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Strober

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(54) **PLAY CONTROL OF CONTENT ON A DISPLAY DEVICE**

(71) Applicant: **Touchstream Technologies, Inc.**,
Valhalla, NY (US)

(72) Inventor: **David Strober**, Rye, NY (US)

(73) Assignee: **Touchstream Technologies, Inc.**,
Valhalla, NY (US)

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(58) **Field of Classification Search**
CPC G06F 16/74; G06F 9/452; G06F 16/951
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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,855,842 A 8/1989 Hayes et al.
5,613,137 A 3/1997 Bertram et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 101534449 A 9/2009
CN 101577650 A 11/2009
(Continued)

OTHER PUBLICATIONS

“AnyRemote”, Retrieved from Internet URL: <http://anyremote.sourceforge.net/>, pp. 2 (2013).

(Continued)

Primary Examiner — Tadesse Hailu

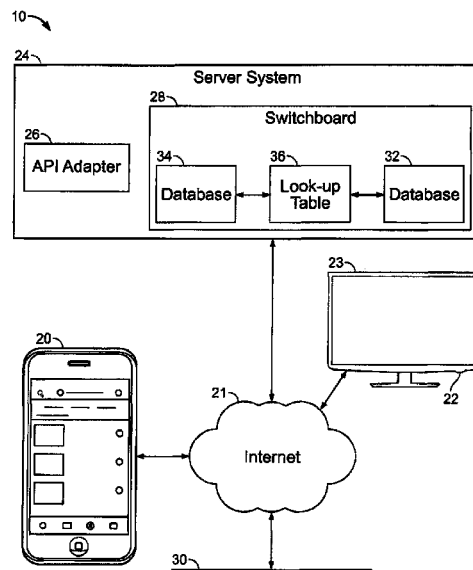
Assistant Examiner — Darrin Hope

(74) *Attorney, Agent, or Firm* — Shook, Hardy & Bacon L.L.P.

(57) **ABSTRACT**

A system for controlling playback of various types of content includes a first computing device that provides a unique identifier to a second computing device to establish an association there between. By virtue of the established association, the second computing device can send one or more messages to the first computing device, the one or more messages referencing a piece of content associated with a first media playing element of a plurality of media playing elements, and one or more commands corresponding to the first media playing element. The first computing device can select the first media playing element based on the received one or more messages, and control how the first media playing element plays the referenced piece of content utilizing the one or more commands.

20 Claims, 9 Drawing Sheets



Related U.S. Application Data

continuation of application No. 13/532,546, filed on Jun. 25, 2012, now Pat. No. 9,767,195, which is a continuation-in-part of application No. 13/157,821, filed on Jun. 10, 2011, now Pat. No. 8,904,289.

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(51) Int. Cl.

G06F 16/951 (2019.01)

G06F 9/451 (2018.01)

