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PTO/SB/39 (06-07)
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## AUTHORIZATION TO PERMIT ACCESS TO APPLICATION BY PARTICIPATING OFFICES

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COMPLETE IF KNOWN							
Application Number							
Filing Date							
First Named Inventor							
Attorney Docket Number							
Title (Required)							

The undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h).

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the application-as-filed with respect to: 1) the above-identified application, 2) any foreign application to which the above-identified application claims priority under 35 USC 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified US application, and 3) any U.S. application from which benefit is sought in the above-identified application.

This written authorization should be submitted prior to the filing of a subsequent foreign application, in which priority is claimed to the above-identified patent application, with any intellectual property office (e.g., the EPO or JPO).

No fee will be charged under 37 CFR 1.19(b)(1) for providing a participating intellectual property office with an electronic copy of the above-identified application.

This form must be signed by an authorized party in accordance with 37 CFR 1.14(c).

/Shun Yao/			
Signature	Date		
Shun Yao	(530) 759-1667		
Printed or Typed Name	Telephone Number		
Attorney of Record	59,242		
Title	Registration Number, if applicable		

This collection of information is required by 37 CFR 1.14(h). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process an application). Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.** 

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Page 1 of 474 SNAP EXHIBIT 1004

#### **Privacy Act Statement**

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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Request Not to Publish. I hereby request that the attached application not be published under 35  U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.														
Representative Information:  Representative information should be provided for all practitioners having a power of attorney in the application. Providing														
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Application Data Sheet 37 CFR 1.76		Application Number				
Title of Invention	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION					

#### **Domestic Benefit Information:**

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a) (4), and need not otherwise be made part of the specification.									
Prior Application Status			Remove						
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Additional Domestic Priority Data may be generated within this form by selecting the <b>Add</b> button.									

# **Foreign Priority Information:**

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).								
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Additional Foreign Priority Data may be generated within this form by selecting the Add button.								

# **Assignee Information:**

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.									
Assignee 1			Remove						
If the Assignee is an Organization check here.									
Organization Name	Palo Alto Research Center Incorporat	ed							
Mailing Address Information:									
Address 1	3333 Coyote Hill Road	3333 Coyote Hill Road							
Address 2									
City	Palo Alto	State/Province	CA						
Country   US		Postal Code	94304						
Phone Number	(650) 812-4000	Fax Number							
Email Address									
Additional Assignee Data may be generated within this form by selecting the Add button.									

# Signature:

	A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.							
Signature	/Shun Yao/	Date (YYYY-MM-DD)	2008-12-02					

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First Name Shun		Last Name	Yao	Registration Number	59242		

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- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# PATENT APPLICATION ATTORNEY DOCKET NO. PARC-20080172-US-NP

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# CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION

10

Inventors: Victoria M. E. Bellotti, Nicolas B. Ducheneaut, Glenn E. Durfee, Philippe J. P. Golle, Qingfeng Huang, Marc E. Mosko, Kurt E. Partridge, Nicholas K. Yee, and Rebecca L. Braynard

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#### **BACKGROUND**

#### **Field of the Invention**

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**[0001]** The present invention generally relates to techniques and systems for creating and presenting content to a user. More specifically, the present invention relates to techniques and systems for creating and presenting content based on contextual information.

#### 25 Related Art

[0002] Advancements in computing technology continue to improve communication between people and provide versatile ways to deliver information. These advancements have allowed communities around the world to interact and share information with each other. In particular, mobile devices are becoming an integral part of human life, as people often carry a mobile device throughout their

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day. These mobile devices can include a mobile phone, a personal digital assistant (PDA), an MP3 player, a handheld game console, and a laptop computer. Newer generations of these mobile devices are developed with more computation power and a growing number of communication features.

[0003] In effect, many of these mobile devices can perpetuate a fast-paced lifestyle for their users, as they may help users schedule the time around their responsibilities. However, these technological advances do not effectively help their users cope with this increase in pace. Typical working professionals may have a number of communication channels that they monitor, and they often need to remind themselves to monitor these channels. Also, these users typically have a list of errands they need to complete, and this list may grow throughout a work week because they do not remember to complete these errands until the weekend. Furthermore, these users often need to continue advancing their skills, but their work and social schedules do not allow much free time for extended study.

[0004] Unfortunately, mobile devices are not effective in helping working professionals accommodate their responsibilities around their busy schedule, because these mobile devices are not capable of learning and understanding the behavior of their users. Furthermore, these mobile devices cannot determine when and how best to provide their users with information or suitable entertainment content, because they do not take into account the activities that their users are involved in.

#### **SUMMARY**

[0005] One embodiment of the present invention provides a computing device that delivers personally-defined context-based content to a user. This

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computing device receives a set of contextual information with respect to the user, and processes the contextual information to determine whether some aspect of the current context can be associated with a probable activity being performed by the user. The computing device then determines whether either or both the context and current activity of the user satisfy a trigger condition which has been previously defined by the user. If so, the computing device selects content from a content database, based on the context or activity, to present to the user, and presents the selected content.

[0006] In a variation on this embodiment, the computing device allows the user to create content that is associated with a user-defined contextual or activity-driven trigger condition. To do so, the computing device records the content that is provided by the user, and creates a content entry in the content database for the recorded content, wherein the content entry can be associated with a number of trigger conditions. Then, the computing device associates a trigger condition for the content entry with a user-defined context or activity. The computing device continuously compares previously-defined trigger conditions for the content entry with the ongoing context of the user and/or user activity. When a trigger condition is met, the computing device retrieves the associated content and presents it to the user.

[0007] In a further variation, the computing device allows the user to create shareable content. To do so, the computing device records the content that is provided by the user, and creates a content package for the recorded content. This content package can include the recorded content, and can include a number of user-defined trigger conditions. The user is capable of sharing the content package with other users by distributing the content package to other users, and/or by uploading the content package onto a public server. Furthermore, other users

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that download or receive the content package are allowed to insert, modify, and/or remove content or trigger conditions from the content package.

[0008] In a variation on this embodiment, the computing device defines a context by creating a context or activity entry in a context manager, and associates the context or activity entry with a set of contextual information.

[0009] In a further variation, the computing device evolves the presentation of content over time by updating the content entries in the content database and updating the context or activity entries in the context manager responsive to actions performed by the user.

[0010] In a variation on this embodiment, the computing device presents the selected content by following a number of pre-defined or user-defined presentation rules associated with the selected content, monitoring actions performed by the user, and presenting the selected content based on the actions performed by the user.

[0011] In a variation on this embodiment, the computing device presents the selected content by sharing the selected content with a remote device.

[0012] In a variation on this embodiment, the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag (e.g., radio frequency identification (RFID) tag), device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream.

[0013] In a variation on this embodiment, the content includes at least one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, and Internet blog.

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#### BRIEF DESCRIPTION OF THE FIGURES

- [0014] FIG. 1 illustrates a content management system in accordance with an embodiment of the present invention.
- [0015] FIG. 2A illustrates a data flow for a content management system associated with delivering content to a user in accordance with an embodiment of the present invention.
  - [0016] FIG. 2B illustrates a data flow for a content management system associated with allowing a user to create content in accordance with an embodiment of the present invention.
- [0017] FIG. 3 presents a flow chart illustrating a process for delivering context-based content to a user in accordance with an embodiment of the present invention.
  - [0018] FIG. 4 presents a flow chart illustrating a process for creating context-based content in accordance with an embodiment of the present invention.
  - [0019] FIG. 5 illustrates an exemplary computing device that facilitates creating and delivering context-based content in accordance with an embodiment of the present invention.
  - [0020] TABLE 1 illustrates an exemplary set of rules for presenting a content package to a user in accordance with an embodiment of the present invention.
  - [0021] TABLE 2 illustrates an exemplary set of rules for presenting a reminder content package to a user in accordance with an embodiment of the present invention.

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#### DETAILED DESCRIPTION

[0022] The following description is presented to enable any person skilled in the art to make and use the invention, and is provided in the context of a particular application and its requirements. Various modifications to the disclosed embodiments will be readily apparent to those skilled in the art, and the general principles defined herein may be applied to other embodiments and applications without departing from the spirit and scope of the present invention. Thus, the present invention is not limited to the embodiments shown, but is to be accorded the widest scope consistent with the principles and features disclosed herein.

[0023] The data structures and code described in this detailed description are typically stored on a computer-readable storage medium, which may be any device or medium that can store code and/or data for use by a computer system. The computer-readable storage medium includes, but is not limited to, volatile memory, non-volatile memory, magnetic and optical storage devices such as disk drives, magnetic tape, CDs (compact discs), DVDs (digital versatile discs or digital video discs), or other media capable of storing computer-readable media now known or later developed.

[0024] The methods and processes described in the detailed description section can be embodied as code and/or data, which can be stored in a computer-readable storage medium as described above. When a computer system reads and executes the code and/or data stored on the computer-readable storage medium, the computer system performs the methods and processes embodied as data structures and code and stored within the computer-readable storage medium.

[0025] Furthermore, the methods and processes described below can be included in hardware modules. For example, the hardware modules can include, but are not limited to, application-specific integrated circuit (ASIC) chips, field-

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programmable gate arrays (FPGAs), and other programmable-logic devices now known or later developed. When the hardware modules are activated, the hardware modules perform the methods and processes included within the hardware modules.

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#### **Overview**

[0026] Embodiments of the present invention provide a content management system for organizing and delivering packages of audio and visual content to a user in response to activities being performed by the user, and in response to a number of environmental factors associated with the user. The user activities and environmental factors that trigger a response from the content management system are defined by the user prior to enabling a given package of content. This content management system is intended to help a user manage their content and responsibilities around their schedule. Prior to operation, a user can upload or input content into the content management system, which may be music, study material, a to-do list, an RSS feed or any other content suitable for delivery in a range of contexts. The user can then specify the conditions under which the content can be presented, in terms of a sensed contextual information (e.g., temperature) or a user-defined context (e.g., a user activity). These conditions represent the triggers for presenting content, and are labeled using usermeaningful terms, such as time of day, day of week, a location identifier (e.g., "home") or a transportation modality (e.g., "on the train"), et cetera. The user can also specify a target audience for the content presentation, such as the user and/or other users.

[0027] In some embodiments, the user may define contexts or activities in terms of low-level contextual information that is associated with the user. Note

that "context" and "activities" are not necessarily mutually exclusive. In one embodiment, a context can be based on or include one or more user activities. For example, if the content management system can sense motion, location, and time of day, then the user can define a context for walking from one location to another at a particular time of day, and label the context using human-meaningful terms (e.g., "walking to work," or "walking around the mall"). In another example, the user can define a context for moving around the yard, and label the context using a human-meaningful term "gardening." In some embodiments, the user may define an activity in terms of a high-level category of conditions, such as "concentrating," "receptive," or "active." For example, the user may define a context labeled "receptive" based on a number of user defined contexts associated with mindless tasks (e.g., "walking to work," "walking around the mall"). On the other hand, the user may define a context labeled "active" based on a number of user-defined contexts associated with physical activities (e.g., "jogging," "gardening"). The user can then define a trigger condition for certain content based on a high-level condition category which includes several low-level contexts.

[0028] During operation, the content management system can gather low-level contextual information from a number of input sources (e.g., a global positioning system (GPS) device, or an accelerometer), which reflects basic information associated with the user. Then, the content management system processes this contextual information to determine an inferred context, which has been defined in human-meaningful terms that describe an event or environmental factor associated with the user (e.g., "on the train after 5 P.M."). In some embodiments, the content management system can use this context to identify content that is ready to be presented in response to a user-defined context. In

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other embodiments, the content management system can use a user-defined context to search for and/or create content that can be presented to a user in a desired context.

[0029] The capabilities of the content management system can be applied to a number of applications. In some embodiments, the content management system can present instructional content under a given user-defined context. For example, the content management system can present visual lectures or interactive lessons to a user when the user is commuting to work in a bus or in a train. Similarly, the content management system can present audio-based instructional content to a user when the user is driving to work or is jogging. In other embodiments, the content management system can present entertainment content to the user when the user enters his or her living room after a long day of work.

[0030] In some embodiments, a user can create shareable content using the content management system on a mobile device or a personal computer (PC). The shareable content is a content package that a user can download, modify, and share with other content management systems. In some embodiments, a user can upload a content package onto an Internet website to share content the user created or modified using the content management system. In some other embodiments, a user can download a content package from an Internet website, and modify the content package to insert, modify, and/or remove content from the content package.

[0031] In some embodiments, the content management system can share content with a remote computing device. For example, a user can create an instructional or an entertainment content package on a content management system, specify a user-defined context for when the content can be presented, and share the content package with other content management systems. In other

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embodiments, the content management system can communicate content to a remote device under a given user-defined context. For example, the content management system can send a text message or an audio stream to the mobile telephone of a user's spouse to alert the spouse that the user is working late.

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#### **Content Management System**

[0032] FIG. 1 illustrates a content management system 100 in accordance with an embodiment of the present invention. In some embodiments, content management system 100 can present content 112 to a user in response to actions being performed by the user, or other information that is associated with the user. In other embodiments, content management system 100 allows a user to create and store content, and associate the content with a given user-defined context. In one example, content management system 100 can present a given class of information to the user when the user is jogging, based on a high-level context labeled "active" which includes the low-level context labeled "jogging." In a second example, content management system 100 can remind the user to buy groceries as the user is driving past a grocery store after work. Furthermore, content management system 100 can read specific items on the grocery list to the user as the user walks across a corresponding aisle of the grocery store.

20 [0033] In some embodiments, content management system 100 includes an input mechanism 102, a context manager 104, a content database 106, and a content delivery mechanism 108. Input mechanism 102 receives a user input 110, which can include information provided by the user through an input device (e.g., a keyboard or a touch screen), or can include contextual information gathered
25 from a number of input sources (e.g., a microphone, a camera, a motion sensor, a global positioning mechanism, or an Internet server).

[0034] Context manager 104 can control how content 112 is stored in content database 106, and can control how content 112 is selected from content database 106 for playback. In some embodiments, context manager 104 creates content 112 by providing content database 106 with a content package to be stored, which includes content 112 and a corresponding user-defined context that describes when content 112 can be presented. In response, content database 106 stores content 112, and associates content 112 with the specified user-defined context. In other embodiments, context manager 104 retrieves content 112 from content database 106 by providing content database 106 with a user-defined context that describes actions being performed by the user, and then receiving a corresponding content from content database 106.

presented to the user. In some embodiments, content delivery mechanism 108 presents content 112 to a user when context manager 104 selects content 112 for playback. In some variations on these embodiments, content delivery mechanism 108 can present content 112 in response to actions performed by the user, or interactions received from the user. For example, content delivery mechanism 108 may provide a user with a sequence of tasks to perform, such that content delivery mechanism 108 monitors the actions performed by the user, and advances to present a subsequent task once the user completes a given task. Context manager 104 can be configured to determine when the user completes a task by monitoring the information gathered by input mechanism 102, such as a microphone that gathers a verbal utterance of the user confirming the completion of a given task. In a second example, content delivery mechanism 108 may react to verbal requests or responses from the user as content delivery mechanism 108 presents content 112.

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#### **Contextual Information**

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[0036] Mobile devices often include a number of information-based capabilities that facilitate integrating these devices into the daily routine of their user. These capabilities can be configured to determine contextual information associated with a user, and the mobile devices can be configured to utilize this contextual information to determine when and how to present information to the user. In one embodiment, "contextual information" can be defined as input data that is gathered by a computing device from a number of input sources, and reflects basic information associated with the user and/or the operating environment of the computing device. In some embodiments of the present invention, contextual information is data that is recorded from a number of input sources without being interpreted by the computing device.

[0037] In some embodiments of the present invention, content management system 100 can determine contextual information associated with a user, including:

- Time of day Content management system 100 can keep track of time and date information. In some embodiments, content management system 100 can synchronize its time and date information with a time server (e.g., using the network time protocol (NTP)). In some embodiments, content management system 100 can take advantage of time of day, day of week, date, holidays, etc., as a contextual factor when delivering information.
- Geographical location Location awareness is becoming a prominent feature of mobile devices. In some embodiments, content management system 100 can determine its geographical location by GPS, cellular

- tower triangulation, Wi-Fi triangulation, or other means now known or later developed.
- Motion detection Some mobile devices are capable of detecting motion (i.e., whether they are moving, shaking, tilting, etc.). Content management system 100 can achieve motion detection by using an accelerometer, a gyroscope, or other means now known or later developed.
- Sound detection Mobile devices often include a microphone for capturing sounds, or can utilize a microphone as a peripheral device. In some embodiments, content management system 100 can use a microphone to capture verbal utterances of the user. In other embodiments, content management system 100 can use a microphone to capture ambient sounds.
- Image detection Mobile devices often include a camera for recording pictures and/or video, or can utilize a peripheral camera. In some embodiments, content management system 100 can use a camera to determine lighting levels.
- Internet information Mobile devices often have access to the Internet, either via a Wi-Fi connection and/or a cellular network. In some embodiments, content management system 100 utilizes an Internet connection to gather public context and content information. This context information can include a weather report, stock report, news event, and any other trigger event that is accessible from the Internet. The content information can include an audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed,

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rich site summary (RSS) feed, Internet blog, and any other content that is accessible from the Internet.

[0038] In some embodiments of the present invention, content management system 100 is designed to detect basic contextual information on the behavior of the user, including but not limited to: location, movement, sound, verbal utterances (e.g., speech), ambient voices (e.g., from a television or radio), keyboard clacking, lighting, brain activity readings, velocity, walking, driving, user input, routines or patterns in the behavior of the user, and vocal inflections or biometric readings indicating agitation and/or irritation.

[0039] In some embodiments, content management system 100 can be kept in continuous operation, and can sustain its awareness of contextual information associated with a user during operation. In some variations on these embodiments, content management system 100 monitors a number of sensors and/or input devices using input mechanism 102 to gather contextual information with respect to the user. In other variations, a sensor or input device can initiate a specific software process of content management system 100 for gathering new contextual information from the sensor or input device. In further embodiments, content management system 100 can awaken from a sleep mode of operation at predetermined time intervals to poll its current context and determine whether the context satisfies trigger conditions which are associated with content in database 106. If no relevant contextual triggers are satisfied by the context, then content management system 100 can return to the sleep mode of operation.

#### **Context**

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[0040] In some embodiments, content management system 100 can determine a context associated with a user and/or operating conditions of the

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mobile device based on contextual information. Whenever input mechanism 102 gathers basic contextual information from a number of sources, context manager 104 can interpret the basic contextual information to infer a number of user-defined contexts. A context is a set of data that describes an event or environmental factor associated with a user or the operational environment of content management system 100. In some variations on these embodiments, a context can be inferred from contextual information gathered by input mechanism 102. In other variations, a context can be inferred from a number of contexts which have been inferred from contextual information. A context can also be inferred from a combination of contexts and contextual information.

[0041] For example, content management system 100 can be programmed to infer specific contexts about the user based on contextual information, including but not limited to whether the user is sitting down, watching TV, asleep, alert, talking, typing at the computer in the home study or at the office, walking around the house, walking outside the house, driving, or performing a household activity (e.g., cooking, or getting ready for work). In other examples, content management system 100 can be programmed to infer user patterns and preferences (e.g., taking the bus rather than walking when the weather is bad), possible hazards (e.g., darkness, weather warnings, proximity to crime zones), and the mental state of the user (e.g., mood, or concentration level).

#### **Content**

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[0042] Mobile devices often include presentation mechanisms for reproducing audio and/or video content. In some embodiments of the present invention, content management system 100 uses these presentation mechanisms to present content that is triggered by a given context. In some variations on these

embodiments, content management system 100 presents interactive content to the user, where a user can interact with the interactive content using input mechanism 102 of content management system 100 (e.g., pressing buttons, touching a location of a touch screen, or communicating verbal utterances into a microphone).

[0043] When content management system 100 infers a user-defined context that is associated with the user, content management system 100 can use the inferred context to search for content in content database 106, and retrieve content that can be presented under the given context. In some embodiments, content database 106 stores a set of content packages, where a content package includes a collection of content, and includes a number of contexts that can trigger content management system 100 to present content in the content package. In some variations on these embodiments, a content package can also include a script or executable code that can control how content is presented, and can implement the software mechanisms that interact with the user during presentation of the content.

[0044] In some embodiments of the present invention, content delivery mechanism 108 of content management system 100 can present content to a user in response to a context associated with the user. In other embodiments, content management system 100 can transmit content to a remote device in response to a context associated with the user.

[0045] In some embodiments of the present invention, content management system 100 can present content that is provided by a central publisher (e.g., a predetermined server). In other embodiments, content management system 100 can present content that is generated by the user. In a variation on these embodiments, content management system 100 can present

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content that is generated on a remote device, and is shared by the user of the remote device. For example, content management system 100 of a user that is driving toward a grocery store can automatically receive a grocery list that his wife generated for herself earlier that day using her content management system.

Once the user enters the grocery store, his content management system 100 can present a combined grocery list that includes his grocery list items and her grocery list items.

[0046] In some variations on these embodiments, content management system 100 can be programmed to present content in response to a user-defined context for a number of applications, including: learning during spare time (e.g., a foreign language by listening, repeating, testing, etc.), automatic retrieval of important e-mail (e.g., subject to the user's attention span, and/or the urgency level of the content), receiving reminders (e.g., errands, purchases) at the right time and while in the right place, receiving directions to a desired location, playing music appropriate to the context of the user, and preparing to give a speech or a presentation by producing a section-by-section presentation layout. For example, a teacher can prepare a content package (e.g., a set of "audio study cards") designed to be present study material to a student during mornings, evenings, and weekends when the student is using a public mode of transportation. Furthermore, the teacher can configure the content package to define a timing and pace for the presentation of the content package, define the required responses from the student to given prompts or questions from the content package, and/or define a delay period for when a given prompt or question can be presented after a correct response from the user.

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#### **Delivering Content**

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[0047] FIG. 2A illustrates a data flow for a content management system 200 associated with delivering content to a user in accordance with an embodiment of the present invention. Content management system 200 includes a context manager 201, an input mechanism 204, a content database 206, and a content delivery mechanism 208. Input mechanism 204 gathers contextual information 210, which includes sensed information about the environment and about user activities, and sends contextual information 210 to an analysis mechanism 202 of context manager 201. Analysis mechanism 202 deduces a context 214 (which may include a user activity) from contextual information 210, and context manager 201 uses context 214 to retrieve a corresponding content package 216 from content database 206. Context manager 201 then provides content delivery mechanism 208 with content package 216 for presentation. In some variations on these embodiments, content database 206 can provide content package 216 directly to content delivery mechanism 208.

[0048] Next, content delivery mechanism 208 presents content package 216 to the user. In doing so, content delivery mechanism 208 receives user interactions 212 from the user, and presents content 218-220 from content package 216 in response to user interactions 212.

[0049] It is possible that during operation, context manager 201 may determine that context 214 corresponds to more than one content package. In other words, context 214 satisfies the conditions for presenting more than one content package. In some embodiments of the present invention, context manager 201 prompts a user to select one content package to present from a set when context 214 corresponds to more than one content package. In other embodiments, context manager 201 selects one content package to present from a set based on predefined priorities or evolving weight values for content packages.

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For example, context manager 201 can select a content package which is the least-recent to be presented (e.g., has the oldest playback time stamp from the set of content packages), or can select a content package which is the most-recent to be presented. In another example, context manager 201 can select a content package from the set which has been presented the least number of times (e.g., has a lowest weight value from the set of content packages, which increments after the content package is presented), or can select a content package which has been presented the most number of times.

#### 10 Creating Content

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[0050] FIG. 2B illustrates a data flow for a content management system 240 associated with allowing a user to create content 253 in accordance with an embodiment of the present invention. In some embodiments, a user can create content 253 using content management system 240 on a mobile device or a personal computer (PC). Content management system 240 includes a context manager 241, an input mechanism 244, and a content database 246. Input mechanism 244 gathers a content stream 248 and user interactions 250, and sends content stream 248 and user interactions 250 to an analysis mechanism 242 of context manager 241. In some variations on these embodiments, user interactions 250 can be verbal commands uttered by the user to interact with a voice-based user interface (UI) of content management system 240. In other variations, user interactions 250 can be data provided by the user through a graphical user interface (GUI), including data entered using a keyboard, a mouse, a touch screen, or any other input device.

[0051] Analysis mechanism 242 creates a definition for a context 254, or selects a predefined context 254, based on user interactions 250. Also, analysis

mechanism 242 creates a content 253 based on content stream 248 and user interactions 250. Next, context manager 241 creates a content package 252 that includes content 253 and context 254, and provides content database 246 with content package 252. Content database 246 then creates an entry for content package 252.

using content management system 240, which includes creating a set of rules for presenting content package 252. In some variations on these embodiments, content management system 240 includes a GUI for creating a content package 252 that resembles a spreadsheet, which includes a number of columns for content, context, or presentation parameters, and a number of rows that allow a user to enter data for the corresponding parameter. In other variations, content management system 240 can achieve a functionality that is equivalent to the spreadsheet GUI described herein while using a different GUI layout. In some variations on these embodiments, content package 252 is created to include the data in a given spreadsheet. In other embodiments, content package 252 is created for a respective row of the spreadsheet.

[0053] During operation, a user can insert content 253 into content package 252 by clicking on an entry under the *content* heading of the GUI. In some variations on these embodiments, clicking on a *content* column entry enables the user to record a content stream 248, while in other variations, clicking on a *content* column entry enables a user to select prerecorded content 253 for the *content* column entry. Similarly, a user can click on an entry under any of the other column headings in a content package 252 to enter a value for the entry. Column headings for creating content package 252 include, but are not limited to, content, time, location, state, response, action correct, and action incorrect. In

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some embodiments, the entries under column headings *time*, *location*, and *state* can be used to define contexts for presenting content 253, and the entries under column headings response, action correct, and action incorrect can be used to define presentation rules.

[0054] Note that, in general, a context or activity can be defined in terms of high-level abstractions, such as "commuting to work." A high-level abstraction can corresponds to a combination of multiple low-level contextual information values, such as day of week, time of day, series of GPS traces, or accelerometer readings. In one embodiment, a low-level contextual information value can correspond to one or more measurable physical parameters. Furthermore, a presentation rule can be defined in terms of one or more high-level abstractions, such as "play while commuting to work and while comminuting from work." In addition, a user can share a presentation rule with another user. The second user can redefine the shared rule to accommodate his personal low-level contextual information values for corresponding high-level abstractions.

Content	Time	Location	State	Response	Action Correct	Action Incorrect
JpI.mp3	Any	Any	Moving	Mimic	7-day- suspend	5-min- suspend
JpHello.mp3	Any	Any	Moving	Mimic	7-day- suspend	5-min- suspend
JpHowDoYouDo.mp3	Any	Any	Moving	Mimic	7-day- suspend	5-min- suspend
JpGoodnight.mp3	>21:00	Bedroom	Moving	Mimic	7-day- suspend	5-min- suspend
JpGoodmorning.mp3	<10:00	Bedroom	Moving	Mimic	7-day- suspend	5-min- suspend

TABLE 1

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[0055] TABLE 1 illustrates an exemplary set of rules for presenting content package 252 to a user in accordance with an embodiment of the present invention. The entries illustrated by Table 1 correspond to a number of audio clips in Japanese for practicing pronunciations to a number of words. The *time* column allows a user to specify a time of day when content 253 can be presented, which can be a time instance, or can be a time range. The *location* column allows a user to specify a location for where content 253 can be presented, and the *state* column allows a user to specify an action that the user can be performing when content 253 is presented. For example, a user that is learning Japanese can program content management system 240 to play "good morning" in Japanese when the user is moving around the bedroom before 10AM, and to play "goodnight" in Japanese when the user is entering or moving around the bedroom after 9PM.

response to the presentation of content 253. The *action correct* column allows a user to specify actions that content management system 240 can perform if the user provides a correct response. The *action incorrect* column allows a user to specify actions that content management system 240 can perform if the user does not provide a correct response. For the example, the user can program content management system 240 to suspend an audio clip for a given phrase for seven days if the user correctly mimics the phrase in Japanese. The user can also program content management system 240 to repeat the phrase after five minutes if the user does not mimic the phrase with a proper pronunciation, thereby allowing the user to practice the phrase repeatedly until the user achieves a proper pronunciation of the Japanese phrase.

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[0057] In some embodiments, content management system 240 allows a user to provide a desired name for a content entry. For example, a user may record a phrase in Japanese, and name the file using the English translation to the phrase. In some variations on these embodiments, a user can provide the name to content management system 240 as verbal speech, and content management system 240 produces a text string for the name by converting the speech to text. In other variations, a user can type the name using an input device of content management system 240. In the event that a user does not provide a name to a recording, content management system 240 can name the recording using a default file name, such as "Note1."

[0058] In some embodiments, content management system 240 allows a user to set a value to a column entry by providing a drop-down menu when a user taps or clicks on the column entry. This drop-down menu displays a vertical list of allowable values for the user to select from, and allows the user to select a value by clicking or tapping on the desired value. In other embodiments, content management system 240 allows a user to set a value to a column entry by allowing the user to type the value into the column entry.

[0059] In some embodiments, a user can provide content management system 240 with a list of allowable values (e.g., names or tags, and corresponding contextual information) for the entries of a given column (e.g., the *time*, *location*, *state*, or *response* columns presented in Table 1). For example, a *location* column entry may obtain an allowable set of values from a database of geographical locations selected by the user. In some embodiments, a user might define a geographical location for current or later use in content management system 240 when the user is at the desired location by notifying content management system 240 to store the current geographical location, and specifying a name for the

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stored geographical location (e.g., "home" or "bedroom"). In other embodiments, a user can specify a geographical location by selecting the location from a map, providing content management system 240 with the street address of the geographical location, or providing content management system 240 with geographic coordinates of the desired location, and then specifying a name or a tag for the geographical location. In some embodiments, content management system 240 can automatically infer geographic locations that are important to a user, and appropriate names for these locations, based on contextual information and routines performed by the user.

[0060] A column entry may also obtain an allowable set of values from a database of predefined names or tags with pre-set values which can be edited by the user. For example, a "moving" value for the *state* column entry can be an identifier which corresponds to a predefined context 254 that can be triggered by a motion detection mechanism.

than one column of a given type. For example, content package 252 can include a column for Japanese entries and another column for corresponding English translation entries which are to be presented according to predetermined rules. In some embodiments, these predetermined rules can be specified in yet another column, and can define the conditions which cause a corresponding English translation to be presented (e.g., a time delay, a contextual condition, or a user response). In another variation, a user can instantiate more than one *state* columns to define more precise context trigger conditions for content 253. For example, a user can instantiate two *state* columns, and select a predefined or user-defined state for each *state* column (e.g., *walking* and *shopping*).

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[0062] A response column entry may obtain a value that describes an expected response from the user in the form of an audio stream or a text string. In some embodiments, a response column entry may obtain a value in the same manner that content 253 is provided for a content column entry, where a user can record an expected response or select a prerecorded response. In other embodiments, a response column entry may obtain a value from the user in the form of a text string encapsulated by quotation marks, where the verbal response by the user and the expected response provided in the form of text are compared using text-to-speech and/or speech-to-text technologies. In yet other embodiments, a response column entry with a value mimic notifies content management system 240 that the response provided by the user should mimic the content identified by the corresponding entry under the content column.

[0063] Content management system 240 can perform an action responsive to a user response or interaction with the presentation of content 253. An *action correct* column entry can obtain a value that specifies an action to be performed by content management system 240 in the event that the user provides an expected response. Furthermore, an *action incorrect* column entry can obtain a value that specifies an action to be performed by content management system 240 on the occasion that the user does not provide an expected response. For example, content management system 240 can suspend playback of content 253 for a given time period, or can delete the content entry.

[0064] In some embodiments, an entry under the *action correct* column or the *action incorrect* column is a predefined capability of content management system 240. In other embodiments, an entry under the *action correct* column or the *action incorrect* column is a script or executable program that is provided by the user. A user can create a script or an executable program, which performs a

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sequence of operations, and can store and access state information gathered from user responses over a period of time. For example, a user can provide an *action* correct column entry with a script or executable program that deletes or alters (e.g., by changing a timing condition for presenting the content again) the corresponding content entry when the user mimics content 253 accurately on three consecutive attempts.

[0065] In some embodiments, an entry for a *content* column can have text-based content 253, including but not limited to, e-mail, Internet blog updates, Internet RSS feeds, tweets, text-based notes and reminders, or computer-readable pointers to content. In some variations on these embodiments, a computer-readable pointer can reference specific content. In other variations, the computer-readable pointer is defined based on metadata (e.g., a date, a geotag, or textual description for a content category), and is used to reference content associated with the metadata which can be gathered from a number of databases.

[0066] In some variations on these embodiments, content management system 240 can present the text-based content by displaying it on a screen of content management system 240. In other variations, content management system 240 can present text-based content 253 by converting content 253 to audio using text-to-speech technologies, and reproducing the audio. Furthermore, content management system 240 can apply a set of rules for presenting the text-based content 253. For example, content management system 240 can present emails to a user from a predefined set of people at certain times of the day, or under a given context 254.

[0067] TABLE 2 illustrates an exemplary set of rules for presenting a reminder content package 252 to a user in accordance with an embodiment of the present invention. An entry under the *content* column identifies a reminder in the

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form of text, and the other columns describe a set of rules for presenting the reminder to the user. For example, a user can program content management system 240 to present a first reminder at a specific day and time if the user is moving (e.g., walking, or jogging). If the user responds to content 253 by uttering "OK," content management system 240 deletes the content entry. Otherwise, if the user does not utter "OK," content management system 240 suspends content 253 of the content entry for fifteen minutes.

[0068] In a second example, a user can program content management system 240 to present a second reminder after a specific day and time, and while the user is driving. If the user responds to content 253 by uttering "OK," content management system 240 deletes the content entry. Otherwise, if the user does not utter "OK," content management system 240 suspends content 253 for fifteen minutes.

[0069] In a third example, a user can program content management system 240 to present a third reminder after a specific day and time, and while the user is stationary at the library (i.e., studying or reading at the library). In some variations on these embodiments, content management system 240 may determine if the user is wearing headphones before reproducing audio content 253 for the user while the user is in the library. If the user does not have headphones plugged into content management system 240, content management system 240 may flash a visual message to the user that requests the user to plug headphones in to the headphone jack, or to step outside the library. In other variations on these embodiments, content management system 240 may reproduce content 253 as text when the user is in the library. If content 253 contains verbal utterances, content management system 240 may use a speech-to-text mechanism to reproduce the verbal utterances as text.

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Content	Time	Location	State	Response	Action Correct	Action Incorrect
Note1 text	=20070929:18:00	Any	Moving	"OK"	Delete	15-min-suspend
Note2 text	>20071001:09:00	Any	Driving	"OK"	Delete	15-min-suspend
Note3 text	>20071001:12:10	Library	Stationary	"OK"	Delete	1-day-suspend
Note4 text	=20071002:10:00	Office	Moving	"OK"	Delete	15-min-suspend
Note5 text	>20071003:18:00	Office	Moving	"OK"	Delete	15-min-suspend

TABLE 2

[0070] Content management system 240 can include an input mechanism

244 that supports short-range communication protocols such as Near Field
Communication (NFC), which can be used to read radio frequency identification
(RFID) tags, or to interact with other NFC devices at a short distance. Content
management system 240 that supports the NFC protocol can identify physical
objects based on RFID tags attached to the objects, and can use the gathered
information as contextual information for presenting content 253, or can use a
detected NFC signal as a user interaction 250.

[0071] For example, a user can program content management system 240 to present a notification to the user to carry an umbrella when content management system 240 detects that the user is about to walk outside the house, determines from an Internet forecasting service that it will rain later in the day, and does not detect an RFID tag that identifies the user's umbrella. In another example, a user can program content management system 240 to notify the user's spouse that the user is returning home when the user passes an RFID tag on the doorframe at work or in the car during the evening.

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#### **Audio-based Content Creation**

[0072] In some embodiments, content management system 240 provides an audio-based user interface (UI). For example, a user can interact with content management system 240 using the audio-based UI when creating a new reminder content while on the move. In some variations on these embodiments, the audio-based UI for content management system 240 follows a linguistic scheme that parallels the GUI for content management system 240. An audio-based UI that resembles a GUI of content management system 240 facilitates a user in becoming acclimated to the audio-based UI when the user is already familiar with the corresponding GUI. For example, an audio-based UI for content management system 240 may interact with a user that is creating a new reminder using the following dialogue:

User: "To-dos, New Note."

System: "Begin Recording To-do."

15 User: "[verbal utterances]... [pause]."

System: "Recording complete."

User: "System, continue recording, [more verbal utterances]... [pause]."

System: "Continued recording complete."

User: "Present to me in time Any, Location Home, State Stationary,

20 Response OK, [pause]."

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System: "Note complete."

[0073] In some variations on these embodiments, a user can state a value for a parameter (e.g., "Any time, home, stationary, response OK"). In other variations, content management system 240 can present audio prompt a user to specify a value for each column entry (e.g., "Specify time condition"). In further variations, a user does not have to communicate a value for every entry associated

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with a column of the content creation GUI. In the event that a user does not provide a value for a given column of the content creation GUI, content management system 240 will fill the corresponding entry with a default value. For example, a user can configure content management system 240 so that the default location is the current location of the user. In a second example, a user can configure content management system 240 so that the default location is the *any* value. In a further example, the user can set the default time for presenting content 253 to the *any* value, and can set the default response to content 253 to "OK."

10 **[0074]** In another example, an audio-based UI for content management system 240 may interact with a user that is creating a presentation layout using the following dialogue:

User: "Presentation [presentation name], Slide One, [pause]."

System: "Begin Recording Presentation."

User: "Slide One, Point One, [speaks remainder of slide content], [pause]."

System: "Recording complete."

User: "System, continue recording, Slide Two, [pause]."

System: "Continue Recording Presentation."

User: "Slide Two, [speaks remainder of slide content], [pause]."

20 System: "Continued recording complete."

#### **Matching Content to Activity**

[0075] In some embodiments of the present invention, content management system 240 is capable of inferring a context 254 associated with a user from contextual information associated with a user, and is capable of matching content 253 to the inferred context 254 in a number of ways.

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[0076] In some embodiments, content management system 240 can determine if the user is receptive to a given content 253, and can give preference to a specific type of content 253 as a result of an activity being performed by the user. For example, a user that has configured content management system 240 to present tutoring content may wish to receive tutoring lessons for learning Japanese when the user is commuting to work. More specifically, content management system 240 may present audio-based Japanese lessons to the user when the user is driving to work, and may present Japanese reading and writing lessons to the user when the user is riding the train to work. In a further example, content management system 240 can provide lessons to the user when the user is walking and is receptive to learning, and can avoid providing lessons when it detects audible speech because the user may be occupied watching television or having a conversation.

[0077] In some embodiments, content management system 240 can be programmed with more than one content package 252. In effect, a user can program content management system 240 to vary the types of content 253 that are presented for different values of context 254. For example, the user can program content management system 240 to restrict language lessons to a particular geographic or geospatial location, and to restrict technical lessons to weekdays or evenings.

[0078] In some embodiments, a user can configure content management system 240 to present content 253 that is relevant to the user's current specific behavior. For example, if the user is walking, content management system 240 can provide a language lesson by describing the action of walking to the user in Japanese, or can provide content 253 in Japanese that is relevant to the location that the user is walking through. In another example, if content management

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system 240 determines that the user is in the kitchen and it is morning, then content management system 240 can infer that the user is preparing breakfast or having breakfast, and may provide breakfast-related Japanese language lessons. In other examples, content management system 240 can provide other types of content 253 based on an inferred context 254, including content types such as music, history lessons, Internet blogs, text-to-speech email, etc.

provide lessons in anticipation of an action that a user is about to perform. In some variations on these embodiments, content management system 240 can present reminder content 253 to the user in advance so that the user can adjust his or her plans. In other variations, content management system 240 can provide natural grammar lessons to a user by providing language lessons in the appropriate grammatical tense. For example, content management system 240 can teach grammar to a user based on the user performing a given action. As the user changes his or her walking state, content management system 240 may produce a corresponding content 253, such as: "I will walk," "I am walking," or "I walked." In a further example, content management system 240 can provide Japanese language lessons relevant to greeting people in the future tense to a user when the user enters a bus or train on a weekday morning. That is, content management system 240 can use grammatical rules to present a sequence of content 253 that matches the anticipation, start, continuance and completion of an activity.

#### **Content Sharing and Delivery Infrastructure**

[0080] In some embodiments, a user can create shareable content using content management system 240 on a mobile device or a PC. The shareable content is a content package 252 that a user can download, modify, and share with

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other content management systems. Furthermore, a content package 252 can include a number of content entry fields for text, graphics, audio, and/or video content 253.

[0081] Once a user invests the initial effort into creating a content package 252, content package 252 can be easily shared and modified by other users. In some embodiments, a user can upload a content package 252 onto an Internet website to make content package 252 publicly available. In some other embodiments, a user can download a content package 252 from an Internet website, and modify content package 252 to insert, modify, and/or remove content 253 from content package 252. In some variations on these embodiments, a user can modify content package 252 to insert, modify, and/or remove presentation rules from content package 252.

[0082] In some embodiments, an abstract name or tag for a contextual condition (e.g., "home" or "shopping") can be recognized by the content management system, and can be easily shared between users without the users having to redefine specific contextual information associated with these names or tags. For example, a first user can define a *home* location name to refer to a specific street address, and a second user can define the *home* location name to refer to a different street address. Therefore, when the first user shares a content package 252 with the second user, any reference to the *home* location name in the content package will be automatically translated to the street address of the second user. The second user does not have to redefine the contextual information associated with the *home* location name of content package 252.

[0083] In some embodiments, a user can share a content package 252 when it is not complete. Content package 252 is not complete when one or more entry fields of content package 252 do not have a corresponding content 253.

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Sharing an incomplete content package 252 allows for a number of users to cooperate in creating shareable content, and allows a number of users to learn from each other.

[0084] For example, a user may invest a significant effort to create a content package 252 for a Japanese language tutorial by creating an extensive list of words and phrases in English, and may even include Japanese translations for some of the corresponding entries. These English and Japanese entries can be audio content 253, or they can be written text. The user can then make content package 252 publicly available, and allow other users to download and improve upon content package 252. Other users can replace the initial Japanese translations with audio recordings that have better pronunciation, and can include Japanese audio recordings for English words and phrases that do not have a corresponding Japanese audio translation. Furthermore, Japanese-speaking users may insert new entries into content package 252 in Japanese for words and/or phrases to which they would like an English translation, thereby allowing an English-speaking user to provide a corresponding audio recording in English.

[0085] In some embodiments of the present invention, a content entry or a set of content entries in content package 252 have one or more content type description entries. A content type description can be a text string which describes a characteristic of content 253 of the entry (e.g., "reminder," tourist information," or "conjugations of the Japanese verb *taberu*"). In some variations, the content type description for a content entry can be predefined. In some other variations, the content type description can be defined by the content management system based on related contextual information (e.g., *time*, *location*, *user activity*, etc.). In further variations, the content type description can be defined by a user.

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[0086] In some embodiments, the content type description entries in content package 252 can be used to classify a collection of content packages based on the type of content they contain. The content type descriptions can be used to search for content 253 with a matching or related content type description stored in content database 246 or any other database or source of content. For example, the user can search for content entries defined as "conjugations of the Japanese verb *taberu*," or "conjugations of Japanese verbs."

[0087] In some embodiments of the present invention, content management system 240 can use artificial intelligence to create a content package 252 that is tailored to a user. In one variation on these embodiments, content management system 240 uses natural language processing (NLP) to parse text entered by the user.

[0088] For example, content management system 240 can be in the form of an Internet website that has HTML and XML-structured content 253 tied to a database that contains vocabulary and grammatical rules. Content management system 240 can enable a user to interact with a textual UI to generate sentences in which words, tense and other variations can be automatically varied so that the user can practice learning grammatical rules by example. Based on the interactions between content management system 240 and the user, content management system 240 can create a content package 252 that implements a lesson plan that allows the user to practice many variations on a number of rules so that the user can learn the rules through practice.

[0089] In a further example, if a user wants to learn how to use passive sentence constructions in Japanese, the user can provide content management system 240 with an exemplar English text entry "Alice was scolded by the teacher." The user can then use a GUI to specify a search for content packages

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252 or content entries which contain grammatically similar results in English paired with Japanese translations. In response, content management system 240 can generate grammatically equivalent sentences, perhaps with the option to vary the subject, object, verse, and tense. In some embodiments, content management system 240 can generate grammatically equivalent sentences by first parsing the user-entered English sentence to determine its linguistic deep structure. Then, content management system 240 can generate a system-defined content type description string based on the user-entered English sentence, and can search for English-Japanese content pairs which have content type descriptions that match some user-specified aspect of the phrase's deep structure, while varying any or all of the subject, object, verb, and tense. For example, content management system 240 can generate grammatically similar sentences using the passive construction, including:

"The dog was being scolded by mother;"

"Mary was praised by the professor;"

"Paul is being interviewed by the journalist;"

"John will be called by the department head;"

"The children used to be scolded by father;" and

"The apple will be eaten by Sara."

In some variations on these embodiments, the grammatically equivalent sentences could be audio-based content 253 that was recorded earlier by other users, where a given audio recording is associated with a content type description text string for the recorded content. Content management system 240 can analyze the grammatical deep structure of the sentence entered by the user to find matches in its database for content with an associated content type description text string.

Then, content management system 240 can assemble recordings, content entries,

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and/or entire content packages from the database that match into a new content package 252.

[0090] FIG. 3 presents a flow chart illustrating a process for delivering context-based content to a user in accordance with an embodiment of the present invention. The content management system begins by receiving contextual information (operation 310), and processing the contextual information to determine a context (operation 320). Next, the content management system determines whether the context satisfies a trigger condition (operation 330). If so, the content management system selects content from the content database based on the context (operation 340), and presents the selected content to the user (operation 350).

[0091] FIG. 4 presents a flow chart illustrating a process for creating context-based content in accordance with an embodiment of the present invention. The content management system begins by recording content provided by the user (operation 410). Then, the content management system creates a content entry in the content database for the recorded content (operation 420). Next, the system associates the content entry with a predefined context by specifying one or more trigger conditions for the content entry (operation 430). In some variations, a user can manually associate the content entry with a predefined context.

[0092] FIG. 5 illustrates an exemplary computing device 502 that facilitates creating and delivering context-based content in accordance with an embodiment of the present invention.

[0093] Computing device 502 includes a processor 504, a memory 506, and a storage device 508. Furthermore, computing device 502 comprises a display 510, a network interface 512, a vibration mechanism 514, a number of sensors 516, an input device 518, a speaker 520, a microphone 522, and a camera

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524. Furthermore, computing device 502 is coupled to a network 526 through network interface 512. In one embodiment, network 526 includes a cellular network. In a further embodiment, network 526 includes the Internet.

[0094] Storage device 508 stores an operating system 528, a content management system 530, context definitions 542, and content 544. Furthermore, content management system 530 includes a user interface (UI) 532, an input mechanism 534, a context manager 536, a content database 538, and a content delivery mechanism 540. In one embodiment, UI 532 is a graphical user interface (GUI). In another embodiment, UI 532 is a voice-based user interface.

[0095] During operation, content management system 530 is loaded from storage device 508 into memory 506 and executed by processor 504. In one embodiment of the present invention, content management system 530 presents content to a user based on a context associated with the user. To do so, input mechanism 534 of content management system 530 gathers contextual information associated with the user from a number of input sources (e.g., network interface 512, sensors 516, input device 518, microphone 522, and/or camera 524), and context manager 536 of content management system 530 interprets the basic contextual information to infer a user-defined context from context definitions 542 that describes an event or environmental factor associated with the user. Context manager 536 then searches for a content package in content database 538 that is triggered by a number of inferred contexts, and content delivery mechanism 540 of content management system 530 presents the selected content package.

[0096] In another embodiment of the present invention, content management system 530 allows a user to create a content package. To do so, input mechanism 534 gathers a content stream and user interactions from a

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number of input sources, and sends the content stream and the user interactions to context manager 536. Context manager 536 creates a context definition, or selects a user-defined context from context definitions 542, based on the user interactions. Also, context manager 536 creates a content file based on the content stream and the user interactions, and creates a content package that includes the content file and the context. Next, context manager 536 provides content database 538 with the content package, and content database 538 creates an entry for the content package.

#### 10 Variations of Embodiments

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#### **Activity-triggered Grammatical Instruction**

[0097] In some embodiments, content management system 530 can be configured by a user, based on the mechanisms described above, to teach grammatical rules to the user by example. In doing so, content management system 530 detects a context associated with the user (e.g., actions such as going out to dinner or driving a car), and presents audio content that contains expressions in a target language that are appropriate to the context, and at the right time. For example, content management system 530 can present the following audio content under the appropriate context:

When the user enters the garage or opens the car door: "I will drive my car."

When the user begins driving: "I am driving my car."

When the user leaves the car: "I drove my car."

#### Language in Context

[0098] In some embodiments, content management system 530 can retrieve geotagged content from a server to present content that is appropriate to

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the geographical location to the user. For example, based on the mechanisms described above, users that visit a popular tourist location can create geotagged content that describes information about the location to help others learn more about the location, and upload this content onto a public database. Furthermore, a number of users may upload geotagged content about the location in a number of languages. Then, when another user visits this geographical location, content management system 530 can download content that is geotagged with this location, and can present the content to the user. A user that is learning a new language can configure content management system 530, based on the mechanisms described above, to retrieve content in that language, thereby listening to language examples that are appropriate to the user's activities.

#### **Collaborative To-Dos**

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[0099] In some embodiments, content management system 530 can create and transmit an electronic message or reminder to a remote device so that the remote device presents the content under a given user-defined context. The electronic messages and reminders can be in the form of text, or audio content. In some variations on these embodiments, content management system 530 can convert text messages and reminders into audio content using text-to-speech technology. These embodiments can provide a user with a new medium for sending important information to a recipient, and can ensure that the recipient will receive the content when the recipient is in a suitable context and activity state, and can complete the task.

#### **Live Connections to Experts**

[00100] In some embodiments, content management system 530 can communicate content between users that do not know each other personally. For example, content management system 530 can be used to implement a tutoring service, where students can submit a shareable content package to the tutoring service using content management system 530, and the tutoring service forwards the content package to an appropriate tutor for the given topic. In some variations, the tutoring service can be implemented by a distributed version of content management system 530, where content management systems for students and teachers forward content requests and content packages to each other. In some other variations, the tutoring service can be implemented as an Internet service, where students and teachers can upload and download content packages and perform requests for relevant content packages.

[00101] A tutor can use the tutoring service to subscribe to a process which monitors the content requests and incomplete content packages which are submitted by other users and are related to a given content type description. When a tutor is notified of a content request or an incomplete content package from a student, the tutor can provide feedback to the student by creating a new content package which includes a response to the requests from the tutor, or can modify the content package to insert feedback content into the content package. Then, the tutor's content management system 530 can make the new or modified content package available to the student. The tutor's new content can then be retrieved via the tutoring service by the student's personal version of content management system 530.

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#### **Progress Analytics**

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state information associated with interactions from a user when presenting a content package. For example, a content package that provides interactive lessons to a user may record accuracy information for the user. Content management system 530 can utilize this information to perform progress analytics, and alter the pace and difficulty of the lesson plan in response to the goals and the learning rate for the user. Content management system 530 may provide a user that is having trouble learning a specific sub-topic with more lessons on that sub-topic, and may increase the pace or difficulty for a user that is learning the material relatively easily. Furthermore, if a given user has a fixed deadline for studying a specific topic, and the user is behind on lessons, content management system 530 can increase the pace of the lesson plan to ensure the user is prepared by the deadline.

#### **Context-Dependent versus Context-Independent Learning**

[00103] In some embodiments, content management system 530 can strengthen a user's memory on a given lesson plan by alternating between providing lesson content within an appropriate context, and providing the lesson content out of any appropriate context. On some occasions, content management system 530 can present lessons to a user in a context under which the user is most effective at learning. On other occasions, content management system 530 can provide the user with lessons in inappropriate and/or inconvenient contexts to radically separate the lesson content from any contextual cues or reminders the user may be relying on.

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#### **Evolution**

[00104] In some embodiments, content management system 530 can evolve a method for delivering a lesson plan to a user. In some variations on these embodiments, content management system 530 can lengthen the period of time it waits before offering the user a correct response to a question when the user is expected to know the lesson material. In other variations, content management system 530 can allow a user with a decreasing period of time to provide a response to a question. In yet other variations, content management system 530 could decrease the clarity of the questions it asks when the user has reached an advanced level of understanding of the subject.

#### **Context Creation**

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[00105] In some embodiments, publishers could create and publish their content on the Internet as content packages for content management system 530. A user that is learning a new language may prefer to pay for a professionally created and advanced language lesson, as opposed to spending significant effort in gathering a multitude of content packages that provide language examples.

#### **Constant Audio Feedback**

[00106] In some embodiments, content management system 530 can use speech recognition to complement an instructional lesson. For example, content management system 530 could use speech recognition to supply a user that is learning a new language with constant feedback on the user's grammar and pronunciation. In another example, content management system 530 could use speech recognition to help a user alter his/her communication style for a target audience. In yet another example, when a user is creating basic second language

educational type content for others, content management system 530 could use speech or text recognition, and deep sentence structure recognition, to provide the user with hints that the user should use language that is simpler for a foreigner to understand. For example, content management system 530 can suggest more common nouns, verbs, and simpler sentence constructions.

#### **Contextual Tagging**

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[00107] In some embodiments, content management system 530 can build context-based inferences for a situation, which can be defined geographically or temporally, based on contextual information that is gathered at a location at a given time, day of week, or day of year. When a user of content management system 530 enters a situation, the user will tend to interact with the environment in a manner that is specific to the situation. Content management system 530 can take advantage of its observations of behaviors aggregated from a number of users in the same situation to infer a context associated with that situation. In some embodiments, content management system 530 does not need to store personal information associated with a specific user, it only needs to store the predefined or user-defined behavior descriptions (e.g., "moving," "walking," "coffee break," etc.) it detects. For example, when a user is sitting at a coffee shop during opening hours while using content management system 530, the user may have a tendency to utter terms and phrases that are associated with a coffee shop, including "coffee," "beans," "pastry," "Wi-Fi," "hot-spot," "relaxing," "great cup of coffee," "tasty cookies," "Internet access" and "Internet café." Based on predefined or user-defined activities and/or observed words and phrases that are detected, content management system 530 can determine that a user's current

situation is associated with the term "coffee" (e.g., the user is currently at a coffee shop).

