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PERSONAU7ED TAGGED MESSAGE 123 NEWS SOURCE 90: INFORMATION SERVICES AD MESSAGE DATBASE 114 "YANKS 2, METS 1, TOP OF 5TH" 122 OF ADVERTISEMENTS WCD IUMBE *130* YANKS 2 SMALL AD 116 MESSAGE 109 OF INTEREST TO METS 1 TOP 5TH BASEBALL FANS 108 USER DATBASE 100 LISERS WANTING WCD VANKS 2 METS 1 TOP 5TH BASEBALL SCORES UMBER SMALL AD MESSAGE 116 "DRINK FIZZO" 124 *130* WCD VANKS 2 NEDIUM METS 1 AD 118 WCD NUMBERS OF 110 140 TOP 5TH USERS WITH WCD SMALL CAPACITY WCS YANKS 2 METS 1 MEDIUM AD MESSAGE } "DRINK FIZZO AT THE GAME" IMARE 126 102 *140* TOP 5TH WCD YANKS 2 METS 1 LARGE JUMBEI AD WCD NUMBERS OF 112, 150 TOP 5TH 120 USERS WITH MEDUIM CAPACITY WCD "YANKS 2 METS 1 TOP 5TH" LARGE AD MESSAGE 120 WCD NUMBER 12 104 DRINK *150* SIGNALS 129 FIZZO WCD NETWOR WCD NUMBERS OF 200 USERS WITH LARGE CAPACITY WCD Y 150 Y Ū. 129 106 ۱۸n WCD WITH YANKS 2. METS 1 5 6 TOP 5TH YANKS 2 METS 1 LARGE WCD WITH ANKS 2 MESSAGE DRIN SMALL MESSAGE CAPACITY METS 1 TOP 5TH FIZZO CAPACITY DRINK FIZZO DRINK FIZZO AT THE GAME

(57) Abstract: A system and method are disclosed to automatically provide Advertising Messages (116, 118, 120) to wireless communications devices (WCD). Each Advertising Message is attached to a Personal Information Services message (109) which is of interest to a user. The composite Tagged Message (123) is customized to fit within the message capacity of the user's wireless communications device. A user profile database (100) includes user records for each user, including the identity of Personal Information Services of interest to that user, the message capacity of the user's WCD (102, 104, 106), the demographic characteristics, geographic location, and buying habits, of the user, and other information. An Advertising Message database (114) includes advertiser records for each advertiser. Each advertiser record includes the advertiser's rules for selecting a user to whom

an Advertising Message is to be sent. The rules in the Advertising Message database include the identity of one or more Personal Information Services that the advertiser uses to select users to contact. The rules in the Advertising Message database (114) also include the demographic characteristics, geographic location, buying habits, and/or other selection criteria of the class of users that the advertiser wants to contact. Advertising Messages (116, 118, 120) are selected based upon the personal characteristics attributed 01 to the User and the informational content of the Personal Information Services message (109). This enables the advertiser to flexibly change the criteria for selecting users based on many factors. Each advertiser record in the Advertising Message database (114) also includes Advertising Messages for one or more of the advertiser's products or services to be advertised. For each such product or service, several Advertising Messages (116, 118, 120) are included in the record, one for each of the several sizes of message

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(54) Title: A METHOD TO PROVIDE ADVERTISING MESSAGES TO WIRELESS COMMUNICATIONS DEVICES



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A Method To Provide Advertising Messages To Wireless Communications Devices

5 Field of the Invention

The invention disclosed broadly relates to telecommunications and advertising, as in the combination of a content or a personal message with an advertisement for delivery to a wireless communications device.

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Background Of The Invention

The following definitions of terms used herein will be helpful to the reader in understanding the background of the invention and the invention itself:

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- "ADMATTs" is an acronym for Advanced Data Mining Advertising Tag and Transaction system, which is the name of the invention disclosed herein.
- "WCD" is an acronym for Wireless Communications Device, which refers to wireless mobile phones, alphanumeric pagers, personal digital assistants, and other digital wireless devices.
- "Personalized Information Services" refers to a service that delivers information or content to an individual based on that individual's preset requirements or on-demand requests. This includes, for example, the final score of a favorite baseball team's game, a stock price at noon each business day, an email from the boss, a calendar appointment, etc.
 - "Advertising Message" refers to a message that contains an advertisement and/or control commands for how an advertisement is to be displayed or handled by the WCD.
 - "Tagged Message" refers to a composite Tagged Message which includes both a Personalized Information Service message and an Advertising Message.
 - "User" is a person who uses a WCD.

Advertising Messages which are selectively matched with Personalized Information Services and delivered as Tagged Messages to a User's WCD, will become a powerful and effective way to reach the User with relevant advertisements, one that has not existed prior to the ADMATTs invention.