(56) References Cited

U.S. PATENT DOCUMENTS

5,875,311	A	2/1999	Bertram et al.	8,761,351	B1	6/2014	Daly et al.
5,878,311	A	3/1999	Ichinokawa	8,761,792	B2	6/2014	Sennett et al.
6,181,713	B1	1/2001	Patki et al.	8,762,240	B2	6/2014	Sogo et al.
6,252,889	B1	6/2001	Patki et al.	8,762,548	B1	6/2014	Kessel et al.
6,756,965	B2	6/2004	Combs et al.	8,763,081	B2	6/2014	Bogdanovic et al.
6,978,424	B2	12/2005	Safadi	8,782,262	B2	7/2014	Collart et al.
7,058,356	B2	6/2006	Slotznick	8,782,528	B2	7/2014	Strober
7,088,823	B2	8/2006	Fetkovich	8,875,180	B2	10/2014	Demchenko et al.
7,114,173	B2	9/2006	Urdang et al.	8,880,491	B2	11/2014	Morris
7,330,875	B1	2/2008	Parasnis et al.	9,071,792	B2	6/2015	Alsina et al.
7,424,718	B2	9/2008	Dutton	9,148,756	B2	9/2015	Filipov
7,433,922	B2	10/2008	Engstrom	9,185,171	B2	11/2015	Pahlavan et al.
7,440,972	B2	10/2008	Oetzel	9,420,025	B2	8/2016	Park
7,453,454	B2	11/2008	Allen et al.	9,720,887	B2	8/2017	Pappu et al.
7,466,823	B2	12/2008	Vestergaard et al.	2002/0034193	A1	3/2002	Patki et al.
7,509,588	B2	3/2009	Van Os et al.	2002/0075332	A1	6/2002	Geilfuss, Jr. et al.
7,614,070	B2	11/2009	Urdang et al.	2002/0083147	A1	6/2002	Ripperger
7,689,931	B2	3/2010	Koga et al.	2002/0120666	A1	8/2002	Landsman et al.
7,769,827	B2	8/2010	Girouard et al.	2002/0129102	A1	9/2002	Landsman et al.
7,774,708	B2	8/2010	Bell et al.	2002/0133518	A1	9/2002	Landsman et al.
7,814,144	B2	10/2010	Koyama et al.	2002/0146122	A1	10/2002	Vestergaard et al.
7,835,505	B2	11/2010	Toyama et al.	2002/0198778	A1	12/2002	Landsman et al.
7,849,485	B2	12/2010	Paik et al.	2003/0004804	A1	1/2003	Landsman et al.
7,878,904	B2	2/2011	Maehiro	2003/0005000	A1	1/2003	Landsman et al.
7,949,606	B1	5/2011	Sweet	2003/0018885	A1	1/2003	Landsman et al.
7,956,846	B2	6/2011	Ording et al.	2003/0023488	A1	1/2003	Landsman et al.
8,060,631	B2	11/2011	Collart et al.	2003/0028565	A1	2/2003	Landsman et al.
8,086,679	B2	12/2011	Nobori et al.	2003/0112258	A1	6/2003	Dietz et al.
8,171,507	B2	5/2012	Hironaka et al.	2003/0112268	A1	6/2003	Wettach
8,230,360	B2	7/2012	Ma et al.	2003/0142127	A1	7/2003	Markel
8,238,887	B2	8/2012	Filipov	2003/0182663	A1	9/2003	Gudorf et al.
8,250,608	B2	8/2012	Hayes et al.	2004/0008972	A1	1/2004	Haken
8,255,968	B2	8/2012	Louie et al.	2004/0049743	A1	3/2004	Bogward
8,316,308	B2	11/2012	Sherman et al.	2004/0088728	A1	5/2004	Shimizu
8,344,870	B2	1/2013	Evans et al.	2004/0268224	A1	12/2004	Balkus et al.
8,356,251	B2	1/2013	Strober	2004/0268451	A1	12/2004	Robbin et al.
8,373,660	B2	2/2013	Pallakoff	2005/0034151	A1	2/2005	Abramson
8,402,494	B1	3/2013	Hu et al.	2005/0144305	A1	6/2005	Fegan, II et al.
8,418,084	B1	4/2013	Tischer	2005/0149970	A1	7/2005	Fairhurst et al.
8,433,812	B2	4/2013	Mahajan et al.	2006/0062544	A1	3/2006	Southwood et al.
8,572,488	B2	10/2013	Phillips et al.	2006/0083194	A1	4/2006	Dhirmaj et al.
8,614,625	B2	12/2013	Alsina et al.	2006/0098624	A1	5/2006	Morgan et al.
8,620,284	B2	12/2013	Filipov	2006/0101098	A1	5/2006	Morgan et al.
8,659,553	B1	2/2014	Chan et al.	2006/0203758	A1	9/2006	Tee et al.
8,671,440	B2	3/2014	Damola et al.	2006/0263038	A1	11/2006	Gilley
8,738,536	B2	5/2014	Strom et al.	2006/0265657	A1	11/2006	Gilley
8,738,737	B2	5/2014	Baldini et al.	2007/0050054	A1	3/2007	Sambandam Guruparan et al.
8,739,074	B2	5/2014	Kinoshita	2007/0052868	A1	3/2007	Chou et al.
8,743,284	B2	6/2014	Russell et al.	2007/0055986	A1	3/2007	Gilley et al.
8,744,434	B2	6/2014	Funderburk et al.	2007/0083540	A1	4/2007	Gundla et al.
8,745,228	B2	6/2014	Beckert et al.	2007/0094408	A1	4/2007	Gundla et al.
8,745,388	B2	6/2014	Kanungo	2007/0112785	A1	5/2007	Murphy et al.
8,751,159	B2	6/2014	Hall	2007/0136778	A1	6/2007	Birger et al.
8,751,520	B1	6/2014	Bhattacharjee et al.	2007/0150963	A1	6/2007	Lee et al.