[00108] In some variations on these embodiments, content management system 530 can provide a public context database with a collection of keywords that it gathers from detected user activities or utterances under a given context, thereby contributing to the pool of contextual knowledge of the public context database. The public context database can learn from the keywords provided by a number of content management systems by identifying the terms and phrases that are most common under a given context, and associating these keywords and phrases with the context.

[00109] In some other variations, content management system 530 monitors the text and speech communicated by a user as part of its context monitoring capability (receive contextual information 310), on a number of applications to gather context-specific keywords. For example, the user may communicate information using a number of applications on a mobile device (e.g., e-mail, Internet search engines, text messages, mobile Web 2.0, etc.) These variations allow users to provide context-specific keywords and phrases to a public context database, without having to tag a context with related keywords. In some embodiments, content management system 530 does not save the specific key words captured from a user, but can add a unit of weight to a word entry of a dictionary of known words as words are detected within a given situation. Over time, the public context database will give preference to keywords and phrases that appear most commonly in a given situation, and can include these keywords within a database that associates specific keywords and phrases with corresponding situations.

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[00110] In some variations on these embodiments, content management system 530 includes a voice-activated keyword lookup mechanism, which uses a speech-to-text mechanism to convert speech to text when it detects verbal utterances. Content management mechanism 530 uses the text generated from these verbal utterances to search in a public context database to infer a context that can be used to identify the current geographical location of the user. In some variations on these embodiments, the keyword lookup mechanism can gather keywords from the environment using a microphone, and/or can gather keywords from a phone conversation that the user is engaged in. In some other variations, the keyword lookup mechanism can gather keywords from terms and phrases that a user receives or sends using content management system 530, including words from a text message, e-mail, or any other communication mechanism.

[00111] The foregoing descriptions of embodiments of the present invention have been presented only for purposes of illustration and description.
 They are not intended to be exhaustive or to limit the present invention to the forms disclosed. Accordingly, many modifications and variations will be apparent to practitioners skilled in the art. Additionally, the above disclosure is not intended to limit the present invention. The scope of the present invention is defined by the appended claims.

### What Is Claimed Is:

1	1. A method for delivering context-based content to a first user, the
2	method comprising:
3	receiving a set of contextual information with respect to the first user;
4	processing the contextual information to determine a context or an activit
5	being performed by the first user; and
6	determining whether either or both the context and a current activity of th
7	first user satisfy a trigger condition which has been previously defined by the first
8	user or a second user, and if so:
9	selecting content associated with the trigger condition from a
10	content database to present to the first user; and
11	presenting the selected content.
1	2. The method of claim 1, wherein the method further comprises
2	allowing the first user to create content that is associated with a user-defined
3	contextual or activity-driven trigger condition by:
4	recording the content that is provided by the first user;
5	creating a content entry in the content database for the recorded
6	content, wherein the content entry is associated with one or more trigger
7	conditions; and
8	associating one or more trigger conditions for the content entry
9	with a user-defined context; and
10	wherein the method further comprises:

. 1	continuously comparing previously-defined trigger conditions for				
2	the content entry with the ongoing context of the first user and/or user				
3	activity; and				
4	when one or more trigger conditions are met, retrieving the				
5	associated content and presenting the retrieved content to the first user.				
1	3. The method of claim 2, wherein the method further comprises				
2	allowing the first user to create shareable content by:				
3	recording the content that is provided by the first user; and				
4	creating a content package for the recorded content, wherein the content				
5	package includes the recorded content, and wherein the content package includes				
6	one or more user-defined trigger conditions;				
7	wherein the content package allows a recipient of the content package to				
8	insert, modify, and/or remove content or trigger conditions from the content				
9	package.				
1					
1	4. The method of claim 1, wherein the method further comprises				
2	defining a context by:				
3	creating one or more context entries in a context manager; and				
4	associating a respective context entry with a set of contextual information				
1	5. The method of claim 4, wherein the method further comprises				
2	evolving the presentation of content over time by updating the content entries in				
3	the content database and updating the context entries in the context manager				
4	responsive to actions performed by the first user.				
•	responsive to actions performed by the first aser.				

1	6. The method of claim 1, wherein presenting the selected content
2	comprises following a number of presentation rules associated with the selected
3	content, monitoring actions performed by the first user, and presenting the
4	selected content based on the actions performed by the first user.

- 7. The method of claim 6, wherein the context or activity is defined as a combination of at least a high-level abstraction which corresponds to one or more low-level contextual information values, wherein the low-level contextual information values can correspond to one or more measurable parameters.
- 1 8. The method of claim 6, wherein a respective rule can be defined 2 with one or more high-level abstractions.
- 9. The method of claim 8, further comprising allowing the first user to share the rules with a second user, wherein the second user can redefine the shared rules based on the second user's low-level contextual and activity parameters.
  - 10. The method of claim 1, wherein presenting the selected content comprises sharing the selected content with a remote device.
- 1 11. The method of claim 1, wherein the contextual information 2 includes one or more of: time, date, location, proximity to a system-detectable 3 tag, device orientation, velocity, direction, distance, vibration, altitude, 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and 5 video stream.

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1	12. The method of claim 1, wherein content includes one or more of:
2	audio clip, image, video stream, language lesson, e-mail, weather report, calendar
3	reminder, news feed, rich site summary (RSS) feed, information update from a
4	Web 2.0 application, and Internet blog.
1	13. A computer-readable storage medium storing instructions that
2	when executed by a computer cause the computer to perform a method for
3	delivering context-based content to a first user, the method comprising:
4	receiving a set of contextual information with respect to the first user;
5	processing the contextual information to determine a context or an activity
6	being performed by the first user; and
7	determining whether either or both the context and a current activity of the
8	first user satisfy a trigger condition which has been previously defined by the first
9	user or a second user, and if so:
10	selecting content associated with the trigger condition from a
11	content database to present to the first user; and
12	presenting the selected content.
1	14. The computer-readable storage medium of claim 13, wherein the
2	method further comprises allowing the first user to create content that is
3	associated with the user-defined contextual or activity-driven trigger condition by:
4	recording the content that is provided by the first user;
5	creating a content entry in the content database for the recorded
6	content, wherein the content entry is associated with one or more trigger
7	conditions: and

8	associating one or more trigger conditions for the content entry
9	with a user-defined context; and
10	wherein the method further comprises:
11	continuously comparing previously-defined trigger conditions for
12	the content entry with the ongoing context of the first user and/or user
13	activity; and
14	when one or more trigger conditions are met, retrieving the
15	associated content and presenting the retrieved content to the first user.
1	15. The computer-readable storage medium of claim 14, wherein the
2	method further comprises allowing the first user to create shareable content by:
3	recording the content that is provided by the first user; and
4	creating a content package for the recorded content, wherein the content
5	package includes the recorded content, and wherein the content package includes
6	one or more user-defined trigger conditions;
7	wherein the content package allows a recipient of the content package to
8	insert, modify, and/or remove content and/or trigger conditions from the content
9	package.
1	16. The computer-readable storage medium of claim 13, wherein the
2	method further comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information.
1	17. The computer-readable storage medium of claim 16, wherein the
2	method further comprises evolving the presentation of content over time by
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- 4 entries in the context manager responsive to actions performed by the first user.
- 1 18. The computer-readable storage medium of claim 13, wherein
- 2 presenting the selected content comprises following a number of presentation
- 3 rules associated with the selected content, monitoring actions performed by the
- 4 first user, and presenting the selected content based on the actions performed by
- 5 the first user.
- 1 19. The computer-readable storage medium of claim 13, wherein the
- 2 contextual information includes one or more of: time, date, location, proximity to
- 3 a system-detectable tag, device orientation, velocity, direction, distance, vibration,
- 4 altitude, temperature, pressure, humidity, sound, luminous intensity, camera
- 5 image, and video stream.
- 1 20. The computer-readable storage medium of claim 13 wherein
- 2 content includes one or more of: audio clip, image, video stream, language lesson,
- 3 e-mail, weather report, calendar reminder, news feed, rich site summary (RSS)
- 4 feed, information update from a Web 2.0 application, and Internet blog.
- 1 21. An apparatus for delivering context-based content to a first user,
- 2 comprising:
- an input mechanism configured to receive a set of contextual information
- 4 with respect to the first user;
- 5 a content database configured to store a collection of context-based
- 6 content;

7	a content delivery mechanism configured to present content to a first user;				
8	and				
9	a context manager configured to process the contextual information to				
10	determine a context or an activity being performed by the first user, and to				
11	determine whether either or both the context and a current activity of the first user				
12	satisfy a trigger condition which has been previously defined by the first user or a				
13	second user;				
14	wherein if the context or current user activity is determined to satisfy a				
15	trigger condition,				
16	the context manager is further configured to select content				
17	associated with the trigger condition from a content database to present to the first				
18	user; and				
19	the content delivery mechanism is further configured to present the				
20	selected content.				
4					
1	22. The apparatus of claim 21, wherein the apparatus further comprises				
2	a content management mechanism configured to allow the first user to create				
3	content that is associated with the user-defined contextual or activity-driven				
4	trigger condition by:				
5	recording the content that is provided by the first user;				
6	creating a content entry in the content database for the recorded content,				
7	wherein the content entry is associated with one or more trigger conditions;				
8	associating one or more trigger conditions for the content entry with a				
9	user-defined context;				
10	continuously comparing previously-defined trigger conditions for the				
11	content entry with the ongoing context of the first user and/or user activity; and				

12	when one or more trigger conditions are met, retrieving the associated
13	content and presenting the retrieved content to the first user.
1	23. The apparatus of claim 22, wherein the content management
2	mechanism is further configured to allow the first user to create shareable content
3	by:
4	recording the content that is provided by the first user; and
5	creating a content package for the recorded content, wherein the content
6	package includes the recorded content, and wherein the content package includes
7	one or more user-defined trigger conditions
8	wherein the content package allows a recipient of the content package to
9	insert, modify, and/or remove content or trigger conditions from the content
10	package.
1	24. The apparatus of claim 21, wherein the context manager defines a
2	context by:
3	creating one or more context entries for the context; and
4	associating a respective context entry with a set of contextual information
1	25. The apparatus of claim 24, wherein the apparatus is further
2	configured to evolve the presentation of content over time by updating the content
3	entries in the content database and updating the user-defined context entries in the
4	context manager responsive to actions performed by the first user.
1	26. The apparatus of claim 21, wherein presenting the selected content
2	comprises following a number of presentation rules associated with the selected

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Inventors: Victoria M. E. Bellotti, et al.

Attorney Docket No. PARC-20080172-US-NP

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- 3 content, monitoring actions performed by the first user, and presenting the
- 4 selected content based on the actions performed by the first user.
- 1 27. The apparatus of claim 21, wherein the contextual information
- 2 includes one or more of: time, date, location, proximity to a system-detectable
- 3 tag, device orientation, velocity, direction, distance, vibration, altitude,
- 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and
- 5 video stream.
- 1 28. The apparatus of claim 21, wherein content includes one or more
- of: audio clip, image, video stream, language lesson, e-mail, weather report,
- 3 calendar reminder, news feed, rich site summary (RSS) feed, information update
- 4 from a Web 2.0 application, and Internet blog.

## CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION

#### **ABSTRACT**

One embodiment of the present invention provides a computing device that delivers personally-defined context-based content to a user. This computing device receives a set of contextual information with respect to the user, and processes the contextual information to determine a context which is associated with an activity being performed by the user. The computing device then determines whether either or both the context and a current activity of the user satisfy a trigger condition which has been previously defined by the user. If so, the computing device selects content from a content database, based on the context, to present to the user, and presents the selected content.

Electronic Patent Application Fee Transmittal						
Application Number:						
Filing Date:						
Title of Invention:	СО	NTEXT AND ACTIVI	TY-DRIVEN CON	ITENT DELIVERY AI	ND INTERACTION	
First Named Inventor/Applicant Name: Victoria M.E. Bellotti						
Filer:	A.F	Richard Park				
Attorney Docket Number:		PARC-20080172-US-NP				
Filed as Large Entity	Filed as Large Entity					
Utility under 35 USC 111(a) Filing Fees						
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)	
Basic Filing:						
Utility application filing		1011	1	330	330	
Utility Search Fee		1111	1	540	540	
Utility Examination Fee		1311	1	220	220	
Pages:						
Claims:						
Claims in excess of 20		1202	8	52	416	
Miscellaneous-Filing:						
Petition:						

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
	Tot	al in USD	(\$)	1506

Electronic Acknowledgement Receipt				
EFS ID:	4376059			
Application Number:	12326457			
International Application Number:				
Confirmation Number:	3430			
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION			
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti			
Customer Number:	35699			
Filer:	A.Richard Park			
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Attorney Docket Number:	PARC-20080172-US-NP			
Receipt Date:	02-DEC-2008			
Filing Date:				
Time Stamp:	16:08:50			
Application Type:	Utility under 35 USC 111(a)			

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'		PARC.pdf	59aea09cfba68e3abf4a3fb5844996b4e24c e323	110	1			
Warnings:		ı		•				
Information:								
2	Drawings-only black and white line drawings	20080172-US- NP_Xerox_Formal_Drawings. pdf	26572	no	4			
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4	Application Data Sheet	Application_Data_Sheet_PARC sb0014_fill.pdf	837437	no	7			
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5		PARC-20080172-US- NP_Patent_Application.pdf	256470	yes	56			
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	Claims	47	55					
	Abstrac	56	56					
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6	Fee Worksheet (PTO-06)	fee-info.pdf	36527	no	2			
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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

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Please deduct any <u>underpayments</u>, credit any <u>overpayments</u>, and charge all required <u>extension of time fees</u> associated with attached filing to Deposit Account Number 24-0037.

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Email: richard@parklegal.com

Respectfully submitted,

A. Ret Ver

By

A. Richard Park

Registration No. 41,241

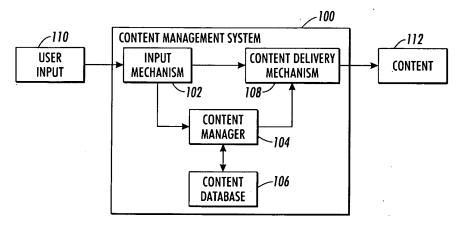


FIG. 1

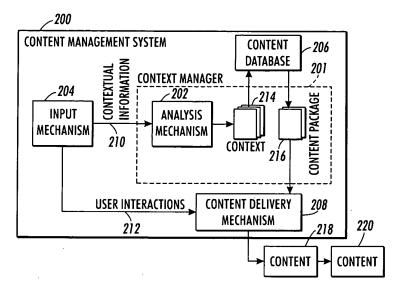


FIG. 2A

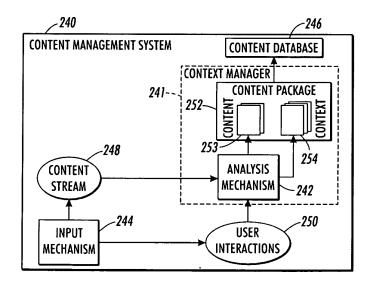


FIG. 2B

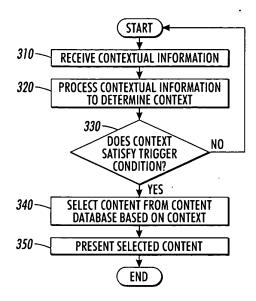


FIG. 3

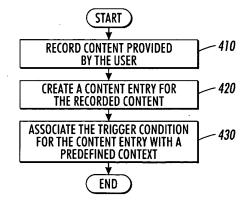


FIG. 4

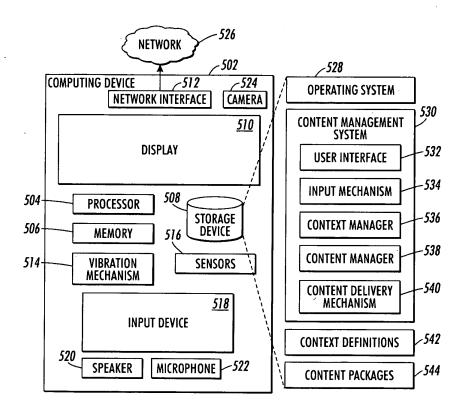


FIG. 5

Filing Date: 12/2/2008 PTO/SB/06 (12-04)

Approved for use through 7/31/2006. OMB 0651-0032

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PATENT APPLICATION FEE DETERMINATION RECORD							Application or Docket Number				
Substitute for Form PTO-875						12/326,457					
	APPLICATION AS FILED - PART I (Column 1) (Column 2) SMALL ENTITY						NTITY	OR	OTHER THAN SMALL ENTITY		
	FOR		NUN	MBER FILED	NUMBER EXTRA		RATE (\$)	FÉE (\$)		RATE (\$)	FEE (\$)
	IC FEE CFR 1.16(a), (b), or	· (c))		N/A	N/A		N/A		1	N/A	330
SEA	RCH FEE			N/A	N/A		N/A		1	N/A	540
EXA	OFR 1.16(k), (i), or MINATION FEE			N/A	N/A		N/A		1	N/A	220
	CFR 1.16(o), (p), or AL CLAIMS	(q))	28			x			ł	X 52=	416
_	FR 1.16(i))	IS .		minus 20 =	8				OR		410
	CFR 1.16(h))		3	minus 3 =	0	×	110=			X 220=	
FEE	LICATION SIZE		sheets o \$250 (\$1 50 sheet	f paper, the appli							
MUI	TIPLE DEPEND	DENT CLAIM PE	RESENT	(37 CFR 1.16	i))		N/A			N/A	
* If ti	ne difference in c	olumn 1 is less	than zer	o, enter "0" in c	column 2.,		TOTAL			TOTAL	1,506
	APPL	ICATION AS	AME	NDED — PAI	RT II (Column 3)		SMALL E	ENTITY	OR		R THAN ENTITY
IT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDI- TIONAL FEE (\$)		RATE (\$)	ADDI- TIONAL FEE (\$)
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	= '	x	=		OR	x =	
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¥	(37 CFR 1.16(h)) Application Size	e Fee (37 CFR 1	I.16(s))	<u></u>			· · ·				
	FIRST PRESENT	TATION OF MULT	IPLE DEF	PENDENT CLAIN	1 (37 CFR 1.16(j))		N/A		OR	N/A	
						TOT	AL OT FEE		OR	TOTAL ADD'T FEE	
		(Column 1)		(Column 2)	(Column 3)				OR		
NT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDI- TIONAL FEE (\$)		RATE (\$)	ADDI- TIONAL FEE (\$)
NDMENT	Total (37 CFR 1.16(i))	*	Minus	** .	=	х	=		OR	x =	
AMEN	Independent (37 CFR 1.16(h))	*	Minus	***	=	х	=		OR	x =	
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	FIRST PRESENT	TATION OF MULT	IPLE DEF	PENDENT CLAIN	1 (37 CFR 1.16(j))		N/A		OR	N/A	
						TOT ADE	OT FEE		OR	TOTAL ADD'T FEE	
		-							-		-
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12/326,457

12/02/2008

Victoria M.E. Bellotti

PARC-20080172-US-NP

CONFIRMATION NO. 3430 FORMALITIES LETTER

35699 PVF -- PARC c/o PARK, VAUGHAN & FLEMING LLP 2820 FIFTH STREET DAVIS, CA 95618-7759



Date Mailed: 12/15/2008

# NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

#### **Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
- A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

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The required item(s) identified below must be timely submitted to avoid abandonment:

• To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this notice.

# **SUMMARY OF FEES DUE:**

Total additional fee(s) required for this application is \$130 for a non-small entity

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FILING or APPLICATION GRP ART FIL FEE REC'D ATTY.DOCKET.NO TOT CLAIMS IND CLAIMS NUMBER 371(c) DATE UNIT 12/02/2008 12/326,457 2161 1506 PARC-20080172-US-NP 28

**CONFIRMATION NO. 3430** 

**FILING RECEIPT** 

35699 **PVF -- PARC** c/o PARK, VAUGHAN & FLEMING LLP 2820 FIFTH STREET DAVIS, CA 95618-7759

Date Mailed: 12/15/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

#### Applicant(s)

Victoria M.E. Bellotti, San Francisco, CA; Nicolas B. Ducheneaut, Sunnyvale, CA; Glenn E. Durfee, San Francisco, CA; Philippe J.P. Golle, San Francisco, CA; Qingfeng Huang, San Jose, CA; Marc E. Mosko, Santa Cruz, CA; Kurt E. Partridge, Palo Alto, CA; Nicholas K. Yee, Mountain View, CA; Rebecca L. Braynard Silberstein, Sunnyvale, CA;

### Assignment For Published Patent Application

Palo Alto Research Center Incorporated, Palo Alto, CA

Power of Attorney: None

Domestic Priority data as claimed by applicant

Foreign Applications

Permission to Access - A proper Authorization to Permit Access to Application by Participating Offices (PTO/SB/39 or its equivalent) has been received by the USPTO.

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/326,457

Projected Publication Date: To Be Determined - pending completion of Missing Parts

page 1 of 3

Non-Publication Request: No

Early Publication Request: No

Title

CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION

**Preliminary Class** 

707

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Application Number: 12/326,457 Confirmation Number: 3430

Applicant : Victoria M.E. Bellotti. Filed : 02 December 2008

TC/A.U. : 2161

Examiner : Not yet assigned

Docket Number : PARC-20080172-US-NP

Customer No. : 36,503

Preliminary Amendment VIA Electronic Filing

# PRELIMINARY AMENDMENT

Sir

Please amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

The claims which appear on pages 3-11 have not been amended.

Remarks/Arguments begin on page 12 of this paper.

# **AMENDMENTS TO THE SPECIFICATION**

# Please amend the inventors as follows:

Inventors: Victoria M. E. Bellotti, Nicolas B. Ducheneaut, Glenn E. Durfee,
Philippe J. P. Golle, Qingfeng Huang, Marc E. Mosko, Kurt E. Partridge,
Nicholas K. Yee, and Rebecca L. Braynard

# **Listing of Claims:**

1	1. (Original) A method for delivering context-based content to a first
2	user, the method comprising:
3	receiving a set of contextual information with respect to the first user;
4	processing the contextual information to determine a context or an activity
5	being performed by the first user; and
6	determining whether either or both the context and a current activity of the
7	first user satisfy a trigger condition which has been previously defined by the first
8	user or a second user, and if so:
9	selecting content associated with the trigger condition from a
10	content database to present to the first user; and
11	presenting the selected content.
1	2. (Original) The method of claim 1, wherein the method further
2	comprises allowing the first user to create content that is associated with a user-
3	defined contextual or activity-driven trigger condition by:
4	recording the content that is provided by the first user;
5	creating a content entry in the content database for the recorded
6	content, wherein the content entry is associated with one or more trigger
7	conditions; and
8	associating one or more trigger conditions for the content entry
9	with a user-defined context; and
10	wherein the method further comprises:
11	continuously comparing previously-defined trigger conditions for
12	the content entry with the ongoing context of the first user and/or user
13	activity; and

14	when one or more trigger conditions are met, retrieving the
15	associated content and presenting the retrieved content to the first user.
1	3. (Original) The method of claim 2, wherein the method further
2	comprises allowing the first user to create shareable content by:
3	recording the content that is provided by the first user; and
4	creating a content package for the recorded content, wherein the content
5	package includes the recorded content, and wherein the content package includes
6	one or more user-defined trigger conditions;
7	wherein the content package allows a recipient of the content package to
8	insert, modify, and/or remove content or trigger conditions from the content
9	package.
1	4. (Original) The method of claim 1, wherein the method further
2	comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information.
1	5. (Original) The method of claim 4, wherein the method further
2	comprises evolving the presentation of content over time by updating the content
3	entries in the content database and updating the context entries in the context
4	manager responsive to actions performed by the first user.
1	6. (Original) The method of claim 1, wherein presenting the selected
2	content comprises following a number of presentation rules associated with the
3	selected content, monitoring actions performed by the first user, and presenting
4	the selected content based on the actions performed by the first user.

1	7.	(Original)	The method of claim 6, wherein the context or activi-	ty

- 2 is defined as a combination of at least a high-level abstraction which corresponds
- 3 to one or more low-level contextual information values, wherein the low-level
- 4 contextual information values can correspond to one or more measurable
- 5 parameters.
- 1 8. (Original) The method of claim 6, wherein a respective rule can be
- 2 defined with one or more high-level abstractions.
- 1 9. (Original) The method of claim 8, further comprising allowing the
- 2 first user to share the rules with a second user, wherein the second user can
- 3 redefine the shared rules based on the second user's low-level contextual and
- 4 activity parameters.
- 1 10. (Original) The method of claim 1, wherein presenting the selected
- 2 content comprises sharing the selected content with a remote device.
- 1 11. (Original) The method of claim 1, wherein the contextual
- 2 information includes one or more of: time, date, location, proximity to a system-
- 3 detectable tag, device orientation, velocity, direction, distance, vibration, altitude,
- 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and
- 5 video stream.
- 1 12. (Original) The method of claim 1, wherein content includes one or
- 2 more of: audio clip, image, video stream, language lesson, e-mail, weather report,
- 3 calendar reminder, news feed, rich site summary (RSS) feed, information update
- 4 from a Web 2.0 application, and Internet blog.

13. (Original) A computer-readable storage medium storing
instructions that when executed by a computer cause the computer to perform a
method for delivering context-based content to a first user, the method
comprising:
receiving a set of contextual information with respect to the first user;
processing the contextual information to determine a context or an activity
being performed by the first user; and
determining whether either or both the context and a current activity of the
first user satisfy a trigger condition which has been previously defined by the first
user or a second user, and if so:
selecting content associated with the trigger condition from a
content database to present to the first user; and
presenting the selected content.
14. (Original) The computer-readable storage medium of claim 13,
wherein the method further comprises allowing the first user to create content that
is associated with the user-defined contextual or activity-driven trigger condition
by:
recording the content that is provided by the first user;
creating a content entry in the content database for the recorded
content, wherein the content entry is associated with one or more trigger
conditions; and
associating one or more trigger conditions for the content entry
with a user-defined context; and
wherein the method further comprises:
continuously comparing previously-defined trigger conditions for
the content entry with the ongoing context of the first user and/or user
activity; and

15	when one or more trigger conditions are met, retrieving the
16	associated content and presenting the retrieved content to the first user.
1	15. (Original) The computer-readable storage medium of claim 14,
2	wherein the method further comprises allowing the first user to create shareable
3	content by:
4	recording the content that is provided by the first user; and
5	creating a content package for the recorded content, wherein the content
6	package includes the recorded content, and wherein the content package includes
7	one or more user-defined trigger conditions;
8	wherein the content package allows a recipient of the content package to
9	insert, modify, and/or remove content and/or trigger conditions from the content
10	package.
1	16. (Original) The computer-readable storage medium of claim 13,
2	wherein the method further comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information
1	17. (Original) The computer-readable storage medium of claim 16,
2	wherein the method further comprises evolving the presentation of content over
3	time by updating the content entries in the content database and updating the
4	context entries in the context manager responsive to actions performed by the first
5	user.
1	18. (Original) The computer-readable storage medium of claim 13,
2	wherein presenting the selected content comprises following a number of
3	presentation rules associated with the selected content, monitoring actions

- 4 performed by the first user, and presenting the selected content based on the
- 5 actions performed by the first user.
- 1 19. (Original) The computer-readable storage medium of claim 13,
- 2 wherein the contextual information includes one or more of: time, date, location,
- 3 proximity to a system-detectable tag, device orientation, velocity, direction,
- 4 distance, vibration, altitude, temperature, pressure, humidity, sound, luminous
- 5 intensity, camera image, and video stream.
- 1 20. (Original) The computer-readable storage medium of claim 13
- 2 wherein content includes one or more of: audio clip, image, video stream,
- 3 language lesson, e-mail, weather report, calendar reminder, news feed, rich site
- 4 summary (RSS) feed, information update from a Web 2.0 application, and Internet
- 5 blog.
- 1 21. (Original) An apparatus for delivering context-based content to a
- 2 first user, comprising:
- an input mechanism configured to receive a set of contextual information
- 4 with respect to the first user;
- 5 a content database configured to store a collection of context-based
- 6 content;
- a content delivery mechanism configured to present content to a first user;
- 8 and
- 9 a context manager configured to process the contextual information to
- determine a context or an activity being performed by the first user, and to
- determine whether either or both the context and a current activity of the first user
- satisfy a trigger condition which has been previously defined by the first user or a
- 13 second user;

14	wherein if the context or current user activity is determined to satisfy a
15	trigger condition,
16	the context manager is further configured to select content
17	associated with the trigger condition from a content database to present to the first
18	user; and
19	the content delivery mechanism is further configured to present the
20	selected content.
1	22. (Original) The apparatus of claim 21, wherein the apparatus
2	further comprises a content management mechanism configured to allow the first
3	user to create content that is associated with the user-defined contextual or
4	activity-driven trigger condition by:
5	recording the content that is provided by the first user;
6	creating a content entry in the content database for the recorded content,
7	wherein the content entry is associated with one or more trigger conditions;
8	associating one or more trigger conditions for the content entry with a
9	user-defined context;
10	continuously comparing previously-defined trigger conditions for the
11	content entry with the ongoing context of the first user and/or user activity; and
12	when one or more trigger conditions are met, retrieving the associated
13	content and presenting the retrieved content to the first user.
1	23. (Original) The apparatus of claim 22, wherein the content
2	management mechanism is further configured to allow the first user to create
3	shareable content by:
4	recording the content that is provided by the first user; and

5	creating a content package for the recorded content, wherein the content
6	package includes the recorded content, and wherein the content package includes
7	one or more user-defined trigger conditions
8	wherein the content package allows a recipient of the content package to
9	insert, modify, and/or remove content or trigger conditions from the content

- 1 24. (Original) The apparatus of claim 21, wherein the context manager 2 defines a context by:
- 3 creating one or more context entries for the context; and
  4 associating a respective context entry with a set of contextual information.
- 1 25. (Original) The apparatus of claim 24, wherein the apparatus is 2 further configured to evolve the presentation of content over time by updating the 3 content entries in the content database and updating the user-defined context 4 entries in the context manager responsive to actions performed by the first user.
  - 26. (Original) The apparatus of claim 21, wherein presenting the selected content comprises following a number of presentation rules associated with the selected content, monitoring actions performed by the first user, and presenting the selected content based on the actions performed by the first user.
- 1 27. (Original) The apparatus of claim 21, wherein the contextual 2 information includes one or more of: time, date, location, proximity to a system-3 detectable tag, device orientation, velocity, direction, distance, vibration, altitude, 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and 5 video stream.

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package.

1	28. (Original) The apparatus of claim 21, wherein content includes
2	one or more of: audio clip, image, video stream, language lesson, e-mail, weather
3	report, calendar reminder, news feed, rich site summary (RSS) feed, information
4	update from a Web 2.0 application, and Internet blog.

11

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# **REMARKS**

The inventors of the application have been amended from the previously listed nine inventors to one inventor, Victoria M.E. Bellotti. No new matter has been added.

# **CONCLUSION**

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

By /Shun Yao/ Shun Yao

Registration No. 59,242

Date: 12 January 2009

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Electronic Ack	knowledgement Receipt
EFS ID:	4590275
Application Number:	12326457
International Application Number:	
Confirmation Number:	3430
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti
Customer Number:	35699
Filer:	A.Richard Park
Filer Authorized By:	
Attorney Docket Number:	PARC-20080172-US-NP
Receipt Date:	12-JAN-2009
Filing Date:	02-DEC-2008
Time Stamp:	12:56:33
Application Type:	Utility under 35 USC 111(a)

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#### National Stage of an International Application under 35 U.S.C. 371

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# AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS OR CREDIT ANY OVERPAYMENTS TO DEPOSIT ACCOUNT 24-0037

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Park, Vaughan & Fleming LLP 2820 Fifth Street

Davis, CA 95618-7759 Tel: (530) 759-1661

Fax: (530) 759-1665

Email: richard@parklegal.com

Respectfully submitted,

A. Ret Ver

By

A. Richard Park

Registration No. 41,241

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Title	Title of Invention CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION						
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Supple Mental Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PARC-20080172-US-NP			
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	m e nfa l ta Sheet 37 CFR		Attorney D			PARC-20080172-US-NP	
Application Da	ta Sheet 37 CFR	1.76	Application	n Numb	er		
Title of Invention	CONTEXT AND ACTIV	/ITY-D	L		<u>_</u>	ND INTERACTION	
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Applicant Author Prefix Given Na	ity O		iddle Name	,		Family Name	Suffix
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Application Data Sheet 37 CFR 1.76		Application N	Application Number				
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Customer Number	35699	***************************************		····			
Email Address	shun@parklegal.co	m			Add Email	Remove Email	
Application Info	mation:	T-0					
Title of the Invention	CONTEXT AND A	CTIVITY-DRIVEN (	CONTENT DE	LIVERY AN	D INTERACTION		
Attorney Docket Num	ber PARC-20080172-U	IS-NP	Small En	tity Status	Claimed		
Application Type	Nonprovisional						
Subject Matter	Utility	======================================		~~~~			
Suggested Class (if a	ny)		Sub Clas	s (if any)			
Suggested Technolog	y Center (if any)						
Total Number of Draw	ring Sheets (if any)	4	Suggeste	d Figure f	for Publication (	if any)	
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Supple Me น fa./ Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PARC-20080172-US-NP
		Application Number	
Title of Invention	CONTEXT AND ACTIVITY-DI	RIVEN CONTENT DELIVERY A	IND INTERACTION

# Domestic Benefit Information:

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the
application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)
(4), and need not otherwise be made part of the specification.

Prior Application Status		AND THE RESIDENCE OF THE PROPERTY OF THE PROPE	Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
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Additional Domestic Priority	Data may be generated withi	n this form by selecting	

Additional Domestic Priority Data may be generated within this form by selecting the Add button.

# Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

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Application Number	Country	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			Yes      No
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# Assignee Information:

	n in the application data sheet does ssignment recorded in the Office.	s not substitute for compliance w	vith any requirement of part 3 of Title 37
Assignee 1			
If the Assignee is an O	Organization check here.	3	
Organization Name	Palo Alto Research Center Incor	rporated	
Mailing Address Info	rmation:		
Address 1	3333 Coyote Hill Road		
Address 2			
City	Palo Alto	State/Province	CA
Country US		Postal Code	94304
Phone Number	(650) 812-4000	Fax Number	
Email Address			
Additional Assignee D	Data may be generated within t	his form by selecting the Ad	ld

# Signature:

	of the applicant or representative is required in accordance with or the form of the signature.	37 CFR 1,33 and 10.18.	Please see 37
Signature	/Shun Yao/	Date (YYYY-MM-DD)	2008-12-02

PTO/SB/14 (06-07)

Approved for use through 06/30/2010, OMB 0651-0032

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	5010	e W	1 <i>e                                    </i>	^ED 4 76	Attorney Docket Number	PARC-20080172-US-NP		
	Application	n La	rg Oliber 91	UFK 1.70	Application Number			
Title of Invention CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION								
-								
-	First Name	Shur	ì	Last Name	Yao	Registration Number	59242	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.** 

# AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS OR CREDIT ANY OVERPAYMENTS TO DEPOSIT ACCOUNT 24-0037

Please deduct any <u>underpayments</u>, credit any <u>overpayments</u>, and charge all required <u>extension of time fees</u> associated with attached filing to Deposit Account Number 24-0037.

Park, Vaughan & Fleming LLP 2820 Fifth Street

Davis, CA 95618-7759

Tel: (530) 759-1661 Fax: (530) 759-1665

Email: richard@parklegal.com

Respectfully submitted,

A. Ret Ver

By

A. Richard Park Registration No. 41,241

Electronic Patent Application Fee Transmittal							
Application Number:	12326457						
Filing Date:	02-	02-Dec-2008					
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION						
First Named Inventor/Applicant Name:	Vic	toria M.E. Bellotti					
Filer:	A.F	Richard Park					
Attorney Docket Number: PARC-20080172-US-NP							
Filed as Large Entity							
Utility under 35 USC 111(a) Filing Fees							
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)		
Basic Filing:							
Pages:							
Claims:							
Miscellaneous-Filing:							
Late filing fee for oath or declaration		1051	1	130	130		
Petition:							
Patent-Appeals-and-Interference:							
Post-Allowance-and-Post-Issuance:							
Extension-of-Time:							

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
	Tot	al in USD	(\$)	130

Electronic Acl	knowledgement Receipt		
EFS ID:	4606638		
Application Number:	12326457		
International Application Number:			
Confirmation Number:	3430		
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION		
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti		
Customer Number:	35699		
Filer:	A.Richard Park		
Filer Authorized By:			
Attorney Docket Number:	PARC-20080172-US-NP		
Receipt Date:	15-JAN-2009		
Filing Date:	02-DEC-2008		
Time Stamp:	17:26:07		
Application Type:	Utility under 35 USC 111(a)		

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Authorized User	
Deposit Account	240037
RAM confirmation Number	2923
Payment was successfully received in RAM	\$130
Payment Type	Deposit Account
Submitted with Payment	yes

# File Listing:

Document	Document Description	Eilo Namo	File Size(Bytes)/ Multi		Pages
Number	Document Description	File Name	Message Digest	Part /.zip	(if appl.)

	1 Authorization-deposit-account	22357			
1	Miscellaneous Incoming Letter	PARC.pdf	59aea09cfba68e3abf4a3fb5844996b4e24c e323	no	1
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Information:					
2	Oath or Declaration filed	Ozah zade	101317	no	2
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Information:					
3	Fee Worksheet (PTO-06)	fee-info.pdf	29931	no	2
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#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

# National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket No. PARC-20080172-US-NP

# DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first an (if plural names are listed below) invention entitled:	nd sole inventor (if only on the subject matter w	one name is listed below) or an original, first and join hich is claimed and for which a patent is sought on th	t inventor 1e
CONTEXT A	ND ACTIVITY-DRIVEN	CONTENT DELIVERY AND INTERACTION	
the specification and claims of w	hich		
are attached hereto	OR Was filed on U.S. Application	02 December 2008 as No. 12/326,457	
I hereby state that I have revie claims. I acknowledge the duty of Federal Regulations, §1.56.	ewed and understand to disclose information	he contents of the above-identified specification, in which is material to the patentability as defined in Tit	icluiting the le 37, Code
Authorization To Permit Acces	ss To Application by F	Participating Offices	
If checked, the undersigned Japan Patent Office (JPO), and the above-identified application This box should not be checke which a foreign application claim.	hereby grants the USF I any other intellectual p is filed access to the a od if the applicant does ning priority to the above	PTO authority to provide the European Patent Office property offices in which a foreign application claiming bove-identified patent application. See 37 CFR 1.14 not wish the EPO, JPO, or other intellectual proper e-identified application is filled to have access to the application.	l(c) and (h). erty office in application.
In accordance with 37 CFR 1.1 the above-identified application, 35 USC 119(a)-(d) if a copy of been filed in the above-identified application.	4(h)(3), access will be, 2) any foreign application the foreign application ad US application, and 3	provided to a copy of the application-as-filed with re- tion to which the above-identified application claims p that satisfies the certified copy requirement of 37 C b) any U.S. application from which benefit is sought i	priority under FR 1.55 has In the above-
Authorization to Permit Access	to Application by Partici		
	a filing date before that	nited States Code, §119 of any foreign or U.S. iso identified below any foreign application(s) or of the application on which priority is claimed:	Provisional Provisional
(Number)	(Country)	(Day/Month/Year Filed)	
with the Customer Number Patent and Trademark Office attorney or agent named he	r 35699 to prosecute the connected therewith. erein to accept and following the States Patent and	tereby appoint the Patent Practitioners associated is application and transact all business in the The undersigned hereby authorized the U.S w instructions from <b>Xerox Corporation</b> as to any Trademark Office regarding this application without agant and the undersigned.	
ADDRESS ALL CORRESP		DIRECT TELEPHONE CALLS TO: (name and telephone number) Shun Yao Reg. No. 59,242	
	33	1	1

(530) 759-1667

**CUSTOMER NO. 35699** 

# **DECLARATION AND POWER OF ATTORNEY, continued**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Name of sole	e or first inventor: Victoria M. E. Bellotti	Date: 12/9/2008
Inventor's Si	gnature:	Date:
Residence: Citizenship:	612 Andover St., San Francisco, CA 94110	Mailing Address: (Same as above)
Name of sec	cand joint inventor:	
Inventor's Si	konature:	Date:
Residence:	•	Marillan Addroop
Citizenship:		Mailing Address: (Same as above)
Name of this	rd joint inventor:	
Inventor's S	ignature:	Date:
Residence:		AA Waa Addanaa
Citizenship:		Mailing Address: (Same as above)
		(Same as above)



# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS Post 1450 Alexandria, Vrignia 22313-1450 www.uspto.gov

APPLICATION NUMBER

DAVIS, CA 95618-7759

FILING OR 371(C) DATE

FIRST NAMED APPLICANT Victoria M.E. Bellotti

ATTY. DOCKET NO./TITLE PARC-20080172-US-NP

12/326,457 12/02/2008

**CONFIRMATION NO. 3430** 

**FORMALITIES LETTER** 

35699 **PVF -- PARC** c/o PARK, VAUGHAN & FLEMING LLP 2820 FIFTH STREET

Date Mailed: 01/27/2009

# NOTICE OF INCOMPLETE REPLY (NONPROVISIONAL)

Filing Date Granted

The U.S. Patent and Trademark Office has received your reply on 01/12/2009 to the Notice to File Missing Parts (Notice) mailed 12/15/2008 and it has been entered into the nonprovisional application. The reply, however, does not include the following items required in the Notice.

The period of reply remains as set forth in the Notice. You may, however, obtain EXTENSIONS OF TIME under the provisions of 37 CFR 1.136(a) accompanied by the appropriate fee (37 CFR 1.17(a)).

A complete reply must be timely filed to prevent ABANDONMENT of the above-identified application. Replies should be mailed to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

- The oath or declaration is missing.
- A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.
- Surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 was not received.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

### SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is \$130 for a non-small entity

• \$130 Surcharge.

# Replies should be mailed to:

Mail Stop Missing Parts Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450

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APPLICATION FILING or GRP ART FIL FEE REC'D ATTY.DOCKET.NO TOT CLAIMS IND CLAIMS NUMBER 371(c) DATE UNIT 12/02/2008 12/326,457 2161 1636 PARC-20080172-US-NP 28

35699 PVF -- PARC c/o PARK, VAUGHAN & FLEMING LLP 2820 FIFTH STREET DAVIS, CA 95618-7759

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Applicant(s)

Victoria M.E. Bellotti, San Francisco, CA;

**Assignment For Published Patent Application** 

Palo Alto Research Center Incorporated, Palo Alto, CA

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Domestic Priority data as claimed by applicant

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Projected Publication Date: 06/03/2010

Non-Publication Request: No

Early Publication Request: No

page 1 of 3

Title

CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION

### **Preliminary Class**

707

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STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		2161
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MIN HONG YUN et al., "Event-based multimedia object scheduling algorithm", Advanced Communication Technology, 2004, The 6th International Conference on Phoenix Park, Korea, Feb 9-11, 2004, Vol. 2, pgs. 735-740, ISBN: 89-5519-119-7.								
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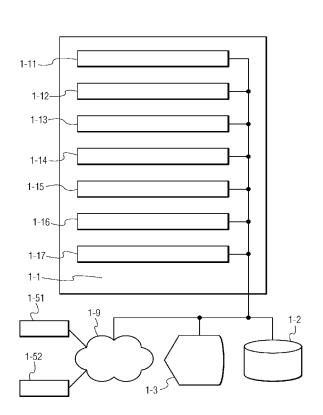
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[Continued on next page]

(54) Title: ACTIVITY-RELATED DOCUMENT MANGEMENT



(57) Abstract: A context aware environment management system (1-1), method and processorreadable medium are disclosed. The system may include a document parser (1-12) for parsing an active document (2-2) that includes setting information for user activity, the active document containing a trigger-behavior variable (2-21) and a context trigger (2-22) that includes a link to at least one target document that includes setting information for user activity and pre-conditions for the link. A list (e) of active context triggers is maintained and triggers are added when the trigger-behavior variable indicates that the context trigger is to be added. The list of active context triggers is monitored, and only the links of context triggers included on the list whose pre-conditions are satisfied is traversed. Further, the document parser (1-12) could be configured to parse a second such document (2-1) with additional or the same trigger (2-12) associated with a trigger-behavior variable (2-11).

#### 

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#### ACTIVITY-RELATED DOCUMENT MANAGEMENT

The present invention relates to the field of context aware systems, ambient intelligence environment systems, management of documents for managing user activity-related devices, and behavior-specified linking in browsers.

In recent years, more and more devices have become "wired" or connected via a network or via a central hub, making it possible to manage the functioning of these devices in an organized way. Home networks, in which household appliances and other consumer devices, are connected and may be remotely controlled, have also made begun to make their mark. Also, context aware systems and ambient intelligence systems have emerged which provide a digital environment that is sensitive, adaptive, and responsive to the presence of the people in the environment. In an ambient intelligence system, electronic devices are embedded in the furniture, clothing or other parts of the environment, and based on the user's activities detected by sensors of the system, devices are activated and services and information are delivered for the user.

In ambient intelligence environments, a user may be simultaneously using several networked devices, such that it would be desirable for the user's actions or activities with respect to one device or with respect to one activity to affect a second device or second activity. Also, more than one person often shares the environment, which causes activities of one user to affect the environment and thereby impact the second user sharing the environment. For example, in an ambient intelligence browser, the user may activate or control the operation or state of a device other than the device with which the user is directly interfaced or engaged. Such a browser may provide an interface to a user of an active document with a link, the document corresponding to a first user activity, and additional active documents corresponding to other activities of the user and the devices associated with those other activities. That is, each activity of a user could be represented by a document and the ambient intelligence browser can at any time support 0 to N activities (and corresponding documents) as active, N being a positive integer.

Each document describes how the presentation is rendered on one or more devices, that is where multimedia elements are to be presented in space (on which device and on which part of the screen, for example) and in time (some multimedia objects begin to play when others have stopped). An example of a document language that supports this

is the SMIL language defined by the W3C (http://www.w3.org/AudioVideo/). The document also describes how users can interact with the application by means of forms that describe user interface widgets such as submit buttons, dropdown lists, text fields or the like. An example of a document language that supports this is XForms (http://www.w3.org/MarkUp/Forms/). XForms is intended to be used in conjunction with a web presentation language such as HTML or SMIL. In addition to this functionality, the document has linking functionality.

XLink (http://www.w3.org/XML/Linking) is a language for describing links and, like XForms, is meant to be used in conjunction with a presentation language like HTML or SMIL. XLink (http://www.w3.org/XML/Linking) defines a "show" attribute that is also used to communicate the desired presentation of the ending resource (end point of the link; the music playing document) on traversal from the starting resource (the begin point of the link; the webcam document). However, in XLink, and in presentation languages like HTML and SMIL for which XLink was meant, only one document at any given time is active. In such systems, only one document has focus.

Co-pending U.S. Application Provisional Application No. 60/632,138, filed on December 1, 2004, incorporated in full by reference herein, discloses a system and method of managing behavior-specified links in a multiple active document environment including, providing for a set of documents to be active simultaneously, each document specifying setting information for a user activity. According to this method, several documents may by simultaneously active, such that a behavior-specified link command included in a first document is processed, and this command affects at least a second document of the active document set.

Most context-aware systems either use a fixed list of triggers or lay the burden on the end-user of controlling which triggers are active. In the first case, this often means that whenever a trigger is activated (when all its preconditions have become true), the action specified by the trigger is performed, for example, the link is traversed. However, the list of active triggers changes depending on the situation arising in the environment. For example, sometimes a user wants to be disturbed by a ringing telephone, sometimes the user does not. This means that many different triggers would have to be defined. However, the longer the list of triggers being monitored by the system, the greater the chance triggers are activated that are not supposed to be activated.

In other systems, users must consciously set and retract triggers. The designer of the system forces the end-user to manage the set of triggers. But this soon gets too difficult for end-users and the aim of achieving a truly ambient intelligence is hindered.

WO Patent 2003/101045 is directed to a physical hypertext language, a way of describing how real world devices can be controlled by a declarative language. WO Patent 2003/101045 does not describe a trigger language module that could be used in a hypertext language that describes the interaction of the user with devices in the physical world or monitoring conditions or pre-conditions associated with such triggers.

U.S. Patent Application Publication No. 2003/0182474 is directed to a way of mapping high-level device controls on low-level device implementations in a generic way, including receiving a high-level device control command, generating a specific device control script based on a device interconnect model and the high-level device control command received, interpreting the generic device control script, and transmitting specific device control commands to a device through a device interface. This reference does not teach that a user without conscious effort or even awareness can set or retract trigger modules for applications.

U.S. Patent 5,611,050 is directed to a system that grants interaction requests that have locational and contextual attributes that are consistent with specified interaction policies and denies those requests that are inconsistent. The invention electronically monitors contextual information concerning user and machines, including state and location information including proximity, and traverses links if the conditions for the link are valid. U.S. Patent 5,611,050 does not disclose a system in which the system controls or provides the event information for traversing the link without conscious effort by the user of the system.

U.S. Patent Application Publication No. 2002/0035404 is directed to a set-top box that controls the operation of certain devices designated in the script in a way somewhat similar to the way described in WO Patent 2003/101045. The patent describes that each of the scripts is initiated based on a corresponding triggering mechanism that can be set by the user via a graphical user interface (GUI). The user enters the trigger and its firing preconditions in the GUI. The system then waits for the preconditions to become true and fires the trigger. U.S. Patent Application Publication No. 2002/0035404 does not disclose a context aware system in which the user does not consciously

set/deactivate triggers.

A context aware environment management system, method and processor-readable medium are disclosed. The system may include a document parser configured to parse an active document that specifies setting information for user activity, the active document containing a trigger-behavior variable and a context trigger that includes a link to at least one target document specifying setting information for user activity and preconditions for the link; a context trigger list manager configured to add the context trigger to a list of active context triggers when the trigger-behavior variable indicates that the context trigger is to be added; such that the context trigger list manager configured to monitor the list of active context triggers, and to traverse only the links of context triggers included on the list whose pre-conditions are satisfied.

Further in this system, the document parser could be configured to parse a second document specifying setting information for user activity containing the context trigger and a second trigger-behavior variable associated with the context trigger; and the context trigger list manager may be deployed to remove the context trigger from the list when the second trigger-behavior variable indicates that the context trigger is to be removed from the list.

Also, in this system, the document parser may reach the context trigger in the active document based on an event related to the user activity specified by the document. Moreover, this system may be an ambient intelligence engine that includes a browser and the link may be a behavior-specified link managed by the browser.

According to this system the document manager of the ambient intelligence engine may be able simultaneously to maintain at least one additional document as an active document.

Figure 1 illustrates a schematic view of a context aware environment management system according to an embodiment of the present invention.

Figure 2 illustrates a browser module according to an aspect of the present invention providing user interface with active documents.

Figures 3A and 3B illustrate a flowchart for an operation of a context aware environment management system according to an aspect of the present invention.

Figure 4 is a flow diagram showing aspects of system states according to an embodiment of the present invention.

The following discussion and the foregoing figures describe embodiments of Applicant's invention as best understood presently by the inventor however, it will be appreciated that numerous modifications of the invention are possible and that the invention may be embodied in other forms and practiced in other ways without departing from the spirit of the invention. Further, features of embodiments described may be omitted, combined selectively, or as a whole, with other embodiments, or used to replace features of other embodiments, or parts thereof, without departing from the spirit of the invention. The figures and the detailed description are therefore to be considered as an illustrative explanation of aspects of the invention, but should not be construed to limit the scope of the invention.

As shown in Figure 1, the context aware environment management system 1-1 includes several modules, which will be described below. Modules of the activity-related document management system 1-1, or portions thereof, and/or the activity-related document management system as a whole, may be comprised of hardware, software, firmware, or a combination of the foregoing, however some modules may be comprised of hardware for example, while other modules may be comprised of software, firmware or a combination thereof.

It is to be understood that modules of the activity-related document management system need not all be located or integrated with the same device. A distributed architecture is also contemplated for the activity-related document management system, which may "piggy-back" off of suitable modules provided by existing devices.

The following description will refer to a context aware environment management system 1-1 that is physically integrated with or connected to a database 1-2 via a wired or wireless connection thereto. The database 1-2 may be embodied on a storage device such as on a hard drive of a personal computer, a personal video recorder, an entertainment system, an electronic organizer, a personal handheld device, a Jaz drive, or may be embodied as a commercial storage facility, such as a disk drive. For example, a commercial storage facility may include a storage space provided by a service provider, or residing in the network. It will be understood that the database 1-2 may include several storage devices that are connected, such that organization or grouping of content items on two or more of such devices is possible. For example, the data may be distributed over

devices in a peer-to-peer network. By way of example, data derived from sensors may thus be handled. It will further be understood that the database may be understood to include one or more storage media, such as disks, including CDs, DVDs, zip disks, floppy disks, data cartridges, or the like, which can be loaded onto and retrieved by the database 1-2. However, it will be understood that the context aware environment management system 1-1 is also capable of retrieving content via a network 1-9, such as a LAN, WAN, the internet, or the like, and that the database may be remotely connected, such as via a network, including the internet.

As shown in Figure 1, context aware environment management system 1-1 includes a document manager 1-11 which manages documents currently active in the system. For example, context aware environment management system 1-1 may include a browser or be logically connected to a browser, or browser module, as shown in Figure 2, including an ambient intelligent browser. The ambient intelligence browser may also be understood as comprising a module or network node outside of the context aware environment management system 1-1, for example as a kind of navigation browsing assistant. Alternatively, the context aware environment management system 1-1, including the document manager 1-11, may be understood as the ambient intelligence browser plus the extra functionality discussed herein and shown as the context aware environment management system 1-1.

Also, device 1-52 and sensor 1-51 may be connected in a wired or wireless mode directly to the context aware environment management system 1-1 or to a device physically integrated with the context aware environment management system 1-1, or as shown in Fig. 1 may be connected to the context aware environment management system 1-1 via a network 1-9, such as wired home network application, or other type or wired or wireless network, including a LAN, a WAN or the internet.

As shown in Figure 2, according to an aspect of the present invention the context aware environment management system 1-1 may provide for several simultaneously active documents, shown as display document, 2-1, telephone document, 2-2, and phone ringing document 2-3. Such documents may control devices associated with activities performed by the user, such as CRT monitor or flat panel display or the like controlled by display document 2-1, telephone function controlled by telephone document 2-2, and phone ringing functions controlled by the phone ringing document 2-3. Several

sets of such documents may be simultaneously active, each set corresponding, for example, to a different user. The browser module shown in Figure 2 may be integrated with the document manager 1-11 of the context aware environment management system 1-1 or be a separate module, as discussed.