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The inclusion of advertising content with wireless information is a new departure in delivering the advertiser's message to the public, one that is significantly different from that provided by preexisting print media and electronic media. In the future, the extent of advertising delivered by advertisers through this new wireless medium will grow

- 10 exponentially with the rapid market penetration of WCDs. The wireless medium is unique among electronic media in that it combines the mobility of radio with the potential to deliver individually targeted Advertising Messages, as in direct mail or the Internet. In addition, the wireless medium provides interactivity through an instant means of User requests and responses. Advertisers will be attracted to the wireless medium for its
- unique ability to deliver active, personalized content to targeted individuals, independent of their location. An active, not passive, method of content delivery means that messages will be read and will more likely be committed to the User's long term memory. While the message size available for WCDs (and the networks they utilize) is limited when compared to other media, advertisers will be able to purchase wireless advertisements in
- 20 creative, highly effective ways, enabling compelling advertising to be created. Once advertisers understand the new wireless medium, they will develop new techniques, response mechanisms and demands for wireless advertising, leading to a dynamic growth of wireless advertising and its capabilities.

25 Most Users will accept Advertising Messages with their Personalized Information Services, especially in exchange for subsidized Personalized Information Services. Advertisers and agencies will approach wireless from a "new medium" rather than as a "traditional medium", and they will develop new, creative approaches suited to wireless delivery which will compete for funds in the advertiser's budget that might otherwise be allocated to the Internet. Wireless advertising will serve equally well for brand/awareness

advertising and direct marketing. It will build customer relationships, provide customer

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services, generate electronic sales, efficiently deliver marketing messages to appropriate prospects, and deliver mass customization and interactive/direct marketing. Wireless advertising will perform effectively on its own, or as part of an integrated campaign to reach consumers across multiple media (e.g., using WCDs to direct targeted Users to

- 5 Internet sites or television programming). Wireless advertising will not be traffic-driven, as is Internet advertising. Instead, its reach will be based on the known number of Users receiving these Personalized Information services and the associated Advertising Messages.
- 10 Delivery technology will improve with time, perhaps driven by the advertising demands. Future WCD capabilities could include bitmap images, animations, and greater character lengths, as WCDs become available with increased message storage and display capacities.
- 15 There are several problems that need to be solved in this area. One problem is how to automatically provide Advertising Messages to WCDs having diverse message capacities. For example, some WCDs can receive 240 character messages, while other WCDs are only capable of receiving 100 characters. This problem would be compounded if the advertiser were to attempt to combine the Advertising Message with Personal 20 Information Services messages having diverse character lengths. Another problem is
- how to automatically provide meaningful Advertising Messages to a User's WCD, which are effective for the advertiser and of interest to the User. For example, an advertiser who wants to promote a new line of ski boots has a preference for selecting Users who are interested in skiing. In another example, an advertiser who wants to promote a soft drink
 25 prefers to deliver an advertisement when the temperature outside is hot.

Summary of the Invention

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These and other problems are solved by the ADMATTs invention disclosed herein. The ADMATTs invention receives Personal Information Service messages, either on a prearranged schedule or when specified events occur. Users can either subscribe to

Personal Information Services or they may have the benefit of receiving certain Personal Information Services for free.

The ADMATTs invention is a method, system, method of doing business, and a computer readable article of manufacture to automatically combine Personal Information Service messages with Advertising Messages to create composite Tagged Messages. The invention applies customized rules defined by the advertiser to select an appropriate Advertising Message based upon the personal characteristics attributed to the User and the informational content of the Personal Information Services message. The invention

selectively matches each Advertising Message with each Personalized Information Service message, which are combined and delivered as a composite Tagged Message over the wireless medium to the User's WCD. The invention considers the number of characters in a Personal Information Services message when selecting an Advertising Message to combine with it. The invention also considers the message capacity of the

15 User's WCD when selecting an Advertising Message to combine with a given sized Personal Information Service message, so that the composite Tagged Message is not larger than can be received by the WCD.

The ADMATTs invention employs a User profile database containing User records which identify which Personal Information Services each User is to receive. When a particular Personal Information Service message is ready to be distributed, either by schedule or by the occurrence of an event, the User profile database is searched for those Users eligible to receive the Personal Information Service message. Each User record also contains the personal characteristics of the User which may be important to advertisers in classifying the User as a suitable recipient of an Advertising Message. One of the characteristics contained in each User record is the message capacity of the User's WCD. The User record may include pointers to other records or databases containing personal characteristics of the User.

30 The ADMATTs invention maintains an advertising message database containing Advertiser records for each advertiser. Each advertiser record includes a set of

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