8,751,793	B2	6/2014	Ginter et al.	2007/0152978	A1	7/2007	Kocienda et al.
8,752,016	B2	6/2014	Hernandez Porras et al.	2007/0152980	A1	7/2007	Kocienda et al.
8,755,919	B2	6/2014	Pyle	2007/0155506	A1	7/2007	Malik
				2007/0156855	A1	7/2007	Johnson
				2007/0202923	A1	8/2007	Jung et al.
				2007/0288715	A1	12/2007	Boswell et al.
				2007/0294621	A1	12/2007	Hansen et al.
				2008/0008439	A1	1/2008	Liu et al.
				2008/0028037	A1	1/2008	Moyer et al.
				2008/0034394	A1	2/2008	Jacobs et al.
				2008/0040758	A1	2/2008	Beetcher et al.
				2008/0077526	A1	3/2008	Arumugam
				2008/0104267	A1	5/2008	Dawson
				2008/0126943	A1	5/2008	Parasnis et al.
				2008/0140849	A1	6/2008	Collazo
				2008/0155600	A1	6/2008	Klappert et al.
				2008/0162670	A1	7/2008	Chapweske et al.
				2008/0178198	A1	7/2008	Gaub
				2008/0187279	A1	8/2008	Gilley et al.
				2008/0189617	A1	8/2008	Covell et al.
				2008/0250190	A1	10/2008	Johnson
				2008/0267369	A1	10/2008	Parlomas et al.
				2008/0270881	A1	10/2008	Meyer et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2009/0077467	A1	3/2009	Adappa et al.	
2009/0100477	A1	4/2009	Jeffs	
2009/0108057	A1	4/2009	Mu et al.	
2009/0150553	A1	6/2009	Collart et al.	
2009/0164641	A1	6/2009	Rogers et al.	
2009/0172780	A1 *	7/2009	Sukeda	H04N 21/4227 726/3
2009/0193466	A1	7/2009	Ehreth et al.	
2009/0228919	A1	9/2009	Zott et al.	
2009/0248802	A1 *	10/2009	Mahajan	H04L 65/4015 709/204
2009/0254827	A1	10/2009	Gonze et al.	
2009/0259944	A1	10/2009	Wu	
2009/0259969	A1	10/2009	Pallakoff	
2009/0282470	A1	11/2009	Yang et al.	
2010/0027974	A1	2/2010	Ansari	
2010/0081375	A1	4/2010	Rosenblatt et al.	
2010/0094728	A1	4/2010	Denning et al.	
2010/0094900	A1	4/2010	Hughes, Jr.	
2010/0137028	A1	6/2010	Farris et al.	
2010/0138746	A1	6/2010	Zarom	
2010/0138780	A1	6/2010	Marano et al.	
2010/0174993	A1	7/2010	Pennington et al.	
2010/0198860	A1	8/2010	Burnett et al.	
2010/0205628	A1	8/2010	Davis et al.	
2010/0208136	A1	8/2010	Castano	
2010/0241699	A1	9/2010	Muthukumarasamy et al.	
2010/0257569	A1	10/2010	O'Hanlon	
2010/0265939	A1	10/2010	Parlamas et al.	
2010/0281042	A1	11/2010	Windes et al.	
2010/0283586	A1	11/2010	Ikeda et al.	
2010/0313135	A1	12/2010	Johnson et al.	
2010/0325552	A1	12/2010	Sloo et al.	
2011/0007901	A1	1/2011	Ikeda et al.	
2011/0014972	A1	1/2011	Herrmann et al.	
2011/0030020	A1	2/2011	Halttunen	
2011/0032870	A1	2/2011	Kumar	
2011/0035692	A1	2/2011	Sandone et al.	
2011/0060998	A1	3/2011	Schwartz et al.	
2011/0084900	A1	4/2011	Jacobsen et al.	
2011/0090898	A1	4/2011	Patel et al.	
2011/0107227	A1	5/2011	Rempell et al.	
2011/0125594	A1	5/2011	Brown et al.	
2011/0131607	A1	6/2011	Thomas et al.	
2011/0137729	A1	6/2011	Weisman et al.	
2011/0138354	A1	6/2011	Hertenstein et al.	
2011/0156879	A1	6/2011	Matsushita et al.	
2011/0161396	A1	6/2011	Filbrich et al.	
2011/0202466	A1	8/2011	Carter	
2011/0214148	A1	9/2011	Gossweiler, III et al.	
2011/0228768	A1	9/2011	Gelter et al.	
2011/0231265	A1	9/2011	Brown et al.	
2011/0231565	A1	9/2011	Gelter et al.	
2011/0231566	A1	9/2011	Gelter et al.	
2011/0267981	A1	11/2011	Davies	
2011/0289419	A1	11/2011	Yu et al.	
2011/0296454	A1	12/2011	Xiong et al.	
2011/0296465	A1	12/2011	Krishnan et al.	
2011/0314386	A1	12/2011	Jeong et al.	
2012/0054616	A1	3/2012	Mittal	
2012/0059875	A1	3/2012	Clark	
2012/0059876	A1	3/2012	Chinta et al.	
2012/0072846	A1	3/2012	Curtis	
2012/0102209	A1	4/2012	Fok Ah Chuen et al.	
2012/0110074	A1	5/2012	Getchius	
2012/0110464	A1	5/2012	Chen et al.	
2012/0114313	A1	5/2012	Phillips et al.	
2012/0130971	A1	5/2012	Morris	
2012/0166560	A1	6/2012	Nobori et al.	
2012/0182994	A1	7/2012	Dec et al.	
2012/0185887	A1	7/2012	Newell	
2012/0192225	A1	7/2012	Harwell et al.	
2012/0239218	A1	9/2012	Forbes, Jr.	