According to an aspect of the present invention, in an ambient intelligence environment, a document or a set of several documents may be created or destroyed by the system responsive to the activities of the user. For instance, when a user walks into a living room, based on sensor information detecting the presence and/or activities of the user, various devices may be activated for providing services or information to or for the user. Each activity may spawn one or several documents corresponding to a device or devices. As stated, such devices may be stand-alone devices or device embedded in the environment. For example, much of the interaction in an ambient intelligence environment is derived from sensor data without the need for conscious intervention or even knowledge by the user. A common example of such a sensor is the one used near a door that automatically slides open when somebody stands in front of the door.

According to an aspect of the present invention, the document manager 1-11 drives the browser or is integrated therewith, and the browser manages controls the direct user interface with both documents. Accordingly, the timing and synchronization of media elements is controlled centrally because otherwise the total presentation could run out of synchronization because different devices use different clocks. Controller 1-17 performs other functions of the activity-related management system 1-1, such as overall coordination of the modules and interfacing with a user (not shown) via user interface/browser 1-3.

#### The instruction:

```
<link id="link1" behaviour="add" from="."
to=http://anengine:8080/query?type=music playing/>
```

is an illustrative example of a format for a type of behavior-specified link that specifies that the reference to the document specified by its URL is to be added to the set of active documents. In the example set forth in the above-enumerated code, the behavior-specified link includes an "add" command, which means that the retrieved document is added to the set of active documents currently managed by the document manager 1-11 of the context aware environment management system 1-1. However, the links need not be behavior specified.

As shown in Fig. 2, the documents contain triggers 2-12 and 2-22, respectively, that include links to other documents. The documents may contain several such triggers, including multiple triggers with links to the same target documents. Documents may also contain no triggers. An instruction or behavior could also be associated with the link. Such a request for a document or behavior-specified link would be triggered when processing reaches that portion of the document and the behavior associated with the link would determine what action would be performed after the target document is accessed. For example, a given part of the target document could be retrieved and displayed, or the target document could be added or removed from the active list. Also, several links may be included in a trigger.

The document parser 1-12 parses the document based on actions of the user or based on events in the ambient intelligence environment that affect the document, and may determine what portions of the document are executed. When a context trigger is reached, the trigger, including pre-conditions and the link, may be added to or removed from a current trigger list as shown in Figure 4, column (e).

The following segment of code illustrates such a trigger and trigger behavior variable 2-21.

The section of code after is the link section beginning with link which specifies that the document following the to= specifier is to be accessed when the link is traversed. As explained above, the link behavior specifies actions that are to be performed after the party document is accessed. For example, the document may be added to the active set of documents as in the current example, or the document may be removed from the active set if the link behavior specifies a different behavior.

The trigger behavior variable is shown in the first line of the code example. The segment:

```
behaviour="add"
```

specifies that the trigger that follows, including the link and the preconditions for the link, are to be added to the current trigger list as a currently active trigger. The specifier id=telephoneSound

identifies this trigger for the context aware environment management system 1-1. This will be especially useful for tracking the trigger once it is on the current trigger list.

The code beginning with until is a pre-condition section of the trigger. The pre-condition section includes the conditions that must be satisfied if the link of the trigger is to be traversed after it has been placed onto the current trigger list monitored by the context trigger list manager 1-14.

Similarly, the following code segment shows that this same trigger can be removed by specifying in the trigger a behavior variable indicating that the trigger is to be removed, such as by including the specifier behaviour="remove" as shown below:

This code segment comprising a trigger and trigger behavior variable may be provided in the same document as the first code segment containing this trigger or may be contained in a different document. In response to the execution by the document parser 1-12 of the first code segment, the trigger including the link and the precondition segment will be added to the current trigger list. In response to the execution by the document parser 1-12 of the second code segment, this trigger will be removed from the current trigger list.

According to an aspect of the present invention, this trigger behavior specifier provides for a much more controlled, balanced way of trigger control and keeps smaller the active triggers that the system monitors. The list of triggers is kept small because endusers set and retract triggers in the documents through their interactions with the

environment and devices in the environment, but the trigger add and remove commands in the documents have been specified by the designer of the documents. Because multiple documents can be active at any time, one document can set a trigger that causes another document to be added or deleted from the active document set, as explained above with regard to the behavior specified links.

Figure 4 is a flow diagram showing aspects of system states as necessary for the present example. Column (a) of Figure 4 shows the sensors/outputs arranged in the environment, column (b) shows status of the display document, column (c) shows status of the telephone document, column (d) shows status of the phone ringing document, and column (e) shows at various moments in time the set of context triggers monitored on the current trigger list by the context trigger list manager 1-13 of the context aware environment management system 1-1.

An operation of an embodiment of the context awareness environment management system 1-1 will now be given with reference to an example involving a single user and a small number of active documents. It will be understood of course that this simple example using a few active documents and several context triggers is provided only to illustrate aspects of the Applicants invention.

Sensor 1, shown for example as Sensor 1-51 of Figure 1, is activated when a user walks into a living room, shown at S1 of Figure 3A and at column (a), row 3 of Fig. 4. Various types of such sensors are known, such as light-sensitive sensors. At this point, the current trigger list still contains no triggers. Fig. 4 at (e2) shows that the current trigger list is empty at this point {null}. (This example may be an over simplification, since in most ambient intelligence systems, there would likely to be one or more triggers on the current trigger list at this point. However, this illustration suffices for the present discussion.)

The activity/event detector 1-15 of the context aware environment management system 1-1 is provided a signal from the sensor, via a network 1-9 or directly and thus recognizes that a user is present in the living room and the document manager 1-1 activates a telephone document 2-2 of Figure 2, at S2 of Figure 3A and at (c4) of Figure 4. For example, a living room user entry document (not shown) may be selected when a user's presence is detected, which can activate the telephone document 2-2 of Figure 2 and other documents.

At S3, after the telephone document 2-2 is launched, document parser 1-12 parses the telephone document 2-2. At S3, as the document parser 1-12 processes the telephone document 2-2 shown in Fig. 2, a context trigger 2-22 with the trigger behavior variable 2, 2-21 is reached, as shown at (c5) of Figure 4.

At this point, the context trigger a 2-22 is read and interpreted by document parser 1-12. Since the trigger behavior variable 2, 2-21, shows an "add" behavior for the context trigger, at S4 context trigger list manager 1-13 adds the context trigger 2-22 to the current trigger list (e), as shown at e4 of Figure 4. From this point forward, context trigger list manager 1-13 monitors periodically the phone ring trigger contained on the current trigger list as part of monitoring all of the context triggers on the current trigger list, and if the context trigger's preconditions are satisfied, then the link in the trigger will be traversed. It will be understood that a context trigger may include more than one link, and thus have more than one document as its target.

At S5 of Figure 3a and at a7 of Figure 4, an incoming telephone call is detected. For instance, in voice over IP telephone application, the modern might sense an incoming call signal and transmit an indication of the signal to activity/event detector 1-15. Context trigger list manager 1-13 monitors the current trigger list and now identifies the preconditions of the phone ring trigger 2-22 as having been satisfied. Accordingly, link handler 1-14 of Figure 4 traverses the link to the phone ringing document 2-3 and at (d8) of Figure 4, the telephone ringing document 2-3 of Figure 2 is selected (that is, the telephone ringing document 2-3 is added to the active document set shown in Figure 2).

Document manager 1-11 of Figure 1 manages the phone ringing document 2-3 in the browser module 2-9 of the server interface 1-16 of the context aware environment management system 1-1. The phone ringing document 2-3 may be nothing more than a description of one or more audio clips of a telephone sound. At (a9) of Figure 4 and at S6 of Figure 3a, the speaker or a bell provides a telephone ring. The telephone ringing document 2-3 may then be removed from the set of active documents managed by the document manager 1-11. The de-selection of the phone ringing document is shown at d10 of Figure 4. However, this does not mean that the phone ring trigger is necessarily removed from the current trigger list, and for purposes of illustration, in the present example, this context trigger is kept on the current trigger list until it is removed pursuant to a trigger remove behavior specified in a parsed section of an active document.

At (a11) of Figure 4 and at S7 of Figure 3a, sensor II is activated as a user sits down in a chair at a display. For example, the chair may be a desk on which a computer monitor is the display. Activity/event detector 1-15 of context aware environment management system 1-1 activates the display document 2-1 of Fig. 2, as shown at (b12) of Figure 4. For example, a living room manager document (not shown) may have added a trigger (not shown) to the current trigger list, which trigger may have contained a link to the display document 2-1, which link is activated when the sensor II condition is satisfied. As a result, document manager 1-11 adds the display document 2-12 to the set of currently active documents shown in browser module 2-9 of Figure 2.

The display document 2-1 is parsed by document parser 1-12 and at b13 of Figure 4, the context trigger 2-12 is reached in the display document 2-1 of Fig. 2, as shown at S8 of Figure 3a. Context trigger list manager 1-13 of Fig. 1 adds the display trigger to the current trigger list as shown at S9 of Figure 3a, since document parser 1-12 determines that the trigger behavior variable 1, 2-11, specifies an "add" behavior. Accordingly, (e14) of Figure 4 now shows that the current trigger list contains the phone ring trigger and the display trigger. The display device is activated, as shown at a15 of Figure 4, when a section of the display document 2-1 is parsed which specifies that the display device is to be turned on.

At S10 of Figure 3a and at (b16) of Figure 4, as the document parser 1-12 continues parsing the display document 2-1, a phone ring trigger with trigger-behavior variable specifying "remove" behavior for the trigger is reached. Accordingly, as shown at S11 of Figure 3b, context trigger list manager 1-13 removes the phone ring trigger from the current trigger list. Figure 4, (e17), shows that the current trigger list now contains only the display trigger. As a result, as context trigger list manager 1-13 continues monitoring of the current trigger list from time to time, even when the preconditions set in the phone ring trigger are satisfied, the link included in the phone ring trigger will not be traversed. That is, as shown at S12 of Figure 3a and at (a18) of Figure 4, when an incoming telephone call is detected by activity/event detector 1-15, the phone ringing document 2-3 of Figure 2 will not be activated, since no link to the phone ringing document will be traversed. As result, as shown S13 and at (a20), no telephone ring is sounded.

Sensor II is activated when the user leaves the chair by the display as shown at S14 of Figure 3b and at (a21) Figure 4. Activity/event detector 1-15 detects the sensor

input of sensor II, and the display document section that specifies displaying wallpaper on the display is now reached at S15.

Further, at S16, a phone ring trigger is reached in the display document, such that the phone ring trigger has an associated trigger behavior variable including an "add" specifier, which is interpreted by document parser 1-12. Accordingly, context trigger list manager 1-13 adds the phone ring trigger back to the current trigger list as shown at (e23) of Figure 4 and at S16 of Figure 3b. Processing is stopped at S17 until further events are input to activity/event detector 1-15, such that the context trigger list manager 1-13 in continuing to monitor the current trigger list determines that preconditions of a context trigger are satisfied and invokes link handler 1-14 to traverse the link included in the trigger.

While there has been shown and described what is considered to be preferred embodiments of the invention, it will, of course, be understood that various modifications and changes in form or detail could readily be made without departing from the spirit of the invention. It is therefore intended that the invention be not limited to the exact forms described and illustrated, but should be constructed to cover all modifications that may fall within the scope of the appended claims.

### **CLAIMS:**

 A method of managing a context aware environment, the method comprising:

parsing (S3) an active document (2-2) that specifies setting information for user activity, the active document containing a trigger-behavior variable (2-21) and a context trigger (2-22) that includes at least one pre-condition for a link to at least one target document specifying setting information for user activity and the link to the target document;

adding (S4) the context trigger to a list of active context triggers when the trigger-behavior variable indicates that the context trigger is to be added; and monitoring the list of active context triggers by a context aware system (1-1), and traversing (S5) only the links of context triggers included on the list of active context triggers whose pre-conditions are satisfied.

2. The method of claim 1, further comprising:

parsing (S7) a second document (2-1) that specifies setting information for user activity and that contains the context trigger (2-12) and a second trigger-behavior variable (2-11) associated with the context trigger; and

removing (S11) the context trigger from the list of active context triggers when the second trigger-behavior variable indicates that the context trigger is to be removed from the list of active context triggers.

- 3. The method of claim 1, wherein the context aware system is an ambient intelligence engine that includes a browser (2-9) and the link is a behavior-specified link managed by the browser.
- 4. The method of claim 3, wherein the ambient intelligence engine simultaneously maintains at least one additional document as an active document.
- 5. The method of claim 3, wherein the behavior-specified link links to a plurality of documents.

 The method of claim 1, wherein the context trigger in the active document is reached based on an event related to the user activity specified by the document.

- 7. The method of claim 2, wherein the first document and the second document are the same document.
- 8. The method of claim 2, wherein the first document and the second document are different documents.
- 9. A context aware environment management system comprising:
  a document parser (1-12) configured to parse an active document (2-2) that
  specifies setting information for user activity, the active document containing a triggerbehavior variable (2-21) and a context trigger (2-22) that includes pre-conditions for a link
  to at least one target document specifying setting information for user activity and the link

a context trigger list manager (1-13) configured to add the context trigger to a list of active context triggers when the trigger-behavior variable indicates that the context trigger is to be added; and

said context trigger list manager configured to monitor the list of active context triggers, and to traverse (S5) only the links of context triggers included on the list whose pre-conditions are satisfied.

### 10. The system of claim 9, wherein:

to the at least one target document;

said document parser (1-12) is configured to parse a second document (2-1) that specifies setting information for user activity containing the context trigger (2-12) and a second trigger-behavior variable (2-11) associated with the context trigger; and

said context trigger list manager (1-13) is configured to remove the context trigger from the list when the second trigger-behavior variable indicates that the context trigger is to be removed from the list.

11. The system of claim 9, wherein the document parser reaches the context trigger in the active document based on an event related to the user activity specified by the document.

- 12. The system of claim 9, wherein the system is an ambient intelligence engine that includes a browser (2-9) and the link is a behavior-specified link managed by the browser.
- 13. The system of claim 12, wherein a document manager of the ambient intelligence engine simultaneously maintains at least one additional document as an active document.
- 14. A processor readable medium incorporating a program of instructions executable by a machine, the program of instructions for managing a context aware environment, the program comprising:

means for parsing (1-12) an active document that specifies setting information for user activity, the active document containing a trigger-behavior variable and a context trigger that includes pre-conditions for a link to at least one target document specifying setting information for user activity and the link to the target document;

means for adding (1-13) the context trigger to a list of active context triggers when the trigger-behavior variable indicates that the context trigger is to be added; and

means for monitoring (1-13) the list of active context triggers by a context aware system, and traversing only the links of context triggers included on the list of active context triggers whose pre-conditions are satisfied.

15. The medium incorporating the program of instructions of claim 14, comprising:

means for parsing (1-12) a second document that specifies setting information for user activity and the context trigger and a second trigger-behavior variable associated with the context trigger; and

means for removing (1-13) the context trigger from the list of active context

triggers when the second trigger-behavior variable indicates that the context trigger is to be removed from the list of active context triggers.

- 16. The medium incorporating the program of instructions of claim 14, wherein the instructions provide an ambient intelligence engine that includes a browser and the link is a behavior-specified link managed by the browser.
- 17. The medium incorporating the program of instructions of claim 16, wherein the ambient intelligence engine simultaneously maintains at least one additional document as an active document.
- 18. The medium incorporating the program of instructions of claim 14, wherein the context trigger in the active document is reached based on an event related to the user activity specified by the document.
- 19. The medium incorporating the program of instructions of claim 14, wherein the first document and the second document are the same document.
- 20. The medium incorporating the program of instructions of claim 14, wherein the first document and the second document are different documents.

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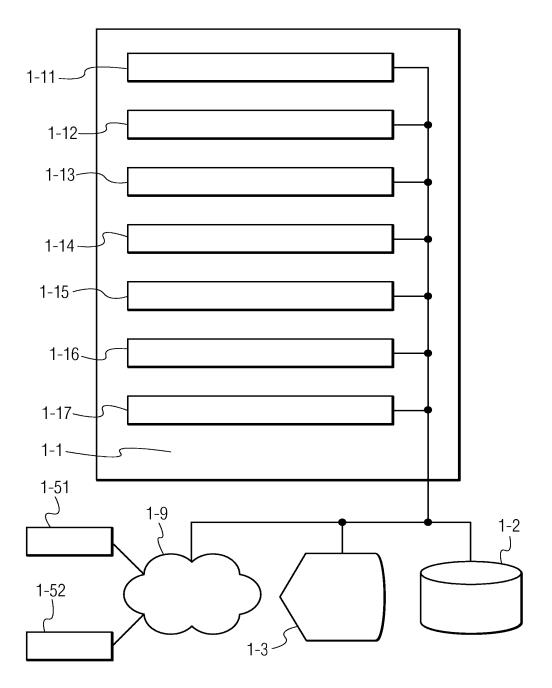


FIG. 1

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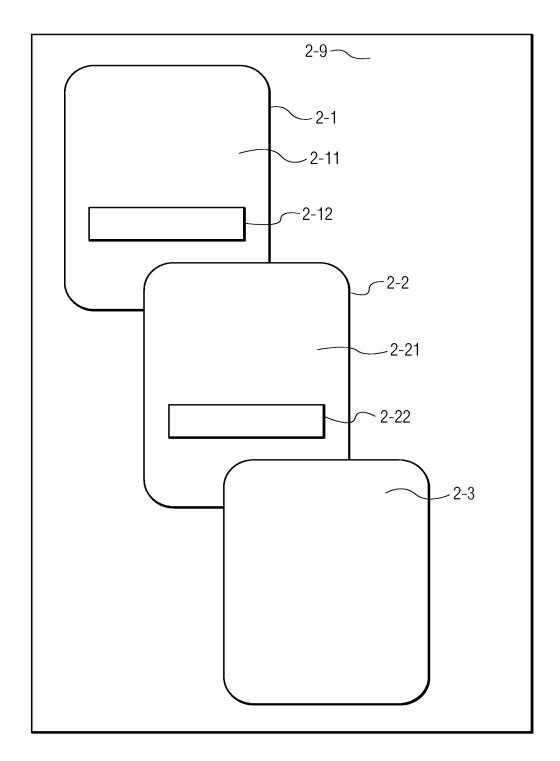


FIG. 2

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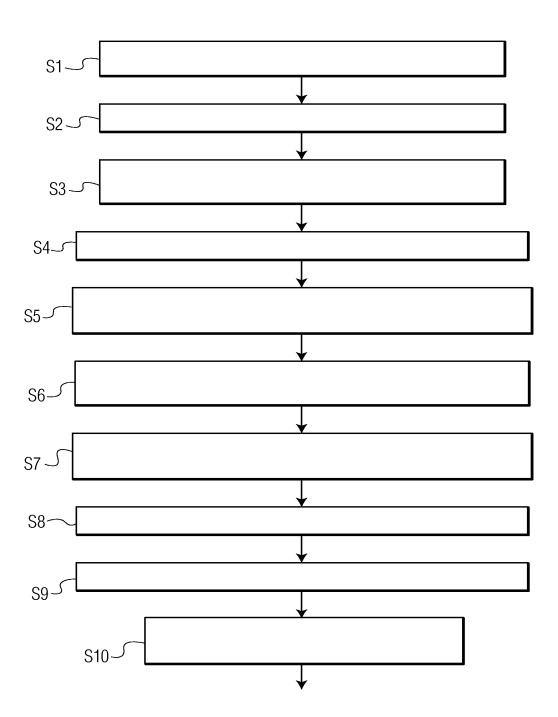


FIG. 3A

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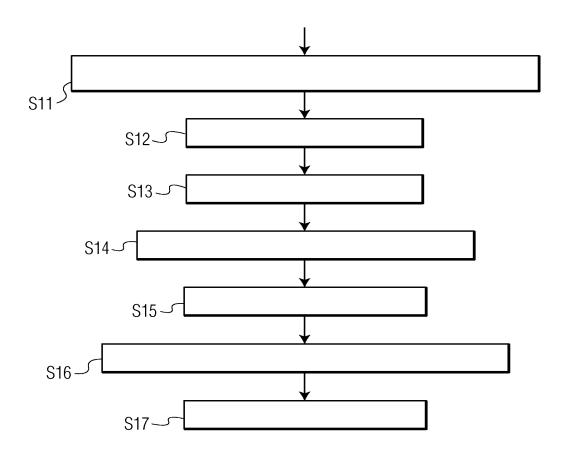


FIG. 3B

(a)	(b)	5/5 (c)	(d)	(e)
(1)				
(1) (2) (3)				
(3)				
(4)				
(5)				
(6)				
(7)				
(8)				
(9)				
(10)				
(11)				
(12)				
(13)				
(14)				
(15)				
(16)				
(17)				
(18)				
(19)				
(20)				
(21)				
(22)				
(23)				

FIG. 4

# INTERNATIONAL SEARCH REPORT

International application No PCT/IB2006/051229

A. CLASSIFICATION OF SUBJECT MATTER INV. G06F17/30 According to International Patent Classification (IPC) or to both national classification and IPC Minimum documentation searched (classification system followed by classification symbols) G06F Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX C. DOCUMENTS CONSIDERED TO BE RELEVANT Category\* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. MIN HONG YUN ET AL: χ "Event-based 1 - 20multimedia object scheduling algorithm" ADVANCED COMMUNICATION TECHNOLOGY, 2004. THE 6TH INTERNATIONAL CONFERENCE ON PHOENIX PARK, KOREA FEB. 9-11, 2004, PISCATAWAY, NJ, USA, IEEE, vol. 2, 9 February 2004 (2004-02-09), pages 735-740, XP010703054 ISBN: 89-5519-119-7 abstract section "Event-based Scheduling Algorithm" section "Scheduler Architecture" figures 6-8; tables 1-5 -/---Further documents are listed in the continuation of Box C. See patent family annex, Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international filing date "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled "O" document referring to an oral disclosure, use, exhibition or document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 17 July 2006 28/07/2006 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Schmidt, A

Form PCT/ISA/210 (second sheet) (April 2005)

## INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2006/051229

Continua	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	
tegory*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	US 5 611 050 A (THEIMER ET AL) 11 March 1997 (1997-03-11) cited in the application abstract; figure 15 column 23, line 56 - column 24, line 26	1-20
Γ	AL-BIN-ALI F: "Design Principles for Inducing Reactivity in Ubiquitous Environments" PERVASIVE SERVICES, 2004. ICPS 2004. IEEE/ACS INTERNATIONAL CONFERENCE ON BEIRUT, LEBANON 19-23 JULY 2004, PISCATAWAY, NJ, USA, IEEE, 19 July 2004 (2004-07-19), pages 131-139, XP010760003 ISBN: 0-7695-2535-0 the whole document	1,9,14
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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2006/051229

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
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(54) Title: PROXIMITY-A WARE VIRTUAL AGENTS FOR USE WITH WIRELESS MOBILE DEVICES

(57) Abstract: Systems and methods are provided for facilitating the discovery of items, individuals, locations and business services that are relevant to the context of an individual (including, e.g., who an individual is, what an individual is looking for, where an individual is, the current time and/or date), facilitating post-discovery notifications (such as notifying the user or users), and executing post-discovery actions (such as making an offer to buy a product or prompting to add the user to an individual's personal network). Accordingly, in implementations of the present invention, agents are configured by the individual and deployed to or by the individual's computerized device (e.g., a mobile device, desktop computer, laptop computer, Internet appliance and/or server).



# PROXIMITY-AWARE VIRTUAL AGENTS FOR USE WITH WIRELESS MOBILE DEVICES

## CROSS REFERENCE TO RELATED APPLICATION(S)

This application claims the benefit of priority under 35 USC §119(e) of U.S. Provisional Patent Application Serial No. 60/736,729, filed on November 15, 2005, the contents of which are hereby incorporated by reference.

#### TECHNICAL FIELD

This disclosure relates to proximity-aware virtual agents for use with wireless mobile devices.

#### **BACKGROUND**

Agent-based technology has become increasingly important for use with applications designed to interact with a user for performing various computer-based tasks in foreground and background modes. Software agents generally relate to computer programs that are set on behalf of users to perform various tasks, including those that are routine, tedious and time-consuming. To be useful to an individual user, an agent should be personalized to the individual user's goals, habits and preferences. Thus, for optimal effectiveness, the agent should acquire user-specific knowledge from the user efficiently and effectively and utilize it to perform tasks on behalf of the user.

The concept of agency, or the use of agents, is well established. An agent is a person authorized by another person, typically referred to as a principal, to act on behalf of the principal. In this manner the principal empowers the agent to perform any of the tasks that the principal is unwilling or unable to perform. For example, an insurance agent may handle all of the insurance requirements for a principal, or a talent agent may act on behalf of a performer to arrange concert dates.

With the advent of the computer (including computerized devices, e.g., personal electronics such as PDAs and cellular telephones), a new domain for employing agents is available. Significant advances in the realm of software enable

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computer programs to act on behalf of computer users to perform routine, tedious and other time-consuming tasks.

Software agents differ from other software modules or applications because, rather than being defined in terms of methods and attributes, an agent is characterized in terms of its behavior. Software agents generally possess one or more of the following characteristics: persistence (code is not executed on demand but executes continuously and decides for itself when it should perform some activity); autonomy (agents have capabilities of task selection, prioritization, goal-directed behavior, decision-making without human intervention); social ability (agents are able to engage other components through some sort of communication and coordination, they may collaborate on a task); and reactivity (agents perceive the context in which they operate and react to it appropriately). To date, software agents generally have been utilized in computing environments having a high degree of available resources (e.g., memory and processing).

Moreover, there has been a recent proliferation of computer and communication networks, both wired and wireless. These networks permit users to access vast amounts of information and services without, essentially, any geographical boundaries. Modern networks include digital and analog cellular networks, wireless networks (*e.g.*, wireless high bandwidth protocols described by IEEE standards 802.11b, 802.11a and 802.11g), the analog telephone network (*e.g.*, POTS), voice over Internet protocol networks (known as "VoIP"), wired networks, cable television networks, and satellite-based networks. Thus, by interfacing with one or more networks, a software agent has a rich environment to perform a large number of tasks on behalf of a user.

Knowledge of a user's current location is another source of information. Although current applications are generally focused on navigation, a user's location can provide information, *e.g.*, context, that a software agent can utilize. Location can be monitored using well-known techniques such as Global Positioning System (GPS) receivers. Such receivers are becoming increasingly affordable and compact. In addition, proximity technologies exist (*e.g.*, utilizing the technologies described in

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IEEE specifications 802.15.1 (regarding Bluetooth®), 802.15.3a (regarding Wireless USB), 802.15.4 (regarding ZigBee™), and/or Radio Frequency Identification ("RFID") protocols such as ISO 14443, EPC, and ISO 18000-6) that may not necessarily determine a user's absolute location, but can be used to determine when a user is near (or proximate to) a beacon or other compatible device.

#### **SUMMARY**

In an aspect of the present invention, a system and method are provided for facilitating the discovery of items, individuals, locations and business services that are relevant to the context of an individual (including, e.g., who an individual is, what an individual is looking for, where an individual is, the current time and/or date), facilitating post-discovery notifications (such as notifying the user or users), and executing post-discovery actions (such as making an offer to buy a product or prompting to add the user to an individual's personal network). Accordingly, in implementations of the present invention, agents are configured by the individual and deployed to or by the individual's computerized device (e.g., a mobile device, desktop computer, laptop computer, Internet appliance, and/or server).

The details of one or more embodiments are set forth in the accompanying drawings and the description below. Various other features and advantages will be apparent from the description and drawings, and from the claims.

#### BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 depicts an illustrative screen layout (home screen) of the agent software.

FIGS. 2A-B depict illustrative screen layouts (match notice, presence list) of the agent software.

FIGS. 3A-C depict illustrative screen layouts (gallery screen, question screen, question response) of the agent software.

FIG. 4 is a schematic diagram of one embodiment of hardware employed in an exemplary proximity-aware virtual agent system.

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FIG. 5 is a block diagram illustrating the software modules on an agent device.

- FIG. 6 is a block diagram illustrating the modules of the central management services.
- FIG. 7 is a block diagram illustrating the software modules of the Web Application.
  - FIG. 8 is a block diagram illustrating the software modules of the Remote Service Manager.
    - FIG. 9 is a block diagram illustrating software modules of the Agent Server.
- FIG. 10 is a block diagram illustrating the software modules on a Point of Presence.
  - FIG. 11 is a flow diagram illustrating a method for executing virtual agents.
  - FIG. 12 is a flow diagram illustrating the evaluation of an agent match.
- FIG. 13 is an object model diagram representing a logical view of virtual agents.
  - FIG. 14 is an object model diagram representing the logical view of user and service agents.
  - FIG. 15A is an object model diagram representing the logical view of user attributes and user items.
  - FIG. 15B is an object model diagram representing the logical view of service attributes and service items.

## **DETAILED DESCRIPTION**

The following is a description of preferred implementations, as well as some alternative implementations, of a system and method for proximity-aware virtual agents for use with agent devices.

In some implementations, a network of devices that execute agents is deployed that execute agents. The agents receive information (e.g., from users) relating to goals. For example, an agent can be configured to look for a compatible romantic

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match having certain characteristics. When devices (which may be referred to as "agent devices") are sufficiently near each other, the agents poll each other to determine whether a match is found (*i.e.*, if another user has the desired characteristics). If a match is found, various notification and post-match functions can be performed. If a match is not found, the agent keeps looking for a match. Moreover, an agent can let a user know when his contacts (*e.g.*, friends, business associates, etc.) are nearby. While proximity is one trigger for executing an agent, it is possible for an agent to poll the entire network looking for match.

More particularly, an agent preferably includes a set of parameters that describe the dimensions a user might use in seeking to attain a particular goal. The goal can include meeting or communicating with a particular person, arriving at a particular place, and finding and/or purchasing a particular product or service. Specific values are assigned to these parameters by a user to describe the goal (e.g., a person, place, product, or service) he wishes to attain. In some implementations, when an agent finds what the user is looking for, i.e., the goal, it is referred to as a "match." There is no requirement that an agent terminate after a match. To the contrary, some agents may provide a user with multiple matches (e.g., finding a product from multiple sources, and then allowing the user or agent to determine the best option based on cost or availability). Additionally, the agent may have arbitrary descriptive data associated with it that the user may view wherever they are (e.g., a map, image, home page, status indicator), as well as instructions on what to do following a match.

Agents can be suited for use in, but not limited to, matching of individuals for romantic, social, or business purposes, identifying items a user is shopping for, contextually relevant advertising, and group-based games. For example, a dating agent could identify a potential romantic match between two individuals that are at the same social gathering (determined, e.g., by utilizing location or proximity information) by comparing information about their ideal mates with information about each other. The agent would then alert the two users, and provide some basic information (such as any friends, business contacts, or interests they may have in common) to facilitate an introduction. In the preferred embodiments, agents provide

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the ability to add personalized functionality to a agent device platform without having to deploy a whole new set of software to the device.

Agents preferably are designed to be compatible with and executed on a wide array of devices. To that end, agents can include a set of meta-data that executes on a platform that can execute the agent as defined in the meta-data. Accordingly, agents can be easily added to agent devices without the need of additional support software, *i.e.*, once the platform is loaded on the agent device, a user is free to add additional agents. The light-weight nature of this design makes them ideally suited to resource constrained environments, such as mobile phones, PDAs, and other portable and consumer electronics. Thus, agent devices can take many forms, including higher resource environments such as desktop PCs, laptop PCs, and servers.

Additionally, the agents can operate in environments where security constraints preclude the execution of arbitrary code (for example, a Java<sup>TM</sup> Platform Micro Edition sandbox, implemented in, *e.g.*, the mobile information device profile (*e.g.*, MIDP JSR 37, JSR 118, or JSR 271) or personal profile (*e.g.*, CDC JSR 36 or JSR 218)). The software on the agent device can be written in, *e.g.*, C++ or any other language/platform that can interface with the agent device operating system and application programming interface ("API").

In some implementations, the agents are configured and managed via a web site (or other network interface) and either transferred to the user's agent device via a synchronization process or executed on the server while communicating with the user's agent device. A user may have multiple agents active at any point in time. While users may use their agent device to modify the agent in real time, the small form factor of some agent devices makes data entry challenging and thus may encourage users to utilize, e.g., a larger form factor device (e.g., a laptop or desktop PC) and web interface for the data entry required to initially configure an agent.

## Agent Device Software Application

An aspect of some implementations is a software application that is executed on an agent device, e.g., a mobile phone or Personal Digital Assistant (PDA). This

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application provides a user interface and set of menu-controls allowing the user to interact with it. Additionally, it provides the engine for detection of other people, locations, services, or products nearby and for the evaluation of potential matches with each person, location, service, or product utilizing the parameters of a user's agent or agents to discover if the person, location, service, or product is of interest to the user. The user typically will leave the application executing on his agent device so it can continually search for people, locations, services, or products nearby.

A substantial portion of the activity on the user interface centers around a few core screens: the home screen, the presence list, the match notice, and the offer screen (used to display advertisements). An illustrative example of a home screen is shown in FIG. 1. The home screen shows summary information for the user, including the number of buddies (*i.e.*, those individuals that the user has identified as contacts) in the area 101, the number of people using the service in the area (labeled present 102), as well as the number of messages in the user's inbox 103 and outbox 104. From the home screen, the user can access other screens through the menus.

When a match is detected in the area, the user is presented with a pop-up match notice that contains some set of information about the person, location, service, or product with which the match occurred. An illustrative example of a match notice screen is shown in FIG. 2A. In this example, the match pertains to a person, and more particularly, is a romantic match. As shown, a photo of the match 201 is provided, as well as a match score 202 that is calculated based on the degree to which the dimensions entered by the user match those possessed by the match. The user, agent, or agent provider (*i.e.*, the party who developed or distributed the agent) can set a threshold match score that must be met before a match alert is generated. The match screen further provides some information about the match. In this case, the user is informed that the match and user share a common friend 203. The match notice screen also gives the user the option of taking action on the match. By selecting the options soft key 204, the user can view additional information, add the person to their relationships, or perform the post-match action defined by the agent. Alternatively, the user can ignore the match by selecting the ignore soft key 205.

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When people, locations, services, or products with which the user has a relationship are nearby, they appear on the presence list. An illustrative example of a presence list is shown in FIG. 2B. Whether a user has a relationship with a particular person, location, service or product can be based on, e.g., (1) the result of an agent finding a match or (2) a user manually entering certain people, locations, services, or products into the agent. From the presence list 206, the user may utilize the options soft key 204 to access additional information about the person, location, service, or product, communicate with the person, location, service, or product, or manage his relationship with the person, location, service or product. For example, the user can highlight an entry on the presence list (in this example Jack, entry 207, is highlighted), and proceed to (1) retrieve additional information about Jack (e.g., from data stored on Jack's agent device or from data associated with Jack elsewhere in the network), (2) communicate with Jack (e.g., telephonically, text message, photo message, video message), and/or (3) change the relationship status with Jack (e.g., delete him from the presence list, change him from a personal contact to a business contact, enable/disable proximity notification, set privacy settings).

An example of information that can be retrieved about a match is a picture gallery containing a set of images that others can view. An illustrative example of such a picture gallery is shown in FIG. 3A. As in this example, a user can have pictures of herself. The user also (or instead) can include images of her business card, resume, or things representing her personal interests. If the match is a product, the image gallery can contain, *e.g.*, images of the product, instructions, capabilities, and/or locations to purchase the product. If the match is a location, the image gallery can contain, *e.g.*, images of the location, nearby landmarks, and the staff currently on duty. If the match is a service, the image gallery can contain, *e.g.*, images of where the service can be found, the person(s) performing the service, and past results. Match information for people, products and services can be found in the form of text, images, structured data, links, audio, video and other device consumable or actionable formats.

A user can communicate with others in a variety of ways, including writing his own messages, sending pre-written messages, or using standard questions. Users can

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communicate with others as a result of an agent finding a match, or a user may manually select a person, location, product or service via the presence list.

Standardized questions are an aspect of the question wizard feature. Standardized questions allow individuals to get more information about a person, location, service or product without having to spend a lot of time writing messages back and forth. Standardized questions are customized for different categories of people (e.g., romantic, friend, or business), locations (e.g., parks, stadiums, or restaurants), products (e.g., consumer electronics, foodstuffs, automobiles) or services (e.g., medical services, accountants, plumbers, contractors, car services). An illustrative example of romantic standardized questions are shown in connection with FIGS. 3B and 3C. When the recipient receives a question 301 (as in FIG. 3B), the user can select from multiple-choice list 302(as shown in FIG. 3C) and the results are returned to the originating user. One of skill in the art could appreciate that many different type of standardized questions can be associated with the different categories of people, locations, services, and products.

## Additional Features of the Agent Device Software Application

The user interface and agent device support many other features. For example, proximity detection detects the presence of nearby agent devices or known fixed locations (e.g., point of presence beacons or products) through, e.g., wireless technology such as Bluetooth® point of presence detection, RFID, ZigBee<sup>TM</sup>, WiFi®, or WiMax or comparison to a geographic location stored in a database. Presence detection may utilize, e.g., Bluetooth® discovery, GPS (or assisted GPS) proximity detection, or other detection mechanisms. The detection of another agent device or fixed location can trigger the friend finder and matching agent capability as is appropriate (discussed below).

The friend finder feature notifies the user when others are nearby with whom the user has an existing relationship. The presence list (e.g., FIG. 2B) shows basic information (e.g. user alias, picture, and relationship category) for each related user that is nearby. Relationships can be stored in a list on the agent device, as well as in a

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central database, and can be managed both through the mobile application user interface and the web site.

The matching agents look for people, locations, services, or products nearby that match the user's interest, based upon information the user has entered for the parameters of each agent. For example, a user in the market for an automobile may set parameters to indicate that he is looking for a 2004 low-mileage black sedan with a manual transmission and leather seats. The matching agent will look for, e.g., nearby car dealerships or individuals selling an automobile matching those parameters. If one is found, the matching agent will alert the user with details regarding the match. For example, if a car dealership is found, the name of the dealership, a photo of the car and directions to the dealership may appear. If an individual selling the car is found, the matching agent can display a picture of the individual (to simply identification) and a photo of the car. The matching agent also can effect communication between the parties. The matching agent also may alert the match that it has been discovered by the user.

The anonymous messaging feature allows a user to exchange messages with other users (including, *e.g.*, people, location, services, or products) without revealing his mobile phone number. This provides an advantage over certain existing text messaging technology, *e.g.*, short message service (known also as "SMS," standard GSM 03.41) which includes the sender's mobile phone number and provides no anonymity. Messages can be sent over the peer to peer network (*e.g.*, from agent device 418 to agent device 420) as well as anonymously via SMS with messages routed through a central server (*e.g.*, central server 408).

The question wizard feature, discussed in connection with FIGS. 3B and 3C, provides standardized questions with quick select answers so a user can pose questions to his friends and matches (from the matching agent) without typing a word.

The photo gallery feature, discussed in connection with FIG. 3A, allows a user to view other user's picture galleries on an agent device. It helps users recognize faces in the crowd and evaluate any matches before meeting in person.

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The instant messaging feature connects with internet instant messaging services, allowing users to chat with friends on the internet, as well as those on agent devices. Preferably, the mobile application integrates instant messaging with proximity, thereby providing indications of when a user's friends are nearby and/or online.

#### Architecture Overview

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In a particular implementation, the agent software application (*i.e.*, the one executed on the agent device) is supported by a broader set of infrastructure, consisting of both a set of central services, distributed points of presence, and user's access via the web or other network. For example, a user is able to create and update information on his PC using a web browser to access a secure internet site containing his information. Information entered into the user database via the website is synchronized to the agent device via an XML-based synchronization procedure that synchronizes new or updated information from the user database to the agent device and synchronizes new or updated information from the agent device to the user database. Additionally, the agent device may communicate with one or more central servers to support additional functionality, such as communication with other users, internet instant messaging, GPS proximity detection, RFID-based item identification, people locators, or remote agent match evaluation. The agent software application also may detect and communicate with fixed points of presence to provide one way of detecting fixed locations of interest.

FIG. 4 is a schematic outlining the physical infrastructure of an implementation. User, agent, and service data, along with core processing functions, are housed in a central hosting facility 400. Multiple hosting facilities may be used as desired to provide redundancy, fault tolerance and scalability. A user database 402 stores user information, including the data of the user, user agent, and user item objects, as well as supporting attribute value data (user attribute, user agent attribute, and user item attribute). The information in the user database 402 is discussed in more detail in connection with FIG. 15A. An agent database 404 stores data defining

the agents, including the data of the agent, agent attribute, and attribute objects. The information in agent database 404 is discussed in more detail in connection with FIGS. 13 and 14. A service database 406 stores service information, including the data of the service, service agent, and service item objects, as well as supporting attribute value data (service attribute, service agent attribute, and service item attribute). More detail regarding the information in service database 406 is provided in connection with FIG. 15B.

Additional databases may be provided for further categories of data. These databases may be physically deployed in a single database, or partitioned across multiple database instances and machines as required to support performance and fault tolerance requirements. A central server 408 is utilized to execute the server applications of the system, including the web application, the remote service manager, and the agent server (*see* discussion of FIG. 6). The application and application components may be partitioned across multiple physical servers and hosting locations as required to support performance and fault tolerance requirements. A user can connect to the web application from a mobile device or personal computer (PC) 410 using a web browser over the public internet 412 to create and maintain his profile, including, *e.g.*, user, user agent(s) and user item data, as well supporting attribute data. This also represents one manner in which a user can download agents (*e.g.*, those stored on the agent database 404, central server 408, or third party agents stored on private server 434 or point of presence 432) onto his agent device 418 or 420.

A user downloads and executes the agent platform on his agent device 418 (in this example, a cellular phone, but the user's PC 410 could be an agent device as well). In the illustrated embodiment, the agent device supports Java<sup>TM</sup> Micro Edition (J2ME<sup>TM</sup>), JSR-82 and/or JSR-179. Once the agent platform is on the agent device, the user is free to add additional agents to his agent device without the need to update or download additional software. The agents on the agent device 418 can interact with another agent device 420 executing the software or a local point of presence 432. The agent device 418 or 420 can communicate with the central server 408, other agent devices or other servers via standard mobile and internet protocols (e.g., SMS, MMS, HTTP, WAP, IP) over the network 414 of the carrier with whom the user has a

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subscription for mobile voice/data services. Some carriers have multiple networks, and as such, the agent device can use any of the carrier's networks. Alternatively, a carrier may allocate one of its networks or a certain part of bandwidth for communication in other ways.

A location 430, such as a retail store or a bar, may make itself known to the system by installing a local point of presence beacon 432. The point of presence beacon 432 can include, e.g., a PC, a workstation, server, internet appliance or hub that communicates with the central agent server and remote service manager (of central server 408, see also items 604 and 606 of FIG. 6) over a network, preferably, the public internet 412. The point of presence beacon 432 also can include storage capability and means for wireless communication and proximity detection (e.g., to alert agent devices when they are nearby). A point of presence also may provide content to users. In the case of a retail store, the content may include product inventory, product images, product prices and store hours. Such information can be stored on a private server 434 that communicates with point of presence beacon 432. The contents of private server 434 are not directly accessible to users, but rather the point of presence beacon 434 acts as a liason between users and the private server. 434. Private server 434 may be remote to point of presence beacon 432. However, it is also possible to integrate the point of presence beacon 432 and private server 434 into a single piece of hardware, e.g., a server that both stores content data and performs the functions of the point of presence beacon 432. Point of presence beacon 432 can communicate with central server 408 via a private network or a virtual private network ("VPN").

## 25 Agent Device Software Application Architecture

FIG. 5 is a block diagram representing the components of the virtual agent platform 502 that reside on an agent device, e.g., 418 of FIG. 4. As discussed, the agent device may be any number of electronic devices, including a mobile phone, personal digital assistant (PDA), PC, or a mobile device with an operating system (OS) that supports third party software (i.e., software not created by the device

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manufacturer). The agent device OS 518 provides functions for interfacing with the agent device hardware, including network access, Bluetooth®, PAN (personal area network), WPAN (wireless personal area network), global positioning system (GPS), storage, memory management, other applications and data executing on the agent device and other capabilities common in operating systems. In some embodiments, the virtual agent platform utilizes the Java<sup>TM</sup> 2 Platform, Micro Edition (J2ME<sup>TM</sup>) standard, along with the related CLDC (JSR-30, JSR-139) and MIDP (JSR 118) standards.

User information is stored in the user data store 520 on the agent device 418. This includes the user, user attribute, user agent, user agent attribute, user item, and user item attribute data (see FIGS. 14 and 15A). This data can be replicated onto the user database 402 of FIG. 4. The virtual agent platform is made up of a number of key modules. The user interface (UI) layer 504 is responsible for displaying information to the user and accepting user input. This includes displaying a list of agents available on the device, displaying notifications or other post-match agent actions, and accepting user response to the action. The event distributor 506 provides a light-weight mechanism for letting the user interface or other modules know about events published by other modules. Examples of these events might be an agent match or the discovery of a nearby user or point of presence. The network manager 516 manages all interaction with a number of network protocols and types, including data connectivity with the central services using HTTP and/or IP, SMS receipt/sending, Bluetooth® or other PAN network connectivity, and location services. The network message distributor 514 routes incoming network messages to the appropriate network message handler. Handlers are registered to handle specific network messages according to a message type identifier.

On the agent device 418, the core agent functionality is handled by an agent manager 510 and an agent engine 508 with support from a synchronizer 512. The agent manager 510 determines whether to deploy zero or more agents when another user, item, or service is within a defined proximity of the agent device or when it receives another event relevant to an agent. The agent manager 510 receives events from the network and deploys the appropriate agent registered to handle one or more

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events. The agent engine 508 performs the actual evaluation of the agent utilizing the agent parameters and the appropriate attribute data of the target user, service or item. Certain agents, known as proxy agents, cause the agent engine 508 to communicate with the central agent server (e.g., server 408 of FIG. 4) for evaluation of the agent. This is useful for more complex agents where the processing could overwhelm the capabilities of the agent device 418, or that is otherwise better executed on a more robust platform like central server 408. The synchronizer 512 manages the replication of data to and from the relevant databases, including user, user attribute, user agent, user agent attribute, user item, and user item attribute data (e.g., user database 402 of FIG. 4).

#### Central Service Architecture

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FIG. 6 depicts components of the central services in greater detail. Web application 602, remote service manager 604, and agent server 606 are aspects of a central server, e.g., 408 of FIG. 4. While it is preferred that all of these aspects are integrated into a single server, for purposes of fault tolerance, scalability, and/or reliability, each aspect 602, 604, and 606 may reside on separate servers. Each aspect 602, 604, and 606 can utilize application server technologies and languages, e.g., C#, C++, Perl, and PHP (hypertext preprocessor). The web application 602 provides users with the ability to create, manage, and update the data about themselves (user and user attribute), their agents (user agent and user agent attributes) and their items (user item and user item attribute). The remote service manager 604 provides the communication link to the agent device. It can utilize web services, e.g., HTTP, IP. and XML, to support this communication. The agent server 606 provides serverbased ability to initiate and evaluate agent matches. This may be used to facilitate server-side matching in support of the website, or to support proxied agent evaluation. Proxied agent evaluation occurs when the agent software application determines that an agent it is evaluating is proxied (the agent has a flag indicating if it is proxied or not), and the agent software application makes a request to the agent server to evaluate the agent. As discussed in connection with FIG. 4, data that supports these

processes are stored in the user database 402, agent database 404 and service database 406.

FIG. 7 is a block diagram depicting components of the web application 602. The web application 602 is designed to be executed by a server (e.g., server 408 of FIG. 4) and utilize the server capability, including storage and memory management, networking and computational power, via the server OS 702. In the illustrated embodiment, the web application executes within a Java<sup>TM</sup> 2, Enterprise Edition (J2EE<sup>TM</sup>) application server 704 to provide the basic functionality of a web-enabled application, including session management, load balancing, server-side scripting, user authentication and authorization, and process partitioning. The basis of the web application is a model-view-controller (MVC) architecture which separates the user interface pages, the navigational logic and the business logic. The model 706 contains a physical implementation of the object model detailed in FIGS. 13, 14, and 15A. The object model describes the framework utilized by the agent matching process to find matches.

The user interface ("UI") layer 714 produces the web pages the user sees in his browser. These pages consist of many sub-components to facilitate reuse of common visual elements, such as a page header, footer, and main menu. Navigation or the control part of the MVC architecture is handled by the UI framework 712, which handles browser requests by getting the appropriate model objects and feeding them to a view in the UI layer. The UI framework 712 also supports the submittal of hypertext markup language ("html") forms with data from the user, the validation of the data, and the incorporation of the data into the model 706. The data access object (DAO) model 708 mediates between the underlying databases (e.g., databases 402, 404, and 406 of FIG. 4) and the model 706 and encapsulates all necessary logic to do so. The services layer 710 provides the UI framework 712 with a series of methods to access the DAO 708 for retrieving, updating or storing objects in the database.

FIG. 8 is a block diagram depicting components of the remote service manager (RSM) 604. The remote service manager is designed to be executed by a server (e.g., server 408 of FIG. 4) and utilize the server capability, including storage

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and memory management, networking, and computational power, via the server OS 702. In the illustrated embodiment, the remote service manager executes within a Java<sup>TM</sup> 2, Enterprise Edition (J2EE<sup>TM</sup>) application server 704 to provide the basic functionality of an internet-enabled service, including session management, load balancing, server-side scripting, user authentication and authorization, and process partitioning. The model 806 contains a physical implementation of the object model detailed in FIGS.13, 14 and 15A. The network manager 812 handles inbound requests for the RSM by providing networking, authentication and authorization, and request routing. Inbound requests are routed to registered handlers according to an identifier in the message. The data access object (DAO) model 808 mediates between the underlying databases (e.g., databases 402, 404 and 406 of FIG. 4) and the model and encapsulates all necessary logic to do so. The services layer 810 provides the network manager 812 with a series of methods to access the DAO 808 for retrieving, updating or storing objects in the database. The services layer 810 also contains the handler for synchronizing messages from an agent device.

FIG. 9 is a block diagram depicting components of the agent server 606. The agent server is designed to be executed by a server (e.g., server 408 of FIG. 4) and utilize the server capability, including storage and memory management, networking and computational power, via the server OS 702. In the illustrated embodiment, the agent server executes within a Java<sup>TM</sup> 2, Enterprise Edition (J2EE<sup>TM</sup>) application server 704 to provide the basic functionality of an internet-enabled service, including session management, load balancing, server-side scripting, user authentication and authorization, and process partitioning. The model 906 contains a physical implementation of the object model detailed in FIGS. 13, 14 and 15A. The network manager 918 handles inbound requests for the agent server by providing networking, authentication and authorization, and request routing. Inbound requests are routed to registered handlers according to an identifier in the message. The data access object (DAO) model 908 mediates between the underlying databases (e.g., databases 402, 404 and 406 of FIG. 4) and the model 906 and encapsulates all necessary logic to do so. The services 910 layer provides the network manager 918 with a series of

methods to access the DAO 908 for retrieving, updating or storing objects in the database.

The core capability of the agent server 606 is handled by an agent manager 914 and an agent engine 912, with an agent plug-in framework 916 providing a mechanism for customized agent handling. The agent manager 914 in the agent server 606 is similar in function to the agent manager on the agent device (e.g., item 510 of FIG. 5), in that it is responsible for deciding when to initiate agent matches. However, the agent manager 914 on the server is capable of handling a much larger volume of input triggers (e.g., the proximity of two users) and resulting decisions. The agent manager 914 would be used for server-side triggers, such as when proximity detection occurs on the server (e.g., with proximity detection between two devices using GPS or Bluetooth®). The agent engine 912 is responsible for evaluating an agent match with a target. It is used when the agent manager 914 determines an agent match should be initiated or when an agent device requests an agent match from a proxy agent.

Although discussed separately, the model, services and DAO modules can be shared by the web application 602, the remote service manager 604 and the agent server 606 as standard building blocks of each of these applications. In the illustrated embodiment, these modules are implemented as a Java<sup>TM</sup> library (also known as a "JAR") that each of the applications includes. Moreover, each module can share a common application server and operating system. Each module could alternatively be executed in separate application servers and operating systems.

## Point of Presence Architecture

FIG. 10 is a block diagram depicting components of a point of presence beacon, e.g., 432 of FIG. 4. Preferably, the point of presence beacon is designed to sit on small footprint device that contains a light weight OS 1002, such as Linux, a Bluetooth® radio transceiver (and/or other wireless communication capabilities), a network connection and data storage capability. On the point of presence beacon 432, the core agent functionality is handled by an agent manager 1010 and an agent engine

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1012, with agent plug-in framework 1016 providing a mechanism for customized agent handling and with further support from a synchronizer 1014. The network manager 1006 handles inbound requests for the point of presence 432 by providing networking, authentication and authorization, and request routing. The agent manager 1010 determines whether to deploy zero or more agents when a user (e.g., agent device) is within proximity of the point of presence 432. The agent engine 1012 performs the actual evaluation of the agent utilizing the agent parameters and the appropriate attribute data of the target user, service or item. Certain agents, known as proxy agents, cause the agent engine 1012, via the network message distributor 1008, to communicate with the central agent server (e.g., server 408 of FIG. 4) for evaluation of the agent. This is useful for more complex agents where the processing could overwhelm the capabilities of the agent device. The synchronizer 1014 manages the replication of data to and from the relevant databases, including service, service attribute, service agent, service agent attribute, service item and service item attribute data (e.g., to and from database 406). Synchronizer 1014 may also manage the replication of data with a point of presence server, e.g., 434 of FIG. 4.

Point of presence beacons can actively scan for the proximity of agents and when detected, send point of presence-initiated match requests and offer match requests. If the response to an offer match request is that a match has occurred, the appropriate offer content can be transmitted to the matched agent device and displayed and/or handled by the agent device.

An alternative light-weight implementation of the point of presence beacon includes the network manager 1006 and the network message distributor 1008. In this configuration, the network message distributor proxy 1008 forwards all requests to the central agent server for handling (e.g., server 606 of FIG. 6). This configuration is useful for smaller footprint devices that have less memory and little/no storage capability. Alternatively, requests (or portions thereof) could also be forwarded to a point of presence server for processing, e.g., 434 of FIG. 4.

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#### Agent Device Discovery Process

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Device discovery is the process by which one agent device executing the agent software application discovers that another agent device is nearby. The agent device may be that of, e.g., an individual, point of presence, location, service or item. Device discovery can trigger significant functionality, including the friend finder and agent matching features. Device discovery can work with a variety of communication or location means, e.g., a peer-to-peer radio technology such as Bluetooth® or with a position detection system such as GPS. The user or agent can control the rate of device discovery as a way to manage power consumption. Additionally, the device discovery mechanism can adjust its rate, based on the number of agent devices discovered. If the process is not finding any agent devices, it will slow down the rate of discovery to conserve power. The rate will speed up if more agent devices are discovered.

Device discovery utilizing a peer to peer radio technology such as Bluetooth® is based on a polling mechanism. In the agent software application, a thread or process periodically conducts a Bluetooth® scan to detect the presence of other Bluetooth® devices of the correct set of classes (Bluetooth® devices are generally classified according to a Class of Device within the Bluetooth® specification). When another Bluetooth® device is within the range in which can be detected (i.e., some predetermined distance that can vary based on the receiver, transmitter, and surrounding conditions), its presence is detected. The particular classes of device this thread attempts to detect (with Bluetooth® major/minor class of device in parenthesis) include, for example, mobile phones (phones-cellular/smart phone), PDAs (computerhandheld/palm-sized/wearable computer), and points of presence (computer-server). Each new device detected (i.e., one that the agent software application has detected and has not left the vicinity) is queried to determine if it is publishing a Bluetooth® service for the agent software application. If so, a handshake is executed to ensure it is executing the agent software application, and to exchange some core data (e.g., a user identifier). Once a successful handshake occurs, detection is considered complete and an event is sent that triggers, e.g., the friend finder and agent matching

features. The Java<sup>TM</sup> software on the agent device may utilize vendor proprietary APIs for Bluetooth® discovery.

Device discovery utilizing location detection systems such as GPS utilize a polling mechanism, combined with a central server that stores individual location information and detects proximity. In the agent software application, a thread or process periodically queries the agent device's GPS module for the current location (defined by a latitude and longitude). A comparison is done with the prior location to determine if the agent device has moved beyond a predetermined distance. If the device has moved more than the predetermined distance (or this is the first location reading taken), the device sends the location to the central remote service manager (e.g., 604 of FIG. 6). The remote service manager stores the location in the user database as the current location of the user. Then it determines which, if any users (e.g., agent devices) and locations of interest (e.g., a store) are within a radius specified by the user. Each time a new user, point of presence, or location of interest appears within the given radius, the central agent server (e.g., 606 of FIG. 6) is sent an agent matching request. Once this processing is done, the central remote service manager sends a reply to the agent device containing a list of the new users or locations nearby, along with information from successful matches (if any).

An alternative example of device discovery utilizes RFID (radio frequency identification). RFID tags are particularly suitable for tagging products because, among other reasons, they are low cost and are already used by many retailers for theft prevention. Device discovery using RFID is also a polling mechanism. In the agent software application, a thread or process periodically queries the agent device's RFID tag reader for nearby tags. Passive RFID tags have no internal power supply. The minute electrical current induced in the tag's antenna by the incoming radio frequency signal from the agent device provides just enough power for the CMOS integrated circuit in the tag to power up and transmit a response. Most passive tags signal by backscattering the carrier signal from the reader. This means that the antenna can be designed both to collect power from the incoming signal and also to transmit the outbound backscatter signal. The response of a passive RFID tag is not necessarily just an ID number; the tag can contain non-volatile EEPROM for storing

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data. Accordingly, when a user walks through a retail store, and it passes a product having an RFID tag, the agent device's antenna provides power to the passive RFID tag which in turn transmits the characteristics of the product (e.g., data that is stored in a non-volatile EEPROM, or an ID number that the agent device then transmits to a point of presence, e.g., 432 of FIG. 4, for a lookup of the product characteristics). Each time a passive RFID tag appears within the given radius, the central agent server (e.g., 606 of FIG. 6) is sent an agent matching request. This given radius is a predetermined distance that can vary based on the receiver, transmitter, and surrounding conditions. Once this processing is done, the central remote service manager sends a reply to the agent device containing a list of products nearby, along with information from successful matches (if any). RFID tags are not limited to retail product applications, but can be used for a variety of applications, particularly commercial applications (e.g., intelligent inventory tracking). Moreover, as passive RFID tags have a limited detection range, active RFID tags (which have ranges up to several hundred meters or more) can also be used.

### **Agent Matching Process**

FIG. 11 is a flow diagram illustrating an example of a method for executing agents. This may occur, *e.g.*, between two agent devices, on the central server, or between a mobile agent device and a point of presence. This flow depicts the handling of an agent as if it were the sole agent on an agent device or point of presence in order to illustrate the core agent processing logic. Preferably, the full agent handling logic attempts to process agents in bulk, *i.e.*, send all relevant agents to the discovered device or point of presence in a single message. The start of the flow 1100 is triggered by the proximity of a user (*e.g.*, via an agent device) to another user, product, point of presence, location, or service, or by some other event (*e.g.* receiving an SMS message). Upon receiving the trigger event, the agent manager determines whether a particular agent targets the remote entity (user, product, location, or service) 1102 in question. In this decision the characteristics of the remote entity are compared with the meta-data in the agent, including remote entity type (user, product,

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location, or service), the date and time and whether this is the first contact with this particular remote entity. If the agent manager determines the agent should be initiated, the agent is sent to the agent device 1104 for the scenario between two agent devices or between a mobile agent device and a point of presence. When this processing occurs in the central agent server (e.g., 408 of FIG. 4), the transmission of agent parameters does not occur (steps 1104 and 1116).

The agent engine (e.g., 508 of FIG. 5) on the agent device performs the agent matching 1106 (see FIG. 12 for detail on the agent matching process). Matching optionally begins by determining whether the targeted device that has received an agent must in turn have the same agent (though the specific attribute values may differ) deployed and active. If this criteria when specified has been met then steps beyond 1106 will commence. An example where matching occurs without both devices sharing a common agent is in the instance that a point of presence detects a device and pushes an offer agent to the device. The offer agent will then execute the match and send back its response.

If there is a match 1108, then post-match processing 1110 is performed and resulting information is attached to the reply to the user. If the agent does not require 2-way matching 1112, the post-match action 1114 indicated by the agent is performed. If the agent requires 2-way matching 1112, then the target replies to originating device with agent parameters 1116. The originating device then will perform agent matching 1118 (see FIG. 12 for detail on the agent matching process). If the match is successful 1120 then post-match processing 1122 is performed, followed by the post-match action 1124. Two-way matching can be used, *e.g.*, to increase match accuracy or as an error correction routine.

Post-match processing 1110, provides the agent the ability to generate information that is based on the match and the parties in the match for use in the post-match action. For example, a dating agent might include a post-match instruction to determine what friends two prospective mates have in common. Post-match actions tell the agent engine what to do once a match has occurred. There are several examples of post-match actions.

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Notification is one of the most basic post-match actions. It notifies both participants of the match. For example, notification would notify both users of a dating agent that a romantic match occurred and provide some detail about the other individual. Information generated in a post-match processing instruction also can be included in the notification.

The auto-offer post-match action is commonly used for product or service matches. It automatically makes an offer to purchase an item or services that were matched. If the offer is accepted, the user is notified. If the offer is not accepted, the user is notified and preferably informed of which aspects of the offer did not match.

The wizard post match action is highly versatile, and can be used for a variety of matches. The wizard feature presents a screen to one or both users with the ability for the user to enter some information and/or take an action. For example, a buying agent may find a product the user is looking for and then present the user with a screen that the user the option to buy (and specify a price), save or ignore the match.

The post match action of an offer type agent is to notify the agent device that has sent the offer of the outcome of the match request. If a match has occurred, the response to the sending agent device may include a match score and the match outcome. The agent device sending the offer will then deliver the offer content to the user of a second agent device for subsequent handling and display. When the offer is displayed, the user can view it and take action based on available options for the specific offer (e.g., save it, ignore it, or accept/purchase). In addition to displaying the offer on the second agent device, the offer is automatically added to the user's messaging center as an available offer that the user can review again at a later point in time.

FIG. 12 is a flowchart depicting an agent matching process. The agent matching process is called from within the overall agent handling flow (see FIG. 11 for detail on the overall agent handling flow). An agent contains a set of one or more agent parameters. The agent matching process loops through each agent parameter 1200. Each parameter that is a matching parameter 1201 (non-matching parameters are ignored in the matching process) is evaluated against the corresponding attributes

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of the target (user, location, product service or item) 1202. The definition of equality depends on the attribute type referred to by the parameter (see attribute types in description of FIG. 13). If the parameter matches, the parameter weight is added to the cumulative score for the agent 1204. If the parameter does not match, it is determined if it is a required parameter 1206. If the parameter is required, the processing loop is broken, and the agent match is marked as failed 1212. If the parameter is not required, the process continues processing agent parameters. Upon completion of the parameter processing loop, the agent score is compared to the threshold assigned to the agent 1208. If the score is equal to or exceeds the threshold, there is a successful match 1210, other wise the match has failed 1212. The threshold can be set by the user, or by the provider of the agent.

#### Object Model

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FIG. 13 describes the agent object model that supports the agent meta-data. An attribute 1314 represents a particular descriptive characteristic or feature that a person, location, service, or item might have. Examples of attributes include:

Target type	Example Attributes
Person	Age
	Height
	Weight
	Hobbies
	Favorite book
Location	Type (e.g. restaurant, bar, store)
	Company Name
	Address
	Postal Code

	Target type	Example Attributes
Service		Type (e.g. accounting)
		Vendor
		Available Hours
Item		Color
		Size
		Price

Because attributes are defined in data (preferably stored, at least in part, on agent device data store, e.g., 520 of FIG. 5 and/or agent database 404 of FIG. 4), the catalog of attributes can be expanded over time to accommodate the descriptors utilized in a variety of applications and implementations. The central attribute catalog provides a standard dictionary for use by agents in performing matches. Attributes contain both meta data (e.g., descriptive information, classifications, etc.) and either a single typed value or a set of values. Attributes which contain sets of values from which a user can select one or more values include the actual pre-defined set of values and their state (e.g., selected/unselected). Each attribute has a type that indicates what sort of data can be associated with the attribute. Examples of these include, but are not limited to, the following types:

Attribute Type	Description
Integer	An attribute with a numerical value such as a phone number, quantity measurement, etc.
Boolean	A switched attribute the value of which is either on/off, true/false, etc.
String	Any text value such as a person's name, description of a product, or an address.

An attribute with a set of values only one of Single select choice which can be selected at any given time. Same as a single select choice except that it Single select choice provides an option in which a user can type his with other option own value. Similar to a single select choice with the Multi select choice exception that a user can select more than one of a set of values for the attribute. Multi-select choice Like a multi select choice, this type of attribute allows for multiple values picked from a list as with other option well as an option of entering a user defined value into another field. Integer range An attribute which stores two numerical values that represent two ends of a range of numbers. Used for, e.g., matching things like desirable age ranges in a dating agent. Attribute which is used for storing a height value Height in preferably a normalized way that can then be matched regardless of measurement format. Age attribute stores a birthday but can return Age values as either dates or ages used for attributes which involve time and elapsed time.

An attribute 1314 that has a choice type (single select choice, single select choice with other option, multi-select choice, multi-select choice with other option) will have one or more attribute choices 1316 associated with it. An attribute choice defines one of the possible choices that a user may select. The type of the attribute defines whether the user may select one choice or more than one.

An agent 1302 has a set of descriptive data for use in identifying a specific agent to a user, including a type, name and a description. The agent also has a target type, which defines whether the agent is looking for a person, a location, a service or an item. The agent also has an optional image associated with it that is displayed when the user views the agent. This is used for a logo or other branding or identifying image. Additional information specific to the agent is stored in an additional information object 1310. An agent may have zero or more additional info objects. Each additional information object represents a specific piece of information (text, image, number) associated with the agent. The additional information object 1310 has a name, a type and a field containing the information itself. A user may view this information to learn more about the particular agent or to refresh themselves as to the specifics of the agent's task. An example of this might be to include an image of a map in a pub crawl agent that shows directions to and from the target bars.

The agent has one or more parameters, represented by an agent parameter 1304. The agent parameter 1304 references a single attribute object 1304 as its type. The agent parameter 1304 has a default value. If attribute 1314 is a choice set type, it will have on or more attribute choices 1316 associated with it. The agent parameter 1304 has a required flag which, if set to true, indicates that a match on the parameter is required (although not necessarily sufficient) for the agent to match with a target (see step 1206 of FIG. 12). The agent parameter also has a hidden flag which, if set to true, indicates that the parameter is not configurable by a user and should not be displayed on any user interfaces. The hidden flag is used to create "types" of agents where the agent itself has some core criteria for use in a match (e.g., a shoe shopping agent may include a hidden, required agent parameter for a product type attribute with a value of "shoe"). The agent parameter 1304 has a matched flag that defines whether or not the parameter is used in a match. Non-matched parameters are used for transporting agent-specific information that is not used for matching. In the event that a dating type agent is executed, an example of a non-matched parameter would be an "about me" parameter that the user may read and evaluate but is not evaluated for a match by the agent. Non-matched parameters may be used by post-match actions such as displaying the "about me" information for a matched individual.

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A post-match action 1308 contains meta-data on standard actions that the agent can invoke once a match has occurred. This catalog of actions must map to actions known by the agent engine components in the agent, in the point of presence, and/or in the agent server. An agent post-match action 1306 associates an agent with a post-match action. The agent 1306 may link to one or more post-match actions 1308. The agent post-match action object 1306 contains a sequence number, which is an ordinal value indicating the sequence in which the agent should execute post-match actions if there are more than one. An example of a post-match event is to notify the user that a match has occurred, include information on what agent matched, what the score was, with whom a match occurred, as well as display any information specified in a post-match processing instruction (see FIG. 12 for a discussion of post-match actions).

A post match process instruction 1312 specifies that the agent engine should perform a particular type of post-match processing to produce dynamic information related to the match. For example, a post-match process instruction could indicate that the agent should calculate how many friends two people have in common following a match. The information that results from such processing is utilized in a notification action specified in the post-match actions.

FIG. 14 is a logical object model depicting the relationship between agents, users and services. A user object 1402 represents a user of the system. It contains a system generated user identifier, as well as key user data, such as username, password and alias. A user can subscribe to one or more agents 1412 (see FIG. 13 for a more detailed description of the agent object model). Subscribing to an agent 1412 creates a user agent object 1404, which relates the user 1402 to a specific agent 1412. The user agent 1404 contains a threshold, preferably a numeric value between 0 and 100, which is utilized by the matching engine (see FIG. 12) to determine what score constitutes a match.

A user agent 1404 contains one or more user agent parameters 1406. There is one user agent parameter 1406 for each agent parameter 1414 (see FIG. 13 for a more detailed description of the agent object model) in the agent 1412 the user agent 1404

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is associated with. The user agent parameter 1406 contains the user-assigned value for the corresponding agent parameter 1414, if the agent parameter is not hidden. If the associated agent parameter 1414 is hidden, then the user agent parameter takes 1406 on the default value of the agent parameter 1414. The user agent parameter 1406 has a weight, which is used to indicate the importance the user 1402 places on the parameter 1406. Alternatively, a parameter 1406 can have a weight override if required. If the associated attribute 1430 (identified by the agent parameter 1414) is of a choice set type, then the user agent parameter 1406 has one or more user agent attribute values 1408. A user agent attribute value 1408 is associated with exactly one attribute choice 1432 (see FIG. 13 regarding attribute choice). A user agent attribute value 1408 represents a selected attribute choice 1432 that the user 1402 is looking for as part of the agent criteria. If the attribute 1430 is of a choice set type, the user agent attribute value 1408 is employed in the agent matching process of FIG. 12 when trying to match users with services. If the attribute 1430 is not a choice set type (e.g., the attribute allows open-ended data entry), then the data value contained in the user agent parameter 1406 is employed in the agent matching process of FIG. 12 when trying to match users with services.

A service object 1422 represents a non-user entity in the system, such as a location. It contains a system generated service identifier, as well as key service data, such as name and address. A service 1422 can be associated with zero or more agents 1412. A service 1422 is associated with an agent 1412 through a service agent object 1424, which relates the service 1422 to a specific agent 1412. The service agent 1424 contains a threshold, preferably a numeric value between 0 and 100, which is utilized by the matching engine (*see* FIG. 12) to determine what score constitutes a match.

A service agent 1424 contains one or more service agent parameters 1426. There must be one or zero service agent parameters 1426 for each agent parameter 1414 in the agent 1412 the service agent 1424 is associated with. If the parameter is required (see, e.g., step 1206 of FIG. 12) it must be commonly shared by both the service 1422 and agent 1412. The service agent parameter 1426 contains the service-assigned value for the corresponding agent parameter 1426 if the agent parameter 1414 is not hidden. If the associated agent parameter 1414 is hidden, then the service

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agent parameter 1426 takes on the default value of the agent parameter 1414. The service agent parameter 1426 has a weight, which is used to indicate the importance the service 1422 places on the parameter. If the associated attribute 1430 (through the agent parameter 1414) is of a choice set type, then the service agent parameter 1426 has one or more attribute choices 1432. A service agent attribute value 1428 is associated with exactly one attribute choice 1432 (see FIG. 13 for detail on attribute choice). A service agent attribute value 1428 represents a selected attribute choice 1432 that the service 1422 is looking for as part of the agent criteria. If the attribute 1430 is a choice set type, the service agent attribute value 1428 is employed in the agent matching process of FIG. 12 when trying to match users with services. If the attribute 1430 is not a choice set type (e.g., the attribute allows open-ended data entry), then the service agent parameter 1426 is employed in the agent matching process of FIG. 12 when trying to match users with services. In particular, for each agent parameter 1414 associated with a given agent 1412, the process of FIG. 12 will compare the values of 1408 and 1428 and/or 1406 and 1426 in evaluating a match. That process can continue for as many agents 1412 and parameters 1414 as needed to evaluate the match(es) between user 1402 and service 1422.

While the discussion of FIG. 14 provided in detail a description of defining attributes for purposes of service and user agent matches, the process for users and users, users and locations, and users and items (and other permutations thereof) is analogous. Thus, each user, service, location and item defines attribute values for parameters associated with one or more agents. The attribute values then are compared (see FIG. 12) for determining a match (or matches) between users, items, services and/or locations.

FIG. 15A is a logical object model depicting the objects that make up the user attributes and user items. User attributes 1504 represent characteristics of the user 1402, the values of which are represented by user attribute values 1506. User items 1510 represent items such as products, services, or other items that the user 1402 wishes to make discoverable by agents in the system. The data relating to the user 1402 and user items 1510 are preferably stored in central server 408 of FIG. 4 and/or user data store 520 on the agent device 418 of FIG. 5.

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The user object 1402 (see FIG. 14 for a more detailed description of the user object) represents an individual user of the system. A user has zero or more user attributes 1504 and user attribute values 1506 that represent specific characteristics of the user, such as height, birth date, age, occupation and/or favorite movies. Each user attribute 1504 is associated with exactly one attribute 1520. Attribute 1520 represents one of the many attributes derived from, e.g., central server 408 of FIG. 4 or agents in the system (e.g., a shopping agent or dating agent that utilizes attributes in addition to those that exist on the central server 408). The user attribute 1504 contains a value specified by the user 1402 (except for user attributes associated with hidden attributes) with a type as determined by the associated attribute 1520. If the associated attribute 1520 is of a choice set type, then the user attribute has one or more attribute choices 1522. A user attribute value 1506 is associated with exactly one attribute choice 1522 (see FIG. 14 for further detail on attribute choice). For attributes 1520 that are the choice set type, a user attribute value 1506 represents a selected attribute choice, and for attributes that are not, user attribute 1504 represents open-ended data (e.g., with reference to the exemplary attributes, the following can be implemented in choice set type: age=28, occupation=engineer, favorite movies=comedies; and the following can be implemented in open-ended type: height=6 feet, birth date=7/22/1978). The agent matching process (see FIG. 12) utilizes the values of user attribute 1504 and user attribute value 1506. Other possible user attributes 1504 include, for example: gender, sexual orientation, sense of humor, political views, interests, industry, marital status, number of children, and favorite bands.

A user may have zero or more user items 1510 that represent products, services or other items that a user 1402 may want to make available for discovery by the agents of other users. Each user item may have zero or more user item attributes 1512 and user item attribute values 1506 that represent specific facts about the user item 1510. Each user item attribute 1512 is associated with exactly one attribute 1520. Attribute 1520 represents one of the many definable attributes derived from, e.g., central server 408 of FIG. 4 or agents in the system (e.g., a shopping agent or dating agent that utilizes attributes in addition to those that exist on the central server

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408). For example, a user 1402 can indicate that he has a bicycle he would like to sell by adding a user item 1510 that represents that bicycle with user item attributes which provide detail about the bicycle (e.g., color=red, type=racing bike, asking price=\$100). The user item 1510 has, e.g., a name, a description and one or more associated images. The user item attribute 1512 contains a value specified by the user (except for user item attributes associated with hidden attributes) with a type as determined by the associated attribute 1520. If the associated attribute is of a choice set type, then the user item attribute 1512 has one or more user item attribute choices 1522. A user item attribute value 1514 is associated with exactly one attribute choice 1522, and represents a selected attribute choice 1522. For attributes 1520 that are the choice set type, a user item attribute value 1514 represents a selected attribute choice, and for attributes that are not, user item attribute 1512 represents open-ended data. The agent matching process (see FIG. 12) utilizes the values of user item attribute 1512 and user item attribute value 1514.

FIGURE 15B is a logical object model depicting the objects that make up the service attributes and service items. Service attributes 1532 and service attribute values 1534 (for choice set type attributes) represent characteristics of the service 1422. Service item(s) 1540 represent items such as products, services or other items that the service 1422 wishes to make discoverable by agents in the system. The data relating to the service 1422 and service items 1540 can be stored in, *e.g.*, central server 408, point of presence 432, or private server 434 of FIG. 4.

The service object 1422 (see FIG. 14 for more description of the service object 1422) represents a non-user entity in the system. A service 1422 has zero or more service attributes 1532 and service attribute values 1534 that represent specific facts about a service, such as type (e.g., bar) or location (e.g., Chelsea, New York City). Each service attribute 1532 and service attribute value 1534 is associated with exactly one attribute 1520. Attribute 1520 represents one of the many definable attributes derived from, e.g., central server 408 of FIG. 4 or agents in the system (e.g., a shopping agent or dating agent that utilize attributes in addition to those that exist on the central server 408). The service attribute 1532 contains a value specified by a representative of the service (except for service attributes associated with hidden

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attributes) with a type as determined by the associated attribute 1520. If the associated attribute 1520 is of a choice set type, then the service attribute 1532 has one or more service attribute choices 1522. A service attribute value is associated with exactly one attribute choice 1522 (see FIG. 13 for details on attribute choice). A service attribute value 1534 represents a selected attribute choice 1522. The agent matching process (see FIG. 12) utilizes the values of service attribute 1532 and service attribute value 1534.

A service 1422 has zero or more service items 1540 that represent products, services or other items that a service may want to make available for discovery by the agents of users. Each service item 1540 may have zero or more service item attributes 1542 and service item attribute values 1544 that represent specific facts about the service item 1540. Each service item attribute 1542 is associated with exactly one attribute 1520. Attribute 1520 represents one of the many definable attributes derived from, e.g., central server 408 of FIG. 4 or agents in the system (e.g., a shopping agent or dating agent that utilize attributes in addition to those that exist on the central server 408). For example, a service 1422 can indicate that it has a purse for sale by adding a service item 1540 that represents that purse with service item attributes which provide detail about the purse (e.g. color=burgundy, type=formal, price=\$500). The service item 1540 has, e.g., a name, a description and one or more associated images. The service item attribute 1542 contains a value specified by a representative of the service (except for service item attributes associated with hidden attributes) with a type as determined by the associated attribute 1520. If the associated attribute is of a choice set type, then the service item attribute has one or more attribute choices 1542. A service item attribute value 1544 is associated with exactly one attribute choice 1522 and represents a selected attribute choice 1522. The agent matching process (see FIG. 12) utilizes the values of service item attribute 1542 and service item attribute value 1544.

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# Implementations

The foregoing embodiments are applicable to many situations. Examples include dating, social networking, conferences, games, retail, venues and advertising.

# 5 Dating

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Proximity services for dating combine the proximity of two users with matching capabilities that utilize match criteria that are compared to user demographics, preferences and other characteristics, and then weighted to derive a weighted match value for dating compatibility. Users are notified when a match threshold has been met for minimum compatibility. The users then can conduct relationship building tasks.

Some implementations enable matching of users to determine their compatibility by using either agent device-hosted/server-hosted or distributed data and functionality that is triggered when the proximity between two users' agent devices is within a specified distance. Users can browse information about their match that includes information that may come from their match's agent device or be downloaded from a server combined with user proprietary information that is used to further enhance the information about a person with whom someone shares some form of connection/relationship. Relationship building features can include, but are not limited to: (1) presence sharing that notifies users when people they have existing relationships with or would like to have a relationship with are nearby (friend finder); (2) profile viewing that allows users to view information about other users; (3) messaging for communication between users; (4) photo gallery sharing; (5) contact information sharing; and (6) anonymous communication between users wherein the user's phone number and other personally identifiable information is not exchanged.

# Social Networking

Proximity services for social networking allow users to know when friends, colleagues, business contacts and members of their social network are nearby.

Additionally, the agent matching process notifies users that there is someone nearby who might be of interest for social, business or other reasons, based on a successful match between two people. Proximity services for social networking can extend beyond the capabilities utilized for dating by adding the concept of group membership — two users may have indirect connections through inclusion in a group (e.g., a professional association) thereby making it possible to maintain a relationship through a common group instead of person to person. Proximity related services for relationship building are similar to those described in the dating implementation. Social networking can utilize overlapping dating criteria with additional unique application specific match criteria and richer user profiles to deliver a broad range of applications that include, but are not limited to, friend finders, job finders, networking and information sharing applications.

Examples of uses for proximity-enabled social networking include: (1) presence notification of the proximity to members of a personal network, e.g., business users walking down the street will know the customer they have been trying to get in touch with is across the street and can approach them immediately to make a connection or friends who never would have known they were in the same neighborhood suddenly can cross paths and reconnect thanks to notification of their proximity; (2) expanded internet presence combines sharing of proximity of individuals who share relationships by adding internet based presence to the presence list, e.g., users of instant messaging platforms can share their presence over the internet and have their presence combine both internet presence with proximity presence in a single integrated list; (3) group sharing enables users who jointly belong to a single group (people who work for a particular company, belong to a fraternity, or social group for example) can be connected automatically and their presence will appear on the presence list of the application when users are within proximity; (4) contact sharing expands the concept of business cards sharing to the sharing of detailed profiles that include details provided by the contact themselves, third parties (e.g., endorsements, ratings and comments), and detailed enhancements contributed by the contact information recipient; and (5) common network sharing that informs the user of the expanded networks two connected individuals share by identifying

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common contacts, e.g., in addition to viewing common contacts users can view the personal networks of individuals with whom they share a connection or relationship.

Features which support relationship/contact management include (1) integration with agent device address book enables proximity services to leverage existing contact information databases and (2) contact loading/synchronization through data upload to a website and synchronization down to an agent device or synchronization between an agent device and computer.

### Conferences

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Conferences bring together large and dense groups of people who share interests in a common theme (or themes) and who often are interested in various forms of social and business networking. Proximity services help attendees connect with people they have relationships with and find people they are interested in building new relationships with. Buyers and sellers can find each other, or buyers can find specific products they are seeking just by walking around a conference area (*see also* earlier discussion of RFID). In addition to connecting people at conferences, proximity services enable conference sponsors to track attendance and distribute information.

# 20 Games

Proximity services on mobile agent devices provide a new aspect to old games and a rich feature set for future games that leverage any combination of proximity detection, matching and messaging for game play. Scavenger hunts, games of assassin and even tag are examples of games that can be enhanced through the use of proximity services. Games that utilize proximity services enable players to automatically detect the presence of others when they are nearby and provide an electronic confirmation of the proximity as well as actions taken between game players.

### **Retail**

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The retail embodiment leverages peer-to-peer agent device proximity services (see also earlier discussion of RFID) as well as person to location proximity services. In a person-to-retail location scenario, a retail outlet can provide a number of proximity services that include, but are not limited to: (1) the ability for mobile users to configure shopping agents with services and products being sought, e.g., as the user comes in proximity of an outlet, the agent will query the business for desired products/services; in the event one is found the user will be informed and can then take action to purchase the desired product/service; (2) retailers dynamically can adjust item characteristics like price, product availability and other essential retail business metrics to achieve the highest closure rate possible, e.g., in a peer-to-peer model users can place product offers while buyers can be notified of products users are looking for in their proximity; (3) customers of certain demographics (e.g., frequent buyers) can be segmented and given premium services; and (4) orders can be executed from an agent device directly to the retailer thereby cutting lines.

# Venues

In venues such as sports arenas, exhibitions, concert halls or social environments like bars proximity services provide a platform for delivering consumer oriented services like VIP access and queue cutters, seat finders, affiliate programs and a host of customer management functions which can be targeted at and delivered to mobile users of agent device proximity services. Furthermore, venues offering on-site proximity services can gain insight into consumer behavior and demographics in exchange for hosting, *e.g.*, points of presence and services.

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# Advertising

Proximity advertising provides users with contextual promotion of products and services made available to them by an advertiser. Advertisements are displayed on the agent device and can be targeted using detailed profile information, contextual

information such as time, duration and location proximity. Using proximity detection of agent devices, an agent device or point of presence can send an offer match request to a device and determine the applicability of the offer (scored by matching the offer with the user). In the event that the offer meets an offeror or offeree-specified threshold of accuracy, the agent device will send an offer which will be delivered to the other agent device. Offers delivered can include many media types including text, images, audio, and video.

Various features of the system may be implemented in hardware, software, or a combination of hardware and software. For example, some features of the system may be implemented in computer programs executing on programmable computers. Each program may be implemented in a high level procedural or object-oriented programming language to communicate with a computer system or other machine. Furthermore, each such computer program may be stored on a storage medium such as read-only-memory (ROM) readable by a general or special purpose programmable computer or processor, for configuring and operating the computer to perform the functions described above.

A number of embodiments of the invention have been described. Nevertheless, it will be understood that various modifications may be made without departing from the spirit and scope of the invention. For example, the present invention can be embodied in various applications including retail, dating, gaming and advertising. Moreover, the agent device may take various forms (e.g., a cellular phone, PDA, laptop computer, GPS transceiver) and have various capabilities (e.g., CDMA, GPS, Bluetooth®, ZigBee<sup>TM</sup>, RFID, WiFi®, WiMax, SMS). Accordingly, other implementations are within the scope of the claims.

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### What is claimed is:

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1. A method for providing contextual information in a network of devices configured for executing one or more agents, the method comprising:

providing a first agent to a first device associated with a first entity, wherein the first agent enables the first entity to specify one or more first attributes associated with a first goal;

providing a second agent to a second device associated with a second entity, wherein the second device comprises second attributes associated with the second entity;

providing proximity data to the first device and the second device indicative of the proximity of the first device to the second device; and

wherein execution of the first agent occurs only if at least one predetermined criterion is met, whereupon execution, the first and the second agents compare the first attributes to the second attributes.

- 15 2. A method according to claim 1 wherein at least one agent comprises meta-data.
  - 3. A method according to claim 1 further comprising:

providing a third agent to the first device associated with the first entity, wherein the third agent enables the first entity to specify one or more third attributes associated with a third goal.

4. A method according to claim 1 further comprising:

providing an agent platform to at least one device for enabling receipt and execution of multiple agents, wherein the agents comprise meta-data.

- 5. A method according to claim 1 wherein at least one device is a mobile phone, computer, PDA, server or wireless device.
  - 6. A method according to claim 1 wherein at least one entity is a person, location, product or service.

7. A method according to claim 1 wherein at least one attribute relates to a person, location, product or service.

- 8. A method according to claim 1 wherein at least one goal relates to a person, location, product or service.
- 9. A method according to claim 1 wherein providing proximity data includes receiving a location signal.
- 10. A method according to claim 1 wherein at least one criterion is that the proximity of the first device to the second device is less than a predetermined distance.
- 10 11. A method according to claim 1 further comprising:

  notifying at least one entity whether the first and second attributes meet a predefined degree of similarity.
  - 12. A method according to claim 11 further comprising: providing information associated with the second attributes to the first device.
  - 13. A method according to claim 12 wherein the information relates to the characteristics of a person, location, item, or service.
    - 14. A method according to claim 1 further comprising:

notifying at least one device whether another device is within a predetermined distance.

15. A method for providing contextual information in a network of devices configured for executing one or more agents, the method comprising:

downloading a first agent from a server to a first device associated with a first entity;

specifying one or more first attributes to the first agent, wherein the first attributes are associated with a first goal;

detecting the proximity of the first device to a second device, wherein the second device comprises second attributes associated with a second entity, the second device further comprising a second agent; and

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executing the first agent only if at least one predetermined criterion is met, whereupon execution, the first and second agents compare the first attributes to the second attributes.

- 16. A method according to claim 15 wherein at least one agent comprises meta-data.
  - 17. A method according to claim 15 further comprising:

downloading a third agent from a server to the first device associated with a first entity;

specifying one or more third attributes to the third agent, wherein the third attributes are associated with a third goal.

- 18. A method according to claim 15 further comprising:
- downloading an agent platform to the first device for enabling receipt and execution of multiple agents, wherein the agents comprise meta-data.
  - 19. A method according to claim 15 further comprising:
- notifying at least one entity whether the first and second attributes meet a predefined degree of similarity.
  - 20. A method according to claim 19 further comprising:

prompting at lease one entity for input if the first and second attributes meet the predefined degree of similarity.

- 21. A method according to claim 19 further comprising:
  receiving, at the first device, information associated with the second attributes.
  - 22. A method according to claim 21 wherein the information relates to the characteristics of a person, location, item, or service.
    - 23. A method according to claim 15 further comprising:
- receiving a notification that at least one device is within a predetermined distance of the first device.

24. A method according to claim 15 wherein at least one device is a mobile phone, computer, PDA, server or wireless device.

- 25. A method according to claim 15 wherein at least one entity is person, location, product or service.
- 26. A method according to claim 15 wherein at least one attribute relates to a person, location, product or service.
- 27. A method according to claim 15 wherein at least one goal relates to a person, location, product or service.
- 28. A method according to claim 15 wherein at least one attribute is specified via a website.
  - 29. A method according to claim 15 wherein detecting the proximity of the first device to a second device comprises comparing GPS data associated with the first device and second device.
  - 30. A method according to claim 15 wherein detecting the proximity of the first device to a second device comprises receiving a wireless signal.
    - 31. A method according to claim 15 wherein at least one criterion is that the proximity of the first device to the second device is less than a predetermined distance.
  - 32. A system for generating contextual information in a network of devices configured for executing one or more agents, the system comprising:
    - a first device programmed with a first agent, wherein the first device is associated with a first entity;

logic on the first device for specifying one or more first attributes to the first agent, the first attributes associated with a first goal;

a second device programmed with a second agent, wherein the second device is associated with a second entity;

logic on the second device for specifying one or more second attributes associated with the second entity;

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first proximity detection structure associated with the first device for detecting the proximity of another device and second proximity detection structure associated with the second device for detecting the proximity of another device, wherein the first and the second proximity detection structures cooperate to detect the proximity of the first device and the second device to each other; and

logic for executing the first agent only if at least one predetermined criterion is met, whereupon execution, the first agent and the second agent compare the first attributes to the second attributes.

- 33. A system according to claim 32 wherein at least one agent comprises meta-data.
  - 34. A system according to claim 32 wherein at least one device is programmed with an agent platform for enabling receipt and execution of multiple agents, wherein the agents comprise meta-data.
- 35. A system according to claim 32 wherein at least one device is programmed with logic to generate a notification when another device is within a predetermined distance.
  - 36. A system according to claim 32 wherein at least one device is a mobile phone, computer, PDA, server or wireless device.
- 37. A system according to claim 32 wherein at least one entity is a person, location, product or service.
  - 38. A system according to claim 32 wherein at least one attribute relates to a person, location, product or service.
  - 39. A system according to claim 32 wherein at least one goal relates to a person, location, product or service.
  - 40. A system according to claim 32 wherein the proximity detection structure comprises a GPS receiver.
    - 41. A system according to claim 32 wherein the proximity detection structure comprises a wireless transceiver.

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42. A system according to claim 32 wherein at least one criterion is that the proximity of the first device to the second device is less than a predetermined distance.

- 43. A system according to claim 32 further comprising:
- one or more servers comprising logic for executing agents, wherein the one or more servers are coupled to the logic for executing the first agent.
  - 44. A system according to claim 32 further comprising:

one or more servers comprising a storage structure for storing agents for transmission from at least one server to at least one device.

45. A system according to claim 32 further comprising:

logic for notifying at least one entity whether the first attributes and second attributes meet a predetermined degree of similarity.

46. An article comprising a machine-readable medium that stores machine-executable instructions for causing a machine to:

receive one or more first attributes, wherein the first attributes are associated with a first goal;

provide the first attributes to a first executable agent;

detect the proximity of the machine to a second device, wherein the second device comprises a second executable agent and second attributes descriptive of an entity; and

execute the first agent only if at least one predetermined criterion is met, whereupon execution, the first and second agents compare the first attributes to the second attributes.

- 47. An article according to claim 46 wherein at least one agent comprises meta data.
  - 48. An article according to claim 46 further causing a machine to: receive multiple executable agents, wherein the agents comprise meta-data.

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49. An article according to claim 46 further causing a machine to: generate a notification whether the first and second attributes meet a predetermined degree of similarity.

- 50. An article according to claim 46 further causing a machine to:
- generate a notification whether the machine is within a predetermined distance to at least one device comprising an agent.
  - 51. An article according to claim 46 further causing a machine to:

    determine whether the proximity of the machine to the second device is less
    than a predetermined distance.
- 52. An article according to claim 46 wherein at least one attribute relates to a person, location, product or service.
  - 53. An article according to claim 46 wherein at least one goal relates to a person, location, product or service.
- 54. A method for providing contextual information in a network of devices configured for executing one or more agents, the method comprising:

determining the context of a first user of a device, the context of the first user comprising (1) the location of the first user; (2) attributes descriptive of the first user; and (3) one or more goals of the first user; and

executing an agent on the device, wherein the agent searches within a predetermined distance from the first user for a second user that matches at least one goal of the first user.

- 55. A method according to claim 54 further comprising:
- notifying at least one user whether a second user matches at least one goal of the first user.
- 56. A method according to claim 54 wherein a device is a mobile phone, computer, PDA, server or wireless device.
  - 57. An apparatus for use in a network of devices comprising:

memory structure for storing one or more executable agents;

logic for specifying one or more first attributes to a first agent, the first attributes associated with a first goal;

proximity detection structure for detecting the proximity of the first device to a second device;

logic for executing the first agent only if at least one predetermined criterion is met; and

logic for comparing the first attributes with second attributes on the second device.

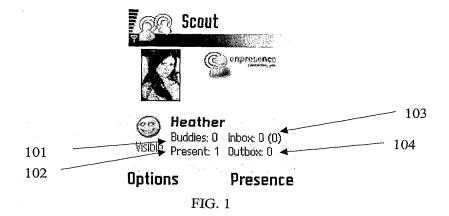
- 58. An apparatus according to claim 57 wherein the apparatus is a mobile phone, computer, PDA, server or wireless device.
- 59. An apparatus according to claim 57 wherein at least one agent comprises meta-data.
  - 60. An apparatus according to claim 57 further comprising:
- agent platform logic for receiving and executing multiple agents, wherein the agents comprise meta-data.
  - 61. An apparatus according to claim 57 further comprising:

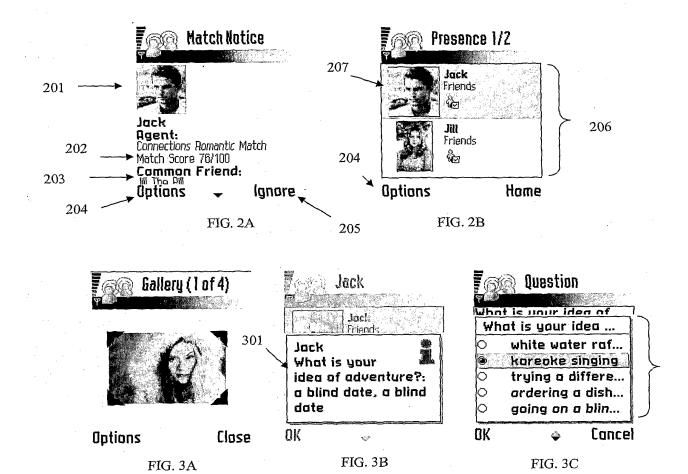
logic for generating a notification whether the first attributes and second attributes meet a predetermined degree of similarity.

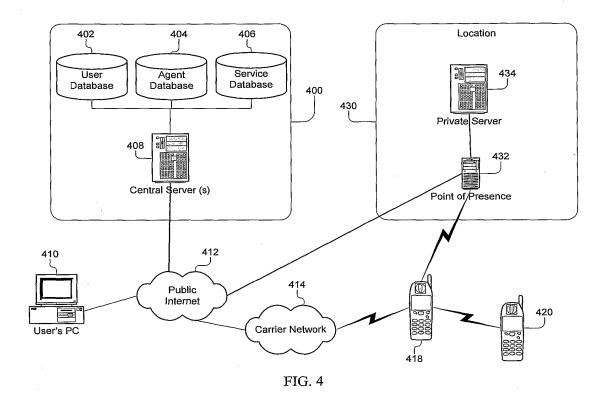
- 62. An apparatus according to claim 57 wherein at least one criterion is that the proximity of the first device to the second device is less than a predetermined distance.
  - 63. An apparatus according to claim 57 wherein the proximity detection structure is adapted to receive a wireless signal.

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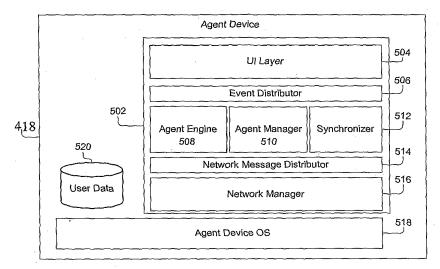


FIG. 5

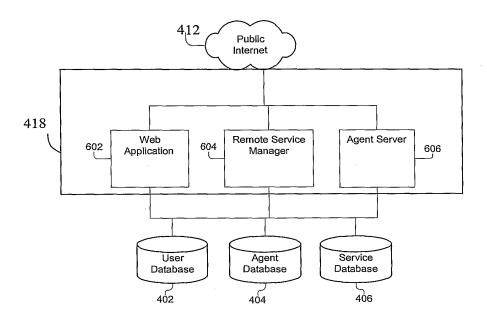
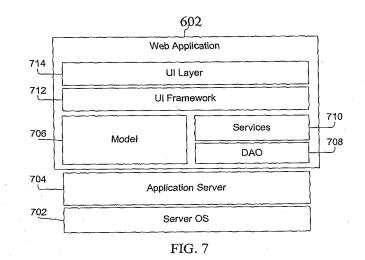
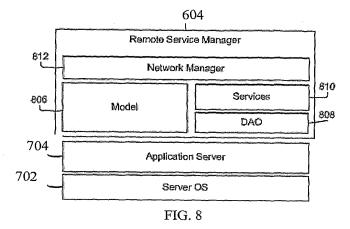
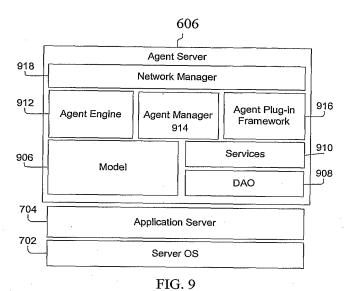


FIG. 6







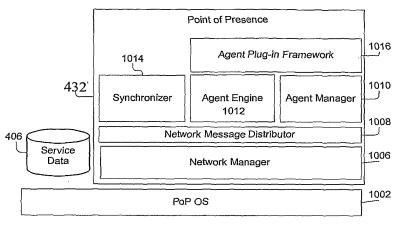


FIG. 10

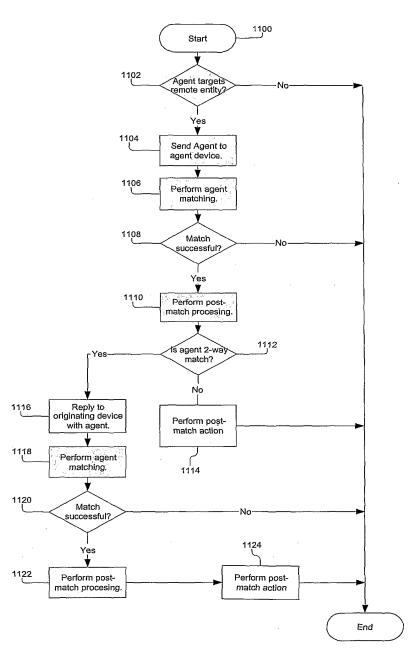
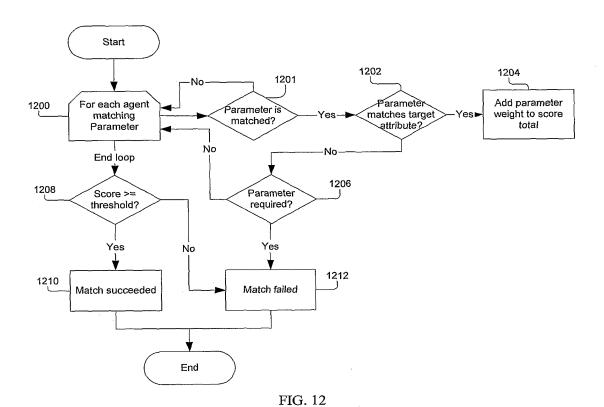


FIG. 11



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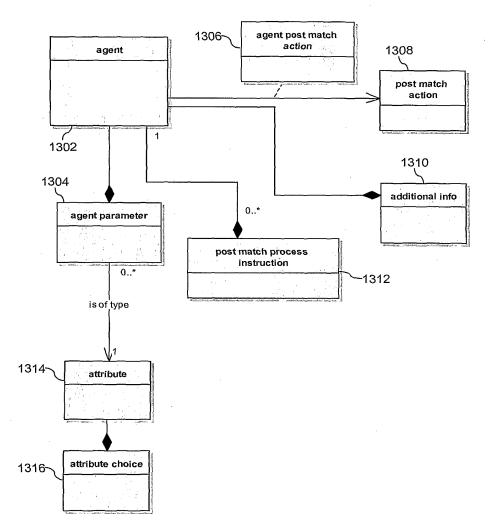


FIG. 13

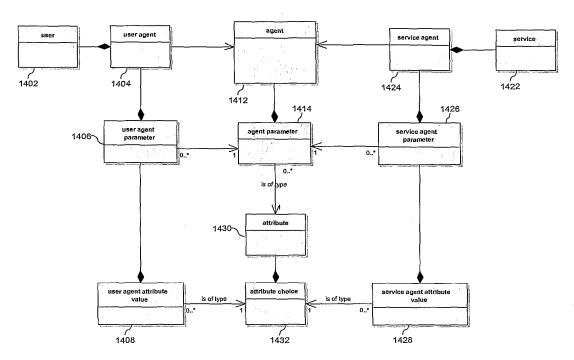
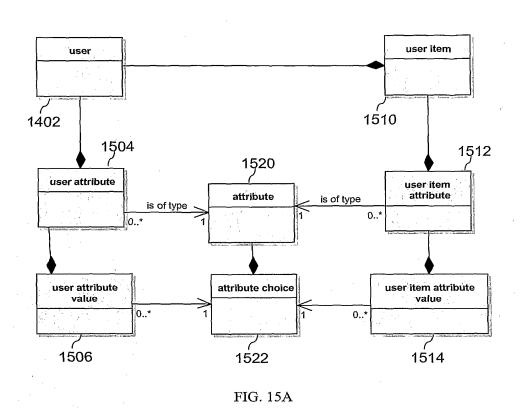


FIG. 14



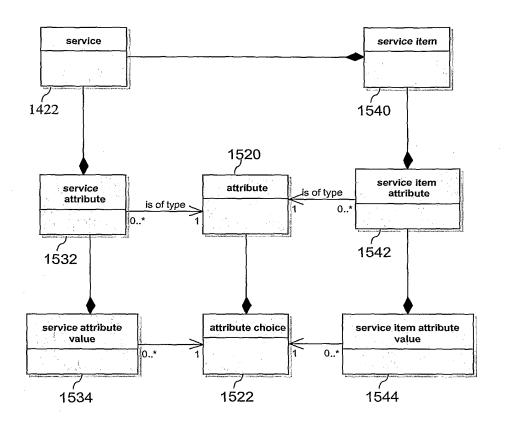


FIG. 15B

Electronic Acknowledgement Receipt		
EFS ID:	7398355	
Application Number:	12326457	
International Application Number:		
Confirmation Number:	3430	
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION	
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti	
Customer Number:	35699	
Filer:	A.Richard Park/Edward J. Grundler	
Filer Authorized By:	A.Richard Park	
Attorney Docket Number:	PARC-20080172-US-NP	
Receipt Date:	12-APR-2010	
Filing Date:	02-DEC-2008	
Time Stamp:	18:05:05	
Application Type:	Utility under 35 USC 111(a)	

# **Payment information:**

Submitted with Payment			no			
File Listing:						
Document Number	Document Description		File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	Au	Authorization-deposit-account- PARC.pdf	22356	no	1
'				37e1edeeb7ab00630ed5af619bfc11c3b30 92ae7		
Warnings:						
Information:						

2	Transmittal Letter	IDS_Certification_Statement. pdf	92777	no	2
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Warnings:					-
Information	:				
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4	NPL Documents	ref1.pdf	436317	no	6
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# New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

# AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS OR CREDIT ANY OVERPAYMENTS TO DEPOSIT ACCOUNT 24-0037

Please deduct any <u>underpayments</u>, credit any <u>overpayments</u>, and charge all required <u>extension of time fees</u> associated with attached filing to Deposit Account Number 24-0037.

Park, Vaughan & Fleming LLP 2820 Fifth Street

Davis, CA 95618-7759

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Respectfully submitted,

A. Ret Ver

By

A. Richard Park

Registration No. 41,241

# INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97

**Inventor:** Victoria M.E. Bellotti

Title: CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND

INTERACTION

Filing Date: 02 December 2008

**Serial Number:** 12/326,457

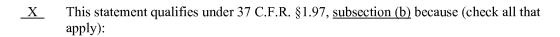
**Group Art Unit:** 2161

**Examiner:** To be Assigned

Listed below or on an attached Form PTO/SB/08a is information known to applicant(s) and submitted pursuant to 37 C.F.R. §1.56. A copy of each listed publication and foreign patent, except for pending U.S. Patents and published U.S. Applications, is being submitted herewith, along with a concise explanation of information in a foreign language, if any, pursuant to 37 C.F.R. §1.97-1.98.

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. If form PTO/SB/08a is enclosed, the Examiner is requested to initial and return it in accordance with MPEP §609.

This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in §1.56.



- \_\_ (1) It is being filed within 3 months of the application filing date.
- \_\_\_ (2) It is being filed within 3 months of entry of a national stage.
- X (3) It is being filed before the mail date of the first Office Action on the merits.

-- OR --

- \_\_\_ (4) It is being filed before the mail date of a first Office action after the filing of a request for continued examination under 37 C.F.R. §1.114.
- This statement qualifies under 37 C.F.R. §1.97, <u>subsection (c)</u>, because this statement is being filed after the latest of: (1) three months beyond the filing date of a national application; (2) three months beyond the date of entry of the national stage as set forth in §1.491 in an international application; (3) the mailing date of a first Office action on the merits; or (4) the mail date of a first Office action after the filing of a request for continued examination, but before the mailing date of the earlier of a final office action

		§1.113, a notice of allowance under §1.311, or an action that otherwise closes ution in the application, and this statement is accompanied by one of:
	_	a certification as specified in §1.97(e) is provided below; or
	_	a fee of \$180.00 as set forth in \$1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.
_	being f	atement qualifies under 37 C.F.R. §1.97, <u>subsection (d)</u> , because this statement is filed after the mailing date of the earlier of a final office action under §1.113, a of allowance under §1.311, or an action that otherwise closes prosecution, but is n or before payment of the issue fee, and this statement is accompanied by:
	_	a certification as specified in §1.97(e) is completed below; and
	_	a fee of \$180.00 as set forth in \$1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.
_	This stapatent.	atement is being filed after the payment of the issue fee but before issuance of the
_	stateme	ent under 37 C.F.R. 1.97(e) - I hereby certify that either:  (1) That each item of information contained in the information disclosure ent was first cited in any communication from a foreign patent office in a repart foreign application not more than three months prior to the filing of the ation disclosure statement; or
	applica reasona stateme	(2) That no item of information contained in the information disclosure statement ed in a communication from a foreign patent office in a counterpart foreign ation, and, to the knowledge of the person signing the certification after making able inquiry, no item of information contained in the information disclosure ent was known to any individual designated in § 1.56(c) more than three months of the filing of the information disclosure statement.
		Signature:
		Respectfully submitted,
		By: <u>/Edward J. Grundler/</u> Edward J. Grundler Reg. No. 47,615
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Date: 12 April 2010



# United States Patent and Trademark Office

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FILING OR 371(C) DATE

FIRST NAMED APPLICANT

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Victoria M.E. Bellotti

PARC-20080172-US-NP CONFIRMATION NO. 3430

**PUBLICATION NOTICE** 

35699 PVF -- PARC c/o PARK, VAUGHAN & FLEMING LLP 2820 FIFTH STREET DAVIS, CA 95618-7759



Title:CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION

Publication No.US-2010-0138416-A1

Publication Date: 06/03/2010

#### NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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page 1 of 1



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/326,457	35699 7590 03/21/2011		PARC-20080172-US-NP	3430
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PVF PARC c/o PARK, VAUGHAN, FLEMING & DOWLER LLP 2820 FIFTH STREET DAVIS, CA 95618-7759		VU, BAI D		
			ART UNIT	PAPER NUMBER
			2165	
			NOTIFICATION DATE	DELIVERY MODE
			03/21/2011	ELECTRONIC

## Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

		Application No.	Applicant(s)
		12/326,457	BELLOTTI, VICTORIA M.E.
	Office Action Summary	Examiner	Art Unit
		Bai D. Vu	2165
Period fo	The MAILING DATE of this communication appo	ears on the cover sheet with the c	orrespondence address
A SH WHIC - Exte after - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DA nsions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. O period for reply is specified above, the maximum statutory period with the to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 16(a). In no event, however, may a reply be tim ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).
Status			
2a)	Responsive to communication(s) filed on <u>12 Jac</u> This action is <b>FINAL</b> . 2b) This Since this application is in condition for allowan closed in accordance with the practice under Ex	action is non-final. ace except for formal matters, pro	
Disposit	ion of Claims		
5)□ 6)⊠ 7)□	Claim(s) <u>1-28</u> is/are pending in the application.  4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed.  Claim(s) <u>1-28</u> is/are rejected.  Claim(s) is/are objected to.  Claim(s) are subject to restriction and/or		
Applicat	ion Papers		
10)	The specification is objected to by the Examiner The drawing(s) filed on <u>12 January 2009</u> is/are: Applicant may not request that any objection to the deplacement drawing sheet(s) including the correction The oath or declaration is objected to by the Example 1.	a)⊠ accepted or b)□ objected drawing(s) be held in abeyance. See on is required if the drawing(s) is obj	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).
Priority (	under 35 U.S.C. § 119		
a)	Acknowledgment is made of a claim for foreign All b) Some * c) None of:  1. Certified copies of the priority documents  2. Certified copies of the priority documents  3. Copies of the certified copies of the priori application from the International Bureau  See the attached detailed Office action for a list of	s have been received. s have been received in Application ity documents have been received (PCT Rule 17.2(a)).	on No ed in this National Stage
2) Notice 3) Information	ct <b>(s)</b> the of References Cited (PTO-892) the of Draftsperson's Patent Drawing Review (PTO-948) the of Disclosure Statement(s) (PTO/SB/08) the No(s)/Mail Date 4/12/10.	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ate

U.S. Patent and Trademark Office PTOL-326 (Rev. 08-06)

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#### **DETAILED ACTION**

1. The instant application having Application No. 12/326,457 filed on 12/2/2008 and 1/12/2009 is presented for examination by the examiner. Claims 1-28 are currently pending in the application.