2013/0014142	A1	1/2013	Newell
2013/0124759	A1	5/2013	Strober
2013/0250181	A1	9/2013	Zhang et al.
2014/0033198	A1	1/2014	Umapathy et al.
2016/0241912	A1	8/2016	McCarthy et al.

FOREIGN PATENT DOCUMENTS

CN	101778198	A	7/2010
CN	101815073	A	8/2010
EP	2 175 607	A1	4/2010
JP	2004-356695	A	12/2004
JP	2006-525771	A	11/2006
WO	2004/100500	A2	11/2004
WO	2007078745	A1	7/2007
WO	2008/070050	A2	6/2008
WO	2008108718	A1	9/2008

OTHER PUBLICATIONS

"Best way to generate Random, Unique Session ID's", vBulletin, Nov. 19, 2011, p. 1.

"Best way to generate Random, Unique ID's", vBulletin, Internet Archive Wayback Machine, on Nov. 19, 2011, p. 1 (Jan. 2009).

"Control television phone", Retrieved from Internet URL: <http://www.bing.com/search?q=control+television+phone&go=Submit+Query&q=bs&for>, Feb. 6, 2014, pp. 3.

"Control television server phone", Retrieved from Internet URL: http://www.bing.com/search?q=control+television+server+phone&q=s&n&form=QB_LH&pq, Feb. 6, 2014, p. 1.

"Mobile device server display device", Retrieved from Internet URL: <http://www.ask.com/web?q=mobile+device+server+display+device&q=src=0&o=0&l=dir>, on Jul. 30, 2012, pp. 2.

"Mashable—10 Mobile Apps to Control Your TV", Retrieved from Internet URL: <http://mashable.com/2012/11/28/apps-control-tv/>, Nov. 28, 2012, pp. 102.

"Mobile Phone Television Remote Control", Retrieved from Internet URL: http://www.fileguru.com/apps/mobile_phone_television_remote_control_app, pp. 5 (2013).