#### Oath Declaration

2. The applicant's oath/declaration submitted on 1/15/2009 has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

#### Drawings

3. The applicant's drawings filed on 12/2/2008 are acceptable for examination purpose.

#### Information Disclosure Statement

4. As required by M.P.E.P. 609, the applicant's submissions of the Information
Disclosure Statement dated 4/12/2010 is acknowledged by the examiner and the cited
references have been considered in the examination of the claims now pending

## **Examiner Notes**

5. With respect to <u>claim 1</u> which is method claim. The examiner notes that the claimed functions must, inherently, require a processor and a memory as taken in view

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of ¶ 0093 lines 1-2 and Figure 5 in the instant disclosure. Therefore, the method of claims 1-12 is statutory under 35 U.S.C. § 101.

## Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. <u>Claim 8</u> is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 line 1 recites "can be". The term "can be and may be" signifies system ability instead of "functional requirement". There is no indication that limitation(s) following the term "can and may" is/are necessarily a required part of the claimed invention. Appropriate correction is required.

#### Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. <u>Claims 21-28</u> are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

As per claim 21 which is apparatus claim. However, it is noted that the use of the

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term "apparatus" does not inherently mean that the claim is directed towards a machine or article of manufacture. Each component of the claimed apparatus can be interpreted as comprising entirely of software *per se* according to one of ordinary skill in the art. Therefore, the claim languages fail to provide the necessary hardware required for the claims to fall within the statutory category of a system.

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According to MPEP 2106, the claim lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. §101. Claims 22-28 are rejected under 35 U.S.C. §101 as non-statutory for at least the reason stated above. Claims 22-28 are directly or indirectly depended on claims 21; however, they do not add any feature or subject matter that would solve any of the non-statutory deficiencies of claim 21.

## Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-28 are rejected under 35 U.S.C. §102(e) as being anticipated by Schultz et al. (US No. 2009/0265764 A1).

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As per <u>claim 1</u>, Schultz et al. discloses a method for delivering context-based content to a first user, the method comprising:

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receiving a set of contextual information with respect to the first user; as (see e.g.,  $\P$  0011 lines 1-4,  $\P$  0015, and Fig. 3: as collect context information corresponding to a user).

processing the contextual information to determine a context or an activity being performed by the first user; and as (see e.g., ¶¶ 0015, 0024, 0028, and Fig. 3).

determining whether either or both the context and a current activity of the first user satisfy a trigger condition which has been previously defined by the first user or a second user, as (see e.g., ¶¶ 0053 and 0055) and if so:

selecting content associated with the trigger condition from a content database to present to the first user; and as (see e.g., ¶ 0054 lines 1-8: content provider selects content as user requested).

presenting the selected content as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 2</u>, Schultz et al. discloses the method of claim 1, wherein the method further comprises allowing the first user to create content that is associated with a user-defined contextual or activity-driven trigger condition by:

recording the content that is provided by the first user; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user, which is gathered and maintained by context aggregator 125).

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creating a content entry in the content database for the recorded content, wherein the content entry is associated with one or more trigger conditions; and associating one or more trigger conditions for the content entry with a user-defined context; and as (see e.g.,  $\P$  0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules) wherein the method further comprises:

continuously comparing previously-defined trigger conditions for the content entry with the ongoing context of the first user and/or user activity; and as (see e.g.,  $\P$  0037 lines 7-9).

when one or more trigger conditions are met, retrieving the associated content and presenting the retrieved content to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 3</u>, Schultz et al. discloses the method of claim 2, wherein the method further comprises allowing the first user to create shareable content by:

recording the content that is provided by the first user; and; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user, which is gathered and maintained by context aggregator 125).

creating a content package for the recorded content, wherein the content package includes the recorded content, and wherein the content package includes one or more user-defined trigger conditions; as (see e.g., ¶¶ 0036 – 0037:

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as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

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wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g.,  $\P\P$  0035 – 0037 and 0050: as information is submitted and shared to different users).

As per <u>claim 4</u>, Schultz et al. discloses the method of claim 1, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶¶ 0037 and 0048).

As per <u>claim 5</u>, Schultz et al. discloses the method of claim 4, wherein the method further comprises evolving the presentation of content over time by updating the content entries in the content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g.,  $\P$  0026).

As per <u>claim 6</u>, Schultz et al. discloses the method of claim 1, wherein presenting the selected content comprises following a number of presentation rules associated with the selected content, monitoring actions performed by the

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first user, and presenting the selected content based on the actions performed by the first user as (see e.g.,  $\P\P$  0074 – 0075).

As per <u>claim 7</u>, Schultz et al. discloses the method of claim 6, wherein the context or activity is defined as a combination of at least a high-level abstraction which corresponds to one or more low-level contextual information values, wherein the low-level contextual information values can correspond to one or more measurable parameters as (see e.g., ¶ 0015).

As per <u>claim 8</u>, Schultz et al. discloses the method of claim 6, wherein a respective rule can be defined with one or more high-level abstractions as (see e.g., ¶ 0030).

As per <u>claim 9</u>, Schultz et al. discloses the method of claim 8, further comprising allowing the first user to share the rules with a second user, wherein the second user can redefine the shared rules based on the second user's low-level contextual and activity parameters as (see e.g., ¶ 0030).

As per <u>claim 10</u>, Schultz et al. discloses the method of claim 1, wherein presenting the selected content comprises sharing the selected content with a remote device as (see e.g., ¶¶ 0002 and 0014).

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As per <u>claim 11</u>, Schultz et al. discloses the method of claim 1, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g.,  $\P$  0027 – 0030).

As per <u>claim 12</u>, Schultz et al. discloses the method of claim 1, wherein content includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g.,  $\P$  0035).

As per <u>claim 13</u>, Schultz et al. discloses a computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method for delivering context-based content to a first user, the method comprising:

receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0011 lines 1-4, ¶ 0015, and Fig. 3: as collect context information corresponding to a user).

processing the contextual information to determine a context or an activity being performed by the first user; and as (see e.g., ¶¶ 0015, 0024, 0028, and Fig. 3).

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determining whether either or both the context and a current activity of the first user satisfy a trigger condition which has been previously defined by the first user or a second user, as (see e.g., ¶¶ 0053 and 0055) and if so:

selecting content associated with the trigger condition from a content database to present to the first user; and as (see e.g., ¶ 0054 lines 1-8: content provider selects content as user requested).

presenting the selected content as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 14</u>, Schultz et al. discloses the computer-readable storage medium of claim 13, wherein the method further comprises allowing the first user to create content that is associated with the user-defined contextual or activity-driven trigger condition by:

recording the content that is provided by the first user; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating a content entry in the content database for the recorded content, wherein the content entry is associated with one or more trigger conditions; and associating one or more trigger conditions for the content entry with a user-defined context; and as (see e.g.,  $\P$  0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules) wherein the method further comprises:

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continuously comparing previously-defined trigger conditions for the content entry with the ongoing context of the first user and/or user activity; and as (see e.g.,  $\P$  0037 lines 7-9).

when one or more trigger conditions are met, retrieving the associated content and presenting the retrieved content to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 15</u>, Schultz et al. discloses the computer-readable storage medium of claim 14, wherein the method further comprises allowing the first user to create shareable content by:

recording the content that is provided by the first user; and as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating a content package for the recorded content, wherein the content package includes the recorded content, and wherein the content package includes one or more user-defined trigger conditions; as (see e.g.,  $\P$  0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content and/or trigger conditions from the content package as (see e.g., ¶¶ 0035 – 0037 and 0050: as information is submitted and shared to different users).

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As per <u>claim 16</u>, Schultz et al. discloses the computer-readable storage medium of claim 13, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶¶ 0037 and 0048).

As per claim 17, Schultz et al. discloses the computer-readable storage medium of claim 16, wherein the method further comprises evolving the presentation of content over time by updating the content entries in the content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0026).

As per <u>claim 18</u>, Schultz et al. discloses the computer-readable storage medium of claim 13, wherein presenting the selected content comprises following a number of presentation rules associated with the selected content, monitoring actions performed by the first user, and presenting the selected content based on the actions performed by the first user as (see e.g.,  $\P$  0074 – 0075).

As per <u>claim 19</u>, Schultz et al. discloses the computer-readable storage medium of claim 13, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity,

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sound, luminous intensity, camera image, and video stream as (see e.g.,  $\P\P$  0027 – 0030).

As per <u>claim 20</u>, Schultz et al. discloses the computer-readable storage medium of claim 13 wherein content includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶ 0035).

As per <u>claim 21</u>, Schultz et al. discloses an apparatus for delivering contextbased content to a first user, comprising:

an input mechanism configured to receive a set of contextual information with respect to the first user; as (see e.g., ¶ 0011 lines 1-4, ¶ 0015, and Fig. 3: as collecting context information corresponding to a user).

a content database configured to store a collection of context-based content; as (see e.g., ¶ 0024: as context-based contents are stored and maintained by context aggregator 125).

a content delivery mechanism configured to present content to a first user; and as (see e.g., ¶ 0054: as requested content is delivered to the user).

a context manager configured to process the contextual information to determine a context or an activity being performed by the first user, as (see e.g., ¶¶ 0015, 0024 and 0028, and Fig. 3) and to determine whether either or both the

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context and a current activity of the first user satisfy a trigger condition which has been previously defined by the first user or a second user; as (see e.g., ¶¶ 0053 and 0055) wherein if the context or current user activity is determined to satisfy a trigger condition, the context manager is further configured to select content associated with the trigger condition from a content database to present to the first user; and as (see e.g., ¶ 0054 lines 1-8: content provider selects content as user requested).

the content delivery mechanism is further configured to present the selected content as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 22</u>, Schultz et al. discloses the apparatus of claim 21, wherein the apparatus further comprises a content management mechanism configured to allow the first user to create content that is associated with the user-defined contextual or activity-driven trigger condition by:

recording the content that is provided by the first user; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating a content entry in the content database for the recorded content, wherein the content entry is associated with one or more trigger conditions; associating one or more trigger conditions for the content entry with a user-defined context; as (see e.g.,  $\P\P$  0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

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continuously comparing previously-defined trigger conditions for the content entry with the ongoing context of the first user and/or user activity; and as (see e.g.,  $\P$  0037 lines 7-9).

when one or more trigger conditions are met, retrieving the associated content and presenting the retrieved content to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 23</u>, Schultz et al. discloses the apparatus of claim 22, wherein the content management mechanism is further configured to allow the first user to create shareable content by:

recording the content that is provided by the first user; and as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating a content package for the recorded content, wherein the content package includes the recorded content, and wherein the content package includes one or more user-defined trigger conditions as (see e.g., ¶¶ 0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules) wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g., ¶¶ 0035 – 0037 and 0050: as information is submitted and shared to different users).

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As per <u>claim 24</u>, Schultz et al. discloses the apparatus of claim 21, wherein the context manager defines a context by: creating one or more context entries for the context; and associating a respective context entry with a set of contextual information as (see e.g., ¶¶ 0037 and 0048).

As per <u>claim 25</u>, Schultz et al. discloses the apparatus of claim 24, wherein the apparatus is further configured to evolve the presentation of content over time by updating the content entries in the content database and updating the user-defined context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0026).

As per <u>claim 26</u>, Schultz et al. discloses the apparatus of claim 21, wherein presenting the selected content comprises following a number of presentation rules associated with the selected content, monitoring actions performed by the first user, and presenting the selected content based on the actions performed by the first user as (see e.g.,  $\P \cap 0074 - 0075$ ).

As per <u>claim 27</u>, Schultz et al. discloses the apparatus of claim 21, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶¶ 0027 – 0030).

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As per <u>claim 28</u>, Schultz et al. discloses the apparatus of claim 21, wherein content includes one or more of: audio clip, image, video stream, language

lesson, e-mail, weather report, calendar reminder, news feed, rich site summary

(RSS) feed, information update from a Web 2.0 application, and Internet blog as

(see e.g., ¶ 0035).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Yano US- 2007/0055657 A1

Mackay US- 2007/0288247 A1

Morris US- 7,631,007 B2

Pather et al. US- 7,797,306 B1

Contact Information

13. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Bai D. Vu whose telephone number is 571-270-1751.

The examiner can normally be reached on Mon - Fri 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Neveen Abel-Jalil can be reached on 571-272-4074. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bai D. Vu/ Examiner, Art Unit 2165 3/14/2011

#### Application/Control No. Applicant(s)/Patent Under Reexamination 12/326,457 BELLOTTI, VICTORIA M.E. Notice of References Cited Examiner Art Unit Page 1 of 1 Bai D. Vu 2165 **U.S. PATENT DOCUMENTS** Document Number Date Classification Name Country Code-Number-Kind Code MM-YYYY \* 03-2007 US-2007/0055657 A1 Yano, Takashi 707/003 Α \* US-2007/0288247 A1 12-2007 705/1 Mackay, Michael В С US-2009/0265764 A1 10-2009 SCHULTZ et al. 726/4 US-7,631,007 B2 12-2009 Morris, Robert P. 705/7.11 D 707/714 Е US-7,797,306 B1 09-2010 Pather et al. F US-US-G US-Н US-Ι US-J US-Κ US-US-Μ FOREIGN PATENT DOCUMENTS Document Number Date Country Name Classification MM-YYYY Country Code-Number-Kind Code Ν 0 Р Q R S Т **NON-PATENT DOCUMENTS** Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) U ٧ W

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

**Notice of References Cited** 

Part of Paper No. 20110218

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

SEARCHED						
Class	Subclass	Date	Examiner			
707	999.003,009 and 732,784 (limted text search) (see attached)	3/14/2011	BV			

SEARCH NOTES						
Search Notes	Date	Examiner				
EAST Search (USPAT;US-PGPUB;JPO;EPO;IBM) (see attached)	3/14/2011	BV				
707/999.003,009 and 707/732,784 (limited text search)	3/14/2011	BV				
Inventor Name Search and Assignee Search	3/14/2011	BV				
IDS	3/14/2011	BV				

	INTERFERENCE SEAR	СН	
Class	Subclass	Date	Examiner

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Index of Claims	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

✓	Rejected	-	Cancelled	N	Non-Elected		A Appeal		
=	Allowed	÷	Restricted	I	Interference		О	Objected	
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☐ Claims	Claims renumbered in the same order as presented by applicant				☐ CPA	☐ T.I	D. 🗆	R.1.47	
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Final	Original	03/14/2011							
	1	✓							
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	27	✓							
	28	✓							

Doc code: IDS Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
Mation Disclosure Statement (IDS) Filed
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	Application Number		12326457	
	Filing Date		2008-12-02	
INFORMATION DISCLOSURE	First Named Inventor Victoria		ria M.E. Bellotti	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		24 <del>6</del> 4 2165	
(Not for Submission under 57 Of K 1.55)	Examiner Name	В	ai D. Vu	
	Attorney Docket Numb	er	PARC-20080172-US-NP	

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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue D	)ate	Name of Patentee or Applicant of cited Document		Pages,Columns,Lines who Relevant Passages or Rel Figures Appear			
/B.V./	1	5611050		1997-03	i-11	THEIMER, MARVIN M.					
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/B.V./	1	20020054174	A1	2002-05	i- <b>0</b> 9	ABBOTT, KENNETH H.					
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/B.V./	/ 1 2006111935		wo	A1		2006-10-26	VAN DOORN, MARKUS GERARDUS LEONARDUS MARIA				
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

( Not for submission under 37 CFR 1.99)

Application Number		12326457		
Filing Date		2008-12-02		
First Named Inventor Victor		ia M.E. Bellotti		
Art Unit		2461 2165		
Examiner Name E		Bai D. vu		
Attorney Docket Number		PARC-20080172-US-NP		

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.					<b>T</b> 5	
/B.V./	1	2004,	MIN HONG YUN et al., "Event-based multimedia object scheduling algorithm", Advanced Communication Technology, 2004, The 6th International Conference on Phoenix Park, Korea, Feb 9-11, 2004, Vol. 2, pgs. 735-740, ISBN: 89-5519-119-7.					
/B.V./	2		AL-BIN-ALI F: "Design Principles for Inducing Reactivity in Ubiquitous Environments", Pervasive Services, 2004, IEEE/ACS International Conference on Beirut, Lebanon 19-23 July 2004, pgs. 131-139, ISBN: 0-7695-2535-0.					
If you wis	h to ac	d add	ditional non-patent litera	ature document citation information	please click the Add	button Add	•	
				EXAMINER SIGNATURE				
Examiner	Examiner Signature /Bai Vu/ Date Considered 03/14/2011							
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								
<sup>1</sup> See Kind Codes of USPTO Patent Documents at <a href="https://www.USPTO.GOV">www.USPTO.GOV</a> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.								



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

# **BIB DATA SHEET**

## **CONFIRMATION NO. 3430**

<b>SERIAL NUMBE</b> 12/326,457	DA	or <b>371(c)</b> TE 2/2008		<b>CLASS</b> 707	GRO	OUP ART 2165		l	NO.	OOCKET 72-US-NF
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ADDRESS	ADDRESS									
c/o PARK, V 2820 FIFTH DAVIS, CA 9	PVF PARC c/o PARK, VAUGHAN, FLEMING & DOWLER LLP 2820 FIFTH STREET DAVIS, CA 95618-7759 UNITED STATES									
TITLE										
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BIB (Rev. 05/07).

# **EAST Search History**

# **EAST Search History (Prior Art)**

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	27	((VICTORIA) near2 (BELLOTTI)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2011/03/14 09:19
S2	1691	(Palo NEAR3 Alto NEAR3 Research NEAR3 Center).AS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:19
S3	4	(S1 S2) AND ((context \$3 NEAR3 information) WITH (context? activity)). clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:19
S4	1884	(context\$3 WITH information) SAME (user WITH activity)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:20
<b>S</b> 5	422	S4 AND (creat\$3 generat\$3) WITH (context\$3 NEAR2 information)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:20
S6	31	S5 AND (creat\$3 generat\$3) WITH (context\$3 NEAR2 information) AND (context\$3 NEAR2 manager)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:20
S7	4	S6 AND (content WITH deliver\$3) AND (trigger\$3 condition)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:21

S8	16761	707/999.003.ccls. 707/999.009.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:21
S9	150	S8 AND ((context\$3 WITH information) SAME (user WITH activity))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:21
S10	4	S9 AND (creat\$3 generat\$3) WITH (context\$3 NEAR2 information) AND (context\$3 NEAR2 manager)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:21
S11	205	(707/732,784).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:22
S12	2	S11 AND ((context\$3 WITH information) SAME (user WITH activity))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:22
S13	4	US-5611050-\$.DID. OR US-20020054174- \$.DID.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:22
S14	1	S13 AND ((context\$3 WITH information) SAME (user WITH activity))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/14 09:22

## 3/14/2011 9:24:09 AM

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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/326,457	12/02/2008	Victoria M.E. Bellotti	PARC-20080172-US-NP	3430
35699 PVF PARC	7590 05/10/201	EXAMINER		
c/o PARK, VA	UGHAN, FLEMING &	VU, BAI D		
	2820 FIFTH STREET DAVIS, CA 95618-7759		ART UNIT	PAPER NUMBER
		2165		
			NOTIFICATION DATE	DELIVERY MODE
			05/10/2011	ELECTRONIC
			03/10/2011	ELECTRONIC

## Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

	Application No.	Applicant(s)	
Interview Summary	12/326,457	BELLOTTI, VICT	ORIA M.E.
interview Summary	Examiner	Art Unit	
	Bai D. Vu	2165	
All participants (applicant, applicant's representative, PTO	personnel):		
(1) Bai D. Vu (Examiner).	(3) Shun Yao (Reg. No. 59	<u>,242)</u> .	
(2)	(4)		
Date of Interview: <u>04 May 2011</u> .			
Type: a)⊠ Telephonic b)□ Video Conference c)□ Personal [copy given to: 1)□ applicant 2	²)⊡ applicant's representative	e]	
Exhibit shown or demonstration conducted: d) Yes If Yes, brief description:	e) No.		
Claim(s) discussed: <u>1</u> .			
Identification of prior art discussed: Schultz et al.			
Agreement with respect to the claims f) was reached. g	)⊠ was not reached. h)□ N	J/A.	
Substance of Interview including description of the general reached, or any other comments: <u>Applicant's representative amendment and the prior art of record, and discussed whe prior art. The examiner agrees the proposed claim amendmexaminer reserves the right to review the prior art and concinvention base on the filed response.</u>	e explained the differences be ther the proposed claim amen nent overcomes the cited port	tween the propo dment could ove ions of the prior	sed claim ercome the art. The
(A fuller description, if necessary, and a copy of the amend allowable, if available, must be attached. Also, where no callowable is available, a summary thereof must be attached	opy of the amendments that w		
THE FORMAL WRITTEN REPLY TO THE LAST OFFICE A INTERVIEW. (See MPEP Section 713.04). If a reply to the GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER INTERVIEW DATE, OR THE MAILING DATE OF THIS INT FILE A STATEMENT OF THE SUBSTANCE OF THE INTERPUIR REPLY OF THE SUBSTANCE O	last Office action has already OF ONE MONTH OR THIRTY ERVIEW SUMMARY FORM, '	been filed, APP / DAYS FROM T WHICHEVER IS	LICANT IS THIS LATER, TO
/Bai D. Vu/ Primary Examiner. Art Unit 2165			

U.S. Patent and Trademark Office PTOL-413 (Rev. 04-03)

Interview Summary

Paper No. 20110504

#### **Summary of Record of Interview Requirements**

#### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
  - (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### **Examiner to Check for Accuracy**

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Application Number: 12/326,457 Confirmation Number: 3430

Applicant : Victoria M.E. Bellotti Filed : 02 December 2008

T.C./A.U. : 2165 Examiner : Vu, Bai D.

Docket Number : PARC-20080172-US-NP

Customer No. : 35,699

Proposed Amendment and Interview Summary Via Fax (571)270-2751

# PROPOSED AMENDMENT AND INTERVIEW AGENDA

Dear Examiner Vu:

Please find our proposed amendment and interview agenda below.

# Identification of Claim and Reference for Discussion

Claim for discussion: Claim 1.

Reference for discussion: Schultz et al. (U.S. Pub. No. 2009/0265764, hereinafter "Schultz").

## Applicant's Arguments

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user in response to user activities and environmental factors (see instant application, par. [0026]). Prior to the operation, a user uploads a plurality pieces of content into the system and specifies under which conditions a particular piece of content will be delivered (see instant application, pars. [0026], [0055], and [0091]). During the operation, the system gathers contextual information to determine an inferred context, and uses this context to identify a piece of content to be presented to the user (see instant application, par. [0028]). The system further determines whether a trigger

YD Amendment A PARC-20080172-US-NP (Proposed Amendment)

condition is met, and if so, presents the identified content piece to the user (see instant application, par. [0090]).

In contrast, Schultz discloses aggregating context information and allowing the context information to be used by authorized context consumers (see Schultz, the Abstract). Although Examiner states that Schultz discloses selecting content associated with the trigger condition from a context database (see Office Action, page 5, ll. 11-13), Applicant respectfully points out that, in the cited text, Schultz discloses providing user-requested content using the highest resolution that is possible based on the user's content (see Schultz, par. [0054]). Note that in the Schultz system the content is requested by the user, and user context determines the content delivery method. Schultz does not disclose selecting a piece of content to be presented from a plurality of content pieces based on the user context.

#### Proposed Amendment:

1.

1

11

12

(Currently Amended) A method for delivering context-based 2 content to a first user, the method comprising: receiving a set of contextual information with respect to the first user; 3 4 processing the contextual information to determine a context or an activity 5 being performed by the first user; [[and]] 6 determining whether either or both the context and a current activity of the 7 first user satisfy a trigger condition which has been previously defined by the first 8 user or a second user;, and if so: 9 in response to the trigger condition being satisfied, selecting at least one content piece associated with the trigger condition from a content database 10

comprising a plurality of content pieces based on the context and the current

YD Amendment A PARC-20080172-US-NP (Proposed Amendment)

activity of to present to the first user; and

By

presenting the selected content piece to the first user.

Respectfully submitted,

/Shun Yao/ Shun Yao Registration No. 59,242

Date: 02 May 2011

Shun Yao Park, Vaughan, Fleming & Dowler LLP 2820 Fifth Street Davis, CA 95618-7759 Tel: (530) 759-1667

Tel: (530) 759-1667 Fax: (530) 759-1665

Email: shun@parklegal.com

Application Number: 12/326,457 Confirmation Number: 3430

Applicant : Victoria M.E. Bellotti Filed : 02 December 2008

T.C./A.U. : 2165 Examiner : Vu, Bai D.

Docket Number : PARC-20080172-US-NP

Customer No. : 35,699

Amendment after Non Final Rejection Via Electronic Filing

#### **AMENDMENT**

Sir:

In response to the Office Action of **21 March 2011**, please amend the above-identified Application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 11 of this paper.

# AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

# **Listing of Claims:**

1	1. (Currently Amended) A method for delivering context-based
2	content to a first user, the method comprising:
3	receiving a set of contextual information with respect to the first user;
4	processing the contextual information to determine a context or an activity
5	being performed by the first user; [[and]]
6	determining whether either or both the context and a current activity of the
7	first user satisfy a trigger condition which has been previously defined by the first
8	user or a second user; and if so:
9	in response to the trigger condition being satisfied, selecting at least one
10	content piece associated with the trigger condition from a content database
11	comprising a plurality of content pieces based on the context and the current
12	activity of to present to the first user, wherein different trigger conditions result in
13	selections of different content pieces associated with different substances; and
14	presenting the selected content_piece to the first user.
1	2. (Currently Amended) The method of claim 1, wherein the method
2	further comprises allowing the first user to create <u>a content piece</u> that is
3	associated with a user-defined contextual or activity-driven trigger condition by:
4	recording the content piece that is provided by the first user;
5	creating an a content entry in the content database for the recorded
6	content piece, wherein the content entry is associated with one or more
7	trigger conditions; and
	VD Amendment A PARC-20080172-US NP (non-final OAR)

ð	associating one or more trigger conditions for the content entry
9	with a user-defined context; and
10	wherein the method further comprises:
11	continuously comparing previously defined previously-defined
12	trigger conditions for the content-entry with the ongoing context of the
13	first user and/or user activity; and
14	when one or more trigger conditions are met, retrieving the
15	associated content piece and presenting the retrieved content piece to the
16	first user.
1	3. (Currently Amended) The method of claim 2, wherein the method
2	further comprises allowing the first user to create <u>a</u> shareable content <u>piece</u> by:
3	recording the sharable content piece that is provided by the first user; and
4	creating a content package for the recorded sharable content piece,
5	wherein the content package includes the recorded sharable content piece, and
6	wherein the content package includes one or more user-defined trigger conditions
7	wherein the content package allows a recipient of the content package to
8	insert, modify, and/or remove content or trigger conditions from the content
9	package.
1	4. (Original) The method of claim 1, wherein the method further
2	comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information.
1	5. (Currently Amended) The method of claim 4, wherein the method
2	further comprises evolving the presentation of content over time by updating the
3	content entries in the content database and updating the context entries in the
4	context manager responsive to actions performed by the first user.
	3 YD Amendment A PARC-20080172-US-NP (non-final OAR)

1	6. (Currently Amended) The method of claim 1, wherein presenting
2	the selected content piece comprises following a number of presentation rules
3	associated with the selected content piece, monitoring actions performed by the
4	first user, and presenting the selected content piece based on the actions
5	performed by the first user.

- 7. (Original) The method of claim 6, wherein the context or activity is defined as a combination of at least a high-level abstraction which corresponds to one or more low-level contextual information values, wherein the low-level contextual information values can correspond to one or more measurable parameters.
- 1 8. (Currently Amended) The method of claim 6, wherein a respective rule <u>can beis</u> defined with one or more high-level abstractions.
- 9. (Original) The method of claim 8, further comprising allowing the first user to share the rules with a second user, wherein the second user can redefine the shared rules based on the second user's low-level contextual and activity parameters.
- 1 10. (Currently Amended) The method of claim 1, wherein presenting 2 the selected content <u>piece</u> comprises sharing the selected content <u>piece</u> with a 3 remote device.
- 1 11. (Original) The method of claim 1, wherein the contextual 2 information includes one or more of: time, date, location, proximity to a system-3 detectable tag, device orientation, velocity, direction, distance, vibration, altitude,

4 YD Amendment A PARC-20080172-US-NP (non-final OAR)

1	temperature, pressure, humidity, sound, luminous intensity, camera image, and
2	video stream.
1	12. (Currently Amended) The method of claim 1, wherein the content
2	piece includes one or more of: audio clip, image, video stream, language lesson,
3	e-mail, weather report, calendar reminder, news feed, rich site summary (RSS)
4	feed, information update from a Web 2.0 application, and Internet blog.
1	13. (Currently Amended) A computer-readable storage medium
2	storing instructions that when executed by a computer cause the computer to
3	perform a method for delivering context-based content to a first user, the method
4	comprising:
5	receiving a set of contextual information with respect to the first user;
6	processing the contextual information to determine a context or an activity
7	being performed by the first user; [[and]]
8	determining whether either or both the context and a current activity of the
9	first user satisfy a trigger condition which has been previously defined by the first
10	user or a second user; and if so:
11	in response to the trigger condition being satisfied, selecting at least one
12	content piece associated with the trigger condition from a content database
13	comprising a plurality of content pieces based on the context and the current
14	activity of to present to the first user, wherein different trigger conditions result in
15	selections of different content pieces associated with different substances; and
16	presenting the selected content piece to the first user.
1	14. (Currently Amended) The computer-readable storage medium of

claim 13, wherein the method further comprises allowing the first user to create  $\underline{a}$  content <u>piece</u> that is associated with the user-defined contextual or activity-driven

trigger condition by:

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5	recording the content <u>piece</u> that is provided by the first user;
6	creating an content entry in the content database for the recorded
7	content piece, wherein the content entry is associated with one or more
8	trigger conditions; and
9	associating one or more trigger conditions for the content entry
10	with a user-defined context; and
11	wherein the method further comprises:
12	continuously comparing previously defined previously-defined
13	trigger conditions for the content entry with the ongoing context of the
14	first user and/or user activity; and
15	when one or more trigger conditions are met, retrieving the
16	associated content piece and presenting the retrieved content piece to the
17	first user.
1	15. (Currently Amended) The computer-readable storage medium of
2	claim 14, wherein the method further comprises allowing the first user to create $\underline{a}$
3	shareable content piece by:
4	recording the sharable content piece that is provided by the first user; and
5	creating a content package for the recorded sharable content piece,
6	wherein the content package includes the recorded sharable content piece, and
7	wherein the content package includes one or more user-defined trigger conditions;
8	wherein the content package allows a recipient of the content package to
9	insert, modify, and/or remove content and/or trigger conditions from the content
10	package.
1	16. (Original) The computer-readable storage medium of claim 13,
2	wherein the method further comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information.
	6 YD Amendment A PARC-20080172-US-NP (non-final OAR)

1	17. (Currently Amended) The computer-readable storage medium of						
2	claim 16, wherein the method further comprises evolving the presentation of						
3	content over time by updating the content entries in the content database and						
4	updating the context entries in the context manager responsive to actions						
5	performed by the first user.						
1	18. (Currently Amended) The computer-readable storage medium of						
2	claim 13, wherein presenting the selected content <u>piece</u> comprises following a						
3	number of presentation rules associated with the selected content piece,						
	•						
4	monitoring actions performed by the first user, and presenting the selected content						
5	piece based on the actions performed by the first user.						
1	19. (Original) The computer-readable storage medium of claim 13,						
2	wherein the contextual information includes one or more of: time, date, location,						
3	proximity to a system-detectable tag, device orientation, velocity, direction,						
4	distance, vibration, altitude, temperature, pressure, humidity, sound, luminous						
5	intensity, camera image, and video stream.						
1	20. (Currently Amended) The computer-readable storage medium of						
2	claim 13, wherein the content piece includes one or more of: audio clip, image,						
3	video stream, language lesson, e-mail, weather report, calendar reminder, news						
4	feed, rich site summary (RSS) feed, information update from a Web 2.0						
5	application, and Internet blog.						
1	21. (Currently Amended) An apparatus for delivering context-based						
2	content to a first user, comprising:						
3	a processor;						

4	an input mechanism configured to receive a set of contextual information
5	with respect to the first user;
6	a content database configured to store a collection of context-
7	basedplurality of content pieces;
8	a content delivery mechanism configured to present content to a first user;
9	and
10	a context manager configured to process the contextual information to
11	determine a context or an activity being performed by the first user, and to
12	determine whether either or both the context and a current activity of the first user
13	satisfy a trigger condition which has been previously defined by the first user or a
14	second user;
15	wherein in response to the trigger condition being satisfied, the content
16	manager is further configured to select at least one content piece associated with
17	the trigger condition from the content based on the context and the current
18	activity of the first user, wherein different trigger conditions result in selections of
19	different content pieces associated with different substances; and if the context or
20	current user activity is determined to satisfy a trigger condition,
21	the context manager is further configured to select content
22	associated with the trigger condition from a content database to present to the firs
23	user; and
24	wherein the content delivery mechanism is further configured to present
25	the selected content <u>piece to the first user</u> .
1	22. (Currently Amended) The apparatus of claim 21, wherein the
2	apparatus further comprises a content management mechanism configured to
3	allow the first user to create a content piece that is associated with the user-
4	defined contextual or activity-driven trigger condition by:
5	recording the content piece that is provided by the first user:

6	creating an content entry in the content database for the recorded content						
7	piece, wherein the content entry is associated with one or more trigger conditions;						
8	associating one or more trigger conditions for the content-entry with a						
9	user-defined context;						
10	continuously comparing previously-defined previously-defined trigger						
11	conditions for the content entry with the ongoing context of the first user and/or						
12	user activity; and						
13	when one or more trigger conditions are met, retrieving the associated						
14	content <u>piece</u> and presenting the retrieved content <u>piece</u> to the first user.						
1	23. (Currently Amended) The apparatus of claim 22, wherein the						
2	content management mechanism is further configured to allow the first user to						
3	create <u>a shareable content piece</u> by:						
4	recording the sharable content piece that is provided by the first user; and						
5	creating a content package for the recorded sharable content piece,						
6	wherein the content package includes the recorded sharable content piece, and						
7	wherein the content package includes one or more user-defined trigger conditions;						
8	wherein the content package allows a recipient of the content package to						
9	insert, modify, and/or remove content or trigger conditions from the content						
10	package.						
1	24. (Original) The apparatus of claim 21, wherein the context manager						
2	defines a context by:						
3	creating one or more context entries for the context; and						
4	associating a respective context entry with a set of contextual information.						
1	25. (Currently Amended) The apparatus of claim 24, wherein the						
2	apparatus is further configured to evolve the presentation of content over time by						
3	updating the content entries in the content database and updating the user-defined 9						
	YD Amendment A PARC-20080172-US-NP (non-final OAR)						

- 4 context entries in the context manager responsive to actions performed by the first
- 5 user.
- 1 26. (Currently Amended) The apparatus of claim 21, wherein
- 2 presenting the selected content piece comprises following a number of
- 3 presentation rules associated with the selected content piece, monitoring actions
- 4 performed by the first user, and presenting the selected content <u>piece</u> based on the
- 5 actions performed by the first user.
- 1 27. (Original) The apparatus of claim 21, wherein the contextual
- 2 information includes one or more of: time, date, location, proximity to a system-
- detectable tag, device orientation, velocity, direction, distance, vibration, altitude,
- 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and
- 5 video stream.
- 1 28. (Currently Amended) The apparatus of claim 21, wherein the
- 2 content piece includes one or more of: audio clip, image, video stream, language
- 3 lesson, e-mail, weather report, calendar reminder, news feed, rich site summary
- 4 (RSS) feed, information update from a Web 2.0 application, and Internet blog.

## REMARKS

In the Official Action mailed on **21 March 2011** (hereinafter "Office Action"), the Examiner reviewed claims 1-28. Examiner rejected claim 8 under 35 U.S.C. § 112. Examiner rejected claims 21-28 under 35 U.S.C. § 101. Examiner rejected claims 1-28 under 35 U.S.C. § 102(e) based on Schultz et al. (U.S. Pub. No. 2009/0265764, hereinafter "Schultz").

## **Examiner Interview**

Applicant thanks Examiner for the phone interview conducted on 4 May 2011. Applicant proposed amendments to the claims and argued that the cited reference Schultz does not disclose selecting a content piece from a content database comprising a plurality of content pieces based on user context. Examiner agreed that the proposed amendments overcome the cited reference. Accordingly, Applicant has incorporated the proposed amendments into this response.

## Rejections under 35 U.S.C. § 101

Examiner rejected claims 21-28 under 35 U.S.C. § 101. More specifically, Examiner stated that claim 21 lacks the necessary physical articles or objects to constitute a machine. Accordingly, Applicant has amended claim 21 to clarify that the claimed apparatus includes a processor, which is a machine, thus overcoming the non-statutory subject matter claim rejection. These amendments find support in FIG. 5 of the instant application. No new matter has been added.

## Rejections under 35 U.S.C. § 112

Examiner rejected claim 8 under 35 U.S.C. § 112 as being indefinite. Accordingly, Applicant has amended claim 8 by replacing the term "can be" with the term "is" to overcome the claim rejection. No new matter has been added

#### Rejections under 35 U.S.C. § 102

Examiner rejected claims 1-28 under 35 U.S.C. § 102(e) as being anticipated by Schultz. Applicant respectfully disagrees because Schultz fails to disclose selecting a content piece from a content database comprising a plurality of content pieces based on user context.

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user in response to user activities and environmental factors (see instant application, par. [0026]). Prior to the operation, a user uploads a plurality of pieces of content into the system and specifies under which conditions a particular piece of content will be delivered (see instant application, pars. [0026], [0055], and [0091]). During the operation, the system gathers contextual information to determine an inferred context, and uses this context to identify a piece of content to be presented to the user (see instant application, par. [0028]). The system further determines whether a trigger condition is met, and if so, presents the identified content piece to the user (see instant application, par. [0090]). Note that different trigger conditions or user context will result in content with different substances being presented to the user (see instant application, Table 1).

In contrast, Schultz discloses aggregating context information and allowing the context information to be used by authorized context consumers (see Schultz, the Abstract). Although Examiner states that Schultz discloses selecting content associated with the trigger condition from a context database (see Office Action, page 5, Il. 11-13), Applicant respectfully points out that, in the cited text, Schultz discloses providing user-requested content using the highest resolution

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that is possible based on the user's content (see Schultz, par. [0054]). Note that in the Schultz system the content is requested by the user, and user context determines the content delivery method. Schultz does not disclose selecting a piece of content to be presented from a plurality of content pieces based on the user context.

Accordingly, Applicant has amended claims 1, 13, and 21 to clarify that, in embodiments of the present invention, the system selects a piece of content from a content database comprising a plurality of content pieces based on the user context, and a different trigger condition results in a selection of a different content piece associated with a different substance. These amendments find support in pars. [0055] and [0090]-[0091], and Table 1 of the instant application. No new matter has been added.

Hence, Applicant respectfully submits that independent claims 1, 13, and 21 as presently amended are in condition for allowance. Applicant also submits that claims 2-12, which depend upon claim 1; claims 14-20, which depend upon claim 13; and claims 22-28, which depend upon claim 21, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

# **CONCLUSION**

It is submitted that the application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

By /Shun Yao/ Shun Yao

Registration No. 59,242

Date: 26 May 2011

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Electronic Acknowledgement Receipt				
EFS ID:	10176254			
Application Number:	12326457			
International Application Number:				
Confirmation Number:	3430			
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION			
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti			
Customer Number:	35699			
Filer:	Shun Yao			
Filer Authorized By:				
Attorney Docket Number:	PARC-20080172-US-NP			
Receipt Date:	26-MAY-2011			
Filing Date:	02-DEC-2008			
Time Stamp:	16:02:39			
Application Type:	Utility under 35 USC 111(a)			

# Payment information:

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File Listing:							
Document Number	Document Description	File Name	File Name File Size(Bytes)/ Multi Pages Message Digest Part /.zip (if appl.				
1		Amendment.pdf	108804 676e8c98b70089a153c0bd49c03fa2d4704 42acb	yes	14		

Multipart Description/PDF files in .zip description								
Document Description	Start	End						
Amendment/Req. Reconsideration-After Non-Final Reject	1	1						
Claims	2	10						
Applicant Arguments/Remarks Made in an Amendment	11	14						

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#### Information:

Total Files Size (in bytes): 108804

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#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)

Approved for use through 1/31/2007. OMB 0651-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Panerwork Reduction Act of 1005, no persons are required to response

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 12/326,457		Filing Date 12/02/2008		To be Mailed			
	APPLICATION AS FILED – PART I (Column 1) (Column 2)										HER THAN ALL ENTITY
	FOR	N	` UMBER FII		MBER EXTRA	П	RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)
Ø	BASIC FEE (37 CFR 1.16(a), (b),	or (c))	N/A		N/A	<b> </b>	N/A		1	N/A	330
	SEARCH FEE (37 CFR 1.16(k), (i), (i)		N/A		N/A		N/A			N/A	
	EXAMINATION FE (37 CFR 1.16(o), (p),	Ε	N/A		N/A	<u>ן</u>	N/A			N/A	
	ΓAL CLAIMS CFR 1.16(i))		mir	nus 20 = *		1 [	X \$ =		OR	X \$ =	
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旦	MULTIPLE DEPEN	IDENT CLAIM PR	ESENT (3	7 CFR 1.16(j))		lL					
* If t	the difference in colu	umn 1 is less than	zero, ente	r "0" in column 2.			TOTAL			TOTAL	330
	APPI	(Column 1)	AMENE	OED – PART II  (Column 2)	(Column 3)		SMAL	L ENTITY	OR		ER THAN ALL ENTITY
AMENDMENT	05/26/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
Μ	Total (37 CFR 1.16(i))	* 28	Minus	** 28	= 0		X \$ =		OR	X \$52=	0
iż l	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0		X \$ =		OR	X \$220=	0
Δ	Application Size Fee (37 CFR 1.16(s))										
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								OR		
						•	TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0
		(Column 1)		(Column 2)	(Column 3)						
⊢		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
ᅵ딞	Total (37 CFR 1.16(i))	*	Minus	**	=		X \$ =		OR	X \$ =	
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Z Z	Application Si	ize Fee (37 CFR 1	.16(s))			1 [					
AME	FIRST PRESEN	NTATION OF MULTIF	PLE DEPEN	IDENT CLAIM (37 CF	R 1.16(j))				OR		
						• •	TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
** If *** I	* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".  *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".  The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
12/326,457 12/02/2008		Victoria M.E. Bellotti	PARC-20080172-US-NP	3430	
35699 PVF PARC	7590 08/17/201	EXAMINER			
c/o PARK, VAU 2820 FIFTH ST	UGHAN, FLEMING &	& DOWLER LLP	VU, BAI D		
DAVIS, CA 95618-7759			ART UNIT	PAPER NUMBER	
			2165		
			NOTIFICATION DATE	DELIVERY MODE	
			08/17/2011	ELECTRONIC	

# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

	Application	ı No.	Applicant(s)				
	12/326,457		BELLOTTI, VICTORIA M.E.				
Office Action Summary	Examiner		Art Unit				
	Bai D. Vu		2165				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).							
Status							
Responsive to communication(s) filed on <u>26 M</u> This action is <b>FINAL</b> . 2b) ☐ This     Since this application is in condition for alloware closed in accordance with the practice under E	action is no	or formal matters, pro					
Disposition of Claims							
4a) Of the above claim(s) is/are withdray 5) ☐ Claim(s) is/are allowed. 6) ☑ Claim(s) <u>1-28</u> is/are rejected. 7) ☐ Claim(s) is/are objected to.	6)⊠ Claim(s) 1-28 is/are rejected.						
Application Papers							
9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119							
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>							
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	í	1) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal Pa 8) Other:	te				

U.S. Patent and Trademark Office PTOL-326 (Rev. 08-06)

Art Unit: 2165

## **DETAILED ACTION**

## Response to Amendment

1. Applicant has amended claims 1-3, 5, 6, 8, 10, 12-15, 17, 18, 20-23, 25, 26 and 28 in the amendment filed on 5/26/2011. Claims 1-28 are currently pending in the application.

## Response to Arguments

2. Applicant's arguments filed on 5/26/2011 with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection

# Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. <u>Claims 1-28</u> are rejected under 35 U.S.C. § 103(a) as being unpatentable over Schultz et al. (US No. 2009/0265764 A1), and further in view of Yano (US No. 2007/0055657 A1).

As per <u>claim 1</u>, Schultz et al. discloses a method for delivering context-based content to a first user, the method comprising:

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receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0011 lines 1-4, ¶ 0015, and Fig. 3: as collect context information corresponding to a user).

processing the contextual information to determine a context or an activity being performed by the first user; as (see e.g., ¶¶ 0015, 0024, 0028, and Fig. 3).

determining whether either or both the context and a current activity of the first user satisfy a trigger condition which has been previously defined by the first user or a second user; as (see e.g., ¶¶ 0053 and 0055).

presenting the selected content piece to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

However, Yano discloses the limitation which is not explicitly disclosed by Schultz as below:

in response to the trigger condition being satisfied, selecting at least one content piece from a content database comprising a plurality of content pieces based on the context and the current activity of the first user, wherein different trigger condition result in selections of different content pieces associated with different substances; and as (see e.g.,  $\P = 0.043 - 0.046$  and 0.050 - 0.053).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Yano teaching of managing context information into Schultz et al. system in order to have the information management system may be able to predict the need of the user with high accuracy, and provide information valuable to the user, such as a list of document data previously accessed by the user, even before the user

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actually instructs the system to perform a search using the context information describing sequential jobs taken by a specific user for completing one search task (Yano, ¶ 0004 lines 7-14).

As per <u>claim 2</u>, Schultz et al. as modified by Yano discloses the method of claim 1, wherein the method further comprises allowing the first user to create a content piece that is associated with a user-defined contextual or activity-driven trigger condition by:

recording the content piece that is provided by the first user; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user, which is gathered and maintained by context aggregator 125).

creating an content entry in the content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; and associating one or more trigger conditions for the content entry with a user-defined context; and as (see e.g., ¶¶ 0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules) wherein the method further comprises:

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and as (see e.g., ¶ 0037 lines 7-9).

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when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 3</u>, Schultz et al. as modified by Yano discloses the method of claim 2, wherein the method further comprises allowing the first user to create a shareable content piece by:

recording the sharable content piece that is provided by the first user; and as (see e.g., ¶ 0037: as information related to user's context is submitted by the user, which is gathered and maintained by context aggregator 125).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more user-defined trigger conditions; as (see e.g.,  $\P 0036 - 0037$ : as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g.,  $\P\P$  0035 – 0037 and 0050: as information is submitted and shared to different users).

As per <u>claim 4</u>, Schultz et al. as modified by Yano discloses the method of claim 1, wherein the method further comprises defining a context by: creating

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one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶¶ 0037 and 0048).

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As per <u>claim 5</u>, Schultz et al. as modified by Yano discloses the method of claim 4, wherein the method further comprises evolving the presentation of content over time by updating entries in the content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0026).

As per <u>claim 6</u>, Schultz et al. as modified by Yano discloses the method of claim 1, wherein presenting the selected content piece comprises following a number of presentation rules associated with the selected content piece, monitoring actions performed by the first user, and presenting the selected content piece based on the actions performed by the first user as (see e.g.,  $\P$  0074 – 0075).

As per <u>claim 7</u>, Schultz et al. as modified by Yano discloses the method of claim 6, wherein the context or activity is defined as a combination of at least a high-level abstraction which corresponds to one or more low-level contextual information values, wherein the low-level contextual information values can correspond to one or more measurable parameters as (see e.g., ¶ 0015).

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As per <u>claim 8</u>, Schultz et al. as modified by Yano discloses the method of claim 6, wherein a respective rule is defined with one or more high-level abstractions as (see e.g., ¶ 0030).

As per <u>claim 9</u>, Schultz et al. as modified by Yano discloses the method of claim 8, further comprising allowing the first user to share the rules with a second user, wherein the second user can redefine the shared rules based on the second user's low-level contextual and activity parameters as (see e.g., ¶ 0030).

As per <u>claim 10</u>, Schultz et al. as modified by Yano discloses the method of claim 1, wherein presenting the selected content piece comprises sharing the selected content piece with a remote device as (see e.g., ¶¶ 0002 and 0014).

As per <u>claim 11</u>, Schultz et al. as modified by Yano discloses the method of claim 1, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶¶ 0027 – 0030).

As per <u>claim 12</u>, Schultz et al. as modified by Yano discloses the method of claim 1, wherein the content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news

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feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶ 0035).

As per <u>claim 13</u>, Schultz et al. discloses a computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method for delivering context-based content to a first user, the method comprising:

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receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0011 lines 1-4, ¶ 0015, and Fig. 3: as collect context information corresponding to a user).

processing the contextual information to determine a context or an activity being performed by the first user; as (see e.g., ¶¶ 0015, 0024, 0028, and Fig. 3).

determining whether either or both the context and a current activity of the first user satisfy a trigger condition which has been previously defined by the first user or a second user; as (see e.g., ¶¶ 0053 and 0055).

presenting the selected content piece to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

However, Yano discloses the limitation which is not explicitly disclosed by Schultz as below:

in response to the trigger condition being satisfied, selecting at least one content piece from a content database comprising a plurality of content pieces based on the context and the current activity of the first user, wherein different

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trigger conditions result in selections of different content pieces associated with different substances; and as (see e.g.,  $\P$  0043 – 0046 and 0050 – 0053).

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It would have been obvious to one of ordinary skill in the art at the time of invention to apply Yano teaching of managing context information into Schultz et al. system in order to have the information management system may be able to predict the need of the user with high accuracy, and provide information valuable to the user, such as a list of document data previously accessed by the user, even before the user actually instructs the system to perform a search using the context information describing sequential jobs taken by a specific user for completing one search task (Yano, ¶ 0004 lines 7-14).

As per <u>claim 14</u>, Schultz et al. as modified by Yano discloses the <u>computer-readable storage medium of claim 13</u>, wherein the method further comprises allowing the first user to create a content piece that is associated with the user-defined contextual or activity-driven trigger condition by:

recording the content piece that is provided by the first user; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating an entry in the content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; and associating one or more trigger conditions for the entry with a user-defined context; and as (see e.g.,  $\P$  0036 – 0037: as information gathered and maintained by

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context aggregator 125 is inferred from user activity and/or predefined rules) wherein the method further comprises:

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and as (see e.g., ¶ 0037 lines 7-9).

when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 15</u>, Schultz et al. as modified by Yano discloses the computerreadable storage medium of claim 14, wherein the method further comprises allowing the first user to create shareable content piece by:

recording the sharable content piece that is provided by the first user; and as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more user-defined trigger conditions; as (see e.g.,  $\P = 0036 - 0037$ : as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content and/or trigger conditions from the content

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**package** as (see e.g.,  $\P\P$  0035 – 0037 and 0050: as information is submitted and shared to different users).

As per <u>claim 16</u>, Schultz et al. as modified by Yano discloses the computer-readable storage medium of claim 13, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶¶ 0037 and 0048).

As per <u>claim 17</u>, Schultz et al. as modified by Yano discloses the computer-readable storage medium of claim 16, wherein the method further comprises evolving the presentation of content over time by updating entries in the content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0026).

As per <u>claim 18</u>, Schultz et al. as modified by Yano discloses the computer-readable storage medium of claim 13, wherein presenting the selected content piece comprises following a number of presentation rules associated with the selected content piece, monitoring actions performed by the first user, and presenting the selected content piece based on the actions performed by the first user as (see e.g.,  $\P$  0074 – 0075).

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As per <u>claim 19</u>, Schultz et al. as modified by Yano discloses the computer-readable storage medium of claim 13, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g.,  $\P$  0027 – 0030).

As per <u>claim 20</u>, Schultz et al. as modified by Yano discloses the computer-readable storage medium of claim 13, wherein the content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶ 0035).

As per <u>claim 21</u>, Schultz et al. discloses an apparatus for delivering contextbased content to a first user, comprising:

a processor;

an input mechanism configured to receive a set of contextual information with respect to the first user; as (see e.g., ¶ 0011 lines 1-4, ¶ 0015, and Fig. 3: as collecting context information corresponding to a user).

a content database configured to store a plurality of content pieces; as (see e.g., ¶ 0024: as context-based contents are stored and maintained by context aggregator 125).

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a content delivery mechanism configured to present content to a first user; and as (see e.g., ¶ 0054: as requested content is delivered to the user).

a context manager configured to process the contextual information to determine a context or an activity being performed by the first user, as (see e.g., ¶¶ 0015, 0024 and 0028, and Fig. 3) and to determine whether either or both the context and a current activity of the first user satisfy a trigger condition which has been previously defined by the first user or a second user; as (see e.g., ¶¶ 0053 and 0055).

wherein the content delivery mechanism is further configured to present the selected content piece to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

However, Yano discloses the limitation which is not explicitly disclosed by Schultz as below:

wherein in response to the trigger condition being satisfied, the content manager is further configured to select at least one content piece associated with the trigger condition from the content based on the context and the current activity of the first user, wherein different trigger conditions result in selections of different content pieces associated with different substance; and as (see e.g.,  $\P$  0043 – 0046 and 0050 – 0053).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Yano teaching of managing context information into Schultz et al. system in order to have the information management system may be able to predict the

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need of the user with high accuracy, and provide information valuable to the user, such as a list of document data previously accessed by the user, even before the user actually instructs the system to perform a search using the context information describing sequential jobs taken by a specific user for completing one search task (Yano, ¶ 0004 lines 7-14).

As per <u>claim 22</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 21, wherein the apparatus further comprises a content management mechanism configured to allow the first user to a create content piece that is associated with the user-defined contextual or activity-driven trigger condition by:

recording the content piece that is provided by the first user; as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating an entry in the content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; associating one or more trigger conditions for the entry with a user-defined context; as (see e.g.,  $\P$  0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and as (see e.g.,  $\P$  0037 lines 7-9).

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when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0054: as requested content is delivered to the user).

As per <u>claim 23</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 22, wherein the content management mechanism is further configured to allow the first user to create a shareable content piece by:

recording the sharable content piece that is provided by the first user; and as (see e.g., ¶ 0037: as information related to user's context is submitted by the user).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more user-defined trigger conditions; as (see e.g., ¶¶ 0036 – 0037: as information gathered and maintained by context aggregator 125 is inferred from user activity and/or predefined rules).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g.,  $\P\P$  0035 – 0037 and 0050: as information is submitted and shared to different users).

As per <u>claim 24</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 21, wherein the context manager defines a context by: creating one or more

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context entries for the context; and associating a respective context entry with a set of contextual information as (see e.g., ¶¶ 0037 and 0048).

As per <u>claim 25</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 24, wherein the apparatus is further configured to evolve the presentation of content over time by updating entries in the content database and updating the user-defined context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0026).

As per <u>claim 26</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 21, wherein presenting the selected content piece comprises following a number of presentation rules associated with the selected content piece, monitoring actions performed by the first user, and presenting the selected content piece based on the actions performed by the first user as (see e.g.,  $\P$  0074 – 0075).

As per <u>claim 27</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 21, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶¶ 0027 – 0030).

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As per <u>claim 28</u>, Schultz et al. as modified by Yano discloses the apparatus of claim 21, wherein content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶ 0035).

#### Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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#### Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bai D. Vu whose telephone number is (571)270-1751. The examiner can normally be reached on Mon - Fri 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel-Jalil can be reached on 571-272-4074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bai D. Vu/ Primary Examiner, Art Unit 2165 8/15/2011

	Application/Control No.	Applicant(s)/Patent Under Reexamination			
Search Notes	12326457	BELLOTTI, VICTORIA M.E.			
	Examiner	Art Unit			
	Bai D. Vu	2165			

SEARCHED						
Class	Subclass	Date	Examiner			
707	999.003,009 and 732,784 (limted text search) (see attached)	8/15/2011	BV			

SEARCH NOTES						
Search Notes	Date	Examiner				
EAST Search (USPAT;US-PGPUB;JPO;EPO;IBM) (see attached)	8/15/2011	BV				
707/999.003,009 and 707/732,784 (limited text search)	8/15/2011	BV				

	INTERFERENCE SEARCH		
Class	Subclass	Date	Examiner

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Index of Claims	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

✓	Rejected	-	Cancelled	N	Non-Elected	ected		Appeal
=	Allowed	÷	Restricted	I	Interference		0	Objected
	☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47							

☐ Claims	renumbered	in the same order	as presented by a	applicant		☐ CPA	□ Т.І	D. 🗆	R.1.47
CL	AIM				DATE				
Final	Original	08/15/2011							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
	6	✓							
	7	✓							
	8	✓							
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	20	✓							
	21	✓							
	22	✓							
	23	<b>√</b>							
	24	✓							
	25	<b>✓</b>							
	26	<b>√</b>							
	27	<b>✓</b>							
	28	<b>✓</b>							

# **EAST Search History**

# **EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S15	1055	((select\$4 generat\$4) WITH content WITH context)	USPAT	OR	OFF	2011/08/15 05:12
S16	73	S15 AND (user NEAR3 activity) AND (user NEAR3 defin\$4)	USPAT	OR	OFF	2011/08/15 05:14
S17	16791	(707/999.003,999.009).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/15 05:15
S18	83	S17 AND ((select\$4 generat\$4) WITH content WITH context)	USPAT	OR	OFF	2011/08/15 05:16
S19	13	S18 AND (user NEAR3 activity) AND (user NEAR3 defin\$4)	USPAT	OR	OFF	2011/08/15 05:16
S20	275	(707/732,784).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/15 05:16
S21	3	S20 AND ((select\$4 generat\$4) WITH content WITH context)	USPAT	OR	OFF	2011/08/15 05:17

8/15/2011 5:20:23 AM

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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/326,457	12/02/2008	Victoria M.E. Bellotti	PARC-20080172-US-NP	3430
35699 PVF PARC	7590 09/22/201	1	EXAM	IINER
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DAVIS, CA 95			ART UNIT	PAPER NUMBER
			2165	
			NOTIFICATION DATE	DELIVERY MODE
			09/22/2011	ELECTRONIC

## Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

		Application No.	Applicant(s)	
Applicant-Initiated Interview Su	mmarv	12/326,457	BELLOTTI, VICT	ORIA M.E.
Applicant-lintiated linterview 30	iiiiiai y	Examiner	Art Unit	
		Bai D. Vu	2165	
All participants (applicant, applicant's represe	entative, PTO	personnel):		
(1) Bai D. Vu (Examiner).		(3) <i>Shun Yao (Reg. No. 59</i>	<u>,242).</u> .	
(2)		(4)		
Date of Interview: 15 September 2011.				
Type: 🛛 Telephonic 🔲 Video Co	onference applicant	☐ applicant's representative]		
Exhibit shown or demonstration conducted: If Yes, brief description:	☐ Yes	⊠ No.		
Issues Discussed 101 112 102 (For each of the checked box(es) above, please describe below				
Claim(s) discussed: 1.				
Identification of prior art discussed: Schultz e	et al. and Yan	<u>o</u> .		
Substance of Interview (For each issue discussed, provide a detailed description and in reference or a portion thereof, claim interpretation, proposed as			identification or clarifi	cation of a
Applicant's representative discussed the differences (i.e., Schultz et al. and Yano). To clarification as suggested by the examiner. The portions cited in references; however, the examined conduct a new search as well for reconsidering the search as well as well as well as the search as well as wel	The applicant of the examiner a aminer reserve	agreed to amend the feature o agreed the proposed claim ame as the right to deeply search in	f "trigger condition endment overcor the cited referer	n <u>" for</u> nes the
Applicant recordation instructions: The formal written section 713.04). If a reply to the last Office action has alrethirty days from this interview date, or the mailing date of interview	eady been filed,	applicant is given a non-extendable pe	eriod of the longer of	one month or
<b>Examiner recordation instructions</b> : Examiners must su the substance of an interview should include the items lis general thrust of each argument or issue discussed, a ge general results or outcome of the interview, to include an	sted in MPEP 713 eneral indication o	3.04 for complete and proper recordation of any other pertinent matters discussed	on including the idened regarding patental	tification of the oility and the
/Bai D. Vu/ Primary Examiner, Art Unit 2165				
J.S. Patent and Trademark Office PTOL-413 (Rev. 8/11/2010)	Interviev	 v Summary	Paper	No. 20110915

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#### **Summary of Record of Interview Requirements**

#### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
  - (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### **Examiner to Check for Accuracy**

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Confirmation Number: 3430 Application Number: 12/326,457

: Victoria M.E. Bellotti Applicant | : 02 December 2008 : 2165 : Vu, Bai D. Filed

T.C./A.U. Examiner

Docket Number : PARC-20080172-US-NP

Customer No. : 35,699

Proposed Amendment and Interview Summary Via Fax (571)270-2751

# PROPOSED AMENDMENT AND INTERVIEW AGENDA

Dear Examiner Vu:

Please find our proposed amendment and interview agenda below.

# Identification of Claim and References for Discussion

Claim for discussion: Claim 1.

Reference for discussion: Schultz et al. (U.S. Pub. No. 2009/0265764, hereinafter "Schultz") and Yano (U.S. Pub. No. 2007/0055657, hereinafter "Yano").

# Applicant's Arguments

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user in response to user activities and environmental factors (see instant application, par. [0026]). Prior to the operation, the content management system receives a set of content packages, wherein a content package includes a collection of content and contexts that can trigger the content management system to present the content in the content packet to the user (see instant application, pars. [0043] and [0046]). Once the trigger

YD Amendment B PARC-20080172-US-NP (Proposed Amendment) Amendment A PARC-20080172-US-NP (Proposed Amendment)

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condition is met, the content management system delivers the content to the user (see instant application, par. [0090]).

In the Office Action, Examiner stated that Schultz discloses a content package that includes the content piece and associated trigger conditions (see Office Action, page 5). Applicant respectfully disagrees. In the cited text, namely, pars. [0036]-[0037] of Schultz, Schultz merely discloses that context aggregator 125 uses user preference information, and gathers and maintains information relating to a user's context. Note that the context information gathered by the aggregator is different from a content package, which includes both the content to be presented to the user and the trigger condition for such presentation. Nowhere does Schultz mention receiving a content package.

Moreover, Yano discloses obtaining context information associated with a search request (see Yano, par. [0004]). Yano does not disclose receiving a content package that includes content and a trigger condition.

# Proposed Amendment:

1	<ol> <li>(Currently Amended) A method for delivering context-based</li> </ol>
2	content to a first user, the method comprising:
3	receiving at least one content package, wherein the content package
4	includes at least one piece of content and a trigger condition associated with the
5	content package:
6	receiving a set of contextual information with respect to the first user;
7	processing the contextual information to determine a context or an activity
8	being performed by the first user;
9	determining whether either or both the context and a current activity of the
10	first user satisfy the trigger condition a trigger condition which has been
11	previously defined by the first user or a second user; and
	2
	YD Amendment B PARC-20080172-US-NP (Proposed Amendment) Amendment A PARC-200804-72-US-NP (Proposed Amendment)

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in response to the trigger condition being satisfied, presenting the content
piece to the first userselecting at least one content piece from a content database
comprising a plurality of content pieces based on the context and the ourrent
activity of the first user, wherein different trigger conditions result in selections of
different content pieces associated with different substances; and
presenting the selected content piece to the first user.

Respectfully submitted,

By /Shun Yao/ Shun Yao Registration No. 59,242

Date: 13 September 2011

Shun Yao Park, Vaughan, Fleming & Dowler LLP 2820 Fifth Street Davis, CA 95618-7759

Tel: (530) 759-1667 Fax: (530) 759-1665

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Email: shun@parklegal.com

Doc code: RCEX Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Request for Continued Examination (RCE)

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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First Named Inventor	Victoria M.E. Bell	otti		Examiner Name	Vu, Bai D.		
Request for C	ontinued Examina	ition (RCE)		R 1.114 does not ap	above-identified application. oply to any utility or plant applic WWW.USPTO.GOV	ation filed	prior to June 8,
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Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	Signature of Registered U.S. Patent Practiti	oner	
Signature	/Shun Yao/	Date (YYYY-MM-DD)	2011-10-13
Name	Shun Yao	Registration Number	59242

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

# **Privacy Act Statement**

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
- A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Application Number: 12/326,457 Confirmation Number: 3430

Applicant : Victoria M.E. Bellotti Filed : 02 December 2008

T.C./A.U. : 2165 Examiner : Vu, Bai D.

Docket Number : PARC-20080172-US-NP

Customer No. : 35,699

Amendment after Final Rejection Via Electronic Filing

#### **AMENDMENT**

In response to the Official Action of **17 August 2011** (hereinafter "Office Action"), please amend the above-identified Application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 12 of this paper.

# **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

# **Listing of Claims:**

1	1. (Currently Amended) A method for delivering context-based
2	content to a first user, the method comprising:
3	receiving at least one content package, wherein the content package
4	includes at least one content piece and a trigger condition associated with the
5	content package, and wherein the trigger condition specifies a context or a user
6	activity that triggers a presentation of the content piece;
7	receiving a set of contextual information with respect to the first user;
8	processing the contextual information to determine a current context or
9	[[an]]a current activity being performed by the first user;
10	determining whether either or both the current context and [[a]]the current
11	activity of the first user satisfy [[a]]the trigger condition which has been
12	previously defined by the first user or a second user; and
13	in response to the trigger condition being satisfied, presenting the content
14	piece to the first user. selecting at least one content piece from a content database
15	comprising a plurality of content pieces based on the context and the current
16	activity of the first user, wherein different trigger conditions result in selections of
17	different content pieces associated with different substances; and
18	presenting the selected content piece to the first user.
1	2 (Currently Amended) The method of claim 1 wherein the method
1	2. (Currently Amended) The method of claim 1, wherein the method
2	further comprises allowing the first user to create a content piece that is

3	associated with a user-defined contextual or activity-driven trigger conditionthe
4	content package by:
5	recording the content piece that is provided by the first user;
6	creating an entry in [[the]]a content database for the recorded
7	content piece, wherein the entry is associated with one or more trigger
8	conditions; and
9	associating one or more trigger conditions for the entry with a
10	user-defined context; and
11	wherein the method further comprises:
12	continuously comparing previously defined trigger conditions for
13	the entry with the ongoing context of the first user and/or user activity;
14	and
15	when one or more trigger conditions are met, retrieving the
16	associated content piece and presenting the retrieved content piece to the
17	first user.
1	3. (Currently Amended) The method of claim 2, wherein the method
2	further comprises allowing the first user to create a shareable content piece by:
3	recording the sharable content piece that is provided by the first user; and
4	creating a content package for the recorded sharable content piece,
5	wherein the content package includes the recorded sharable content piece, and
6	wherein the content package includes one or more user-defined trigger conditions;
7	wherein the content package allows a recipient of the content package to
8	insert, modify, and/or remove content or trigger conditions from the content
9	package.
1	4. (Original) The method of claim 1, wherein the method further
2	comprises defining a context by:
3	creating one or more context entries in a context manager; and
	3 YD Amendment B PARC-20080172-US-NP (final OAR)

- 4 associating a respective context entry with a set of contextual information.
- 1 5. (Currently Amended) The method of claim 4, wherein the method
- 2 further comprises evolving the presentation of content over time by updating
- 3 entries in [[the]]a content database and updating the context entries in the context
- 4 manager responsive to actions performed by the first user.
- 1 6. (Currently Amended) The method of claim 1, wherein presenting
- 2 the selected content piece comprises following a number of presentation rules
- 3 associated with the selected content piece, monitoring actions performed by the
- 4 first user, and presenting the selected content piece based on the actions
- 5 performed by the first user.
- 1 7. (Currently Amended) The method of claim 6, wherein the context
- 2 or the user activity is defined as a combination of at least a high-level abstraction
- 3 which corresponds to one or more low-level contextual information values,
- 4 wherein the low-level contextual information values can correspond to one or
- 5 more measurable parameters.
- 1 8. (Previously Presented) The method of claim 6, wherein a
- 2 respective rule is defined with one or more high-level abstractions.
- 1 9. (Original) The method of claim 8, further comprising allowing the
- 2 first user to share the rules with a second user, wherein the second user can
- 3 redefine the shared rules based on the second user's low-level contextual and
- 4 activity parameters.

1	10. (Currently Amended) The method of claim 1, wherein presenting
2	the selected content piece comprises sharing the selected content piece with a
3	remote device.
1	11. (Original) The method of claim 1, wherein the contextual
2	information includes one or more of: time, date, location, proximity to a system-
3	detectable tag, device orientation, velocity, direction, distance, vibration, altitude,
4	temperature, pressure, humidity, sound, luminous intensity, camera image, and
5	video stream.
1	12. (Previously Presented) The method of claim 1, wherein the content
2	piece includes one or more of: audio clip, image, video stream, language lesson,
3	e-mail, weather report, calendar reminder, news feed, rich site summary (RSS)
4	feed, information update from a Web 2.0 application, and Internet blog.
1	13. (Currently Amended) A computer-readable storage medium
2	storing instructions that when executed by a computer cause the computer to
3	perform a method for delivering context-based content to a first user, the method
4	comprising:
5	receiving at least one content package, wherein the content package
6	includes at least one content piece and a trigger condition associated with the
7	content package, and wherein the trigger condition specifies a context or a user
8	activity that triggers a presentation of the content piece;
9	receiving a set of contextual information with respect to the first user;
10	processing the contextual information to determine a current context or
11	[[an]]a current activity being performed by the first user;
12	determining whether either or both the current context and [[a]]the current
13	activity of the first user satisfy [[a]]the trigger condition which has been
14	previously defined by the first user or a second user; and

15	in response to the trigger condition being satisfied, presenting the content
16	piece to the first user selecting at least one content piece from a content database
17	comprising a plurality of content pieces based on the context and the current
18	activity of the first user, wherein different trigger conditions result in selections
19	of different content pieces associated with different substances; and
20	presenting the selected content piece to the first user.
1	14. (Currently Amended) The computer-readable storage medium of
2	claim 13, wherein the method further comprises allowing the first user to create a
3	content piece that is associated with the user-defined contextual or activity-driver
4	trigger conditionthe content package by:
5	recording the content piece that is provided by the first user;
6	creating an entry in [[the]]a content database for the recorded
7	content piece, wherein the entry is associated with one or more trigger
8	conditions; and
9	associating one or more trigger conditions for the entry with a
10	user-defined context; and
11	wherein the method further comprises:
12	continuously comparing previously defined trigger conditions for
13	the entry with the ongoing context of the first user and/or user activity;
14	and
15	when one or more trigger conditions are met, retrieving the
16	associated content piece and presenting the retrieved content piece to the
17	first user.
1	15. (Currently Amended) The computer-readable storage medium of
2	claim 14, wherein the method further comprises allowing the first user to create a
3	shareable content piece by:
4	recording the sharable content piece that is provided by the first user; and
	YD Amendment B PARC-20080172-US-NP (final OAR)

- 5 creating a content package for the recorded sharable content piece,
  6 wherein the content package includes the recorded sharable content piece, and
  7 wherein the content package includes one or more user defined trigger conditions;
  8 wherein the content package allows a recipient of the content package to
  9 insert, modify, and/or remove content and/or trigger conditions from the content
  10 package.
- 1 16. (Original) The computer-readable storage medium of claim 13,
  2 wherein the method further comprises defining a context by:
  3 creating one or more context entries in a context manager; and
  4 associating a respective context entry with a set of contextual information.
- 1 17. (Currently Amended) The computer-readable storage medium of claim 16, wherein the method further comprises evolving the presentation of content over time by updating entries in [[the]]a content database and updating the context entries in the context manager responsive to actions performed by the first user.
- 1 18. (Currently Amended) The computer-readable storage medium of
  2 claim 13, wherein presenting the selected content piece comprises following a
  3 number of presentation rules associated with the selected content piece,
  4 monitoring actions performed by the first user, and presenting the selected content
  5 piece based on the actions performed by the first user.
- 1 19. (Original) The computer-readable storage medium of claim 13, 2 wherein the contextual information includes one or more of: time, date, location, 3 proximity to a system-detectable tag, device orientation, velocity, direction, 4 distance, vibration, altitude, temperature, pressure, humidity, sound, luminous 5 intensity, camera image, and video stream.

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1	20. (Previously Presented) The computer-readable storage medium of
2	claim 13, wherein the content piece includes one or more of: audio clip, image,
3	video stream, language lesson, e-mail, weather report, calendar reminder, news
4	feed, rich site summary (RSS) feed, information update from a Web 2.0
5	application, and Internet blog.
1	21. (Currently Amended) An apparatus for delivering context-based
2	content to a first user, comprising:
3	a processor;
4	an input mechanism configured to receive a set of contextual information
5	with respect to the first user;
6	a content database configured to store a plurality of content pieces;
7	a receiving mechanism configured to receive at least one content package,
8	wherein the content package includes at least one content piece and a trigger
9	condition associated with the content package, and wherein the trigger condition
10	specifies a context or a user activity that triggers a presentation of the content
11	piece;
12	a content delivery mechanism configured to present content to a first user;
13	and
14	a context manager configured to process the contextual information to
15	determine a <u>current</u> context or [[an]]a <u>current</u> activity being performed by the first
16	user, and to determine whether either or both the <u>current</u> context and [[a]]the
17	current activity of the first user satisfy [[a]]the trigger condition-which has been
18	previously defined by the first user or a second user;
19	wherein in response to the trigger condition being satisfied, the content
20	delivery mechanism is configured to present the content piece to the first user.the
21	content manager is further configured to select at least one content piece
22	associated with the trigger condition from the content based on the context and
	8

the current activity of the first user, wherein different trigger conditions result in
selections of different content pieces associated with different substances; and
wherein the content delivery mechanism is further configured to present
the selected content niece to the first user

22. (Currently Amended) The apparatus of claim 21, wherein the apparatus further comprises a content management mechanism configured to allow the first user to create a content piece that is associated with the user-defined contextual or activity driven trigger conditionthe content package by: recording the content piece that is provided by the first user; creating an entry in [[the]]a content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; associating one or more trigger conditions for the entry with a user-defined context; continuously comparing previously defined previously-defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user.

23. (Currently Amended) The apparatus of claim 22, wherein the content management mechanism is further configured to allow the first user to create a shareable content piece by:

recording the sharable content piece that is provided by the first user; and creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more user-defined trigger conditions;

ð	wherein the content package allows a recipient of the content package to							
9	insert, modify, and/or remove content or trigger conditions from the content							
10	package.							
1	24. (Original) The apparatus of claim 21, wherein the context manager							
2	defines a context by:							
3	creating one or more context entries for the context; and							
4	associating a respective context entry with a set of contextual information.							
1	25. (Currently Amended) The apparatus of claim 24, wherein the							
2	apparatus is further configured to evolve the presentation of content over time by							
3	updating update entries in the content database and update updating the user-							
4	defined context entries in the context manager responsive to actions performed by							
5	the first user.							
1	26. (Currently Amended) The apparatus of claim 21, wherein							
2	presenting the selected content piece comprises following a number of							
3	presentation rules associated with the selected-content piece, monitoring actions							
4	performed by the first user, and presenting the selected content piece based on the							
5	actions performed by the first user.							
1	27. (Original) The apparatus of claim 21, wherein the contextual							
2	information includes one or more of: time, date, location, proximity to a system-							
3	detectable tag, device orientation, velocity, direction, distance, vibration, altitude,							
4	temperature, pressure, humidity, sound, luminous intensity, camera image, and							
5	video stream.							
1	28. (Previously Presented) The apparatus of claim 21, wherein the							
2	content piece includes one or more of: audio clip, image, video stream, language							
	10 YD Amendment B PARC-20080172-US-NP (final OAR)							

- 3 lesson, e-mail, weather report, calendar reminder, news feed, rich site summary
- 4 (RSS) feed, information update from a Web 2.0 application, and Internet blog.

#### REMARKS

In the Office Action mailed on **17 August 2011**, the Examiner reviewed claims 1-28. Examiner rejected claims 1-28 under 35 U.S.C. § 103(a) based on Schultz et al. (U.S. Pub. No. 2009/0265764, hereinafter "Schultz"), in view of Yano (U.S. Pub. No. 2007/0055657, hereinafter "Yano").

#### **Examiner Interview**

Applicant thanks Examiner for the phone interview conducted on 15 September 2011. Applicant proposed amendments to the claims and argued that the cited references, Schultz and Yano, do not disclose a content package that includes content and a trigger condition. Examiner agreed that the proposed amendments overcome the cited references, and suggested that Applicant further clarify the trigger condition. Accordingly, Applicant has incorporated the proposed amendments and Examiner's suggestion into this response.

#### Rejections under 35 U.S.C. § 103

Examiner rejected claims 1-28 under 35 U.S.C. § 103(a) as being unpatentable over Schultz, in view of Yano. Applicant respectfully disagrees because Schultz and Yano fail to disclose receiving a content package that includes a content piece and a trigger condition, which specifies user context that triggers a presentation of the content piece.

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user in response to user activities and environmental factors (see instant application, par. [0026]). Prior to the operation, the content management system receives a set of content packages, wherein a content package includes a collection of content and a trigger condition, which specifies contexts that can trigger the content management system to present the content in the content packet to the user (see instant

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application, pars. [0043] and [0046]). Once the trigger condition is met, the content management system delivers the content to the user (see instant application, par. [0090]).

In the Office Action, Examiner stated that Schultz discloses a content package that includes the content piece and associated trigger conditions (see Office Action, page 5). Applicant respectfully disagrees. In the cited text, namely, pars. [0036]-[0037] of Schultz, Schultz merely discloses that context aggregator 125 uses user preference information, and gathers and maintains information relating to a user's context. Note that the context information gathered by the aggregator is different from a content package, which includes both the content to be presented to the user and the trigger condition for such presentation. Nowhere does Schultz mention receiving a content package.

Moreover, Yano discloses obtaining context information **associated with** a search request (see Yano, par. [0004]). Yano does not disclose receiving a content package that includes content and a trigger condition.

Accordingly, Applicant has amended claims 1, 13, and 21 to clarify that, in embodiments of the present invention, the system receives a content package that includes a content piece and a trigger condition, and the trigger condition specifies user context that triggers a presentation of the content piece. These amendments find support in pars. [0043]-[0046] and Table 1 of the instant application. No new matter has been added.

Hence, Applicant respectfully submits that independent claims 1, 13, and 21 as presently amended are in condition for allowance. Applicant also submits that claims 2-12, which depend upon claim 1; claims 14-20, which depend upon claim 13; and claims 22-28, which depend upon claim 21, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

## **CONCLUSION**

It is submitted that the application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

By /Shun Yao/ Shun Yao Registration No. 59,242

Date: 13 October 2011

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Electronic Patent Application Fee Transmittal							
Application Number:	12326457						
Filing Date:	02-	Dec-2008					
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION						
First Named Inventor/Applicant Name:	Vic	toria M.E. Bellotti					
Filer:	Sh	un Yao					
Attorney Docket Number:	PA	RC-20080172-US-N	Р				
Filed as Large Entity							
Utility under 35 USC 111(a) Filing Fees							
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)		
Basic Filing:							
Pages:							
Claims:							
Miscellaneous-Filing:							
Petition:							
Patent-Appeals-and-Interference:							
Post-Allowance-and-Post-Issuance:							
Extension-of-Time:	Extension-of-Time:						

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)				
Miscellaneous:								
Request for continued examination 1801 1 930 9								
Total in USD (\$) 930								

Electronic Acknowledgement Receipt						
EFS ID:	11184380					
Application Number:	12326457					
International Application Number:						
Confirmation Number:	3430					
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION					
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti					
Customer Number:	35699					
Filer:	Shun Yao					
Filer Authorized By:						
Attorney Docket Number:	PARC-20080172-US-NP					
Receipt Date:	14-OCT-2011					
Filing Date:	02-DEC-2008					
Time Stamp:	12:37:07					
Application Type:	Utility under 35 USC 111(a)					

# **Payment information:**

File Listing:	
Authorized User	
Deposit Account	240037
RAM confirmation Number	8584
Payment was successfully received in RAM	\$930
Payment Type	Deposit Account
Submitted with Payment	yes

#### File Listing:

Document	Document Description	File Name	File Size(Bytes)/	Multi	Pages
Number	Document Description	riie Name	Message Digest	Part /.zip	(if appl.)

1	Request for Continued Examination	RCE.pdf	697857	no	3
,	(RCE)		1bb17f07b0943c7f5f9e02a485e8ada58b3f a3a8	110	
Warnings:					-
Information					
2		Amendment.pdf _		yes	14
2		2d535eb8b48afbf8991addce62c71a2235fa b699	yes 		
	Multip	art Description/PDF files in .	zip description		
	Document Des	scription	Start	End	
	Amendment Af	1		1	
	Claims	2	11		
	Applicant Arguments/Remarks	12	14		
Warnings:	1		1		
Information	:				
3	Fee Worksheet (SB06)	fee-info.pdf	30472 no		2
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Warnings:					
Information	:				
		Total Files Size (in bytes)	83	38020	

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#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)

Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
o a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875							Application or Docket Number 12/326,457		Filing Date 12/02/2008		To be Mailed
	APPLICATION AS FILED – PART I  (Column 1) (Column 2)							SMALL ENTITY			HER THAN
	FOR	NU	JMBER FIL	.ED NUI	MBER EXTRA		RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)
☒	BASIC FEE (37 CFR 1.16(a), (b),	or (c))	N/A		N/A		N/A		1	N/A	330
	SEARCH FEE (37 CFR 1.16(k), (i), o		N/A		N/A		N/A			N/A	
	EXAMINATION FE (37 CFR 1.16(o), (p),	Ε	N/A		N/A		N/A			N/A	
	TAL CLAIMS CFR 1.16(i))		mir	us 20 = *			X \$ =		OR	X \$ =	
	EPENDENT CLAIM CFR 1.16(h))	S	mi	nus 3 = *			X \$ =			X \$ =	
	APPLICATION SIZE (37 CFR 1.16(s))	shee is \$25 additi	ts of pape 50 (\$125 ional 50 s	ation and drawing er, the application for small entity) sheets or fraction a)(1)(G) and 37	n size fee due for each n thereof. See						
	MULTIPLE DEPEN	IDENT CLAIM PRI	ESENT (3	7 CFR 1.16(j))							
* If t	he difference in colu	ımn 1 is less than	zero, ente	r "0" in column 2.			TOTAL			TOTAL	330
	APPI	(Column 1)	AMENC	DED — PART II (Column 2)	(Column 3)		SMAL	L ENTITY	OR		ER THAN ALL ENTITY
AMENDMENT	10/14/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
ME	Total (37 CFR 1.16(i))	* 28	Minus	** 28	= 0		X \$ =		OR	X \$60=	0
IZ I	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0		X \$ =		OR	X \$250=	0
\ ME	Application Size Fee (37 CFR 1.16(s))										
	FIRST PRESEN	ITATION OF MULTIF	LE DEPEN	DENT CLAIM (37 CFI	R 1.16(j))				OR		
							TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0
		(Column 1)		(Column 2)	(Column 3)						
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
Ш	Total (37 CFR 1.16(i))	*	Minus	**	=		X \$ =		OR	X \$ =	
ENDM	Independent (37 CFR 1.16(h))	*	Minus	***	=		X \$ =		OR	X \$ =	
	Application Si	ze Fee (37 CFR 1	.16(s))								
AM	FIRST PRESEN	ITATION OF MULTIP	LE DEPEN	DENT CLAIM (37 CFI	R 1.16(j))				OR		
						• '	TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
** If *** I	* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".  *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".  The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	APPLICATION NO. FILING DATE FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.		
12/326,457	12/02/2008	PARC-20080172-US-NP	3430			
35699 PVF PARC	7590 02/23/201	2	EXAMINER			
	UGHAN, FLEMING &	VU, BAI D				
DAVIS, CA 95			ART UNIT	PAPER NUMBER		
		2165				
		NOTIFICATION DATE	DELIVERY MODE			
			02/23/2012	ELECTRONIC		

## Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

		Application No.	Applicant(s)						
		12/326,457	BELLOTTI, VICTORIA M.E.						
	Office Action Summary	Examiner	Art Unit						
	•	Bai D. Vu	2165						
	The MAILING DATE of this communication appe								
Period for			·						
WHICH - Extensi after SI - If NO p - Failure Any rep	A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).								
Status									
1) <b>⊠</b> F	Responsive to communication(s) filed on <u>14 Oc</u>	<u>tober 2011</u> .							
2a)□ T	This action is <b>FINAL</b> . 2b)⊠ This a	action is non-final.							
3) 🔲 🛭 A	an election was made by the applicant in respo	•							
<b>.</b>	; the restriction requirement and election	•							
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	n of Claims	Cparte Guayre, 1000 O.D. 11, 40	0 0.0. 210.						
	Claim(s) <u>1-28</u> is/are pending in the application. a) Of the above claim(s) is/are withdraw	n from consideration							
	Claim(s) is/are allowed.	Trifotti ootiolaafattati.							
·	Claim(s) <u>1-28</u> is/are rejected.								
	Claim(s) is/are objected to.								
9) 🗌 🤇	Claim(s) are subject to restriction and/or	election requirement.							
Applicatio	n Papers								
10)□ T	he specification is objected to by the Examiner								
11) 🔲 T	he drawing(s) filed on is/are: a)□ acce	pted or b) objected to by the E	Examiner.						
Д	pplicant may not request that any objection to the d	rawing(s) be held in abeyance. See	: 37 CFR 1.85(a).						
	Replacement drawing sheet(s) including the correction								
12)∐ T	he oath or declaration is objected to by the Exa	aminer. Note the attached Office	Action or form PTO-152.						
Priority un	der 35 U.S.C. § 119								
<ul> <li>13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>									
Attachment(s	\$)								
	of References Cited (PTO-892)	4) Interview Summary							
3) Informa	of Draftsperson's Patent Drawing Review (PTO-948) ation Disclosure Statement(s) (PTO/SB/08) No(s)/Mail Date	Paper No(s)/Mail Da 5) Notice of Informal Pa 6) Other:							

U.S. Patent and Trademark Office PTOL-326 (Rev. 03-11) Application/Control Number: 12/326,457

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### **DETAILED ACTION**

Page 2

#### Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2011 has been entered.

#### Response to Amendment

2. Applicant has amended claims 1-3, 5-7, 10, 13-15, 17-18, 21-23 and 25-26 in the amendment filed on 10/14/2011. Claims 1-28 are currently pending in the application.

#### Response to Arguments

3. Applicant's arguments filed on 10/14/2011 with respect to claims 1-28 have been considered but are most in view of the new ground(s) of rejection.

#### Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. <u>Claims 1, 5, 13, 17 and 21</u> are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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With respect to claims 1, 13 and 21 recite features of:

"determine a current context **or** a current activity being performed by the first user", and then

"determine whether either or **both** the current context and the current activity of the first user satisfy the trigger condition".

The examiner interprets the phrase "a current context or a current activity" as optionally only ONE is determined; however the phrase "both the current context and the current activity" is interpreted as TWO must be required. Accordingly, the term "both" is indefinite. Correction is required.

With to respect to <u>claim 21</u>, the recited feature "a content delivery mechanism configured to present content to a first user" is indefinite. It is unclear what the presented content is referred to. Correction is required.

With respect to <u>claim 5</u>, the phrase "a content database" recited in line 3 is indefinite. It is unclear whether the phrase "a content database" in line 3 of claim 5 is referred to as "a content database" recited in line 6 of claim 2. Clarification is required.

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With respect to <u>claim 17</u>, the phrase "a content database" recited in line 3 is indefinite. It is unclear whether the phrase "a content database" in line 3 of claim 5 is referred to as "a content database" recited in line 6 of claim 14. Clarification is required.

### Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 10-17, 19-25 and 27-28 are rejected under 35 U.S.C. §102(b) as being anticipated by Brandenberg et al. (US No. 2003/0063072 A1).

As per <u>claim 1</u>, Brandenberg et al. discloses **a method for delivering context**based content to a first user, the method comprising:

receiving at least one content package, wherein the content package includes at least one content piece and a trigger condition associated with the content package, as (see e.g., ¶ 0014 lines 4-7, ¶ 0015 lines 10-16, and ¶ 0016 lines 10-13: as the digital content item is referred to as content piece; and data plus metadata associated with the digital content item is referred to as the trigger condition) and wherein the trigger condition specifies a context or a user activity that triggers a presentation of the content piece; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-

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13,  $\P\P$  0029 – 0031; and Figs. 1I-1K: as the data plus metadata is referred to as the trigger condition).

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receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶ 0032; and Fig. 1L: as the contextual user profile is referred to as the set of contextual information).

processing the contextual information to determine a current context or a current activity being performed by the first user; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0410 – 0414; and Figs. 1I-1L).

determining whether either or both the current context and the current activity of the first user satisfy the trigger condition; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

in response to the trigger condition being satisfied, presenting the content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 2</u>, Brandenberg et al. discloses the method of claim 1, wherein the method further comprises allowing the first user to create the content package by:

recording the content piece that is provided by the first user; as (see e.g., ¶ 0016 lines 14-26).

creating an content entry in a content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; and

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associating one or more trigger conditions for the content entry with a userdefined context; and as (see e.g., ¶ 0032; and Fig. 1L) wherein the method further comprises:

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 - 0414; and Figs. 1I-1L).

when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 3</u>, Brandenberg et al. discloses the method of claim 2, wherein the method further comprises allowing the first user to create a shareable content piece by:

recording the sharable content piece that is provided by the first user; and as (see e.g., ¶¶ 0735 and 0795).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more trigger conditions; as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

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wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g., ¶¶ 0334, 0496, 0498, 0514, 0651 and 0732).

As per <u>claim 4</u>, Brandenberg et al. discloses the method of claim 1, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 5</u>, Brandenberg et al. discloses the method of claim 4, wherein the method further comprises updating entries in a content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0016 lines 10-13).

As per <u>claim 10</u>, Brandenberg et al. discloses the method of claim 1, wherein presenting the content piece comprises sharing the content piece with a remote device as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

As per <u>claim 11</u>, Brandenberg et al. discloses the method of claim 1, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance,

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vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 12</u>, Brandenberg et al. discloses the method of claim 1, wherein the content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶¶ 0029 and 0032; and Figs. 1I and 1L).

As per <u>claim 13</u>, Brandenberg et al. discloses a <u>computer-readable storage</u> medium storing instructions that when executed by a computer cause the computer to perform a method for delivering context-based content to a first user, the method comprising:

receiving at least one content package, wherein the content package includes at least one content piece and a trigger condition associated with the content package, as (see e.g., ¶ 0014 lines 4-7, ¶ 0015 lines 10-16 and ¶ 0016 lines 10-13: as the digital content item is referred to as content piece; and data plus metadata associated with the digital content item is referred to as the trigger condition) and wherein the trigger condition specifies a context or a user activity that triggers a presentation of the content piece; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶¶ 0029 – 0031; and Figs. 1I-1K: as the data plus metadata is referred to as the trigger condition).

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receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶ 0032; and Fig. 1L: as the contextual user profile is referred to as the set of contextual information).

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processing the contextual information to determine a current context or a current activity being performed by the first user; as (see e.g.,  $\P$  0015 lines 16-23,  $\P$  0410 – 0414; and Figs. 1I-1L).

determining whether either or both the current context and the current activity of the first user satisfy the trigger condition; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

in response to the trigger condition being satisfied, presenting the content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 14</u>, Brandenberg et al. discloses the <u>computer-readable storage</u> medium of claim 13, wherein the method further comprises allowing the first user to create the <u>content package</u> by:

recording the content piece that is provided by the first user; as (see e.g.,  $\P$  0016 lines 14-26).

creating an entry in a content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; and associating one or more trigger conditions for the entry with a user-defined

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context; and as (see e.g., ¶ 0032; and Fig. 1L) wherein the method further comprises:

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and as (see e.g., ¶ 0015 lines 16-23, ¶¶ 0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 15</u>, Brandenberg et al. discloses the computer-readable storage medium of claim 14, wherein the method further comprises allowing the first user to create shareable content piece by:

recording the sharable content piece that is provided by the first user; and as (see e.g.,  $\P\P$  0735 and 0795).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more trigger conditions; as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content and/or trigger conditions from the content package as (see e.g.,  $\P 0334$ , 0496, 0498, 0514, 0651 and 0732).

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As per <u>claim 16</u>, Brandenberg et al. discloses the computer-readable storage medium of claim 13, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 17</u>, Brandenberg et al. discloses the computer-readable storage medium of claim 16, wherein the method further comprises updating entries in a content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0016 lines 10-13).

As per <u>claim 19</u>, Brandenberg et al. discloses the computer-readable storage medium of claim 13, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 20</u>, Brandenberg et al. discloses the computer-readable storage medium of claim 13, wherein the content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar

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reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶¶ 0029 and 0032; and Figs. 11 and 1L).

As per <u>claim 21</u>, Brandenberg et al. discloses an apparatus for delivering context-based content to a first user, comprising: a processor;

an input mechanism configured to receive a set of contextual information with respect to the first user; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶ 0032; and Fig. 1L: as the contextual user profile is referred to as the set of contextual information).

a receiving mechanism configured to receive at least one content package, wherein the content package includes at least one content piece and a trigger condition associated with the content package, as (see e.g., ¶ 0014 lines 4-7, ¶ 0015 lines 10-16 and ¶ 0016 lines 10-13: as the digital content item is referred to as content piece; and data plus metadata associated with the digital content item is referred to as the trigger condition) and wherein the trigger condition specifies a context or a user activity that triggers a presentation of the content piece; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶¶ 0029 – 0031; and Figs. 1I-1K: as the data plus metadata is referred to as the trigger condition).

a content delivery mechanism configured to present content to a first user; and as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

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a context manager configured to process the contextual information to determine a current context or a current activity being performed by the first user, as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0410 – 0414; and Figs. 1I-1L) and to determine whether either or both the current context and the current activity of the first user satisfy the trigger condition; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

wherein in response to the trigger condition being satisfied, the content delivery mechanism is further configured to present the content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 22</u>, Brandenberg et al. discloses the apparatus of claim 21, wherein the apparatus further comprises a content management mechanism configured to allow the first user to create the content package by:

recording the content piece that is provided by the first user; as (see e.g., ¶ 0016 lines 14-26).

creating an entry in a content database for the recorded content piece, wherein the entry is associated with one or more trigger conditions; associating one or more trigger conditions for the entry with a user-defined context; as (see e.g., ¶ 0032; and Fig. 1L).

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user and/or user activity; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P$  0266, 0334, and 0410 - 0414; and Figs. 1I-1L).

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when one or more trigger conditions are met, retrieving the associated content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 23</u>, Brandenberg et al. discloses the apparatus of claim 22, wherein the content management mechanism is further configured to allow the first user to create a shareable content piece by:

recording the sharable content piece that is provided by the first user; and as (see e.g.,  $\P\P$  0735 and 0795).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more trigger conditions; as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g., ¶¶ 0334, 0496, 0498, 0514, 0651 and 0732).

As per <u>claim 24</u>, Brandenberg et al. discloses the apparatus of claim 21, wherein the context manager defines a context by: creating one or more context entries for the context; and associating a respective context entry with a set of contextual information as (see e.g., ¶ 0032; and Fig. 1L).

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As per <u>claim 25</u>, Brandenberg et al. discloses the apparatus of claim 24, wherein the apparatus is further configured to update entries in the content database and update the user-defined context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0016 lines 10-13).

As per <u>claim 27</u>, Brandenberg et al. discloses the apparatus of claim 21, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 28</u>, Brandenberg et al. discloses the apparatus of claim 21, wherein content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶¶ 0029 and 0032; and Figs. 1I and 1L).

## Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained through the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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9. <u>Claims 6-9, 18 and 26</u> are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brandenberg et al., and further in view of Schultz et al. (US No. 2009/0265764 A1).

As per <u>claim 6</u>, Schultz et al. discloses the method of claim 1, wherein presenting the content piece comprises following a number of presentation rules associated with the content piece, monitoring actions performed by the first user, and presenting the content piece based on the actions performed by the first user, which is not explicitly disclosed by Brandenberg et al., as (see e.g., ¶¶ 0074 – 0075).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. system in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

As per <u>claim 7</u>, Schultz et al. discloses the method of claim 6, wherein the context or the user activity is defined as a combination of at least a high-level abstraction which corresponds to one or more low-level contextual information values, wherein the low-level contextual information values can correspond to one or more measurable parameters, which is not explicitly disclosed by Brandenberg et al., as (see e.g., ¶ 0015).

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It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. system in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

As per <u>claim 8</u>, Schultz et al. discloses **the method of claim 6**, **wherein a** respective rule is defined with one or more high-level abstractions, which is not explicitly disclosed by Brandenberg et al., as (see e.g., ¶ 0030).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. system in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

As per <u>claim 9</u>, Schultz et al. discloses the method of claim 8, further comprising allowing the first user to share the rules with a second user, wherein the second user can redefine the shared rules based on the second user's low-level contextual and activity parameters, which is not explicitly disclosed by Brandenberg et al., as (see e.g., ¶ 0030).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. system in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

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As per <u>claim 18</u>, Schultz et al. discloses the computer-readable storage medium of claim 13, wherein presenting the content piece comprises following a number of presentation rules associated with the content piece, monitoring actions performed by the first user, and presenting the content piece based on the actions performed by the first user, which is not explicitly disclosed by Brandenberg et al., as (see e.g.,  $\P$  0074 – 0075).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. system in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

As per <u>claim 26</u>, Schultz et al. discloses the apparatus of claim 21, wherein presenting the content piece comprises following a number of presentation rules associated with the content piece, monitoring actions performed by the first user, and presenting the content piece based on the actions performed by the first user, which is not explicitly disclosed by Brandenberg et al., as (see e.g., ¶¶ 0074 – 0075).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. system in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

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### Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached form PTOL-892.

### Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bai D. Vu whose telephone number is (571)270-1751. The examiner can normally be reached on Mon - Fri 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel-Jalil can be reached on 571-272-4074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bai D. Vu/ Primary Examiner, Art Unit 2165 2/15/2012

#### Application/Control No. Applicant(s)/Patent Under Reexamination 12/326,457 BELLOTTI, VICTORIA M.E. Notice of References Cited Examiner Art Unit Page 1 of 1 Bai D. Vu 2165 **U.S. PATENT DOCUMENTS** Document Number Date Classification Name Country Code-Number-Kind Code MM-YYYY \* 04-2003 US-2003/0063072 A1 Brandenberg et al. 345/173 Α \* US-2007/0038603 A1 02-2007 Guha, Ramanathan V. 707/003 В US-2007/0250901 A1 10-2007 McIntire et al. 725/146 С US-2008/0168135 A1 07-2008 Redlich et al. 709/204 D 726/1 Е US-2009/0254971 A1 10-2009 Herz et al. F US-7,630,986 B1 12-2009 Herz et al. 1/1 US-G US-Н US-1 US-J US-Κ US-US-М FOREIGN PATENT DOCUMENTS Document Number Date Country Name Classification MM-YYYY Country Code-Number-Kind Code Ν 0 Р Q R S Т **NON-PATENT DOCUMENTS** Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) U ٧ W

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20120213

## **EAST Search History**

## **EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S22	32	((VICTORIA) near2 (BELLOTTI)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2012/02/15 12:27
S23	1992	(Palo NEAR3 Alto NEAR3 Research NEAR3 Center).AS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 12:28
S24	11	(S22 S23) AND (determin\$4 WITH context WITH activity)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 12:28
S25	3	(S22 S23) AND (determin\$4 WITH context WITH activity).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 12:32
S26	2937	(determin\$4 WITH context WITH activity)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 12:47
S27	97	(determin\$4 WITH context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 12:47
S28	21	\$27 AND ((shar\$4 collaborat\$4) WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 12:48
S29	11	S28 AND (content WITH tag\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 14:38
S30	3	S29 AND ((shar\$4 collaborat\$4) SAME tag\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 15:06
S31	8879	(determin\$4 WITH (context activity) WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 16:29
S32	1249	S31 AND ((shar\$4 collaborat\$4) WITH content)	US-PGPUB; USPAT; USOCR;	OR	ON	2012/02/15 16:29

			EPO; JPO; DERWENT; IBM_TDB			
S33	523	S32 AND (content WITH tag\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 16:30
S34	131	\$33 AND ((shar\$4 collaborat\$4) \$AME tag\$4 SAME (context activity)) AND ((chang\$4 modif\$4) WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 16:52
<b>S</b> 35	14	S34 AND (context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 16:53
S36	209	(content NEAR3 package) WITH (context activity)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 18:27
S37	26	S36 AND ((shar\$4 collaborat\$4) SAME (context activity)) AND ((chang\$4 modif\$4) WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 18:28
S38	16832	(707/999.003,999.009).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 21:20
S39	7	S38 AND (determin\$4 WITH context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 21:21
S40	379	(707/732,784).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 21:21
S41	0	S40 AND (determin\$4 WITH context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/02/15 21:21

## 2/15/2012 9:22:48 PM

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Index of Claims	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

<b>✓</b>	✓ Rejected -		Car	ncelled		N	Non-E	Elected	A	Þ	Appe	eal
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Final	Original	02/15/2012										
	1	<b>✓</b>										
	2	<b>√</b>										
	3	<b>√</b>										

U.S. Patent and Trademark Office Part of Paper No.: 20120213

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

	SEARCHED		
Class	Subclass	Date	Examiner
707	999.003,009 and 732,784 (limted text search) (see attached)	2/15/2012	BV

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Search (USPAT;US-PGPUB;JPO;EPO;IBM) (see attached)	2/15/2012	BV
707/999.003,009 and 707/732,784 (limited text search)	2/15/2012	BV
Inventor Name Search and Assignee Search	2/15/2012	BV

	INTERFERENCE SEAF	RCH	
Class	Subclass	Date	Examiner



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
12/326,457	12/02/2008 Victoria M.E. Bellotti		PARC-20080172-US-NP	3430	
PVF PARC c/o PARK, VAUGHAN, FLEMING & DOWLER LLP 2820 FIFTH STREET DAVIS, CA 95618-7759		EXAMINER			
		VU, BAI D			
			ART UNIT	PAPER NUMBER	
		2165			
		NOTIFICATION DATE	DELIVERY MODE		
			05/15/2012	ELECTRONIC	

## Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

	Application No.	Applicant(s)				
Applicant-Initiated Interview Summary	12/326,457	BELLOTTI, VICTORIA M.E.				
Apprount instalca interview cumulary	Examiner	Art Unit				
	Bai D. Vu	2165				
All participants (applicant, applicant's representative, PTO	personnel):					
(1) <u>Bai D. Vu (Examiner)</u> .	(3) <u>Jorge Campos (Reg. No</u>	<u>o. 62,872)</u> .				
(2)						
Date of Interview: 09 May 2012.						
Type: ☑ Telephonic ☑ Video Conference ☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]						
Exhibit shown or demonstration conducted: Yes If Yes, brief description:						
Issues Discussed 101 112 112 102 103 Others (For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)						
Claim(s) discussed: <u>1</u> .						
Identification of prior art discussed: Brandenberg et al.						
Substance of Interview (For each issue discussed, provide a detailed description and indicate if agreement reference or a portion thereof, claim interpretation, proposed amendments, arguments.)		dentification or clarification of a				
Applicant's representative discussed the differences between (i.e., Brandenberg et al.). The examiner agreed the propose however, the examiner reserves the right to deeply search in reconsidering the claimed invention base on the formal filed	d claim amendment overcoment the cited reference and cond	es the cited reference;				
<b>Applicant recordation instructions:</b> The formal written reply to the last C section 713.04). If a reply to the last Office action has already been filed, all thirty days from this interview date, or the mailing date of this interview sum interview	pplicant is given a non-extendable pe	riod of the longer of one month or				
<b>Examiner recordation instructions</b> : Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.						
Attachment						
/Bai D. Vu/ Primary Examiner, Art Unit 2165						

U.S. Patent and Trademark Office PTOL-413 (Rev. 8/11/2010)

#### **Summary of Record of Interview Requirements**

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
  - (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### **Examiner to Check for Accuracy**

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

05/03/2012 09:02 5307591665 PARK VAUGHAN FLEMING PAGE 01/03

> Confirmation Number: 3430 Application Number : 12/326,457

Applicant : Victoria M.E. Bellotti
Filed : 02 December 2008
T.C./A.U. : 2165

T.C./A.U. : 2165 Examiner : Vu, Bai D.

Docket Number : PARC-20080172-US-NP Customer No. : 35,699

Proposed Amendment and Interview Summary Via Fax (571)270-2751

# PROPOSED AMENDMENT AND INTERVIEW AGENDA

Dear Examiner Vu:

Please find our proposed amendment and interview agenda below.

# Identification of Claim and References for Discussion

Claim for discussion: Claim 1.

Reference for discussion: Brandenberg (US 2003/0063072).

## Applicant's Arguments

Examiner rejected claim 1 as being anticipated by Brandenberg. Applicant respectfully disagrees with the rejection, because Brandenberg does not disclose determining whether a user response corresponding to a presented content piece matches an expected response, and performing an action on the content piece based on the outcome of the determination.

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user based on user context (see instant application, par. [0026]). Prior to the operation, the content management system receives a set of content packages, wherein a content package includes a collection of content and a set of rules for presenting the content package (see

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instant application, par. [0055]). The set of rules includes at least one trigger condition and a pre-defined expected response (see instant application, par. [0056]). Once the trigger condition is met, the content management system delivers the content to the user (see instant application, par. [0090]). Subsequently, the system receives a response from the user corresponding to the presented content, determines whether the response matches the pre-defined expected response, and performs an action based on the outcome of the determination (see instant application, pars. [0062]-[0064]). For example, if the user fails to mimic the played audio signal correctly, the system replays the audio file for the user (see instant application, par. [0056]).

In contrast, Brandenberg merely discloses determining which items of digital content are relevant to the user and transmitting the content to the client device (see Brandenberg, the Abstract). Brandenberg fails to disclose determining whether a user response corresponding to a presented content piece matches an expected response, and performing an action on the content piece based on the outcome of the determination.

## Proposed Amendment:

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1. (Currently Amended) A method for delivering context-based content to a first user, the method comprising:

receiving at least one content package, wherein the content package includes at least one content piece and a set of rules trigger condition associated with the content package, wherein the set of rules includes a trigger condition and an expected response, and wherein the trigger condition specifies a context or a user activity that triggers a presentation of the content piece;

receiving a set of contextual information with respect to the first user;

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9	processing the contextual information to determine a current context or a
10	current-activity being performed by the first user;
11	determining whether either or both the current context and the current
12	activity of the first user satisfy satisfies the trigger condition; [[and]]
13	in response to the trigger condition being satisfied, presenting the content
14	piece to the first user;
15	receiving a response from the first user corresponding to the presented
16	content piece;
17	determining whether the received response matches the expected response;
18	and
19	performing an action based on an outcome of the determination.

Respectfully submitted,

By /Jorge Campos/
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Date: 3 May 2012

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Application Number: 12/326,457 Confirmation Number: 3430

Applicant : Victoria M.E. Bellotti Filed : 02 December 2008

T.C./A.U. : 2165 Examiner : Vu, Bai D.