"Mobile server television control", Retrieved from Internet URL: <http://www.bing.com/search?q=mobile+server+television+control&q=s&n&form=QBLH&p>, Jun. 26, 2014, p. 1.

"Mobile server television control media player", Retrieved from Internet URL: <http://www.bing.com/search?q=mobile+server+television+control+media+player&q=s&n&f>, Jun. 26, 2014, p. 1.

"Phone Server television control", Retrieved from Internet URL: <http://www.bing.com/search?q=phone+server+television+control&q=s&n&form=QBRE&p>, Jun. 26, 2014, p. 1.

"Phone server television control media player", Retrieved from Internet URL: <http://www.bing.com/search?q=phone+server+television+control+media+player&q=s&n&f>, Jun. 26, 2014, p. 1.

"Session identifier random", Ask.com, Nov. 19, 2011, p. 1.

"Session cookie", Webopedia Computer Dictionary, Nov. 19, 2011, pp. 3.

"Snapstick", Snapstick—Home, Retrieved from Internet URL: <http://www.snapstick.com/>, on Dec. 12, 2019, pp. 2, (Mar. 2011).

"Smartphone Remote Control Apps Boxee Support", Retrieved from Internet URL: <http://support.boxee.tv/entries/20771358-smartphone-remote-control-apps>, on Feb. 6, 2014, pp. 2 (Dec. 2011).

"Using AirPlay", Retrieved from Internet URL: <https://web.archive.org/web/20101129073434/http://support.apple.com/kb/HT4437>, pp. 2 (2011).

Using the Play to feature to stream media, Retrieved from the Internet URL: <http://windows.microsoft.com/en-US/windows7/using-the-play-to-feature-to-stream-media>, pp. 3 (Jun. 2011).

"User session", Webopedia Computer Dictionary, Nov. 19, 2011, pp. 3.

"Web identifier", Webopedia: Online Computer Dictionary for Internet Terms and Technical Support, Retrieved from Internet URL

(56)

References Cited

OTHER PUBLICATIONS

"You Tube—Leanback", Retrieved from Internet URL : <https://www.youtube.com/watch?v=bITse42LpKA>, p. 1 (2010).

"Yahoo!7 TV Guide ", Retrieved from the Internet URL : <http://itunes.apple.com/au/app/yahoo-7-tv-guide/id424719922?mt=8>, pp. 2 (2011).

Cheng, J., "Stream AirPlay video to regular TV? Apple might make it happen", Retrieved from Internet URL : <http://arstechnica.com/apple/news/2011/03/stream-airplay-video-to-a-regular-tv-apple-might-make-it-happen/>, on Dec. 12, 2019, pp. 5 (Mar. 2011).

Dolcourt, J., et al., "Snapstick takes on Apple TV, Google TV," Retrieved from Internet URL : <https://www.cnet.com/news/snapstick-takes-on-apple-tv-google-tv/>, Dec. 9, 2010, pp. 3.

Fallahkhair, S., et al., "Dual Device User interface Design for Ubiquitous Language Learning: Mobile Phone and Interactive Television (iTV)", Proceedings of the 2005 IEEE International Workshop on Wireless and Mobile Technologies in Education, 2005 , pp. 8.

Hu, C., et al., "Mobile Media Content Sharing in UPnP-Based Home Network Environment", Journal of Information Science and Engineering 24, pp. 1753-1769 (2008).

Hachman, M., "Snapstick's Media Streaming App/Box: Hands on", Retrieved from Internet URL : <https://uk.pcmag.com/news/102838/snapsticks-media-streaming-appbox-hands-on>, on Dec. 12, 2019, pp. 2 (Jan. 2011).

Paul, I., "Hands on: YouTube Leanback", PCWORLD, Retrived from Internet URL : http://www.pcworld.com/article/200769/hands_on_youtube_leanback.html, pp. 6 (Jul. 2010).

Notice of Allowance dated Sep. 3, 2020 in U.S. Appl. No. 15/687,249, 5 pages.

Shaivitz, M., "The Web to Your TV, With a Flick of a Wrist? Slapstick Says Yes", <http://techcocktail.com/the-web-to-our-tv-with-a-flick-of-a-wrist-slapstick-says-yes-2010-12>, 2pages, (Dec. 10, 2010) (PDF not available).

Non-Final Office Action dated Feb. 2, 2021 in U.S. Appl. No. 15/687,249, 9 pages.

* cited by examiner

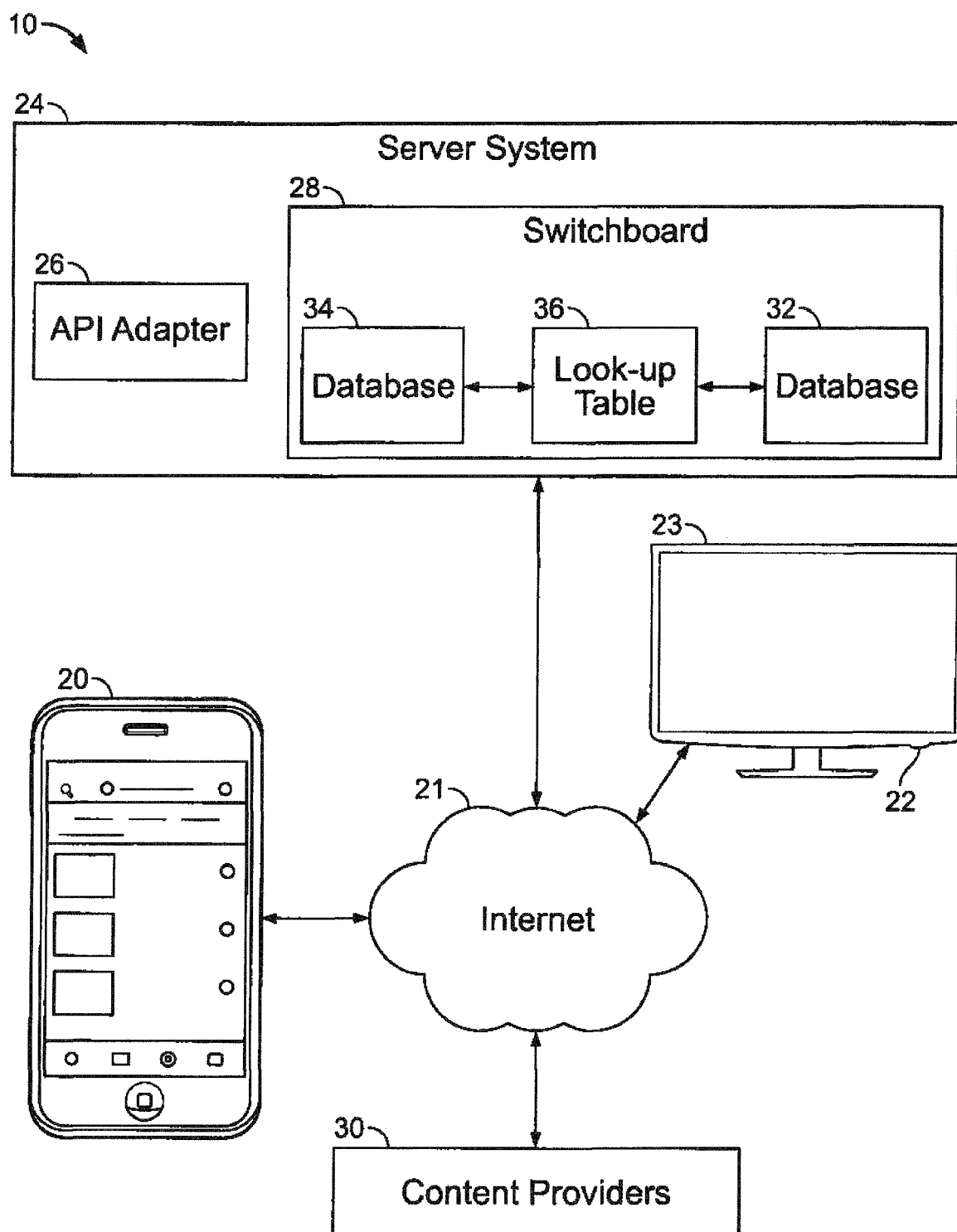


FIG. 1

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