Docket Number : PARC-20080172-US-NP

Customer No. : 35,699

Amendment after Final Rejection Via Electronic Filing

### **AMENDMENT**

In response to the Official Action of **23 February 2012** (hereinafter "Office Action"), please amend the above-identified Application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 11 of this paper.

# **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

# **Listing of Claims:**

1	1. (Currently Amended) A method for delivering context-based
2	content to a first user, the method comprising:
3	receiving at least one content package, wherein the content package
4	includes at least one content piece and a set of rules trigger condition associated
5	with the content package, wherein the set of rules includes a trigger condition and
6	an expected response, and wherein the trigger condition specifies a context or a
7	user activity-that triggers a presentation of the content piece;
8	receiving a set of contextual information with respect to the first user;
9	processing the contextual information to determine a current context for
10	the first user or a current activity being performed by the first user;
11	determining whether either or both the current context and the current
12	activity of the first user satisfy satisfies the trigger condition; [[and]]
13	in response to the trigger condition being satisfied, presenting the content
14	piece to the first user;
15	receiving a response from the first user corresponding to the presented
16	content piece;
17	determining whether the received response matches the expected
18	response; and
19	performing an action based on an outcome of the determination.

2	further comprises allowing the first user to create creating the content package for
3	the first user, wherein creating the content package involves: [[by:]]
4	recording the content piece that is provided by the first user;
5	creating an entry in a content database for the recorded content piece,
6	wherein the entry is associated with includes one or more trigger conditions; and
7	associating the one or more trigger conditions for the entry with a user-
8	defined context; and
9	wherein the method further comprises:
10	continuously comparing previously defined trigger conditions for
11	the entry with the ongoing context of the first user-and/or user activity;
12	and
13	when-in response to the one or more trigger conditions being
14	[[are]] met, retrieving the associated content piece, and presenting the
15	retrieved content piece to the first user.
1	3. (Currently Amended) The method of claim 2, wherein the method
2	further comprises allowing the first user to create creating a shareable content
3	piece for the first user, wherein creating the sharable content piece involves:
4	[[by:]]
5	recording the sharable content piece that is provided by the first user; and
6	creating a content package for the recorded sharable content piece,
7	wherein the content package includes the recorded sharable content piece, and
8	wherein the content package includes one or more trigger conditions;
9	wherein the content package allows a recipient of the content package to
10	insert, modify, and/or remove content or trigger conditions from the content
11	nackage.

(Currently Amended) The method of claim 1, wherein the method

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2	comprises de	fining a context by:
3	creati	ng one or more context entries in a context manager; and
4	assoc	iating a respective context entry with a set of contextual information.
1	5.	(Previously Presented) The method of claim 4, wherein the method
2	further comp	rises updating entries in a content database and updating the context
3	entries in the	context manager responsive to actions performed by the first user.
1	6.	(Cancelled)
1	7.	(Currently Amended) The method of claim 1 elaim 6, wherein the
2	context or the	e user activity-is defined as a combination of at least a high-level
3	abstraction w	hich corresponds to one or more low-level contextual information
4	values, where	ein the low-level contextual information values can correspond to
5	one or more	measurable parameters.
1	8.	(Currently Amended) The method of claim 1 elaim 6, wherein a
2	respective ru	le is defined with one or more high-level abstractions.
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1	9.	(Currently Amended) The method of claim 8, further comprising
2	allowing the	first user to share the rules with a second user, wherein the second
3	user can rede	fine the shared rules based on the second user's low-level contextual
4	and activity p	parameters.
1	10.	(Previously Presented) The method of claim 1, wherein presenting
2	the content p	iece comprises sharing the content piece with a remote device.

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(Original) The method of claim 1, wherein the method further

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1	11. (Original) The method of claim 1, wherein the contextual	
2	information includes one or more of: time, date, location, proximity to a system-	
3	detectable tag, device orientation, velocity, direction, distance, vibration, altitude,	
4	temperature, pressure, humidity, sound, luminous intensity, camera image, and	
5	video stream.	
1	12. (Previously Presented) The method of claim 1, wherein the content	
2	piece includes one or more of: audio clip, image, video stream, language lesson,	
3	e-mail, weather report, calendar reminder, news feed, rich site summary (RSS)	
4	feed, information update from a Web 2.0 application, and Internet blog.	
1	13. (Currently Amended) A computer-readable storage medium	
2	storing instructions that when executed by a computer cause the computer to	
3	perform a method for delivering context-based content to a first user, the method	
4	comprising:	
5	receiving at least one content package, wherein the content package	
6	includes at least one content piece and a trigger conditionset of rules associated	
7	with the content package, wherein the set of rules includes a trigger condition and	
8	an expected response, and wherein the trigger condition specifies a context or a	
9	user activity that triggers a presentation of the content piece;	
10	receiving a set of contextual information with respect to the first user;	
11	processing the contextual information to determine a current context for	
12	the first user or a current activity being performed by the first user;	
13	determining whether either or both the current context and the current	
14	activity of the first user satisfy satisfies the trigger condition; [[and]]	
15	in response to the trigger condition being satisfied, presenting the content	
16	piece to the first user:	
17	receiving a response from the first user corresponding to the presented	
18	content piece;	
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19	determining whether the received response matches the expected
20	response; and
21	•
<b>41</b>	performing an action based on an outcome of the determination.
1	14. (Currently Amended) The computer-readable storage medium of
2	claim 13, wherein the method further comprises allowing the first user to create
3	creating the content package for the first user, wherein creating the content
4	package involves: [[by:]]
5	recording the content piece that is provided by the first user;
6	creating an entry in a content database for the recorded content piece,
7	wherein the entry is associated with includes one or more trigger conditions; and
8	associating the one or more trigger conditions for the entry with a user-
9	defined context; and
10	wherein the method further comprises:
11	continuously comparing previously defined trigger conditions for
12	the entry with the ongoing context of the first user and/or user activity;
13	and
14	when in response to the one or more trigger conditions being
15	[[are]] met, retrieving the associated content piece and presenting the
16	retrieved content piece to the first user.
1	15. (Currently Amended) The computer-readable storage medium of
2	claim 14, wherein the method further comprises allowing the first user to create
3	creating a shareable content piece for the first user, wherein creating the sharable
4	content piece involves: [[by:]]
5	recording the sharable content piece that is provided by the first user; and
6	creating a content package for the recorded sharable content piece,
7	wherein the content package includes the recorded sharable content piece, and
8	wherein the content package includes one or more trigger conditions;
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9	wherein the content package allows a recipient of the content package to
10	insert, modify, and/or remove content and/or trigger conditions from the content
11	package.
1	16. (Original) The computer-readable storage medium of claim 13,
2	wherein the method further comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information

1 17. (Previously Presented) The computer-readable storage medium of 2 claim 16, wherein the method further comprises updating entries in a content 3 database and updating the context entries in the context manager responsive to 4 actions performed by the first user.

## 18. (Cancelled)

- 1 19. (Original) The computer-readable storage medium of claim 13, 2 wherein the contextual information includes one or more of: time, date, location, 3 proximity to a system-detectable tag, device orientation, velocity, direction, 4 distance, vibration, altitude, temperature, pressure, humidity, sound, luminous 5 intensity, camera image, and video stream.
- 1 20. (Previously Presented) The computer-readable storage medium of 2 claim 13, wherein the content piece includes one or more of: audio clip, image, 3 video stream, language lesson, e-mail, weather report, calendar reminder, news 4 feed, rich site summary (RSS) feed, information update from a Web 2.0 5 application, and Internet blog.

1	21. (Currently Amended) An apparatus for delivering context-based
2	content to a first user, comprising:
3	a processor;
4	an input mechanism configured to receive a set of contextual information
5	with respect to the first user;
6	a receiving mechanism configured to receive at least one content package
7	wherein the content package includes at least one content piece and a trigger
8	eonditionset of rules associated with the content package, wherein the set of rules
9	includes a trigger condition and an expected response, and wherein the trigger
10	condition specifies a context or a user activity that triggers a presentation of the
11	content piece;
12	a content delivery mechanism configured to present the context-based
13	content to a first user; and
14	a context manager configured to process the contextual information to
15	determine a current context for the first user or a current activity being performed
16	by the first user, and to determine whether either or both the current context and
17	the current activity of the first user satisfysatisfies the trigger condition;
18	wherein in response to the trigger condition being satisfied, the content
19	delivery mechanism is configured to present the content piece to the first user:
20	<u>and</u>
21	wherein while presenting the content piece to the first user, the content
22	delivery mechanism is further configured to:
23	receive a response from the first user corresponding to the
24	presented content piece,
25	determine whether the received response matches the expected
26	response, and
27	perform an action based on an outcome of the determination.

1	22. (Currently Amended) The apparatus of claim 21, wherein the	
2	apparatus further comprises a content management mechanism configured to	
3	allow the first user to create the content package for the first user, wherein	
4	creating the content package involves: [[by:]]	
5	recording the content piece that is provided by the first user;	
6	creating an entry in a content database for the recorded content piece,	
7	wherein the entry is associated with includes one or more trigger conditions;	
8	associating the one or more trigger conditions for the entry with a use	
9	defined context;	
10	continuously comparing previously defined trigger conditions for the entry	
11	with the ongoing context of the first user-and/or user activity; and	
12	when in response to the one or more trigger conditions being [[are]] met,	
13	retrieving the associated-content piece and presenting the retrieved content piece	
14	to the first user.	
1	23. (Currently Amended) The apparatus of claim 22, wherein the	
2	content management mechanism is further configured to allow the first user to	
3	create a shareable content piece for the first user, wherein creating the sharable	
4	content piece involves: [[by:]]	
5	recording the sharable content piece that is provided by the first user; and	
6	creating a content package for the recorded sharable content piece,	
7	wherein the content package includes the recorded sharable content piece, and	
8	wherein the content package includes one or more trigger conditions;	
9	wherein the content package allows a recipient of the content package to	
10	insert, modify, and/or remove content or trigger conditions from the content	
11	package.	
1	24. (Original) The apparatus of claim 21, wherein the context manager	
2	defines a context by:	
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3	creating one or more context entries for the context; and
4	associating a respective context entry with a set of contextual information

- 1 25. (Previously Presented) The apparatus of claim 24, wherein the 2 apparatus is further configured to update entries in the content database and 3 update the user-defined context entries in the context manager responsive to 4 actions performed by the first user.
  - 26. (Cancelled)

- 1 27. (Original) The apparatus of claim 21, wherein the contextual 2 information includes one or more of: time, date, location, proximity to a system-3 detectable tag, device orientation, velocity, direction, distance, vibration, altitude, 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and 5 video stream.
- 1 28. (Previously Presented) The apparatus of claim 21, wherein the 2 content piece includes one or more of: audio clip, image, video stream, language 3 lesson, e-mail, weather report, calendar reminder, news feed, rich site summary 4 (RSS) feed, information update from a Web 2.0 application, and Internet blog.

## REMARKS

In the Office Action mailed on **23 February 2012**, the Examiner reviewed claims 1-28. Examiner rejected claims 1, 5, 13, 17, and 21 under 35 U.S.C. § 112. Examiner rejected claims 1-5, 10-17, 19-25, and 27-28 under 35 U.S.C. § 102(b) as being anticipated by Brandenberg et al. (US Patent Pub. No. 2003/0063072, hereinafter "Brandenberg"). Examiner rejected claims 6-9, 18, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Brandenberg, in view of Schultz et al. (US Patent Pub. No. 2009/0265764, hereinafter "Schultz").

### **Examiner Interview**

Applicant thanks Examiner for the phone interview conducted on 9 May 2012. Applicant proposed amendments to the claims and argued that the cited reference, Brandenberg, does not disclose determining whether a user response corresponding to a presented content piece matches an expected response, and performing an action on the content piece based on the outcome of the determination. Examiner agreed that the proposed amendments overcome the cited references. Accordingly, Applicant has incorporated the proposed amendments into this response.

## Rejections under 35 U.S.C. § 112

Examiner rejected claims 1, 5, 13, 17, and 21 under 35 U.S.C. § 112, second paragraph, as being indefinite. More specifically, Examiner stated that claims 1, 13, and 21 are indefinite for stating "determine whether both the current context and the current activity satisfy the trigger condition" while the previous portion of the claims states that determining them both is only optional. Accordingly, Applicant has amended claims 1, 13, and 21 to clarify that the system determines the current context, and then determines whether the current

context satisfies the trigger condition, thus obviating the rejection to these claims under 35 U.S.C. § 112.

Examiner rejected claim 21, stating that it is not clear what the presented content refers to. Accordingly, Applicant has amended claim 21 to clarify that the content delivery mechanism is configured to present "the context-based content" to the first user, thus obviating the rejection to claim 21 under 35 U.S.C. § 112.

Moreover, Examiner rejected claims 5 and 17, stating that it is unclear whether the recited claim limitation "a content database" refers to "a content database" recited in claims 2 and 14, respectively. Applicant respectfully points out that claim 5 depends upon claim 4, which depends upon claim 1. There is no dependency relationship between claim 2 and claim 5. Hence, the limitations of "a content database" in claim 2 and claim 5 are independent of each other. Similarly, there is no dependency relationship between claims 14 and 17, and thus the limitations of "a content database" in claim 14 and claim 17 are independent of each other.

### Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

Examiner rejected claims 1-5, 10-17, 19-25, and 27-28 under 35 U.S.C. § 102(b) as being anticipated by Brandenburg. Examiner rejected claims 6-9, 18, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Brandenberg, in view of Schultz. Applicant respectfully disagrees with the rejection, because Brandenberg and Schultz do not disclose determining whether a user response corresponding to a presented content piece matches an expected response, and performing an action on the content piece based on the outcome of the determination.

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user based on a user context (see instant application, par. [0026]). Prior to the operation, the content management system receives a set of content packages, wherein a content

package includes a collection of content and a set of rules for presenting the content package (see instant application, par. [0055]). The set of rules includes at least one trigger condition and a pre-defined expected response (see instant application, par. [0056]). Once the trigger condition is met, the content management system delivers the content to the user (see instant application, par. [0090]). Subsequently, the system receives a response from the user corresponding to the presented content, determines whether the response matches the pre-defined expected response, and performs an action based on the outcome of the determination (see instant application, pars. [0062]-[0064]). For example, if the user fails to mimic the played audio signal correctly, the system replays the audio file for the user (see instant application, par. [0056]).

In contrast, Brandenberg merely discloses determining which items of digital content are relevant to the user and transmitting the content to the client device (see Brandenberg, the Abstract). Brandenberg fails to disclose determining whether a user response corresponding to a presented content piece matches an expected response, and performing an action on the content piece based on the outcome of the determination.

Schultz discloses that context information can be aggregated and used by authorized context consumers (see Schultz, the Abstract). Schultz does not disclose receiving a user response after the content is presented.

Accordingly, Applicant has amended claims 1, 13, and 21 to clarify that, in embodiments of the present invention, the system determines whether a user response corresponding to a presented content piece matches an expected response, and performs an action on the content piece based on the outcome of the determination. These amendments find support in pars. [0062]-[0064] of the instant application. Claims 6, 18, and 26 have been cancelled without prejudice. No new matter has been added.

Hence, Applicant respectfully submits that independent claims 1, 13, and 21 as presently amended are in condition for allowance. Applicant also submits 13
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that claims 2-5 and 7-12, which depend upon claim 1; claims 14-17 and 19-20, which depend upon claim 13; and claims 22-25 and 27-28, which depend upon claim 21, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

# **CONCLUSION**

It is submitted that the application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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Date: 23 May 2012

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Electronic Acl	knowledgement Receipt	
EFS ID:	12849777	
Application Number:	12326457	
International Application Number:		
Confirmation Number:	3430	
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION	
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti	
Customer Number:	35699	
Filer:	Shun Yao	
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Receipt Date:	23-MAY-2012	
Filing Date:	02-DEC-2008	
Time Stamp:	18:20:46	
Application Type:	Utility under 35 USC 111(a)	

# Payment information:

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Document Number	Document Description		File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

# AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS OR CREDIT ANY OVERPAYMENTS TO DEPOSIT ACCOUNT 24-0037

Please deduct any <u>underpayments</u>, credit any <u>overpayments</u>, and charge all required <u>extension of time fees</u> associated with attached filing to Deposit Account Number 24-0037.

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PTO/SB/06 (07-06)

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 12/326,457			ing Date 02/2008	To be Mailed			
APPLICATION AS FILED – PART I (Column 1) (Column 2)					SMALL ENTITY				HER THAN		
	FOR	NU	JMBER FIL	· · · · ·	MBER EXTRA	П	RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)
	BASIC FEE (37 CFR 1.16(a), (b), o	or (c))	N/A		N/A	lt	N/A		1	N/A	
	SEARCH FEE (37 CFR 1.16(k), (i), o		N/A		N/A		N/A			N/A	
	EXAMINATION FE (37 CFR 1.16(o), (p), (	E	N/A		N/A		N/A		1	N/A	
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* If t	the difference in colu	ımn 1 is less than	zero, ente	r "0" in column 2.			TOTAL			TOTAL	
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AMENDMENT	05/23/2012	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
ME	Total (37 CFR 1.16(i))	* 25	Minus	** 28	= 0		X \$ =		OR	X \$60=	0
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√ME	Application Si	ze Fee (37 CFR 1	.16(s))								
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AM	FIRST PRESEN	ITATION OF MULTIF	LE DEPEN	DENT CLAIM (37 CFF	R 1.16(j))				OR		
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			2165	
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			07/27/2012	ELECTRONIC

# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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		Application No.	Applicant(s)	
		12/326,457	BELLOTTI, VICTORIA M.E.	
	Office Action Summary	Examiner	Art Unit	
	-	Bai D. Vu	2165	
	The MAILING DATE of this communication appo			
Period fo	• •			
WHIC - Exter after - If NC - Failu Any (	ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DA nsions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. Poeriod for reply is specified above, the maximum statutory period wire to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	TE OF THIS COMMUNICATION 6(a). In no event, however, may a reply be tim ill apply and will expire SIX (6) MONTHS from to cause the application to become ABANDONEI	ely filed the mailing date of this communication.  (35 U.S.C. § 133).	
Status				
1)🛛	Responsive to communication(s) filed on 23 Ma	<u>ay 2012</u> .		
2a)🛛	This action is <b>FINAL</b> . 2b) ☐ This	action is non-final.		
3)	An election was made by the applicant in respo	•	· ·	
ا ا	; the restriction requirement and election	·		
4)	Since this application is in condition for allowan closed in accordance with the practice under E.			
Dispositi	ion of Claims	r parte dealyre, rece e.e. rr, re		
	Claim(s) <u>1-5,7-17,19-25,27 and 28</u> is/are pendi	ng in the application		
	5a) Of the above claim(s) is/are withdraw			
	Claim(s) is/are allowed.			
7) 🖂	Claim(s) <u>1-5,7-17,19-25,27 and 28</u> is/are rejected	ed.		
	Claim(s) is/are objected to.			
9)	Claim(s) are subject to restriction and/or	election requirement.		
Applicati	on Papers			
10)	The specification is objected to by the Examiner			
11)	The drawing(s) filed on is/are: a) $\square$ acce			
	Applicant may not request that any objection to the d			
12\□	Replacement drawing sheet(s) including the correction.  The oath or declaration is objected to by the Example 1.		, ,	
, —	under 35 U.S.C. § 119	arminer. Note the attached Office	Action of former 10-132.	
-	-	priority under 25 H.S.C. \$ 110(a)	(d) or (f)	
<ul> <li>13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>				
Attachmen	t(s)			
	e of References Cited (PTO-892)	4) Interview Summary		
3) Inform	re of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO/SB/08) r No(s)/Mail Date	Paper No(s)/Mail Da 5) Notice of Informal Pa 6) Other:		

U.S. Patent and Trademark Office PTOL-326 (Rev. 03-11)

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#### **DETAILED ACTION**

#### Response to Amendment

1. Applicant has amended claims 1-3, 7-9, 13-15 and 21-23; and canceled claims 6, 18 and 26 in the amendment filed on 5/23/2012. Claims 1-5, 7-17, 19-25, 27 and 28 are currently pending in the application.

#### Response to Arguments

2. Applicant's arguments filed on 5/23/2012 with respect to claims 1-5, 7-17, 19-25, 27 and 28 have been fully considered but are moot in view of the new ground(s) of rejection.

# Regarding to the Applicant's Arguments:

With respect to the applicant's argument asserted, on pages 11-12 of the
Remarks that claims 2 and 5 have no dependency relationship and therefore
the limitations of "a content database" in claim 2 and claim 5 are independent
each other. Thus, the rejection of claim 5 under 35 U.S.C. 112, second
paragraph, as being indefinite is improper. Similar argument is applied to
claims 14 and 17.

In response to the applicant's argument, the examiner respectfully disagrees because claim 2 depended on claim 1 is limited to comprise "a content database", and claim 5 depended upon claim 4, which depended on claim 1 is

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additionally or further limited to comprise "a content database" as previously introduced in claim 2; and therefore the limitation "a content database" in claim 5 is indefinite. Similar discussion is applied to claims 14 and 17. Accordingly, the rejection of claims 5 and 17 under 35 U.S.C. 112, second paragraph, as being indefinite is hereby maintained.

#### Claim Rejections - 35 USC § 112

- 3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
  The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 4. <u>Claims 5 and 17</u> are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to <u>claim 5</u>, the phrase "a content database" recited in line 3 is indefinite. It is unclear whether the phrase "a content database" in line 3 of claim 5 is referred to as "a content database" recited in line 6 of claim 2. Clarification is required.

With respect to <u>claim 17</u>, the phrase "a content database" recited in line 3 is indefinite. It is unclear whether the phrase "a content database" in line 3 of claim 5 is referred to as "a content database" recited in line 6 of claim 14. Clarification is required.

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#### Claim Rejections - 35 USC § 102

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-5, 10-17, 19-25 and 27-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brandenberg et al. (US No. 2003/0063072 A1), and further in view of Herz et al. (US No. 2009/0254971 A1).

As per <u>claim 1</u>, Brandenberg et al. discloses a method for delivering contextbased content to a first user, the method comprising:

receiving at least one content package, wherein the content package includes at least one content piece and a set of rules associated with the content package, wherein the set of rules includes a trigger condition and an expected response, as (see e.g., ¶ 0014 lines 4-7, ¶ 0015 lines 10-16, and ¶ 0016 lines 10-13: as the digital content item is referred to as content piece; data plus metadata associated with the digital content item is referred to as the trigger condition; and user profile characteristics (e.g., user interests) is referred to an expected response) and wherein the trigger condition specifies a context that triggers a presentation of the content piece; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶¶ 0029 – 0031; and Figs. 1I-1K: as the data plus metadata is referred to as the trigger condition).

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receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶ 0032; and Fig. 1L: as the contextual user profile is referred to as the set of contextual information).

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processing the contextual information to determine a current context for the first user; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0410 – 0414; and Figs. 1I-1L).

determining whether the current context satisfies the trigger condition; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

in response to the trigger condition being satisfied, presenting the content piece to the first user; as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

However, Herz et al. discloses the features which are not explicitly disclosed by Brandenberg et al. as the followings:

receiving a response from the first user corresponding to the presented content piece; as (see e.g., ¶ 1411: as feedbacks and/or comments in response to various on-line stimuli (e.g. general Web and e-commerce sites to various products such as movies, music, interactive content, advertising news, interactions with other users etc.) based on user profile, which is referred to as the presented content piece).

determining whether the received response matches the expected response; and as (see e.g., ¶ 1411: as feedbacks and/or comments are extracted, clustered, and closely exemplify user profile).

performing an action based on an outcome of the determination as (see e.g., ¶ 1411: as extracted feedbacks and/or comments are presented to vendors).

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It would have been obvious to one of ordinary skill in the art at the time of invention to apply Herz et al. teaching of data exchange between multiple self-interested parties into Brandenberg et al. system in order to allow vendors to provide sensitive and valuable information, for example about business needs and customer bases, in a secure environment that controls access and leverages value (Herz et al., ¶ 0004 lines 14-17).

As per <u>claim 2</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 1, wherein the method further comprises creating the content package for the first user, wherein creating the content package involves:

recording the content piece that is provided by the first user; as (see e.g.,  $\P$  0016 lines 14-26).

creating an content entry in a content database for the recorded content piece, wherein the entry includes one or more trigger conditions; and associating the one or more trigger conditions for the content entry with a user-defined context; and as (see e.g., ¶ 0032; and Fig. 1L) wherein the method further comprises:

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

in response to the one or more trigger conditions being met, retrieving the content piece, and presenting the retrieved content piece to

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the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 3</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 2, wherein the method further comprises creating a shareable content piece for the first user, wherein creating the sharable content piece involves:

recording the sharable content piece that is provided by the first user; and as (see e.g.,  $\P\P$  0735 and 0795).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more trigger conditions; as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g., ¶¶ 0334, 0496, 0498, 0514, 0651 and 0732).

As per <u>claim 4</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 1, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶ 0032; and Fig. 1L).

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As per <u>claim 5</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 4, wherein the method further comprises updating entries in a content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0016 lines 10-13).

As per <u>claim 10</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 1, wherein presenting the content piece comprises sharing the content piece with a remote device as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

As per <u>claim 11</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 1, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 12</u>, Brandenberg et al. as modified by Herz et al. discloses the method of claim 1, wherein the content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶¶ 0029 and 0032; and Figs. 1I and 1L).

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As per <u>claim 13</u>, Brandenberg et al. discloses a <u>computer-readable storage</u> medium storing instructions that when executed by a computer cause the computer to perform a method for delivering context-based content to a first user, the method comprising:

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receiving at least one content package, wherein the content package includes at least one content piece and a set of rules associated with the content package, wherein the set of rules includes a trigger condition and an expected response, as (see e.g., ¶ 0014 lines 4-7, ¶ 0015 lines 10-16 and ¶ 0016 lines 10-13: as the digital content item is referred to as content piece; and data plus metadata associated with the digital content item is referred to as the trigger condition; and user profile characteristics (e.g., user interests) is referred to an expected response) and wherein the trigger condition specifies a context that triggers a presentation of the content piece; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶¶ 0029 – 0031; and Figs. 1I-1K: as the data plus metadata is referred to as the trigger condition).

receiving a set of contextual information with respect to the first user; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶ 0032; and Fig. 1L: as the contextual user profile is referred to as the set of contextual information).

processing the contextual information to determine a current context for the first user; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0410 – 0414; and Figs. 1I-1L).

determining whether the current context satisfies the trigger condition; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

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in response to the trigger condition being satisfied, presenting the content piece to the first user; as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

However, Herz et al. discloses the features which are not explicitly disclosed by Brandenberg et al. as the followings:

receiving a response from the first user corresponding to the presented content piece; as (see e.g., ¶ 1411: as feedbacks and/or comments in response to various on-line stimuli (e.g. general Web and e-commerce sites to various products such as movies, music, interactive content, advertising news, interactions with other users etc.) based on user profile, which is referred to as the presented content piece).

determining whether the received response matches the expected response; and as (see e.g., ¶ 1411: as feedbacks and/or comments are extracted, clustered, and closely exemplify user profile).

performing an action based on an outcome of the determination as (see e.g., ¶ 1411: as extracted feedbacks and/or comments are presented to vendors).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Herz et al. teaching of data exchange between multiple self-interested parties into Brandenberg et al. system in order to allow vendors to provide sensitive and valuable information, for example about business needs and customer bases, in a secure environment that controls access and leverages value (Herz et al., ¶ 0004 lines 14-17).

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As per <u>claim 14</u>, Brandenberg et al. as modified by Herz et al. discloses the computer-readable storage medium of claim 13, wherein the method further comprises creating the content package for the first user, wherein creating the content package involves:

recording the content piece that is provided by the first user; as (see e.g.,  $\P$  0016 lines 14-26).

creating an entry in a content database for the recorded content piece, wherein the entry includes one or more trigger conditions; and associating the one or more trigger conditions for the entry with a user-defined context; and as (see e.g., ¶ 0032; and Fig. 1L) wherein the method further comprises:

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

in response to the one or more trigger conditions being met, retrieving the content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 15</u>, Brandenberg et al. as modified by Herz et al. discloses the computer-readable storage medium of claim 14, wherein the method further comprises creating a shareable content piece for the first user, wherein creating the sharable content piece involves:

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recording the sharable content piece that is provided by the first user; and as (see e.g.,  $\P\P$  0735 and 0795).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more trigger conditions; as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content and/or trigger conditions from the content package as (see e.g., ¶¶ 0334, 0496, 0498, 0514, 0651 and 0732).

As per <u>claim 16</u>, Brandenberg et al. as modified by Herz et al. discloses the computer-readable storage medium of claim 13, wherein the method further comprises defining a context by: creating one or more context entries in a context manager; and associating a respective context entry with a set of contextual information as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 17</u>, Brandenberg et al. as modified by Herz et al. discloses the computer-readable storage medium of claim 16, wherein the method further comprises updating entries in a content database and updating the context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0016 lines 10-13).

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As per <u>claim 19</u>, Brandenberg et al. as modified by Herz et al. discloses the computer-readable storage medium of claim 13, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 20</u>, Brandenberg et al. as modified by Herz et al. discloses the computer-readable storage medium of claim 13, wherein the content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶¶ 0029 and 0032; and Figs. 1I and 1L).

As per <u>claim 21</u>, Brandenberg et al. discloses an apparatus for delivering context-based content to a first user, comprising: a processor;

an input mechanism configured to receive a set of contextual information with respect to the first user; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶ 0032; and Fig. 1L: as the contextual user profile is referred to as the set of contextual information).

a receiving mechanism configured to receive at least one content package, wherein the content package includes at least one content piece and a set of

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rules associated with the content package, wherein the set of rules includes a trigger condition and an expected response, as (see e.g., ¶ 0014 lines 4-7, ¶ 0015 lines 10-16 and ¶ 0016 lines 10-13: as the digital content item is referred to as content piece; and data plus metadata associated with the digital content item is referred to as the trigger condition; and user profile characteristics (e.g., user interests) is referred to an expected response) and wherein the trigger condition specifies a context that triggers a presentation of the content piece; as (see e.g., ¶ 0015 lines 10-16, ¶ 0016 lines 10-13, ¶¶ 0029 – 0031; and Figs. 1I-1K: as the data plus metadata is referred to as the trigger condition).

a content delivery mechanism configured to present the context-based content to a first user; and as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

a context manager configured to process the contextual information to determine a current context for the first user, as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0410 – 0414; and Figs. 1I-1L) and to determine whether the current context satisfies the trigger condition; as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

wherein in response to the trigger condition being satisfied, the content delivery mechanism is further configured to present the content piece to the first user; and as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user)

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However, Herz et al. discloses the features which are not explicitly disclosed by Brandenberg et al. as the followings:

wherein while presenting the content piece to the first user, the content delivery mechanism is further configured to:

receive a response from the first user corresponding to the presented content piece, as (see e.g., ¶ 1411: as feedbacks and/or comments in response to various on-line stimuli (e.g. general Web and e-commerce sites to various products such as movies, music, interactive content, advertising news, interactions with other users etc.) based on user profile, which is referred to as the presented content piece).

determine whether the received response matches the expected response; and as (see e.g., ¶ 1411: as feedbacks and/or comments are extracted, clustered, and closely exemplify user profile).

perform an action based on an outcome of the determination as (see e.g., ¶ 1411: as extracted feedbacks and/or comments are presented to vendors).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Herz et al. teaching of data exchange between multiple self-interested parties into Brandenberg et al. system in order to allow vendors to provide sensitive and valuable information, for example about business needs and customer bases, in a secure environment that controls access and leverages value (Herz et al., ¶ 0004 lines 14-17).

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As per <u>claim 22</u>, Brandenberg et al. as modified by Herz et al. discloses the apparatus of claim 21, wherein the apparatus further comprises a content management mechanism configured to create the content package for the first user, wherein creating the content package involves:

recording the content piece that is provided by the first user; as (see e.g.,  $\P$  0016 lines 14-26).

creating an entry in a content database for the recorded content piece, wherein the entry includes one or more trigger conditions; associating the one or more trigger conditions for the entry with a user-defined context; as (see e.g., ¶ 0032; and Fig. 1L).

continuously comparing previously defined trigger conditions for the entry with the ongoing context of the first user; and as (see e.g.,  $\P$  0015 lines 16-23,  $\P\P$  0266, 0334, and 0410 – 0414; and Figs. 1I-1L).

in response to the one or more trigger conditions being met, retrieving the content piece and presenting the retrieved content piece to the first user as (see e.g., ¶ 0015 lines 20-28: as requested content is delivered to the user).

As per <u>claim 23</u>, Brandenberg et al. as modified by Herz et al. discloses the apparatus of claim 22, wherein the content management mechanism is further configured to create a shareable content piece for the first user, wherein creating the sharable content piece involves:

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recording the sharable content piece that is provided by the first user; and as (see e.g.,  $\P\P$  0735 and 0795).

creating a content package for the recorded sharable content piece, wherein the content package includes the recorded sharable content piece, and wherein the content package includes one or more trigger conditions; as (see e.g., ¶¶ 0460, 0650, 0735 and 0795).

wherein the content package allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package as (see e.g., ¶¶ 0334, 0496, 0498, 0514, 0651 and 0732).

As per <u>claim 24</u>, Brandenberg et al. as modified by Herz et al. discloses the apparatus of claim 21, wherein the context manager defines a context by: creating one or more context entries for the context; and associating a respective context entry with a set of contextual information as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 25</u>, Brandenberg et al. as modified by Herz et al. discloses the apparatus of claim 24, wherein the apparatus is further configured to update entries in the content database and update the user-defined context entries in the context manager responsive to actions performed by the first user as (see e.g., ¶ 0016 lines 10-13).

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As per <u>claim 27</u>, Brandenberg et al. as modified by Herz et al. discloses the apparatus of claim 21, wherein the contextual information includes one or more of: time, date, location, proximity to a system-detectable tag, device orientation, velocity, direction, distance, vibration, altitude, temperature, pressure, humidity, sound, luminous intensity, camera image, and video stream as (see e.g., ¶ 0032; and Fig. 1L).

As per <u>claim 28</u>, Brandenberg et al. as modified by Herz et al. discloses the apparatus of claim 21, wherein content piece includes one or more of: audio clip, image, video stream, language lesson, e-mail, weather report, calendar reminder, news feed, rich site summary (RSS) feed, information update from a Web 2.0 application, and Internet blog as (see e.g., ¶¶ 0029 and 0032; and Figs. 1I and 1L).

7. <u>Claims 7-9</u> are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brandenberg et al., in view of Herz et al., and further in view of Schultz et al. (US No. 2009/0265764 A1).

As per <u>claim 7</u>, Schultz et al. discloses the method of claim 6, wherein the context or the user activity is defined as a combination of at least a high-level abstraction which corresponds to one or more low-level contextual information values, wherein the low-level contextual information values can correspond to

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one or more measurable parameters, which is not explicitly disclosed by Brandenberg et al. and Herz et al., as (see e.g., ¶ 0015).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. and Herz et al. systems in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

As per <u>claim 8</u>, Schultz et al. discloses the method of claim 6, wherein a respective rule is defined with one or more high-level abstractions, which is not explicitly disclosed by Brandenberg et al. and Herz et al., as (see e.g., ¶ 0030).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. and Herz et al. systems in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

As per <u>claim 9</u>, Schultz et al. discloses the method of claim 8, further comprising allowing the first user to share the rules with a second user, wherein the second user can redefine the shared rules based on the second user's low-level contextual and activity parameters, which is not explicitly disclosed by Brandenberg et al. and Herz et al., as (see e.g., ¶ 0030).

Art Unit: 2165

It would have been obvious to one of ordinary skill in the art at the time of invention to apply Schultz et al. teaching of aggregating information related to users context into Brandenberg et al. and Herz et al. systems in order to generate location labels based on user-defined rules relating to device presence information (Schultz et al., ¶ 0031).

#### Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bai D. Vu whose telephone number is (571) 270-1751. The examiner can normally be reached on Mon - Fri 8:30 - 5:00 EST.

Art Unit: 2165

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel-Jalil can be reached on 571-272-4074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bai D. Vu/ Primary Examiner, Art Unit 2165 7/24/2012

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Index of Claims	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

✓	Rejected	-	Cancelled	N	Non-Elected		A	Appeal
=	Allowed	÷	Restricted	I	Interference		О	Objected
☐ Claims renumbered in the same order as presented by applicant ☐ CPA						Г	¬ т.р.	☐ R.1.47

☐ Claims	renumbered	in the same order	as presented by ap	plicant	☐ CPA	☐ T.D.	R.1.47
CL	AIM			DA	TE		
Final	Original	07/24/2012					
	1	✓					
	2	✓					
	3	✓					
	4	✓					
	5	✓					
	6	-					
	7	✓					
	8	<b>√</b>					
	9	✓					
	10	✓					
	11	<b>√</b>					
	12	✓					
	13	✓					
	14	<b>✓</b>					
	15	<b>✓</b>					
	16	✓					
	17	✓					
	18	-					
	19	✓					
	20	✓					
	21	✓					
	22	<b>✓</b>					
	23	✓					
	24	✓					
	25	✓					
	26	-					
	27	✓					
	28	✓					

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

	SEARCHED		
Class	Subclass	Date	Examiner
707	999.003,009 and 732,784 (limted text search) (see attached)	7/24/2012	BV

SEARCH NOTES					
Search Notes	Date	Examiner			
EAST Search (USPAT;US-PGPUB;JPO;EPO;IBM) (see attached)	7/24/2012	BV			
707/999.003,009 and 707/732,784 (limited text search)	7/24/2012	BV			

INTERFERENCE SEARCH						
Class	Subclass	Date	Examiner			

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# **EAST Search History**

# **EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S44	14176	(respons\$4 WITH (user client subscriber)) SAME (match\$4 WITH respons\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:28
S45	108	(determin\$4 WITH context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:29
S46	7	S45 AND (respons\$4 WITH (user client subscriber)) SAME (match\$4 WITH respons\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:29
S47	16853	(707/999.003,999.009).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S48	7	S47 AND (determin\$4 WITH context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S49	0	S48 AND (respons\$4 WITH (user client subscriber)) SAME (match\$4 WITH respons\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S50	0	S48 AND (respons\$4 WITH (user client subscriber)) AND (match\$4 WITH respons\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S51	481	(707/732,784).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S52	0	\$51 AND (determin\$4 WITH context WITH activity WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S53	0	S52 AND (respons\$4 WITH (user client subscriber)) SAME (match\$4 WITH respons\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:30
S54	0	S52 AND (respons\$4 WITH (user client subscriber)) AND (match\$4 WITH respons\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/07/24 23:31

7/24/2012 11:31:49 PM

C:\ Users\ bvu1\ Documents\ EAST\ Workspaces\ 12326457.wsp

# **AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS** OR CREDIT ANY OVERPAYMENTS TO DEPOSIT **ACCOUNT 24-0037**

Please deduct any underpayments, credit any overpayments, and charge all required extension of time fees associated with attached filing to Deposit Account Number 24-0037.

Park, Vaughan, Fleming & Dowler LLP

2820 Fifth Street

Davis, CA 95618-7759

Tel: (530) 759-1661 Fax: (530) 759-1665

Email: richard@parklegal.com

Respectfully submitted,

A. Raker

By

A. Richard Park Registration No. 41,241

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

		Docket Number	· (Optional)			
NOTICE OF APPEAL FROM THE EXAMINER TO	PARC-20080172-US-NP					
THE BOARD OF PATENT APPEALS AND INTERFERE	=NCES	PARG-20080	)172-US-NP			
I hereby certify that this correspondence is being facsimile transmitted	In re Application of					
to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to		Victoria M.E. Bellotti et al.				
"Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]	Application N 12/326,45		Filed 02 December 2008			
on						
Signature		For CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION				
Typed or printed	Art Unit 2165		Examiner Vu. Roi D			
name	2100		Vu, Bai D.			
Applicant hereby appeals to the Board of Patent Appeals and Interference	s from the last	decision of the ex	aminer.			
			<sub>\$</sub> 630.00			
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1))			\$			
Applicant claims small entity status. See 37 CFR 1.27. Therefore, th	ne fee shown at	nove is reduced				
by half, and the resulting fee is:	10 100 01.01	000 10 1044004	\$			
A check in the amount of the fee is enclosed.						
Payment by credit card. Form PTO-2038 is attached.						
The Director has already been authorized to charge fees in this appl	lication to a Dec	nosit Account				
The birector has already been addressed to sharge recent and app.	illoation to a boy	JUSIL ACCOUNT.				
The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No						
A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.						
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.						
I am the						
<u> </u>	/Shun	ı Yao/				
applicant/inventor.			Signature			
assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.	Shun Yao					
(Form PTO/SB/96)	Typed or printed name					
attorney or agent of record. 59242	530-759-1667					
Registration number	_·		ephone number			
attorney or agent acting under 37 CFR 1.34.	00 Ostobou 0040					
Registration number if acting under 37 CFR 1.34.		ctober 2012	Date			
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  Submit multiple forms if more than one signature is required, see below*.						
*Total of 1 forms are submitted.						

This collection of information is required by 37 CFR 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

#### Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal						
Application Number:	12326457					
Filing Date:	02-Dec-2008					
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION					
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti					
Filer:	Shun Yao					
Attorney Docket Number:	y Docket Number: PARC-20080172-US-NP					
Filed as Large Entity						
Utility under 35 USC 111(a) Filing Fees						
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)	
Basic Filing:						
Pages:						
Claims:						
Miscellaneous-Filing:						
Petition:						
Patent-Appeals-and-Interference:						
Notice of appeal		1401	1	630	630	
Post-Allowance-and-Post-Issuance:						
Extension-of-Time:						

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
	Total in USD (\$)			630

Electronic Acl	knowledgement Receipt
EFS ID:	13944480
Application Number:	12326457
International Application Number:	
Confirmation Number:	3430
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti
Customer Number:	35699
Filer:	Shun Yao
Filer Authorized By:	
Attorney Docket Number:	PARC-20080172-US-NP
Receipt Date:	09-OCT-2012
Filing Date:	02-DEC-2008
Time Stamp:	19:00:57
Application Type:	Utility under 35 USC 111(a)

# **Payment information:**

File Listina:	
Authorized User	
Deposit Account	240037
RAM confirmation Number	6433
Payment was successfully received in RAM	\$630
Payment Type	Deposit Account
Submitted with Payment	yes

#### File Listing:

Document	Document Description	File Name	File Size(Bytes)/	Multi	Pages
Number			Message Digest	Part /.zip	(if appl.)

1	Miscellaneous Incoming Letter	Authorization-deposit-account- PARC.pdf	21989	no	1
'			0703504a8c0f45b447dce3672d85c4cc6a8 6d7ee		
Warnings:					
Information	1				
2	Natice of Appeal Filed	ch0031 NaticoofAppool pdf	257578	no	2
2	Notice of Appeal Filed	sb0031_NoticeofAppeal.pdf	e0c983482c224a5fccc358157f535e7f7d340 0f7	no	
Warnings:					-
Information					
_	- 14 (52-5)	6 , 6 , 16	30174		_
3	Fee Worksheet (SB06)	fee-info.pdf	ecbe3c1f84e130fab212b36635ac977b6610 a5b6	no	2
Warnings:					
Information					
		Total Files Size (in bytes)	3	09741	
			•		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO.		CONFIRMATION NO.	
12/326,457	12/326,457 12/02/2008 Victoria M.E. Bellotti		PARC-20080172-US-NP	3430
35699 PVF PARC	EXAM	IINER		
c/o PARK, VAUGHAN, FLEMING & DOWLER LLP 2820 FIFTH STREET			VU, BAI D	
DAVIS, CA 95618-7759			ART UNIT	PAPER NUMBER
		2165		
			NOTIFICATION DATE	DELIVERY MODE
			10/17/2012	ELECTRONIC

### Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto-incoming@parklegal.com Office.Action@xerox.com

	Application No. Applicant(s)			
Applicant-Initiated Interview Summary	12/326,457	BELLOTTI, VICTORIA M.E.		
Apprount innuited interview cumulary	Examiner	Art Unit		
	Bai D. Vu	2165		
All participants (applicant, applicant's representative, PTO	personnel):			
(1) <u>Bai D. Vu (Examiner)</u> .	(3) <u>Jorge Campos (Reg. No</u>	o. <i>62,872)</i> .		
(2)	(4)			
Date of Interview: <u>04 October 2012</u> .				
Type: 🛛 Telephonic 🔲 Video Conference 🔲 Personal [copy given to: 🔲 applicant [	applicant's representative]			
Exhibit shown or demonstration conducted: Yes If Yes, brief description:	⊠ No.			
Issues Discussed 101 112 102 103 Othe (For each of the checked box(es) above, please describe below the issue and detail				
Claim(s) discussed: <u>1</u> .				
Identification of prior art discussed: Brandenberg et al. and	Herz et al.			
Substance of Interview (For each issue discussed, provide a detailed description and indicate if agreement reference or a portion thereof, claim interpretation, proposed amendments, arguments.	- •	dentification or clarific	ation of a	
Applicant's representative discussed the differences between the claimed features (i.e., "receiving a response from the first user corresponding to the presented content piece; and determining whether the received response matches the expected response") and the cited portions of Herz et al. in order to take appropriate action in a file response. No agreement was reached. The examiner will reconsider the claimed invention base on a formal filed response.				
Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview				
<b>Examiner recordation instructions</b> : Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.			ification of the ility and the	
/Bai D. Vu/ Primary Examiner, Art Unit 2165				

U.S. Patent and Trademark Office PTOL-413 (Rev. 8/11/2010)

#### **Summary of Record of Interview Requirements**

#### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
  - (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### **Examiner to Check for Accuracy**

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Confirmation Number: 3430

Application Number: 12/326,457

Applicant : Victoria M.E. Bellotti
Filed : 02 December 2008
T.C./A.U. : 2165
Examiner : Vu, Bai D.
Docket Number : PARC-20080172-US-NP
Customer No. : 35,699

Interview Agenda Via Fax (571)270-2751

#### INTERVIEW AGENDA

Dear Examiner Vu:

Please find our interview agenda below.

### Identification of Claim and References for Discussion

Claim for discussion: Claim 1.

Reference for discussion: Brandenberg (US Pub. No. 2003/0063072) and Herz (US Pub. No. 2009/0254971).

## Applicant's Arguments

Examiner rejected claim 1 as being unpatentable over Brandenberg, in view of Herz. Applicant respectfully disagrees with the rejection, because neither Brandenberg nor Herz discloses determining whether a user response to a presented content piece matches an expected response, which is included as part of the content package.

Embodiments of the present invention provide a content management system that can deliver audio or visual content to a user based on user context (see instant application, par. [0026]). Prior to the operation, the content management system receives a set of content packages, wherein a content package includes a collection of content and a set of rules for presenting the content package. The set of rules includes at least one trigger condition and a pre-defined expected

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response, which defines how a user is expected to respond to the presented content (see instant application, pars. [0055]-[0056]). Once the trigger condition is met, the content management system delivers the content to the user (see instant application, par. [0090]). Subsequently, the system receives a response from the user corresponding to the presented content, determines whether the response matches the pre-defined expected response, and performs an action based on the outcome of the determination (see instant application, pars. [0062]-[0064]). For example, if the user fails to mimic the played audio signal correctly, the system replays the audio file for the user (see instant application, par. [0056]).

In the Office Action, Examiner stated that Brandenberg discloses the rules associated with the content include an expected response. More specifically, Examiner cited pars. [0014]-[0015] of Brandenberg, stating that user profile characteristics is referred to an expected response (see Office Action, page. 4). Applicant respectfully disagrees because the cited text of Brandenberg merely discloses allowing the user to rate the digital content, thereby providing the user with certain level of controls (see Brandenberg, par. [0016]). Note that receiving a user's rating is different from receiving an expected response because it is not possible for the system to "expect" a certain rating from the user.

Examiner further stated that Herz discloses receiving a user response and determining whether the received response matches the expected response by citing par. [1411] of Herz (see Office Action, page 5). Applicant respectfully points out that Herz merely discloses a system for mining user reactions and responses to on-line media by user profile characteristics. More specifically, Herz discloses using a clustering technique to cluster collected comments from the user and user profiles in order to present this information to a vendor, which allows the vendor to observe statistical correlations between the user profile characteristics and ratings (see Herz, par. [1411]). Similarly, the Herz system cannot "expect"

what is the user's comment or rating, and include such comment or rating as part of the rules for presenting the content.

Thus, there is nothing in either Brandenberg and Herz that discloses "determining whether the received response matches the expected response."

## Claim for discussion:

1	<ol> <li>(Previously Presented) A method for delivering context-based</li> </ol>
2	content to a first user, the method comprising:
3	receiving at least one content package, wherein the content package
4	includes at least one content piece and a set of rules associated with the content
5	package, wherein the set of rules includes a trigger condition and an expected
6	response, and wherein the trigger condition specifies a context that triggers a
7	presentation of the content piece;
8	receiving a set of contextual information with respect to the first user;
9	processing the contextual information to determine a current context;
10	determining whether the current context satisfies the trigger condition;
11	in response to the trigger condition being satisfied, presenting the content
12	piece to the first user;
13	receiving a response from the first user corresponding to the presented
14	content piece;
15	determining whether the received response matches the expected response;
16	and
17	performing an action based on an outcome of the determination.

Respectfully submitted,

By /Jorge Campos/

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Date: 21 September 2012

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# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.: 12/326,457 Examiner: Bai D. Vu

Atty. Docket No.: PARC-20080172-US-NP Art Unit: 2165

Filed: 02 December 2008 Conf. No.: 3430

Appellant: Bellotti, Ducheneaut, Durfee, Golle, Huang, Mosko,

Partridge, Yee, and Braynard

For: Context and Activity-Driven Content Delivery and

Interaction

#### **APPEAL BRIEF**

Sir:

In response to the Notice of Appeal filed 09 October 2012, Appellant submits this Appeal Brief to appeal the rejection of claims 1-5, 7-17, 19-25, 27, and 28 under 35 U.S.C. § 103(a) in a Final Office Action mailed 27 July 2012. This Appeal Brief demonstrates that such rejections cannot be sustained because not each and every element as set forth in the claim is found, either expressly or inherently described, in the cited references.

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### THE REAL PARTY IN INTEREST

The real party in interest in this appeal is Palo Alto Research Center Incorporated, the assignee of this application.

# RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any appeals or interferences that will affect directly, will be affected directly by, or will otherwise have bearing on the decision in this appeal.

# **STATUS OF CLAIMS**

The status of the claims is as follows:

Claims pending: 1-5, 7-17, 19-25, 27, and 28

Claims rejected: 1-5, 7-17, 19-25, 27, and 28

Claims objected to: None

Claims cancelled: 6, 18, and 26

Claims appealed: 1-5, 7-17, 19-25, 27, and 28

# STATUS OF AMENDMENTS

All amendments have been entered. A copy of the rejected claims is attached as Appendix A.

#### SUMMARY OF THE CLAIMED SUBJECT MATTER

The claims in the instant application are directed toward a method, a computer-readable storage medium, and an apparatus for delivering context-based content to a user.

As described in the instant application, current mobile devices do not take into account the activities that the user is involved in while providing content to the user.<sup>1</sup>

The claimed invention addresses this problem by providing a content management system that is capable of organizing and delivering packages of audio and visual content to a user in response to a number of environmental factors associated with the user.<sup>2</sup> Moreover, the content package includes a set of rules for presenting the package. The rules include at least one trigger condition (which triggers the delivery of the content), a pre-defined expected user response (which defines how a user is expected to respond to the content), and an action to be performed in response to the user's response.<sup>3</sup>

In summary, the context-based content-delivery process and set of rules for presenting a content package are described in paragraphs [0047]-[0049], [0055]-[0056], and Tables 1-2 of the instant application.

# <u>Independent Claim 1: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

The claimed method ("the method") delivers content to a user based on the user's context, receives the user's response, and performs an action based on the user's response. The method is described in paragraphs [0047]-[0048] of the

<sup>&</sup>lt;sup>1</sup> See instant application at par. [0004].

<sup>&</sup>lt;sup>2</sup> See instant application at par. [0026].

<sup>&</sup>lt;sup>3</sup> See instant application at pars. [0055]-[0056], and Table 1.

instant application. A corresponding computer system is described in paragraphs [0092]-[0096] of the instant application.

The method involves receiving a content package that includes at least one content piece, and receiving a set of rules associated with the content package. The rules include a trigger condition, which specifies a context that triggers a presentation of the content, and an expected response. This operation is described in paragraphs [0050]-[0056] and [0091] of the instant application.

The system receives a set of contextual information with respect to the user and determines a current context. These operations are described in paragraph [0047] of the instant application.

The system determines whether the current context satisfies the trigger condition and, if so, presents the content piece to the user. These operations are described in paragraph [0090] of the instant application.

The system further receives a response from the user and performs an action based on whether the user's response matches the expected response. These operations are described in paragraphs [0056] and [0062] of the instant application.

# <u>Dependent Claim 2: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 2 depends upon independent claim 1. In the claimed method, the system creates a content package, which involves recording the content piece, creating an entry (which includes one or more trigger conditions), and associating the trigger conditions with a user-defined context. The system further continuously compares previously defined trigger conditions with the ongoing context of the user, and retrieves and presents the content piece in response to a trigger condition being met. This operation is described in paragraphs [0050]-[0056] of the instant application.

# <u>Dependent Claim 3: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 3 depends upon dependent claim 2. In the claimed method, the system creates a sharable content piece, which involves recording the content piece and creating a content package, which allows a recipient of the content package to insert, modify, and/or remove content or trigger conditions from the content package. This operation is described in paragraphs [0090]-[0094] of the instant application.

# <u>Dependent Claim 4: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 4 depends upon independent claim 1. In the claimed method, the system defines a context by creating one or more context entries in a context manager, and associating a respective context entry with a set of contextual information. This operation is described in paragraphs [0040]-[0041] of the instant application.

# <u>Dependent Claim 5: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 5 depends upon dependent claim 4. In the claimed method, the system updates entries in a content database and updates the context entries in a context manager responsive to actions performed by the user. This variation is described in paragraphs [0078]-[0079] of the instant application.

# <u>Dependent Claim 7: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 7 depends upon independent claim 1. In the claimed method, the context is defined as a combination of a high-level abstraction, which corresponds to one or more low-level contextual information values. The low-level contextual information values correspond to one or more measureable parameters. This variation is described in paragraph [0054] of the instant application.

# <u>Dependent Claim 8: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 8 depends upon independent claim 1. In the claimed method, a respective rule is defined with one or more high-level abstractions. This variation is described in paragraph [0054] of the instant application.

# <u>Dependent Claim 9: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 9 depends upon dependent claim 8. In the claimed method, the system allows the user to share the rules with a second user, who can redefine the shared rules based on his low-level contextual parameters. This variation is described in paragraphs [0081]-[0082] of the instant application.

# <u>Dependent Claim 10: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 10 depends upon independent claim 1. In the claimed method, while presenting the content piece, the system shares the content piece with a remote device. This variation is described in paragraph [0044] of the instant application.

# <u>Dependent Claim 11: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 11 depends upon independent claim 1. In the claimed method, the contextual information includes one or more of: a time, a date, a location, a proximity to a system-detectable tag, a device orientation, a velocity, a direction, a distance, a vibration measurement, an altitude, a temperature, a pressure, a humidity level, a sound, a luminous intensity, a camera image, and a video stream. These variations are described in paragraphs [0037]-[0038] of the instant application.

# <u>Dependent Claim 12: A Method for Delivering Context-Based Content to a</u> <u>First User</u>

Dependent claim 12 depends upon independent claim 1. In the claimed method, the content piece includes one or more of: an audio clip, an image, a video stream, a language lesson, an e-mail, a weather report, a calendar reminder, a news feed, a rich site summary (RSS) feed, and an Internet blog. These variations are described in paragraph [0037] of the instant application.

# Independent Claim 13 and Dependent Claims 14-17 and 19-20: A Computer-Readable Storage Medium Storing Instructions that when Executed by a Computer Cause the Computer to Perform a Method for Delivering Context-Based Content to a First User

Much of the subject matter taught in independent claim 1 and dependent claims 2-5 and 11-12 also appears in independent claim 13 and dependent claims 14-17 and 19-20, respectively, as applied to a computer-readable storage medium. Aside from the computer-readable storage medium, which is described in paragraphs [0023] and [0094], and FIG. 5 of the instant application, the remaining

subject matter of claims 1, 2-5, and 11-12, as summarized above, is sufficient to establish patentability. Appellant, therefore, does not repeat the above description.

# Independent Claim 21 and Dependent Claims 22-25 and 27-28: An Apparatus for Delivering Context-Based Content to a First User

Much of the subject matter taught in independent claim 1 and dependent claims 2-5 and 11-12 also appears in independent claim 21 and dependent claims 22-25 and 27-28, respectively, as applied to a computer system. Aside from the computer system, which is described in paragraphs [0092]-[0096] and FIG. 5 of the instant application, the remaining subject matter of claims 1, 2-5, and 11-12, as summarized above, is sufficient to establish patentability. Appellant, therefore, does not repeat the above description.

#### GROUNDS FOR REJECTION PRESENTED FOR REVIEW

In the Office Action mailed on **27 July 2012**, Examiner reviewed claims 1-5, 7-17, 19-25, and 27-28. Examiner rejected claims 5 and 17 under 35 U.S.C. § 112. Examiner rejected claims 1-5, 10-17, 19-25, and 27-28 under 35 U.S.C. § 103(a) as being unpatentable over Brandenberg, et al. (US Pub. No. 2003/0063072, hereinafter "Brandenberg"), and further in view of Herz, et al. (US Pub. No. 2009/0254971, hereinafter "Herz"). Examiner rejected claims 7-9 under 35 U.S.C. § 103(a) as being unpatentable over Brandenberg, in view of Herz, and further in view of Schultz, et al. (US Pub. No. 2009/0265764, hereinafter "Schultz").

For the purposes of this appeal, and without admission as to the appropriateness of the other grounds raised by the Examiner, Appellant will address the Examiner's reliance on Brandenberg and Herz for disclosing "determining whether a received response matches the expected response, and performing an action based on the outcome of the determination." More specifically, Appellant will demonstrate that Herz fails to disclose a content package including a set of rules, which include an expected response.

#### **ARGUMENTS**

#### Rejections under 35 U.S.C. § 103(a)

In response to the rejection under 35 U.S.C. § 103(a) in the Final Office Action mailed on 27 July 2012 (hereinafter "0727 OA"), Appellant submits that the rejections cannot be sustained because:

When establishing a prima facie case of obviousness when rejecting claims under 35 U.S.C. § 103(a), Examiner's cited art must render obvious the claimed invention as a whole:

To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person.<sup>4</sup>

Examiner has failed to establish a prima facie case of obviousness because there is at least one fundamental distinction between the cited references, Brandenberg and Herz, and the claimed invention. Specifically, there is nothing in Brandenberg and Herz, either expressly or inherently, that discloses determining whether a received response matches an expected response, and performing an action based on the outcome of the determination.

<sup>4</sup> See Manual of Patent Examining Procedure (MPEP) § 2142.

#### **Overview of Brandenberg and Herz**

In the interest of clarifying the arguments against the rejection of the claimed invention using Brandenberg and Herz, we provide an overview of the system disclosed in Brandenberg and Herz. In addition to providing the overview, we briefly identify the limitations of the claimed invention that are missing from the Brandenberg and Herz systems.

Generally, the Brandenberg system provides a software scheduling agent that resides on a network or client device, such as a location-aware wireless appliance. Moreover, in the Brandenberg system, an electronic content wrapper is associated with each item of a piece of digital content, and holds information in the form of data and metadata related to the digital content. More specifically, the wrappers provide information that can be used to identify the content and to control the routing and presentation of the content. The wrappers include a header, sensitivities, and content-association keys. Hence, the Brandenberg wrappers are merely used to identify a piece of content, which is not the same as determining whether a received response matches an expected response, and performing an action based on the outcome of the determination.

Herz, on the other hand, discloses a secure data interchange system that enables information about bilateral and multilateral interactions between multiple persistent parties to be exchanged. Specifically, the Herz system is concerned with allowing such data to be exchanged and leveraged within an environment that uses a combination of techniques to control access to information, release of information, and matching of information back to parties. More specifically, the Herz system mines user reactions and responses to on-line media by user profile

<sup>&</sup>lt;sup>5</sup> See Brandenberg at the Abstract.

<sup>&</sup>lt;sup>6</sup> See Brandenberg at the Abstract.

<sup>&</sup>lt;sup>7</sup> See Brandenberg at pars. [0309]-[0321].

<sup>&</sup>lt;sup>8</sup> See Brandenberg at pars. [0322].

<sup>&</sup>lt;sup>9</sup> See Herz at the Abstract.

characteristics.<sup>10</sup> Hence, the Herz system is merely concerned with facilitating data to be exchanged between multiple persistent parties, which does not involve determining whether a received response matches an expected response, and performing an action based on the outcome of the determination.

#### Rejections of Independent Claims 1, 13, and 21

The Examiner rejected independent claims 1, 13, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Brandenburg, in view of Herz. Appellant respectfully disagrees with the rejection. The rejection of independent claims 1, 13, and 21 is improper because there is at least one fundamental distinction between the cited references, Brandenburg and Herz, and the claimed invention. Specifically, there is nothing in Brandenburg and Herz, either expressly or inherently, that discloses determining whether a received response matches the expected response, and performing an action based on the outcome of the determination.

Note that because claim 1, which is directed to a method; claim 13, which is directed to a computer-readable storage medium; and claim 21, which is directed to a computer system, include a similarly rejected limitation, Appellant addresses the rejections for all of the claims in the following section.

# 1. The Gap between the Prior Art and the Claimed Invention is so Great as to Render the Claims Nonobvious to One Reasonably Skilled in the Art

When establishing a prima facie case of obviousness when rejecting claims under 35 U.S.C. § 103, Examiner's cited prior art must cover the claimed subject matter. Where the prior art does not cover the claimed subject matter,

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<sup>&</sup>lt;sup>10</sup> See Herz at par. [1411].

Examiner is required to explain the differences. Appellant respectfully notes that Examiner has failed to establish a prima facie case of obviousness because Examiner has failed to explain fundamental differences between the cited Brandenburg and Herz references and independent claims 1, 13, and 21 in the instant application. Specifically, Examiner has failed to explain how the Brandenburg and Herz systems determine whether a received response matches the expected response, and perform an action based on the outcome of the determination.

In the 0727 OA, Examiner stated that Brandenberg discloses that the rules associated with the content include an expected response. More specifically, Examiner cited pars. [0014]-[0015] of Brandenberg, stating that user profile characteristics disclosed in Brandenberg is referred to as an expected response.<sup>11</sup> Applicant respectfully disagrees with Examiner's interpretation, because the cited text of Brandenberg is merely concerned with allowing the user to rate the digital content as a way to provide the user with certain level of controls. 12 Note that receiving a user's rating is not the same as receiving a response and comparing it with an expected response because it is not possible for the Brandenberg system to "expect" a certain rating from the user.

In the 0727 OA, Examiner further stated that Herz discloses receiving a user response and determining whether the received response matches the expected response by citing par. [1411] of Herz. <sup>13</sup> Appellant respectfully points out that the cited text of Herz merely discloses a system for mining user reactions and responses to on-line media by user profile characteristics. More specifically, Herz discloses using a clustering technique to cluster collected comments from the user and user profiles in order to present this information to a vendor, which allows the vendor to observe statistical correlations between the user profile

See 0727 OA at page 4.See Brandenberg at par. [0016].

<sup>&</sup>lt;sup>13</sup> See 0727 OA at page 5.

characteristics and ratings.<sup>14</sup> Similar to the Brandenberg system, the Herz system cannot "expect" a specific comment or rating from the user. Hence, the Herz system at most categorizes user responses, which is not the same as comparing a user's response to an expected response from a rule for presenting the piece of content.

Thus, in summary, the rejection of claims 1, 13, and 21 under 35 U.S.C. § 103(a) using Brandenberg and Herz is improper because Examiner has failed to explain how the Brandenberg and Herz disclosures render obvious the claimed embodiments, in which the system determines whether a received response matches the expected response, and performs an action based on the outcome of the determination.

Appellant, therefore, respectfully requests the withdrawal of the rejection of these claims under 35 U.S.C. § 103(a).

# 2. The Proposed Modification or Combination of the Prior Art would Change the Principle of Operation of the Prior Art Invention Being Modified

When establishing a prima facie case of obviousness when rejecting claims under 35 U.S.C. § 103, Examiner must not change the principle of operation of a reference. Appellant respectfully notes that Examiner has failed to establish a prima facie case of obviousness because Examiner has attributed principles of operation to the Herz cited art that are nowhere disclosed in either Brandenberg or Herz.

Specifically, Examiner stated that Herz discloses "determining whether the received response matches the expected response, and performing an action

<sup>&</sup>lt;sup>14</sup> See Herz at par. [1411]

based on an outcome of the determination."<sup>15</sup> As described above, the Herz system is concerned with mining users' responses (comments). Herz at most discloses receiving user comments, clustering both the comments and users, and extracting comment cluster exemplars, which are presented to vendors and/or users. <sup>16</sup>

Appellant respectfully submits that clustering of users and their comments is not the same as determining whether a received response matches an expected response. Moreover, modifying the Herz reference to perform an action based on an outcome of the determination "whether the received response matches the expected response" changes the principle operation that is intended by the Herz reference. The Herz system is designed to present to the users and/or vendors the comment cluster exemplars, the aggregate of the user profiles associated with that cluster, and the user profile of the user who provided the exemplar comment.<sup>17</sup> Hence, the Hertz system does not perform certain actions (e.g., presenting content to a user that enters a response) based on a determination as to whether the user's response matches a predefined expected response.

Hence, the rejection of claims 1, 13, and 21 under 35 U.S.C. § 103(a) using Brandenberg and Herz is improper because Examiner has proposed modifications of the Brandenberg and Herz cited arts that neither Brandenberg nor Herz discloses. Appellant, therefore, respectfully requests that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

<sup>15</sup> See 0727 OA at page 5.16 See Herz at par. [1411].

<sup>&</sup>lt;sup>17</sup> See Herz at par. [1411].

#### **Conclusion**

In summary, Appellant has demonstrated that the rejections under 35 U.S.C. § 103(a) cannot be sustained because Brandenberg and Herz do not disclose: 1) determining whether a received user response matches an expected response; and 2) performing an action based on the outcome of the determination.

In view of the foregoing, Appellant respectfully requests the reversal of all of the rejections in the Final Office Action mailed on 27 July 2012. Appellant further requests allowance of all the claims in the instant application.

Respectfully submitted,

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Date: 10 December 2012

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# **APPENDICES**

# **Appendix A: Claims Appendix**

1	1. (Previously Presented) A method for delivering context-based				
2	content to a first user, the method comprising:				
3	receiving at least one content package, wherein the content package				
4	includes at least one content piece and a set of rules associated with the content				
5	package, wherein the set of rules includes a trigger condition and an expected				
6	response, and wherein the trigger condition specifies a context that triggers a				
7	presentation of the content piece;				
8	receiving a set of contextual information with respect to the first user;				
9	processing the contextual information to determine a current context for				
10	the first user;				
11	determining whether the current context satisfies the trigger condition;				
12	in response to the trigger condition being satisfied, presenting the content				
13	piece to the first user;				
14	receiving a response from the first user corresponding to the presented				
15	content piece;				
16	determining whether the received response matches the expected response;				
17	and				
18	performing an action based on an outcome of the determination.				
1	2. (Previously Presented) The method of claim 1, wherein the method				
2	further comprises creating the content package for the first user, wherein creating				
3	the content package involves:				
4	recording the content piece that is provided by the first user;				

5	creating an entry in a content database for the recorded content piece,
6	wherein the entry includes one or more trigger conditions; and
7	associating the one or more trigger conditions for the entry with a user-
8	defined context; and
9	wherein the method further comprises:
10	continuously comparing previously defined trigger conditions for
11	the entry with the ongoing context of the first user; and
12	in response to the one or more trigger conditions being are met,
13	retrieving the content piece, and presenting the retrieved content piece to
14	the first user.
1	3. (Previously Presented) The method of claim 2, wherein the method
2	further comprises creating a shareable content piece for the first user, wherein
3	creating the sharable content piece involves:
4	recording the sharable content piece that is provided by the first user; and
5	creating a content package for the recorded sharable content piece,
6	wherein the content package includes the recorded sharable content piece, and
7	wherein the content package includes one or more trigger conditions;
8	wherein the content package allows a recipient of the content package to
9	insert, modify, and/or remove content or trigger conditions from the content
10	package.
1	4. (Original) The method of claim 1, wherein the method further
2	comprises defining a context by:
3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information.

1	5.	(Previously Presented) The method of claim 4, wherein the method	
2	further compa	rises updating entries in a content database and updating the context	
3	entries in the context manager responsive to actions performed by the first user.		
1	6.	(Concelled)	
1	0.	(Cancelled)	
1	7.	(Previously Presented) The method of claim 1, wherein the context	
2	is defined as	a combination of at least a high-level abstraction which corresponds	
3	to one or mor	re low-level contextual information values, wherein the low-level	
4	contextual int	formation values can correspond to one or more measurable	
5	parameters.		
1	8.	(Previously Presented) The method of claim 1, wherein a	
2	respective rul	e is defined with one or more high-level abstractions.	
1			
1	9.	(Previously Presented) The method of claim 8, further comprising	
2	allowing the	first user to share the rules with a second user, wherein the second	
3	user can rede	fine the shared rules based on the second user's low-level contextual	
4	parameters.		
1	10.	(Previously Presented) The method of claim 1, wherein presenting	
2	the content pi	ece comprises sharing the content piece with a remote device.	
1	11.	(Original) The method of claim 1, wherein the contextual	
2	information in	ncludes one or more of: time, date, location, proximity to a system-	
3	detectable tag	g, device orientation, velocity, direction, distance, vibration, altitude,	

temperature, pressure, humidity, sound, luminous intensity, camera image, and

video stream.

1	12. (Previously Presented) The method of claim 1, wherein the content
2	piece includes one or more of: audio clip, image, video stream, language lesson,
3	e-mail, weather report, calendar reminder, news feed, rich site summary (RSS)
4	feed, information update from a Web 2.0 application, and Internet blog.
1	13. (Previously Presented) A computer-readable storage medium
2	storing instructions that when executed by a computer cause the computer to
3	perform a method for delivering context-based content to a first user, the method
4	comprising:
5	receiving at least one content package, wherein the content package
6	includes at least one content piece and a set of rules associated with the content
7	package, wherein the set of rules includes a trigger condition and an expected
8	response, and wherein the trigger condition specifies a context that triggers a
9	presentation of the content piece;
10	receiving a set of contextual information with respect to the first user;
11	processing the contextual information to determine a current context for
12	the first user;
13	determining whether the current context satisfies the trigger condition;
14	in response to the trigger condition being satisfied, presenting the content
15	piece to the first user;
16	receiving a response from the first user corresponding to the presented
17	content piece;
18	determining whether the received response matches the expected response;
19	and
20	performing an action based on an outcome of the determination.

1	14. (Previously Presented) The computer-readable storage medium of
2	claim 13, wherein the method further comprises creating the content package for
3	the first user, wherein creating the content package involves:
4	recording the content piece that is provided by the first user;
5	creating an entry in a content database for the recorded content piece,
6	wherein the entry includes one or more trigger conditions; and
7	associating the one or more trigger conditions for the entry with a user-
8	defined context; and
9	wherein the method further comprises:
10	continuously comparing previously defined trigger conditions for
11	the entry with the ongoing context of the first user; and
12	in response to the one or more trigger conditions being met,
13	retrieving the content piece and presenting the retrieved content piece to
14	the first user.
1	15. (Previously Presented) The computer-readable storage medium of
2	claim 14, wherein the method further comprises creating a shareable content piece
3	for the first user, wherein creating the sharable content piece involves:
4	recording the sharable content piece that is provided by the first user; and
5	creating a content package for the recorded sharable content piece,
6	wherein the content package includes the recorded sharable content piece, and
7	wherein the content package includes one or more trigger conditions;
8	wherein the content package allows a recipient of the content package to
9	insert, modify, and/or remove content and/or trigger conditions from the content
10	package.
1	16. (Original) The computer-readable storage medium of claim 13,

wherein the method further comprises defining a context by:

3	creating one or more context entries in a context manager; and
4	associating a respective context entry with a set of contextual information
1	17. (Previously Presented) The computer-readable storage medium of
2	claim 16, wherein the method further comprises updating entries in a content
3	database and updating the context entries in the context manager responsive to
4	actions performed by the first user.
1	18. (Cancelled)
1	19. (Original) The computer-readable storage medium of claim 13,
2	wherein the contextual information includes one or more of: time, date, location
3	proximity to a system-detectable tag, device orientation, velocity, direction,
4	distance, vibration, altitude, temperature, pressure, humidity, sound, luminous
5	intensity, camera image, and video stream.
1	20. (Previously Presented) The computer-readable storage medium of
2	claim 13, wherein the content piece includes one or more of: audio clip, image,
3	video stream, language lesson, e-mail, weather report, calendar reminder, news
4	feed, rich site summary (RSS) feed, information update from a Web 2.0
5	application, and Internet blog.
1	21. (Previously Presented) An apparatus for delivering context-based
2	content to a first user, comprising:
3	a processor;
4	an input mechanism configured to receive a set of contextual information

a receiving mechanism configured to receive at least one content package,

with respect to the first user;

5

1	wherein the content package includes at least one content piece and a set of rules
8	associated with the content package, wherein the set of rules includes a trigger
9	condition and an expected response, and wherein the trigger condition specifies a
10	context that triggers a presentation of the content piece;
11	a content delivery mechanism configured to present the context-based
12	content to a first user; and
13	a context manager configured to process the contextual information to
14	determine a current context for the first user, and to determine whether the current
15	context satisfies the trigger condition;
16	wherein in response to the trigger condition being satisfied, the content
17	delivery mechanism is configured to present the content piece to the first user;
18	and
19	wherein while presenting the content piece to the first user, the content
20	delivery mechanism is further configured to:
21	receive a response from the first user corresponding to the
22	presented content piece,
23	determine whether the received response matches the expected
24	response, and
25	perform an action based on an outcome of the determination.
1	22. (Previously Presented) The apparatus of claim 21, wherein the
2	apparatus further comprises a content management mechanism configured to
3	create the content package for the first user, wherein creating the content package
4	involves:
5	recording the content piece that is provided by the first user;
6	creating an entry in a content database for the recorded content piece,
7	wherein the entry includes one or more trigger conditions:

associating the one or more trigger conditions for the entry with a user-
defined context;
continuously comparing previously defined trigger conditions for the entry
with the ongoing context of the first user; and
in response to the one or more trigger conditions being met, retrieving the
content piece and presenting the retrieved content piece to the first user.
23. (Previously Presented) The apparatus of claim 22, wherein the
content management mechanism is further configured to create a shareable
content piece for the first user, wherein creating the sharable content piece
involves:
recording the sharable content piece that is provided by the first user; and
creating a content package for the recorded sharable content piece,
wherein the content package includes the recorded sharable content piece, and
wherein the content package includes one or more trigger conditions;
wherein the content package allows a recipient of the content package to
insert, modify, and/or remove content or trigger conditions from the content
package.
24. (Original) The apparatus of claim 21, wherein the context manager
defines a context by:
creating one or more context entries for the context; and
associating a respective context entry with a set of contextual information
25. (Previously Presented) The apparatus of claim 24, wherein the
apparatus is further configured to update entries in the content database and

update the user-defined context entries in the context manager responsive to

actions performed by the first user.

3

# 26. (Cancelled)

- 1 27. (Original) The apparatus of claim 21, wherein the contextual 2 information includes one or more of: time, date, location, proximity to a system-3 detectable tag, device orientation, velocity, direction, distance, vibration, altitude, 4 temperature, pressure, humidity, sound, luminous intensity, camera image, and 5 video stream.
- 1 28. (Previously Presented) The apparatus of claim 21, wherein the 2 content piece includes one or more of: audio clip, image, video stream, language 3 lesson, e-mail, weather report, calendar reminder, news feed, rich site summary 4 (RSS) feed, information update from a Web 2.0 application, and Internet blog.

# **Appendix B: Evidence**

For this appeal, Appellant does not rely on any evidence submitted pursuant to §§ 1.130, 1.131, or 1.132, or other evidence entered by the Examiner.

# **Appendix C: Related Proceedings**

Appellant is aware of no related proceedings.

Electronic Patent Application Fee Transmittal								
Application Number:	12326457							
Filing Date:	02-Dec-2008							
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION							
First Named Inventor/Applicant Name:	Vic	toria M.E. Bellotti						
Filer:	Shun Yao							
Attorney Docket Number:	PA	RC-20080172-US-N	P					
Filed as Large Entity								
Utility under 35 USC 111(a) Filing Fees								
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)			
Basic Filing:								
Pages:								
Claims:								
Miscellaneous-Filing:								
Petition:								
Patent-Appeals-and-Interference:								
Filing a brief in support of an appeal 1402 1 630 630								
Post-Allowance-and-Post-Issuance:								
Extension-of-Time:								

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				630

Electronic Acl	knowledgement Receipt
EFS ID:	14422858
Application Number:	12326457
International Application Number:	
Confirmation Number:	3430
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti
Customer Number:	35699
Filer:	Shun Yao
Filer Authorized By:	
Attorney Docket Number:	PARC-20080172-US-NP
Receipt Date:	10-DEC-2012
Filing Date:	02-DEC-2008
Time Stamp:	19:10:12
Application Type:	Utility under 35 USC 111(a)

# **Payment information:**

File Listina:	
Authorized User	
Deposit Account	240037
RAM confirmation Number	6740
Payment was successfully received in RAM	\$630
Payment Type	Deposit Account
Submitted with Payment	yes

### File Listing:

Document	Desument Description	File Name	File Size(Bytes)/	Multi	Pages
Number	Document Description	File Name	Message Digest	Part /.zip	(if appl.)

1	Miscellaneous Incoming Letter	Authorization-deposit-account-	21989	no	1			
, i		PARC.pdf	0703504a8c0f45b447dce3672d85c4cc6a8 6d7ee	110				
Warnings:								
Information:								
2	Appeal Brief Filed	Appeal_Brief.pdf	158647	no	32			
_		прреш_впепраг	c9b0dd115e98d0a8d924862782658a507d 1ed53c					
Warnings:								
Information:								
3	Fee Worksheet (SB06)	fee-info.pdf	30287	no	2			
	ree worksheet (5500)	rec illo.pai	7dde0d8daa2244bb116a23fd901f665a362 620bf	110	_			
Warnings:								
Information:	Information:							
		Total Files Size (in bytes)	2	10923				

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

# **AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS** OR CREDIT ANY OVERPAYMENTS TO DEPOSIT **ACCOUNT 24-0037**

Please deduct any underpayments, credit any overpayments, and charge all required extension of time fees associated with attached filing to Deposit Account Number 24-0037.

Park, Vaughan, Fleming & Dowler LLP

2820 Fifth Street

Davis, CA 95618-7759 Tel: (530) 759-1661

Fax: (530) 759-1665

Email: richard@parklegal.com

Respectfully submitted,

A. Raker

By

A. Richard Park Registration No. 41,241

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 P.O. Box 1450 Alexandria, Virginia 22313-1450

# NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 03/15/2013 PVF -- PARC c/o PARK, VAUGHAN, FLEMING & DOWLER LLP 2820 FIFTH STREET DAVIS, CA 95618-7759 EXAMINER

VU, BAI D

ART UNIT PAPER NUMBER

2165

DATE MAILED: 03/15/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/326.457	12/02/2008	Victoria M.E. Bellotti	PARC-20080172-US-NP	3430

TITLE OF INVENTION: CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1770	\$300	\$0	\$2070	06/17/2013

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Page 1 of 3

# PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
(571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as

maintenance fee notificate CURRENT CORRESPONDE		Block 1 for any change of address)	No	te: A certificate of m	ailing can only be used for	domestic mailings of the	
			Fee par	e(s) Transmittal. This pers. Each additional p	certificate cannot be used fo paper, such as an assignmen	r domestic mailings of the or any other accompanying nt or formal drawing, must	
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c/o PARK, VAU 2820 FIFTH STI DAVIS, CA 956	REET	G & DOWLER LLP	Sta ado trai	tes Postal Service wit lressed to the Mail S ismitted to the USPTO	h sufficient postage for firs Stop ISSUE FEE address O (571) 273-2885, on the da	deposited with the United t class mail in an envelope above, or being facsimile te indicated below.	
DAVIS, CA 950	10-7739		Γ			(Depositor's name)	
						(Signature)	
						(Date)	
APPLICATION NO.	FILING DATE	3	FIRST NAMED INVENTOR	₹ #	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
12/326,457	12/02/2008	•	Victoria M.E. Bellotti		PARC-20080172-US-NP	3430	
TITLE OF INVENTION	CONTEXT AND AC	TIVITY-DRIVEN CONTI	ENT DELIVERY AND I	NTERACTION			
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE TOTAL FEE(S) DUE	DATE DUE	
nonprovisional	NO	\$1770	\$300	\$0	\$2070	06/17/2013	
EXAM	INER	ART UNIT	CLASS-SUBCLASS	]			
VU, B	AI D	2165	707-736000				
1. Change of corresponde CFR 1.363).	nce address or indicati	on of "Fee Address" (37	2. For printing on the		1		
	ondence address (or Ch	ange of Correspondence	(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,				
			(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to				
PTO/SB/47; Rev 03-0 Number is required.	cation (or "Fee Addres 2 or more recent) attack	s" Indication form hed. Use of a Customer	2 registered attorney or 2 registered patent attorney listed, no name will be	orneys or agents. If no			
3. ASSIGNEE NAME A	ND RESIDENCE DAT	TA TO BE PRINTED ON	- ΓΗΕ PATENT (print or ty	rpe)			
PLEASE NOTE: Unl	ess an assignee is iden	ntified below, no assignee	data will appear on the p	oatent. If an assignee	is identified below, the do	ocument has been filed for	
(A) NAME OF ASSIG		ipietion of this form is tvo	(B) RESIDENCE: (CIT				
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Please check the appropri	ate assignee category of				ooration or other private gro		
4a. The following fee(s) a	re submitted:	41		ase first reapply any	previously paid issue fee s	shown above)	
☐ Issue Fee☐ Publication Fee (N	o small entity discount	nermitted)	☐ A check is enclosed.☐ Payment by credit ca	rd Form PTO-2038 is	s attached		
	of Copies		The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any				
5. Change in Entity Stat	us (from status indicat	ed above)	overpayment, to Dep	osit Account Number	(enclose a	extra copy of this form).	
_ ~ .	S SMALL ENTITY sta	*	☐ b. Applicant is no lor	nger claiming SMALL	ENTITY status. See 37 CF	FR 1.27(g)(2).	
NOTE: The Issue Fee and interest as shown by the I	l Publication Fee (if re- ecords of the United St	quired) will not be accepte tates Patent and Trademark	d from anyone other than Office.	the applicant; a regist	ered attorney or agent; or th	e assignee or other party in	
Authorized Signature				Date			
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This collection of inform an application. Confident submitting the completed	ation is required by 37 iality is governed by 3 application form to the	CFR 1.311. The information of U.S.C. 122 and 37 CFR the USPTO. Time will vary	on is required to obtain or 1.14. This collection is established depending upon the indi	retain a benefit by the timated to take 12 mi vidual case. Any com	public which is to file (and nutes to complete, includin ments on the amount of tir ademark Office, U.S. Depa SEND TO: Commissioner f	by the USPTO to process) g gathering, preparing, and ne you require to complete	



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/326,457	12/02/2008	Victoria M.E. Bellotti	PARC-20080172-US-NP	3430
35699 75	90 03/15/2013		EXAM	IINER
PVF PARC	HAN, FLEMING & D	VU, E	BAI D	
2820 FIFTH STRE	,	O WEEK EEK	ART UNIT	PAPER NUMBER
DAVIS, CA 95618	3-7759		2165	

DATE MAILED: 03/15/2013

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 421 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 421 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# **Privacy Act Statement**

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Application No. Applicant(s)										
Examiner-Initiated Interview Summary	12/326,457	BELLOTTI, VICTORIA M.E.								
Examiner-initiated interview Summary	Examiner	Art Unit								
	Bai D. Vu	2165								
All participants (applicant, applicant's representative, PTC	personnel):									
(1) <u>Bai D. Vu (Examiner)</u> .	(3) Jorge Campos (Reg. N	<u>lo. 62,872)</u> .								
(2)	(2)									
Date of Interview: <u>20 February 2013</u> .										
Type: X Telephonic Video Conference Personal [copy given to: Applicant	applicant's representative]									
Exhibit shown or demonstration conducted: Yes If Yes, brief description:	⊠ No.									
Issues Discussed 101 112 102 103 Ot (For each of the checked box(es) above, please describe below the issue and det										
Claim(s) discussed: <u>5 and 17</u> .										
Identification of prior art discussed: <u>N/A</u> .										
Substance of Interview (For each issue discussed, provide a detailed description and indicate if agreeme reference or a portion thereof, claim interpretation, proposed amendments, arguing		identification or clarifi	cation of a							
Applicant's representative agreed to amend claims 5 and addressed in the office action mailed on 7/27/2012, and to										
Applicant recordation instructions: It is not necessary for applicant to	provide a congrete record of the subs	tanco of intorviow								
Examiner recordation instructions: Examiners must summarize the substance of an interview should include the items listed in MPEP 71 general thrust of each argument or issue discussed, a general indication general results or outcome of the interview, to include an indication as to  Attachment	bstance of any interview of record. A c 3.04 for complete and proper recordat of any other pertinent matters discuss	complete and proper ion including the iden ed regarding patental	tification of the bility and the							
/Bai D. Vu/ Primary Examiner, Art Unit 2165										
U.S. Patent and Trademark Office PTOL-413B (Rev. 8/11/2010) Intervie	w Summary	Paper	No. 20130219							

Page 447 of 474

	Application No. Applicant(s)							
	• •							
Notice of Allowability	12/326,457 <b>Examiner</b>	BELLOTTI, VICTORIA M.E.  Art Unit						
	Dei D. W.	0105						
	Bai D. Vu	2165						
The MAILING DATE of this communication apperation apperations being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this app or other appropriate communication GHTS. This application is subject to and MPEP 1308.	plication. If not included will be mailed in due course. <b>THIS</b>						
1. $igtimes$ This communication is responsive to <u>the Appeal Conference</u>	e Request filed on 12/10/2012.							
<ol> <li>An election was made by the applicant in response to a rest requirement and election have been incorporated into this ac</li> </ol>		he interview on; the restriction						
<ol> <li>The allowed claim(s) is/are 1-5,7-17,19-25,27 and 28. As a         Patent Prosecution Highway program at a participating int information, please see <a href="http://www.uspto.gov/patents/init_ev">http://www.uspto.gov/patents/init_ev</a></li> </ol>	ellectual property office for the corre	sponding application. For more						
<ol> <li>Acknowledgment is made of a claim for foreign priority unde</li> <li>a) ☐ All b) ☐ Some* c) ☐ None of the:</li> </ol>	er 35 U.S.C. § 119(a)-(d) or (f).							
<ol> <li>Certified copies of the priority documents have</li> </ol>	been received.							
<ol><li>Certified copies of the priority documents have</li></ol>	been received in Application No	·						
<ol><li>Copies of the certified copies of the priority do</li></ol>	cuments have been received in this	national stage application from the						
International Bureau (PCT Rule 17.2(a)).								
* Certified copies not received:								
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with the requirements						
5.  CORRECTED DRAWINGS ( as "replacement sheets") must	t be submitted.							
including changes required by the attached Examiner's Paper No./Mail Date	s Amendment / Comment or in the C	office action of						
Identifying indicia such as the application number (see 37 CFR 1, each sheet. Replacement sheet(s) should be labeled as such in t								
<ol> <li>DEPOSIT OF and/or INFORMATION about the deposit of B attached Examiner's comment regarding REQUIREMENT FC</li> </ol>								
Attachment(s)								
1. Notice of References Cited (PTO-892)	5. 🛛 Examiner's Amendr							
<ol> <li>Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date</li> </ol>	6. <b>⊠</b> Examiner's Stateme	ent of Reasons for Allowance						
3.   Examiner's Comment Regarding Requirement for Deposit	7. 🔲 Other							
of Biological Material 4. ☑ Interview Summary (PTO-413), Paper No./Mail Date <u>see attached</u> .								
/Bai D. Vu/ Primary Examiner, Art Unit 2165								

U.S. Patent and Trademark Office PTOL-37 (Rev. 09-12)

Notice of Allowability

Part of Paper No./Mail Date 20130219

Application/Control Number: 12/326,457 Page 2

Art Unit: 2165

**DETAILED ACTION** 

Response to Appeal Conference Request

1. This office action has been issued in response to the Appeal Conference

Request filed on 12/10/2012. Applicant's arguments in the Appeal Conference Request

with respect to claims 1-5, 7-17, 19-25, 27 and 28 rejected under 35 U.S.C. § 103(a)

have been fully considered and are persuasive. Accordingly, the previous office action

has been withdrawn. Claims 1-5, 7-17, 19-25, 27 and 28 are currently pending in the

application.

**EXAMINER'S AMENDMENT** 

2. An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Jorge Campos (Reg. No. 62,872) on February 20, 2013.

3. In claims: Please replace claims 5 and 17 with the amended claims 5 and 17 as

below:

5. (Currently Amended): The method of claim 4, wherein the method

Application/Control Number: 12/326,457 Page 3

Art Unit: 2165

further comprises updating entries in [[a]] <u>the</u> content database and updating the context entries in the context manager responsive to actions performed by the first user.

17. (Currently Amended): The computer-readable storage medium of claim 16, wherein the method further comprises updating entries in [[a]] the content database and updating the context entries in the context manager responsive to actions performed by the first user.

# Allowable Subject Matter

4. Claims 1-5, 7-17, 19-25, 27 and 28 are allowed.

### Reasons for Allowance

5. The following is an examiner's statement of reasons for allowance:

The This communication warrants no examiner's reason for allowance, as applicant's reply makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the substances of applicant's Appeal Conference Request filed on December 10, 2012 with respect to the claim limitations point out and make clear the reason claims are patentable over the prior arts of record such as Brandenberg et al. (US No. 2003/0063072 A1), Herz et al. (US No. 2009/0254971 A1), and Schultz et al. (US No. 2009/0265764 A1). Thus, the reason for allowance is in all probability evident from the record and no statement for examiner's reason for allowance is necessary (see MPEP 13202.14).

Application/Control Number: 12/326,457 Page 4

Art Unit: 2165

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bai D. Vu whose telephone number is (571) 270-1751. The examiner can normally be reached on Mon - Fri 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel-Jalil can be reached on 571-272-4074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bai D. Vu/ Primary Examiner, Art Unit 2165 2/20/2013

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					Bai D. Vu		2	165	l age 1011
				U.S. P.	ATENT DOCUM	ENTS			
*		Document Number Country Code-Number-Kind Code	Date MM-YYYY			Name			Classification
*	Α	US-2008/0172261 A1	07-2008	ALBEF	RTSON et al.				705/7
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

**Notice of References Cited** 

Part of Paper No. 20130219



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# **BIB DATA SHEET**

# **CONFIRMATION NO. 3430**

SERIAL NUMBE	R	FILING or			CLASS	GR	OUP ART	RNEY DOCKET					
12/326,457		12/02/2	_		707		2165	F	ARC.	-20080172-US-NI			
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APPLICANTS Victoria M.E	. Bello	otti, San Fran	ncisco, CA	٨;									
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** FOREIGN APPLICATIONS ************************************													
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 12/09/2008													
Foreign Priority claimed 35 USC 119(a-d) condition		Yes No	☐ Met af	ter ince	STATE OR COUNTRY		HEETS WINGS	TOT		INDEPENDENT CLAIMS			
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

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NONE		Total Clain	ns Allowed:			
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U.S. Patent and Trademark Office Part of Paper No. 20130219

Issue Classification	Application	/Control	No	•				Applicant(s)/Patent Under Reexamination BELLOTTI, VICTORIA M.E.					
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NONE		Total Claims Allowed:						
(Assistant Examiner)	(Date)	2	5					
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U.S. Patent and Trademark Office Part of Paper No. 20130219

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

	☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47														
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(Primary Examiner)	(Date)	1	1

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# Search Notes Application/Control No. Applicant(s)/Patent Under Reexamination BELLOTTI, VICTORIA M.E. Examiner Bai D. Vu 2165

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Symbol	Date	Examiner			

CPC COMBINATION SETS - SEARCHED					
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US CLASSIFICATION SEARCHED					
Class	Subclass	Date	Examiner		
707	999.003,009 and 736 (limited text search) (see attached)	2/20/2013	BV		

SEARCH NOTES						
Search Notes	Date	Examiner				
EAST Search (USPAT;US-PGPUB;JPO;EPO;IBM) (see attached)	2/20/2013	BV				
707/999.003,009 and 707/736 (limited text search)	2/20/2013	BV				
Inventor Name Search and Assignee Search	2/20/2013	BV				
Google Search History	2/20/2013	BV				
IEEE Xplore Search History	2/20/2013	BV				
ACM Digital Library Search History	2/20/2013	BV				

INTERFERENCE SEARCH							
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner				
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707	3 and 9 (limited text search)	2/20/2013	BV				

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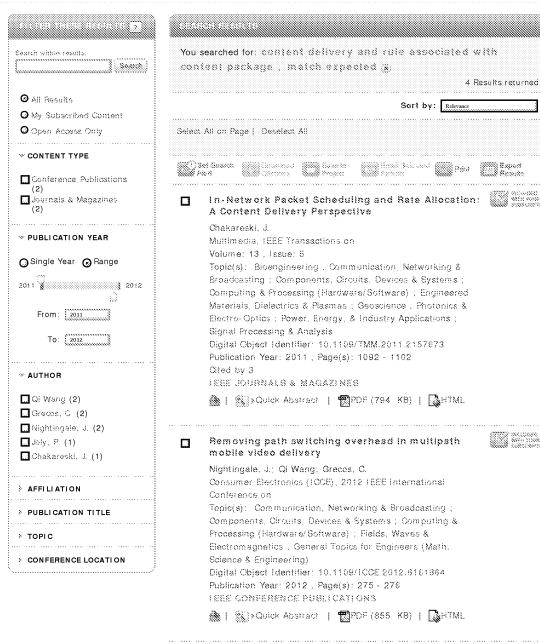


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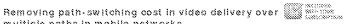


#### SEARCH HISTORY

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TO NOTICE



multiple paths in mobile networks Nightingale, J.; Qi Wang; Grecos, C.

Consumer Electronics, IEEE Transactions on

Volume: 58 , Issue: 1

Topic(s): Bioengineering; Communication, Networking &

Broadcasting; Components, Circuits, Devices & Systems; Computing & Processing (Hardware/Software); Engineered Materials, Dielectrics & Plasmas; Engineering Profession; Fields, Waves & Electromagnetics; General Topics for Engineers (Math, Science & Engineering); Geoscience; Power,

Energy, & Industry Applications; Signal Processing & Analysis Digital Object Identifier: 10.1109/TCE.2012.6170053

Publication Year: 2012, Page(s): 38 - 46

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Electronics, Control, Measurement and Signals (ECMS), 2011 10th International Workshop on

Topic(s): Communication, Networking & Broadcasting; Components, Circuits, Devices & Systems; Computing & Processing (Hardware/Software); Power, Energy, & Industry Applications; Robotics & Control Systems; Signal Processing & Analysis

Digital Object Identifier, 10.1109/IWEOMS 2011.5952369

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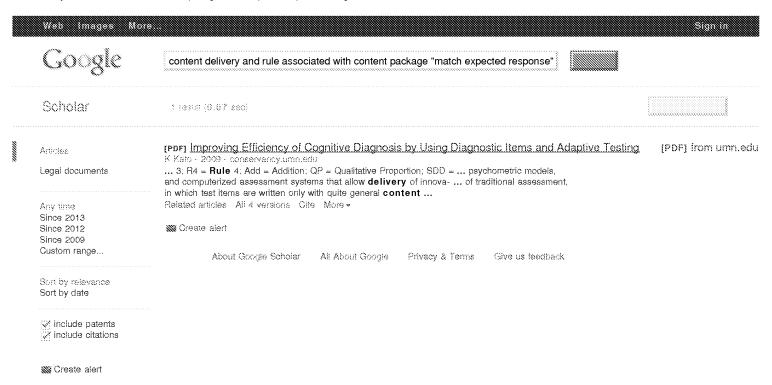
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# **EAST Search History**

# **EAST Search History (Prior Art)**

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S55	34	((VICTORIA) near2 (BELLOTTI)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/20 23:25
S56	2376	(Palo NEAR3 Alto NEAR3 Research NEAR3 Center).AS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 23:25
S57	19	(S55 S56) AND (expect\$4 NEAR3 response)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 23:25
S58	0	(S55 S56) AND (expect\$4 NEAR3 response).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 23:25
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S62	16885	(707/999.003,999.009).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 23:26
S63	82	\$62 AND (content NEAR3 deliver\$4) AND (rule WITH (associat\$4 relat\$4 correspond\$4) WITH content)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 23:26
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S65	1542	(707/736).cds.	US-PGPUB; USPAT; USOCR;	OR	ON	2013/02/20 23:27

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# **EAST Search History (Interference)**

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S71	1007	(707/736).ccls.	USPAT; UPAD	OR	ON	2013/02/20 23:28
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System-on-Chip Test Architectures: Nanometer Design for Testability November 2007

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Index of Claims	12326457	BELLOTTI, VICTORIA M.E.
	Examiner	Art Unit
	Bai D. Vu	2165

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APPLICATION NO.	FILING DATE		FIRST NAMED INVENT	OR	ATTOR	NEY DOCKET NO.	CONFIRMATION NO.
12/326,457 ITTLE OF INVENTION	12/02/2008 : CONTEXT AND ACT	IVITY-DRIVEN CONTI	Victoria M.E. Bellot ENT DELIVERY AND		PARC-	20080172-US-NP	3430
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DU	E PREV. PAID ISSU	E FEE	TOTAL FEE(S) DUE	E DATE DUE
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VU, B	AI D	2165	707-736000				
"Fee Address" indi	ondence address (or Chai 3/122) attached. ication (or "Fee Address" 2 or more recent) attache	Indication form	or agents OR, altern (2) the name of a si registered attorney of	gle firm (having as a r agent) and the nam ttorneys or agents. If	nember ses of up	a 2 Park, V	/aughan, Fleming
PLEASE NOTE: Unit recordation as set fort!  (A) NAME OF ASSIC PALO ALTO I CENTER INC	ess an assignee is identi h in 37 CFR 3.11. Comp GNEE RESEARCH ORPORATED	A TO BE PRINTED ON The fied below, no assignee eletion of this form is NO categories (will not be presented to the present the presented to th	data will appear on the T a substitute for filing (B) RESIDENCE: (CI PALO ALTO,	patent. If an assign assignment.  TY and STATE OR C	COUNTR	Y)	document has been filed for
Issue Fee Publication Fee (N		4l permitted)	b. Payment of Fee(s): (F A check is enclose Payment by credit The Director is her	lease first reapply as l. card. Form PTO-2038 by authorized to cha	ny previo	ously paid issue fee ed. quired fee(s), any d	
a. Applicant claim	tus (from status indicated s SMALL ENTITY statu d Publication Fee (if requ	s. See 37 CFR 1.27.	b. Applicant is no led from anyone other tha		LL ENTI		
nterest as shown by the i	records of the United Sta	tes Patent and Trademark	Office.	,, <u>-</u>			he assignee or other party in
Authorized Signature	Shi	onlao		Date	니	June 59	<u>2013</u> 242
an application. Confident submitting the completed this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 if application form to the cons for reducing this bur (irginia 22313-1450. DO 13-1450.	FR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary den, should be sent to the	1.14. This collection is depending upon the in the Chief Information Of COMPLETED FORMS	estimated to take 12 dividual case. Any coicer, U.S. Patent and TO THIS ADDRESS	the public minutes to mments Tradema S. SEND	o complete, includi on the amount of ti rk Office, U.S. Dep TO: Commissioner	d by the USPTO to process, ng gathering, preparing, and time you require to complete partment of Commerce, P.O. for Patents, P.O. Box 1450.
PTOL-85 (Rev. 02/11) A	approved for use through	08/31/2013	OMB 0651-0033	U.S. Patent and Tra	demark C	office: U.S. DEPAR	TMENT OF COMMERCE

Electronic Patent Application Fee Transmittal									
Application Number:	12:	12326457							
Filing Date:	02-	02-Dec-2008							
Title of Invention:	СО	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION							
First Named Inventor/Applicant Name:	Vic	toria M.E. Bellotti							
Filer:	Sh	Shun Yao							
Attorney Docket Number:	PA	RC-20080172-US-N	Р						
Filed as Large Entity									
Utility under 35 USC 111(a) Filing Fees									
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)				
Basic Filing:									
Pages:									
Claims:									
Miscellaneous-Filing:									
Petition:									
Patent-Appeals-and-Interference:									
Post-Allowance-and-Post-Issuance:									
Utility Appl Issue Fee		1501	1	1780	1780				
Publ. Fee- Early, Voluntary, or Normal		1504	1	300	300				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
	Total in USD (\$)			2080

Electronic Acl	knowledgement Receipt
EFS ID:	16049877
Application Number:	12326457
International Application Number:	
Confirmation Number:	3430
Title of Invention:	CONTEXT AND ACTIVITY-DRIVEN CONTENT DELIVERY AND INTERACTION
First Named Inventor/Applicant Name:	Victoria M.E. Bellotti
Customer Number:	35699
Filer:	Shun Yao
Filer Authorized By:	
Attorney Docket Number:	PARC-20080172-US-NP
Receipt Date:	14-JUN-2013
Filing Date:	02-DEC-2008
Time Stamp:	19:06:44
Application Type:	Utility under 35 USC 111(a)

# **Payment information:**

File Listing:	
Authorized User	
Deposit Account	240037
RAM confirmation Number	6162
Payment was successfully received in RAM	\$2080
Payment Type	Deposit Account
Submitted with Payment	yes

# File Listing:

Document	Document Description	File Name	File Size(Bytes)/	Multi	Pages
Number	Document Description	riie Name	Message Digest	Part /.zip	(if appl.)

1	Miscellaneous Incoming Letter	Authorization-deposit-account-	21989	no	1
'	PARC.pdf		0703504a8c0f45b447dce3672d85c4cc6a8 6d7ee	110	'
Warnings:					
Information	•				
2			103513		1
2	2 Issue Fee Payment (PTO-85B) Issue_Fee_Transmittal.pdf		d93fb4d71cf3957957d0562c0b69e2af8411 3ef8	no	'
Warnings:					
Information	•				
3	F . W . L (CDoc)	fee-info.pdf	31906	no	2
	Fee Worksheet (SB06) fee-info.pdf		b17307798ff0c663395a4a1f90a55e085a6c 4268	110	2
Warnings:					•
Information	:				
		Total Files Size (in bytes)	1:	57408	
			1		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

# AUTHORIZATION TO DEDUCT ANY UNDERPAYMENTS OR CREDIT ANY OVERPAYMENTS TO DEPOSIT ACCOUNT 24-0037

Please deduct any <u>underpayments</u>, credit any <u>overpayments</u>, and charge all required <u>extension of time fees</u> associated with attached filing to Deposit Account Number 24-0037.

Park, Vaughan, Fleming & Dowler LLP

2820 Fifth Street

Davis, CA 95618-7759

Tel: (530) 759-1661 Fax: (530) 759-1665

Email: richard@parklegal.com

Respectfully submitted,

A. Raker

A. Richard Park

By

Registration No. 41,241



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO. ISSUE DATE PATENT NO. ATTORNEY DOCKET NO. CONFIRMATION NO. 12/326,457 07/16/2013 8489599 PARC-20080172-US-NP 3430

35699 7590 06/26/2013

PVF -- PARC c/o PARK, VAUGHAN, FLEMING & DOWLER LLP 2820 FIFTH STREET DAVIS, CA 95618-7759

### ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment is 421 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Victoria M.E. Bellotti, San Francisco, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit <u>SelectUSA.gov</u>.

IR103 (Rev. 10/09)

AO 120 (Rev. 08/10)

TO:

# Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

# REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

L							
In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been							
	filed in the U.S. District Court Central District of California on the following						
☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):							
DOCKET NO. 2:20-cv-10753	DATE FILED 11/25/2020	U.S. DISTRICT COURT  Central Distri	ct of California				
PLAINTIFF	······································	DEFENDANT					
PALO ALTO RESEARCI	H CENTER INC.	FACEBOOK, INC.					
PATENT OR	DATE OF PATENT	HOLDER OF PATE	NT OR TRADEMARK				
1 U.S. 8,489,599	OR TRADEMARK 7/16/2013	Palo Alto Research Center Inc.	Palo Alto Research Center Incorporated				
2 U.S. 9,208,439	12/8/2015	raio Alto Research Center Inc	Palo Alto Research Center Incorporated				
3 U.S. 9,137,190	9/15/2015	Palo Alto Research Center Inc	Palo Alto Research Center Incorporated				
4 U.S. 8,732,584	5/20/2014	Palo Alto Research Center Inc	Palo Alto Research Center Incorporated				
5 U.S. 7,043,475	5/9/2006	Palo Alto Research Center Inc	Palo Alto Research Center Incorporated				
	In the above—entitled case,	the following patent(s)/ trademark(s) have been	en included:				
DATE INCLUDED	INCLUDED BY	mendment Answer Cross	Bill 🗹 Other Pleading				
PATENT OR	DATE OF PATENT						
TRADEMARK NO.	OR TRADEMARK	HOLDER OF FATE	HOLDER OF PATENT OR TRADEMARK				
1 U.S. 8,606,781	12/10/2013	Palo Alto Research Center Inc	Palo Alto Research Center Incorporated				
<sup>2</sup> U.S. 7,167,871	1/23/2007	Palo Alto Research Center Inc	Palo Alto Research Center Incorporated				
3							
4							
5							
	***************************************						
In the above—entitled case, the following decision has been rendered or judgement issued:							
DECISION/JUDGEMENT							
CLERK	(E	Y) DEPUTY CLERK	DATE				

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

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# REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

L						
In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been						
filed in the U.S. District Court Central District of California on the following  Trademarks or Patents. ( the patent action involves 35 U.S.C. § 292.):						
DOCKET NO. 2:20-cv-10754	DATE FILED 11/25/2020	U.S. DISTRICT COURT Central District of California				
PLAINTIFF		DEFENDANT				
PALO ALTO RESEARCH CENTER INC.		TWITTER, INC.				
***************************************	приничения		nnnaaannaanna			
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK			
1 U.S. 8,489,599	7/16/2013	Palo Alto Research Center Incorporated	Palo Alto Research Center Incorporated			
2 U.S. 9,208,439	12/8/2015	Palo Alto Research Center Incorporated	Palo Alto Research Center Incorporated			
3 U.S. 8,966,362	2/24/2015	Palo Alto Research Center Incorporated	Palo Alto Research Center Incorporated			
4 U.S. 8,606,781	12/10/2013	Palo Alto Research Center Incorporated	Palo Alto Research Center Incorporated			
5 U.S. 7,043,475	5/9/2006	Palo Alto Research Center Incorporated	Palo Alto Research Center Incorporated			
	In the above—entitled case	se, the following patent(s)/ trademark(s) have been included:				
DATE INCLUDED	INCLUDED BY	Amendment Answer Cross Bill  Other Pleading				
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK				
1 U.S. 7,167,871	1/23/2007	Palo Alto Research Center Incorporated				
2						
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T 1 1.			***************************************			
***************************************	e-ennuea case, the follow	owing decision has been rendered or judgement issued:	************			
DECISION/JUDGEMENT						
CLERK (BY) C		(BY) DEPUTY CLERK DATE				

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AO 120 (Rev. 08/10)

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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Central District of California on the following  ☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):						
DOCKET NO. 2:20-cv-10755	DATE FILED 11/25/2020	U.S. DISTRICT COURT  Central District of California				
PLAINTIFF	11/25/2020	DEFENDANT DESIRET OF CAMOUNIA				
PALO ALTO RESEARCH CENTER INC.		SNAP, INC.				
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK				
1 U.S. 8,489,599	7/16/2013	Palo Alto Research Center Incorporated				
2 U.S. 9,208,439	12/8/2015	Palo Alto Research Center Incorporated				
3 U.S. 8,966,362	2/24/2015	Palo Alto Research Center Incorporated				
4						
5						
In the above—entitled case, the following patent(s)/ trademark(s) have been included:						
DATE INCLUDED	INCLUDED BY	nendment	ther Pleading			
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK				
1						
2						
3						
4						
5						
In the above—entitled case, the following decision has been rendered or judgement issued:						
DECISION/JUDGEMENT						
CLERK	(RV	Y) DEPUTY CLERK DA	ΓF			
	(5)	a y an and C a A Communition (ACA).	-			

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy