

FILED

February 13, 2023
CLERK, U.S. DISTRICT COURT
WESTERN DISTRICT OF TEXAS

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

BY: _____ **CV** _____
DEPUTY

Sockeye Licensing TX LLC,

Plaintiff,

v.

HP Inc.,

Defendant.

Case No. 6:22-cv-00791-ADA

Patent Case

Jury Trial Demanded

SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Sockeye Licensing TX LLC (“Sockeye”), through its attorney, Isaac Rabicoff, complains against Defendant HP Inc. (“HP Inc.” or “Defendant”) and alleges the following:

PARTIES

1. Plaintiff Sockeye Licensing TX LLC is a limited liability company organized and existing under the laws of Texas with its principal place of business at 320 Wilmette Avenue, Glenview, IL 60025.

2. Defendant HP Inc. is a corporation organized and existing under the laws of California that maintains an established place of business at 3800 Quick Hill Road, Suite 100, Austin, Texas 78728.

JURISDICTION

3. This is an action for Patent infringement arising under the Patent laws of the United States, Title 35 of the United States Code.

4. This Court has exclusive subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Defendant because it has engaged in systematic and continuous business activities in the Western District of Texas. Specifically, Defendant provides its full range of services to residents in this District. As described below, Defendant has committed acts of patent infringement giving rise to this action within this District.

VENUE

6. Venue is proper in this District under 28 U.S.C. § 1391(c) because Defendant is a foreign corporation. In addition, Defendant has committed acts of patent infringement in this District, and Plaintiff has suffered harm in this district.

PATENTS-IN-SUIT

7. Sockeye is the assignee of all right, title, and interest in United States Patent No. 9,547,981 (the "'981 Patent"), including all rights to enforce and prosecute actions for infringement and to collect damages for all relevant times against infringers of the '981 Patent. Accordingly, Sockeye possesses the exclusive right and standing to prosecute the present action for infringement of the '981 Patent by Defendant.

8. On January 17, 2017, the United States Patent and Trademark Office issued the '981 Patent. The '981 Patent is titled "System, Method and Apparatus for Using a Wireless Device to Control Other Devices." The application leading to the '981 Patent was filed on November 3, 2014, which is a continuation of U.S. Application No. 13/418,829; which was filed on March 13, 2012; which is a divisional application of U.S. Application No. 11/898,912, now the '342 Patent, which was filed on September 17, 2007; which claims priority from provisional application number 60/844,645, which was filed on September 15, 2006. A true and correct copy of the '981 Patent is attached hereto as Exhibit A and incorporated herein by reference.

9. Prior to the filing of the applications that matured into the '981 Patent, state of the art cell phone designs emphasized their use as standalone devices. In the industry it was widely expected that, as the multimedia capabilities of the cell phone became richer, the cell phone itself would serve as a multimedia player and alternative to traditional modes of viewing video, such as via television screens. Accordingly, cell phone manufacturers at the time of filing focused on developing the “onboard” capabilities of their products, rather than adapting them to connect with and control a higher resolution device. Thus, for example, the Nokia N92 mobile device announced in 2005 was marketed as a phone for watching TV. The Nokia N92, while capable of playing “mobile TV,” was designed as an alternate platform for watching television, and it operated as a standalone device, wholly-independent of television sets of the period. The '981 Patent went further. In contrast to the standalone approach of the Nokia N92, the '981 Patent taught particular systems and methods by which the cell phone could connect with and control a higher resolution display device, streaming video thereto. The state-of-the-art cell phones of the day were not equipped to operate in this way, nor was this their goal. Indeed, as Nokia stated at the time, the “Nokia N92 offers easy access to TV programs *without* having to sit in front of a television set.” Exhibit B. Notably, so-called “[t]hird generation mobile phones” or “3G mobiles” which were capable of “multi-media communication” of this kind—i.e., “viewing TV on a mobile phone”—were far from the norm in 2006. Exhibit C. As NEC stated at the time, although such devices were “expected to be extremely popular,” using a cell phone to view television was itself a “groundbreaking way to use mobile phones.” *Id.* Still more groundbreaking was the inventive approach of the '981 Patent, which went beyond the cell phones merely equipped to play television, such as the Nokia N92 and the NEC e636, and taught particular systems and methods by which the cell phone could connect with and control a higher

resolution display device for streaming video. The claimed inventions would have been inoperable on even the most sophisticated cell phones of the period, such as the Nokia N92 and NEC e636, because they required significant technical advancements and improvements to the hardware and software “stack” of the cell phone in order to enable their inventive functionality. *See* Exhibit D.

Background of the Patented Technology

10. The '981 Patent taught the hardware and software “stack” necessary to implement the particular methods claimed in the Patents. For example, Figure 3D illustrates the relationships between the hardware and software components of the cell phone itself, as well as the internet and a high-resolution display device, in terms of their hierarchy and I/O requirements and functions. Figure 3D teaches a cell phone operating system that supports TCP/IP services, a desktop browser and operating system within the cell phone, and the device drivers necessary to manage streaming media as it is received from the network, rendered by the operating system, and communicated to external devices. Figure 3D teaches that the cell phone’s device drivers interact with the peripheral communications hardware and software that, in turn, communicates with external display devices. Further, Figure 3B shows that the peripheral communications hardware and software interacts with multichannel USB, and IEEE 1394 and IEEE 802.11 protocols that, in turn, use a multiport wireless interface to communicate with a high-resolution digital display device. Without the hardware and software stack (or its equivalents) disclosed, *inter alia*, in Figures 3B and 3D of the '981 Patent, the claimed inventions would have been inoperable. The hardware and software stack disclosed in the Patents was absent from the more advanced cell phones of the day (e.g., the Nokia N92 and NEC e636), which were designed as mere standalone devices—a completely different paradigm than that disclosed in the '981 Patent,

which teach the cell phone connecting with and controlling a higher resolution display device on which media may be streamed.

11. In the few prior art examples where a cell phone was actually connected to another device, the cell phone was used in a manner completely different than that claimed in the '981 Patent, and for different purposes. As the inventor pointed out during prosecution of the parent '342 Patent, the prior art merely “describe[d] a conventional tethering operation of a cell phone to a computer, and not peripheral cell phone control of the claimed invention.” Exhibit E [Prosecution History of '342 Parent Patent, Amendment, May 31, 2011, at 11]. According to the “conventional tethering operation[s]” of the prior art, the “PC or laptop connects to the internet via another PC’s or a cell phone’s wireless Internet connection, providing a bridge connection but not ceding control.” *Id.* By contrast, the “instant invention,” the inventor explained, “does not use a cell phone to connect a ‘computer’ to the Internet” — “[q]uite the reverse, the instant invention connects peripheral devices (connected to the computer) to the cell phone to create a desktop computing environment on the cell phone.” *Id.* As the inventor described it in a later amendment during prosecution of the '342 parent Patent, the “present invention” was one “directed to an innovative approach to employ a cell phone or like PDA . . . to create a media center controlled by the user through the cell phone—without the usage of the computing power of the peripherals’ PC.” Exhibit F. [Prosecution History of '342 Patent, Amendment, January 17, 2012, at 31]. The inventor emphasized that in the prior art “the portable device is a mere tether” and “has zero control – the network server is running things directly” in the “traditional client/server relationship.” *Id.* at 32. By contrast, the parent '342 Patent “expressly involves and claims control of the peripheral device by the portable device, not at network control.” *Id.* Thus, at best, the prior art contemplated the “conventional tethering” of the cell phone to the computer

for the purpose of improving the functionality of the computer according to the “traditional client/server relationship.” The ’981 Patent, however, claims and teaches improvements in the cell phone hardware and software “stack,” enabling it to control the high-resolution display device, in a clear reversal of the “traditional client/server relationship” and departure from “conventional tethering.” As the inventor stated during prosecution of the ’981 Patent, quoting the summary of the invention, “[t]he user may access’ the movies and videos ‘using the desktop monitor’ because, for example the ‘user interfaces’ of the web site providing this content ‘can be displayed through’ the ‘desktop monitor’ ” and “[t]hose ‘user interfaces are sent to the ‘desktop monitor’ by means of the ‘wireless cell phone.’ ” Exhibit G [Prosecution History of ’981 Patent, Sept. 7, 2016, Declaration of Michael D. Harold, at pages 3-4, para. 7(a)(4)]. None of the prior art discloses the hardware and software “stack” necessary to execute this inventive and unconventional functionality or to accomplish the objectives of the ’981 Patent.

12. As the inventor pointed out during prosecution of the ’981 Patent, the methods employed in the prior art failed to disclose, for example, the claimed step of “transmitting by the mobile communications device of at least some of the particular movie or video to the display device for display thereon **simultaneously** while at least some of the particular movie or video is being downloaded from the server to the mobile communications device.” Exhibit H [Prosecution History of ’981 Patent, Sept. 9, 2016 Amendment, at 8] (emphasis added). This unconventional step of claim 1 of the ’981 Patent not only distinguishes it from prior art methods but constitutes one of the ’981 Patent’s “inventive concepts,” both in its own right as well as in combination with other claim elements, rendering the Patent eligible under 35 U.S.C. § 101. Indeed, the inventor pointed out that this step “teaches away” from the prior art, which merely “discloses that a document must be fully downloaded before it can be accessed,” from prior art

wherein “content is fully downloaded *before* the mobile device ‘detects’ the display” or from prior art wherein “a movie or video conference is received or initiated *before* it is routed to the external display.” (Emphasis added). As such, the inventor noted, the prior art “teach[es] away from the claimed methods.” *Id.* at 8-9.

13. As the inventor further noted during prosecution of the ’981 Patent, the “claims are specifically limited to the field of consumer electronic entertainment, as contemplated by the specification.” For example, claim 1 of the ’981 Patent specifically limits the “electrical coupling” between the display device and the mobile communications device to be “for consumer electronic entertainment purposes,” which puts “limitations . . . on the type of electrical couplings that are covered by the claims.” *Id.* at 10-11.

14. The USPTO issued the ’981 Patent on January 17, 2017, without ever having rejected any of the claims under 35 U.S.C. § 101 during prosecution.

15. The inventor of the ’981 Patent conceived of the inventions disclosed and claimed therein and worked to commercialize them for several years. Among his goals (and later those of his company, Zamboola) was to provide hardware and software solutions for the mobile market to allow the interfacing of user information between devices in an enhanced way. Accordingly, after filing in 2006 the applications that eventually issued as the ’981 Patent, he set to work prototyping solutions that reduced the claimed inventions to practice. Mr. Harold began by modifying an “open source” cell phone released after filing, the Openmoko “Neo,” which had an operating system and some of the hardware necessary to support streaming media from the Internet to a high-resolution display device. However, because the software on the Neo proved to be too unstable for the purposes of the claimed inventions, the inventor was forced to migrate to an “Android” operating system. Still more modifications were necessary after migrating to

the Android OS, which was not designed for the purpose of streaming media to a high-resolution display device, and lacked the architecture for concurrent, multi-threaded operations and inter-process communications. Subsequently, the inventor adapted open-source device drivers to these purposes. Additionally, because the Neo had a USB port, the inventor developed a USB-to-VGA connector that allowed the cell phone to display media at the higher resolution VGA, controlled by the user via the Neo touchscreen. Thus, the conventional software and hardware components available required significant modifications from their original form before it was possible to integrate them into a prototype incorporating the claimed inventions.

16. The '981 Patent is valid and enforceable.

17. The '981 Patent describes a need to provide an improved paradigm for using a wireless cell phone or other such communications device as a central component of a desktop or other such computing environment. Ex. A, 2:61-64.

18. The '981 Patent describes a system, method and apparatus in which the user of a wireless cell phone device establishes a direct connection with a desktop computer monitor, keyboard, mouse or other component using any combination of wireline connections and wireless connections. *Id.* at 1:30-36.

19. The '981 Patent is not directed to a method of organizing human activity or to a fundamental economic practice long prevalent in commerce. The '981 Patent describes a system that addresses a technical problem—using a wireless cell phone as a central component of a desktop or other computing environment that includes, in addition to a desktop computer monitor and a desktop keyboard and mouse, using the use of desktop speakers and a desktop printer. *Id.* at 3:7-12—with a technical solution: increasing the use of a cell phone as a connection,

communications and controlling device for desktop computers, digital display monitor and keyboard and mouse. *Id.* at 3:41-48.

20. The '981 Patent does not preempt the field or preclude the use of other wireless cell phones. For example, many companies offer currently offer rudimentary products that allow a cell phone to project images, presentations and movies onto a nearby wall or surface. *Id.* at 2:9-12. The prior art also only uses cell phones as computing devices and not as a full-sized computer monitor or other full-size digital output device for manipulating data or issuing commands remotely through the handheld communications devices. *Id.* at 3:20-27.

21. The '981 Patent does not take a well-known or established business method or process and apply it to a general-purpose computer. Instead, in an exemplary embodiment, they describe a wireless cell phone as a central component of a desktop or other computing environment that includes, in addition to a desktop computer monitor and a desktop keyboard and mouse, the use of desktop speakers and a desktop printer. *Id.* at 3:7-12. The desktop computer monitors or other full-size digital display device is also used as a visual output device, and a full-size keyboard and mouse are used as user input devices. *Id.* 2:66-3:1.

22. The PTAB declined to institute an IPR against the asserted claim 21 of the '342 Patent in IPR2016-00989, and therefore determined that there was not a reasonable likelihood of unpatentability on the given grounds. *See RPX Corp. v. Sockeye Licensing TX, LLC*, IPR2016-00989 (P.T.A.B. 2016) (declining to institute an IPR as to claims 21, 22, 25 and 26). In IPR2016-01052, the Petitioner did not seek to institute an IPR of claim 21. *See RPX Corp. v. Sockeye Licensing TX, LLC*, IPR2016-01052 (P.T.A.B. 2016) (requesting an IPR for claims 11-19 and 58-76 and denying institution of an IPR for claims 60-61 and 69). In the application leading to the '981 Patent, the Examiner expressly considered all of the IPR petitions filed against the '342

Patent referred to *supra*, and allowed the '981 Patent to issue over all the prior art cited in those IPR petitions.

FIRST CAUSE OF ACTION
INDIRECT INFRINGEMENT OF THE '981 PATENT

23. Sockeye incorporates the above paragraphs herein by reference.

24. Defendant manufacturers various products that are offered for sale in the United States by, for example, visiting this website and selecting a product: <https://www.hp.com/us-en/home.html>.

25. At <https://www.hp.com/us-en/shop/slp/hp-chromebooks/all-chromebooks>, seventeen different models of HP Chromebooks are for sale by, for example, direct purchase on the website. All of these HP Chromebooks, together with all of Defendant's products that are identical from a patent infringement perspective, are collectively referenced hereinafter as the "Infringing Products."

26. The Infringing Products allow, for example, a movie or video to be selected and then downloaded from a server hosting a website to a user's Infringing Product, and then wirelessly cast therefrom to the casting circuitry inside or attached to a suitable display (*e.g.*, a television set or a projector showing a screen or a wall). When an Infringing Product is used as in this manner, that use involves the performance of all of the steps recited in at least claims 1, 5 and 15-16 of the '981 Patent as, for example, discussed in greater detail hereinafter:

a. The preamble of claim 1 recites a "method for downloading and viewing a movie or video on a display device." While it is not a positively recited limitation, corresponding to the preamble of claim 1, each Infringing Product includes casting circuitry that provides a screen mirroring or casting functionality. This allows a user to cause, for example, a

movie or video to be downloaded from a server to the user's Infringing Product, and then wirelessly cast therefrom to the casting circuitry associated with a suitable display.

b. Claim 1 recites "electrically coupling for consumer electronic entertainment purposes a display device suitable for use in a media center environment with a mobile communications device that does not form a part of the media center environment." Corresponding to this limitation of claim 1, the display to which each Infringing Product casts a movie or video forms a "display device" that is suitable for use in a media center environment where a movie or video can be watched. The user's Infringing Product is not a part of that environment. The user's Infringing Product is coupled to the casting circuitry inside the display to which a movie or video is cast by means of a wireless network connection.

c. Claim 1 recites "causing a first graphic user interface to be displayed on the display device that conveys information to a viewer of the display device about movies or videos that are individually downloadable from a server for display on the display device for consumer electronic entertainment purposes." Corresponding to this limitation of claim 1, when selecting a movie or video, the graphic user interface ("GUI") is cast from Infringing Product to the casting circuitry associated with the suitable display which then causes it to be displayed to the user on the display device. By viewing the GUI, the user can select a movie or video to watch on the display screen of the display device.

d. Claim 1 recites "receiving entertainment selection commands by the mobile communications device to allow a particular one of the movies or videos to be selected for downloading from the server based on visual feedback the viewer receives by reading or interacting with the first graphic user interface shown on the display device." Corresponding to this limitation of claim 1, the user selects a movie or video to watch by entering commands into

the Infringing Product. The user makes the selection by reading the GUI that is displayed on the display screen associated with each Infringing Product.

e. Claim 1 recites “receiving by the mobile communications device of the particular movie or video that is sent to it from the server based on the viewer's reading or interaction with the first graphic user interface shown on the display device.” Corresponding to this limitation of claim 1, by selecting a particular video to be watched, the user’s Infringing Product indicates to the server that the particular video should be sent to user’s Infringing Product. The user makes the selection by reading the GUI that is displayed on the display screen associated with each Infringing Product.

f. Claim 1 recites “transmitting by the mobile communications device of at least some of the particular movie or video to the display device for display thereon simultaneously while at least some of the particular movie or video is being downloaded from the server to the mobile communications device.” Corresponding to this limitation of claim 1, the particular movie or video that the user selected is streamed from the server to the casting circuitry of each Infringing Product and then to the casting circuitry associated with the suitable display while the user is watching it on the suitable display.

g. Claim 1 recites “wherein the electrical coupling between the mobile communications device and the display device allows the particular movie or video to be sent there between when the mobile communications device is located a distance away from the display device at which a person watches a movie or video at home.” Corresponding to this limitation of claim 1, the wireless connection between the user’s Infringing Product and the casting circuitry associated with the suitable display is sufficiently strong and robust to allow the

user to watch the video when the Infringing Product is located, for example, between 10-15 feet away from the suitable display.

h. Claim 5 recites the “method of claim 1, wherein the mobile communications device is adapted to communicate with the server via the internet.”

Corresponding to this limitation of claim 5, the user’s Infringing Product is adapted to communicate with the server via the internet.

i. Claim 15 recites the “method of claim 1, wherein the transmitting of the particular movie or video from the mobile communications device to the display device for display thereon occurs substantially simultaneously with the downloading of the particular movie or video from the server to the mobile communications device. Corresponding to this limitation of claim 15, the particular movie or video that the user selected is streamed from the server to the casting circuitry associated with the suitable display via the casting circuit of the Infringing Product.

j. Claim 16 recites the method of claim 1, wherein the causing step includes downloading the GUI from the server to the Infringing Product. Corresponding to this limitation of claim 16, the user’s Infringing Product communicates with the server to allow it to send to the Infringing Product at least a portion of the GUI.

27. At <https://www.hp.com/us-en/shop/slp/hp-chromebooks/all-chromebooks>, seventeen different models of HP Chromebooks are presented for sale to the public by direct purchase on the website. At <https://www.hp.com/us-en/shop/cv/hp-chromebooks>, the website describes HP Chromebooks as coming “with the best of Google built-in.” At <https://www.hp.com/us-en/shop/pdp/hp-chromebook-x360-14c-cc0047nr>, the “HP Chromebook x360 14c-cc0047nr” is has “Chrome OS™” built in to it. At <https://www.hp.com/us->

[en/shop/tech-takes/what-is-screen-mirroring](https://www.hp.com/us-en/shop/tech-takes/what-is-screen-mirroring), Defendant describes the “Google Chrome browser” as being “one of the most popular casting technologies available” that “allows you to use the browser to send the screen contents to a connected, compatible device” such as “Chromecast” that “will prompt you to connect to a wireless network before they can mirror or cast.” At <https://www.hp.com/us-en/shop/tech-takes/connect-chromecast-to-computer>, Defendant states that “Chromecast receives data over your WiFi network” from a user’s “mobile device” to “display movies” on the screen. Defendant’s Infringing Product, when used in a manner that infringes at least claims 1, 5, and 15-16 of the ‘981 Patent, is “electrically coupled” to the display device in a wireless manner, since there is no “wired” connection between the Infringing Product and the display device, and no “wired” connection between the Infringing Product and the Chromecast. Notably, the ‘981 Patent discloses an embodiment wherein the “interconnection between the wireless device 400, as well as wireless devices 401, to the device, devices or components 502, can be either wireless or wireline.” ‘981 Patent, 15:17-20.

28. Upon information and belief, Defendant has specifically intended that its customers use the Infringing Products as described above in paragraph 26 and, therefore, that its customers use the Infringing Products in a way that infringes at least claims 1, 5, and 15-16 of the ‘981 Patent.

29. Thus, by promoting the above-mentioned uses of the Infringing Products, Defendant actively induces its customers to use the device to perform the steps of all claim elements of at least claims 1, 5 and 15-16 of the ‘981 Patent and thus to directly infringe at least claims 1, 5, and 15-16 of the ‘981 Patent. HP provided active inducement for its customers to use the Infringing Products in a manner that infringes by, for example, providing customer support to “[s]et up Chromecast with your Chromebook.”

<https://h30434.www3.hp.com/t5/Notebook-Wireless-and-Networking/Chromebook-fails-to-detect-Chromecast-devices/td-p/7101034>

30. Since at least the filing date of the instant complaint, Defendant has had knowledge of the '981 Patent, as well as knowledge that the above-mentioned uses of the Infringing Products induce Defendant's customers to infringe least claims 1, 5, 15-16 of the '981 Patent. This infringement by Defendant's customers, which Defendant has induced, is ongoing and will likely continue during the pendency of this action.

31. Sockeye is entitled to recover damages adequate to compensate it for such infringement in an amount no less than a reasonable royalty under 35 U.S.C. § 284.

SECOND CAUSE OF ACTION
INDIRECT INFRINGEMENT OF THE '342 PATENT

32. Sockeye incorporates the above paragraphs herein by reference.

33. The Infringing Products allow, for example, a movie or video to be selected and then downloaded from a server hosting a website over the internet to the user's Infringing Product, and then wirelessly cast it from it to the casting circuitry associated with a suitable display device for display thereon. When the Infringing Products are used in this manner, that use forms a system that meets all of the elements recited in at least claim 21 of the '342 Patent. For example:

a. Claim 21 of the '342 Patent, which depends from independent claim 20, recites the preamble of claim 20 which references a "peripheral device control system, comprising." While it is not a positively recited limitation, corresponding to the preamble of claim 21, each Infringing Product is wirelessly connected to a suitable display device.

b. Claim 21 of the '342 Patent recites "a peripheral device." Corresponding to this limitation, the suitable display device that is wirelessly connected to the Infringing Product forms a "peripheral" device.

c. Claim 21 of the '342 Patent recites "an interconnector." Corresponding to this limitation, the casting circuitry associated with the suitable display device to which the Infringing Product is connected forms an "interconnector."

d. Claim 21 of the '342 Patent recites "said interconnector connecting, at the control of a user, a wireless device to said peripheral device, and." Corresponding to this limitation, the casting circuitry associated with the suitable display device to which the Infringing Product is connected forms an "interconnector" that allows a user to cause a movie or video to be downloaded from a server to the user's Infringing Product, and then wirelessly cast from there to the casting circuitry associated with the suitable display device for display thereon.

e. Claim 21 of the '342 Patent recites "downloading user information to said peripheral device." Corresponding to this limitation, the casting circuitry associated with the suitable display device allows a user to cause a movie or video to be downloaded from a server to the user's mobile communications device, and then wirelessly cast from there to the casting circuitry associated with the suitable display to be shown thereon.

f. Claim 21 of the '342 Patent recites said user information being stored on a server in a communications network." Corresponding to this limitation, the movie or video displayed on the display screen is stored in memory on the server and is accessible over the internet.

g. Claim 21 of the '342 Patent recites "said peripheral device, upon receipt of the downloaded user information, employing said user information at the control of said user."

Corresponding to this limitation, each Infringing Product, upon receipt of the movie or video, caused the selected movie or video to be shown to a user on the suitable display device. The display of the movie or video on the suitable display device is controlled by the user entering commands into the user's mobile communications device with reference to a GUI cast from the mobile communications device that is shown on the suitable display device.

h. Claim 21 of the '342 Patent recites "wherein said peripheral device, controlled by said user from said wireless device, is part of a separate system, and."

Corresponding to this limitation, the suitable display to which the Infringing Product is wirelessly connected forms a "display device" that is suitable for use in a "home media center environment." The mobile communications device is not a part of that environment which contains items such as amplifiers and pre-amplifiers. The mobile communications device is coupled to the casting circuitry associated with the suitable display device.

i. Claim 21 of the '342 Patent recites "wherein said downloaded user information employed by said peripheral device creates an environment selected from the group consisting of desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof." Corresponding to this limitation, the suitable display device to which the Infringing Product is wirelessly connected forms a "display device" that is suitable for use in a "home media center environment."

j. Claim 21 of the '342 Patent recites the "peripheral device control system according to claim 20, further comprising." Corresponding to this limitation, the suitable display device to which the Infringing Product is connected forms a "peripheral device."

k. Claim 21 of the '342 Patent recites “means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and.” Corresponding to this limitation, the casting circuitry associated with the suitable display device forms at least a portion of the “means for receiving.” It allows the movie or video cast from the Infringing Product to be shown on the suitable display device via a wireless connection therebetween.

l. Claim 21 of the '342 Patent recites “means for employing, at said peripheral device, said downloaded user information.” Corresponding to this limitation, the suitable display device includes a screen and casting circuitry connecting the screen to the casting circuitry that forms at least a portion of the “means for employing.” It allows the movie or video to be shown on the display screen of the suitable display device.

34. At <https://www.hp.com/us-en/shop/slp/hp-chromebooks/all-chromebooks>, seventeen different models of HP Chromebooks are presented for sale to the public by direct purchase on the website. At <https://www.hp.com/us-en/shop/cv/hp-chromebooks>, the website describes HP Chromebooks as coming “with the best of Google built-in.” At <https://www.hp.com/us-en/shop/pdp/hp-chromebook-x360-14c-cc0047nr>, the “HP Chromebook x360 14c-cc0047nr” is has “Chrome OS™” built in to it. At <https://www.hp.com/us-en/shop/tech-takes/what-is-screen-mirroring>, Defendant describes the “Google Chrome browser” as being “one of the most popular casting technologies available” that “allows you to use the browser to send the screen contents to a connected, compatible device” such as “Chromecast” that “will prompt you to connect to a wireless network before they can mirror or cast.” At <https://www.hp.com/us-en/shop/tech-takes/connect-chromecast-to-computer>, Defendant states that “Chromecast receives data over your WiFi network” from a user’s “mobile

device” to “display movies” on the screen. Defendant’s Infringing Product, when used in a manner that infringes at least claim 21 of the ‘342 Patent, is connected to the display device in a wireless manner, since there is no “wired” connection between the Infringing Product and the display device, and no “wired” connection between the Infringing Product and the Chromecast. Notably, the ‘342 Patent discloses an embodiment wherein the “interconnection between the wireless device 400, as well as wireless devices 401, to the device, devices or components 502, can be either wireless or wireline.” ‘342 Patent, 14:52-56.

35. Upon information and belief, Defendant has specifically intended that its customers use the Infringing Products as described above in paragraph 34 and, therefore, that its customers use the Infringing Products in a way that results in the direct infringement of at least claim 21 of the ‘342 Patent.

36. Thus, by promoting the Infringing Products in this manner, Defendant actively induces its customers to form the system that includes all of the elements of at least claim 21 of the ‘342 Patent and to commit direct infringement of at least claim 21 of the ‘342 Patent. HP provided active inducement for its customers to use the Infringing Products in a manner that infringes by, for example, providing customer support to “[s]et up Chromecast with your Chromebook.” <https://h30434.www3.hp.com/t5/Notebook-Wireless-and-Networking/Chromebook-fails-to-detect-Chromecast-devices/td-p/7101034>

37. Since at least the time of the filing of the Complaint, Defendant has had knowledge of the ‘342 Patent, as well as knowledge that its customers engage in the above-mentioned uses of the Infringing Products in a manner that infringes at least claim 21 of the ‘342 Patent. This infringement by Defendant’s customers, which Defendant has induced, is ongoing and will likely continue during the pendency of this action.

38. Sockeye is entitled to recover damages adequate to compensate it for such infringement in an amount no less than a reasonable royalty under 35 U.S.C. § 284.

JURY DEMAND

39. Under Rule 38(b) of the Federal Rules of Civil Procedure, Sockeye respectfully requests a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Sockeye asks this Court to enter judgment against Defendant, granting the following relief:

- A. A declaration that Defendant has infringed the Patents-In-Suit;
- B. An award of damages to compensate Sockeye for Defendant's indirect infringement of the Patents-In-Suit;
- C. An award of damages, including trebling of all damages, sufficient to remedy Defendant's infringement of the Patents-In-Suit under 35 U.S.C. § 284;
- D. An accounting of all damages not presented at trial;
- E. A declaration that this case is exceptional, and an award to Sockeye of reasonable attorneys' fees, expenses and costs under 35 U.S.C. § 285;
- F. An award of prejudgment and post-judgment interest; and
- G. Such other relief as this Court or jury may deem proper and just.

Dated: December 21, 2022

Respectfully submitted,

/s/ Isaac Rabicoff
Isaac Rabicoff

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing document was served on all parties who have appeared in this case on December 21, 2022 via the Court's CM/ECF system.

/s/ Isaac Rabicoff
Isaac Rabicoff

Exhibit A



US009547981B1

(12) **United States Patent**
Harold

(10) **Patent No.:** **US 9,547,981 B1**
(45) **Date of Patent:** ***Jan. 17, 2017**

(54) **SYSTEM, METHOD AND APPARATUS FOR USING A WIRELESS DEVICE TO CONTROL OTHER DEVICES**

(71) Applicant: **Sockeye Licensing TX LLC**, Glenview, IL (US)

(72) Inventor: **Michael D. Harold**, Shreveport, LA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/531,641**

(22) Filed: **Nov. 3, 2014**

Related U.S. Application Data

(60) Continuation of application No. 13/418,829, filed on Mar. 13, 2012, now Pat. No. 8,879,987, which is a division of application No. 11/898,912, filed on Sep. 17, 2007, now Pat. No. 8,135,342.

(60) Provisional application No. 60/844,645, filed on Sep. 15, 2006.

(51) **Int. Cl.**
H04B 5/00 (2006.01)
G08C 17/02 (2006.01)

(52) **U.S. Cl.**
CPC **G08C 17/02** (2013.01); **G08C 2201/20** (2013.01); **G08C 2201/30** (2013.01)

(58) **Field of Classification Search**
CPC H04W 4/001
USPC 455/41.1, 41.2, 41.3, 557, 556.1
See application file for complete search history.

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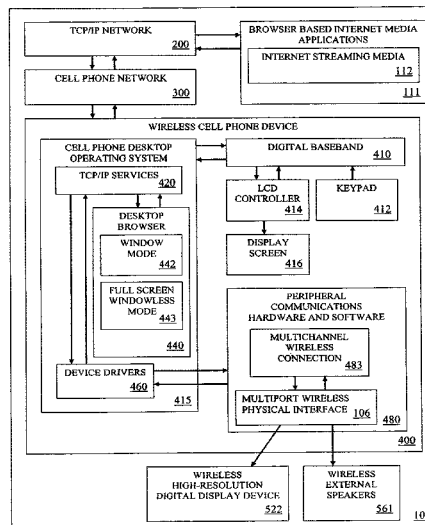
Primary Examiner — Sanh Phu

(74) *Attorney, Agent, or Firm* — Eugenio J. Torres-Oyola; Victor Rodriguez-Reyes; Rafael Rodriguez-Muriel

(57) **ABSTRACT**

A system, method and apparatus which permits the use of a wireless cell phone or other communications device as a connection, communications and control device able to connect a full-sized desktop monitor or other digital display device, keyboard, mouse, speakers, printer and other external devices to a wireless cell phone device using any combination of wireline or wireless connections from the desktop devices to the wireless cell phone device. The wireless cell phone device is used to create an Internet or other network connection capable of accessing any browser-based web site or browser-based software application, e.g., via an Internet connection. Once the connections between the components are established with the wireless cell phone device and the Internet connection is established components. Access to Internet software, services and media includes all forms of browser-based desktop software, as well as digital movies, music, and streaming video.

16 Claims, 9 Drawing Sheets



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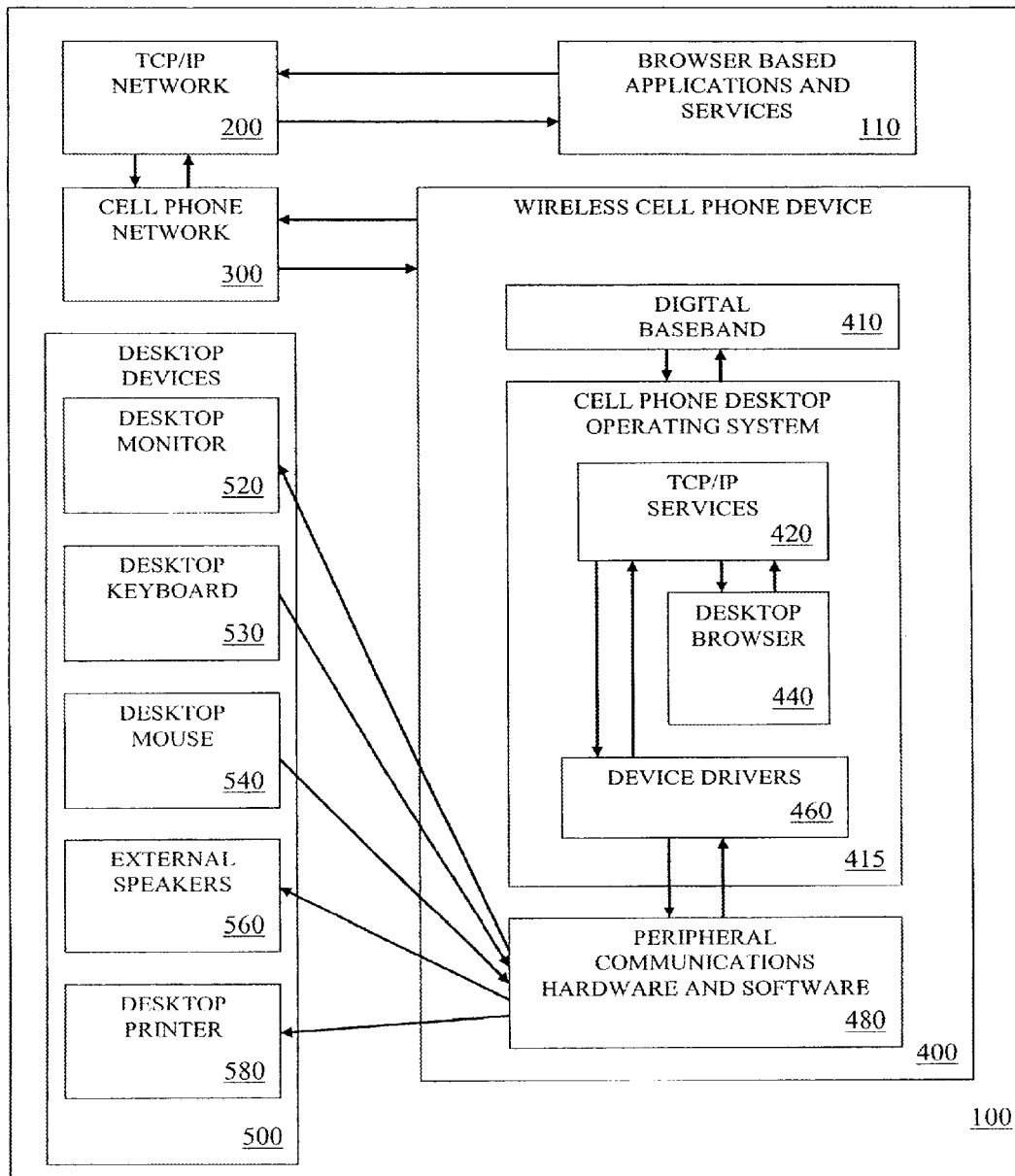


FIGURE 1

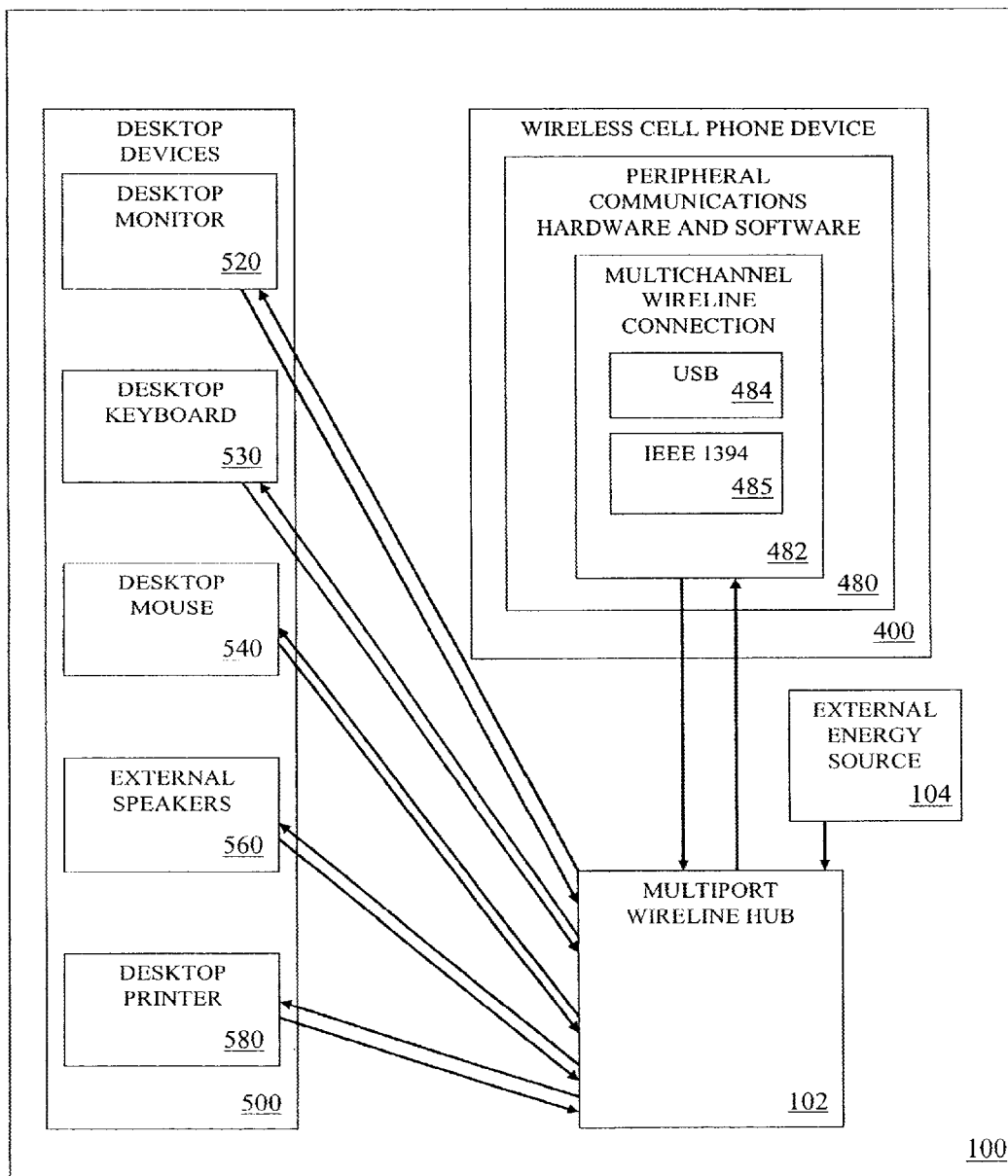


FIGURE 2A

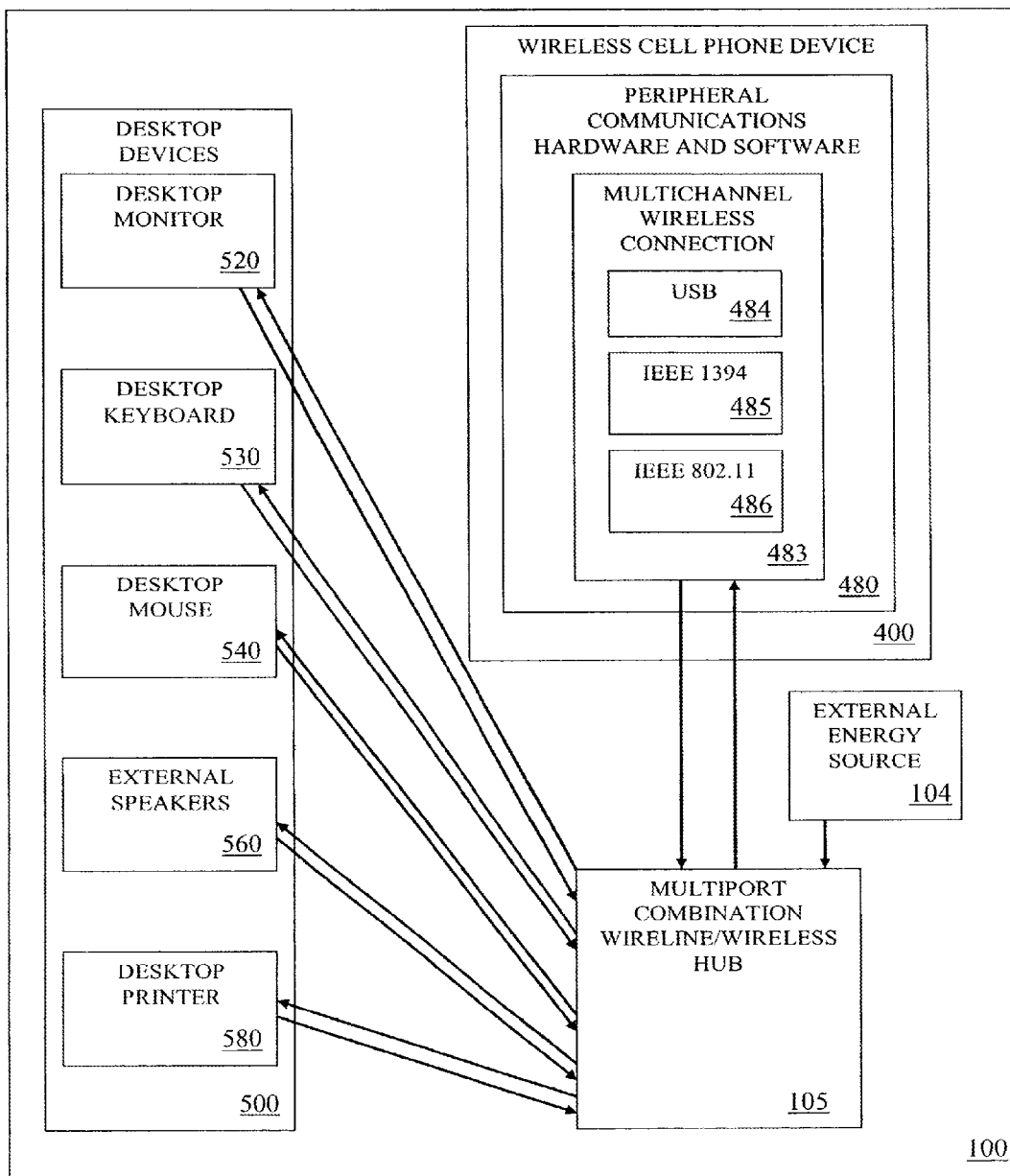


FIGURE 2B

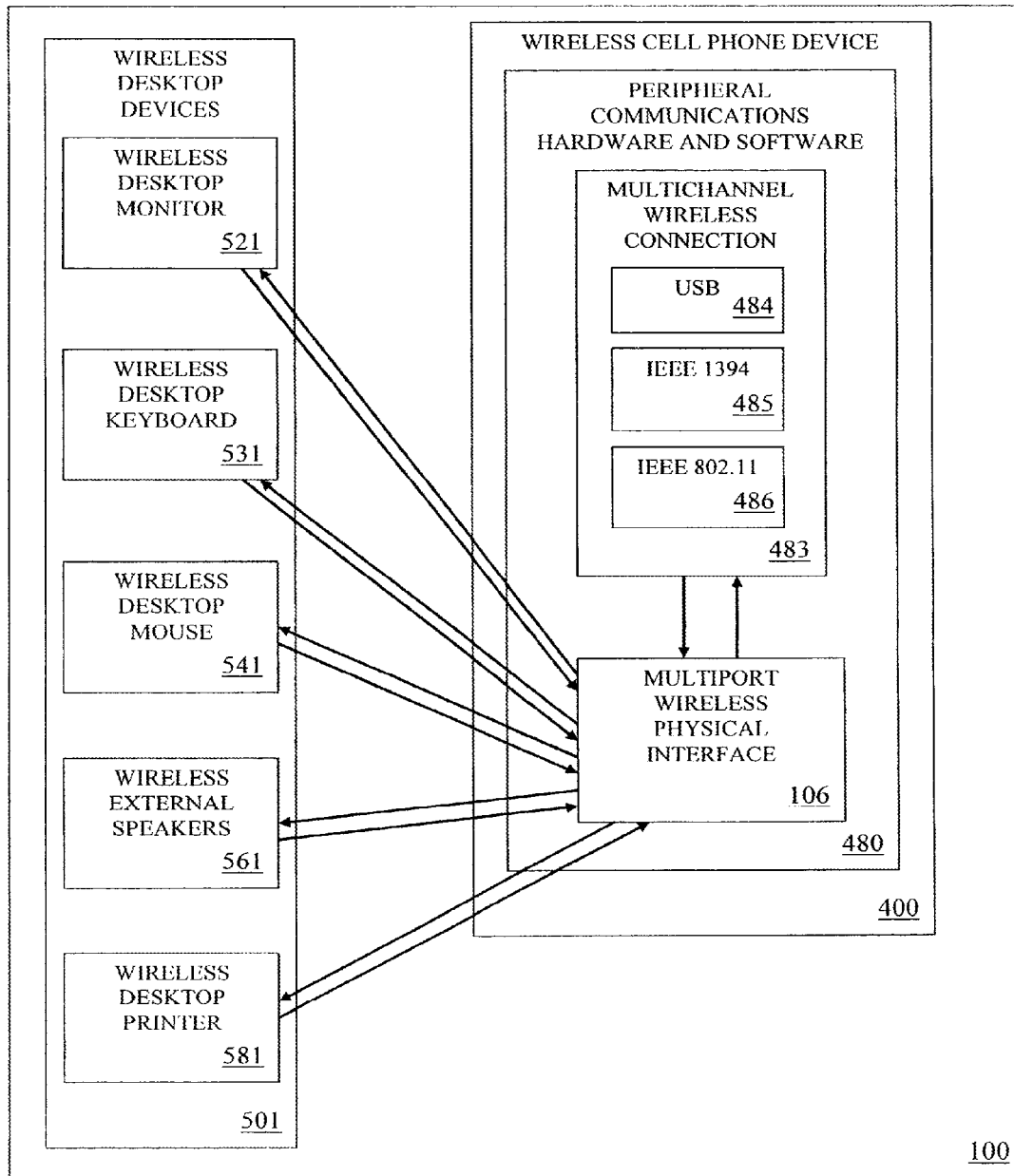


FIGURE 2C

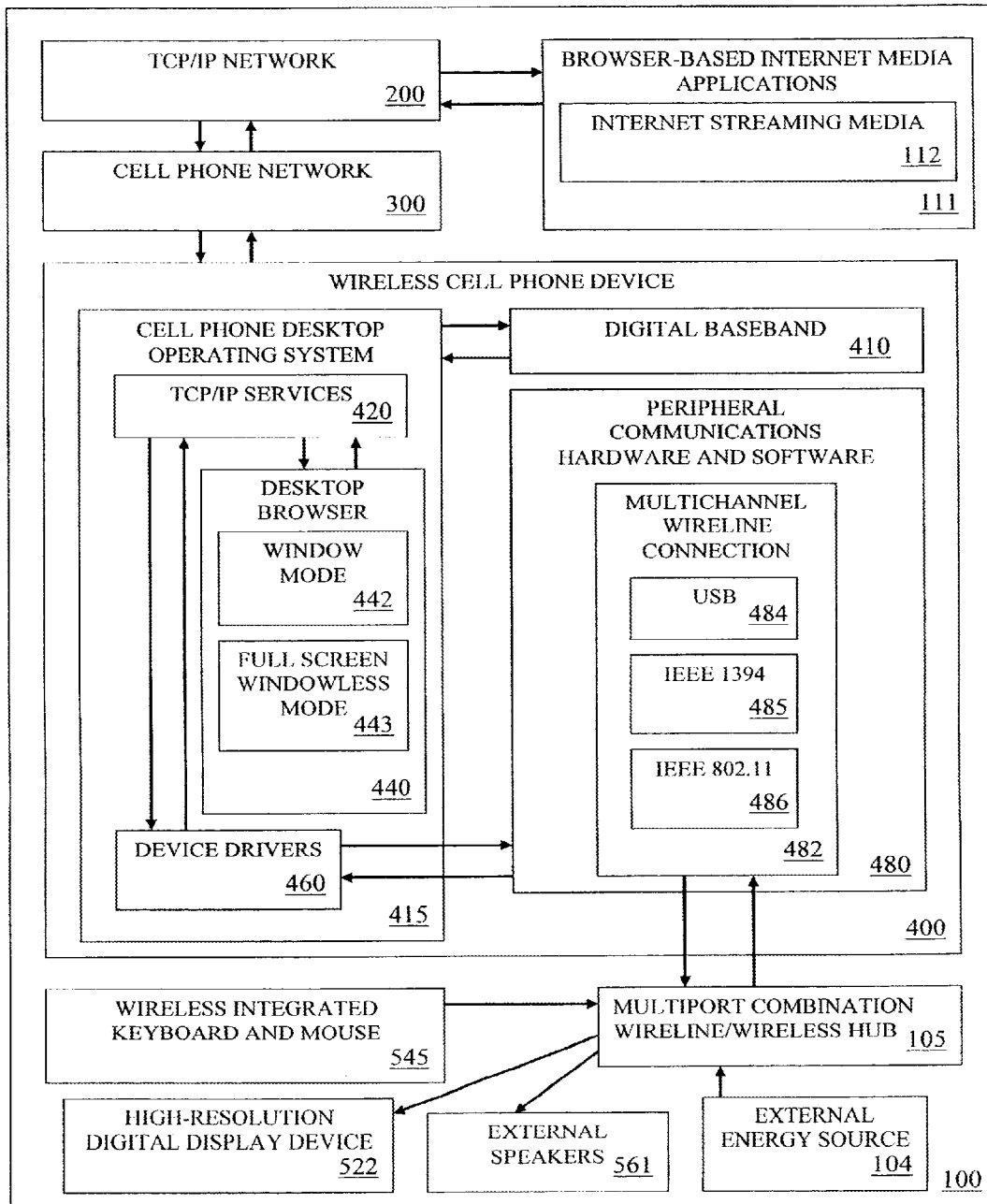


FIGURE 3A

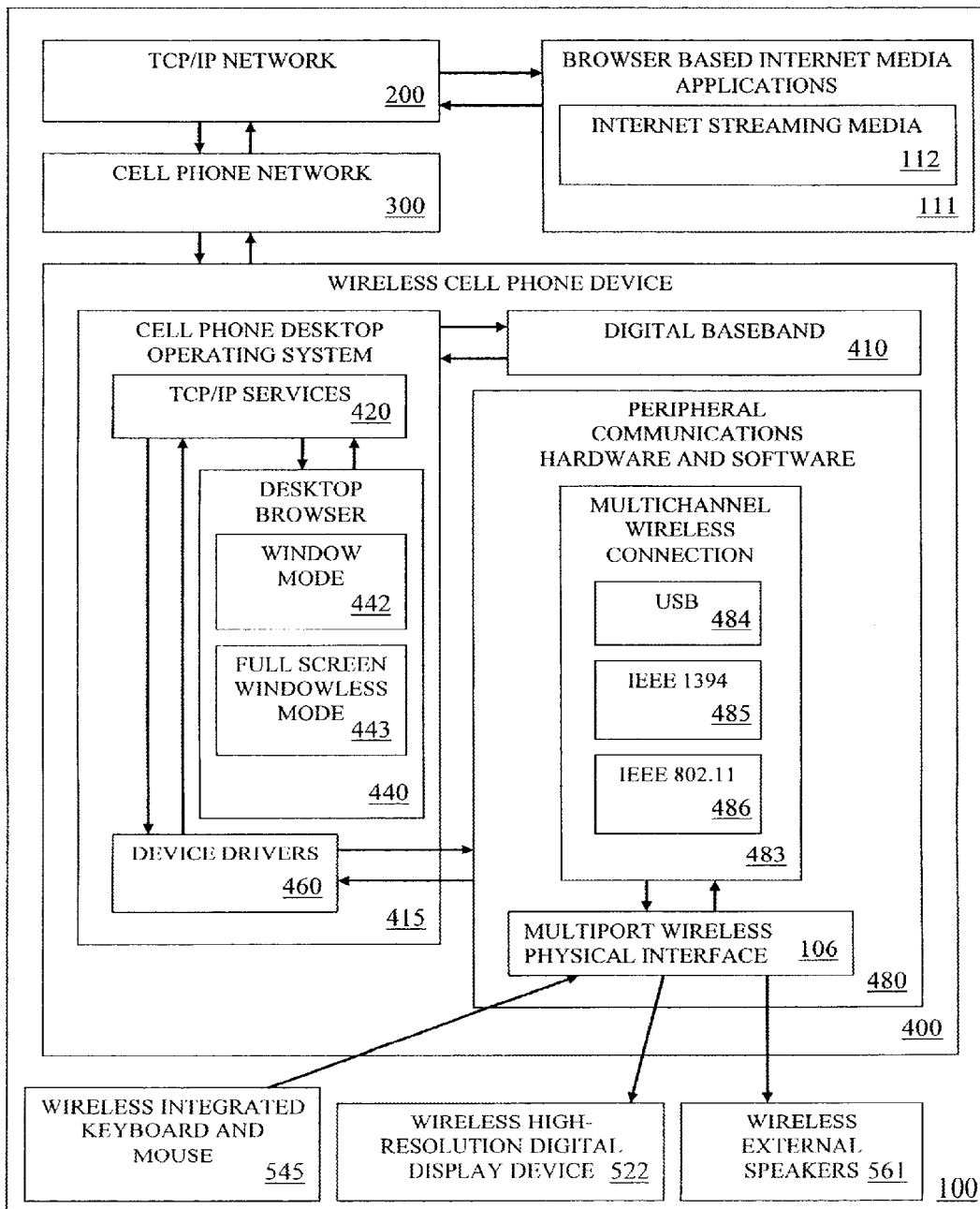


FIGURE 3B

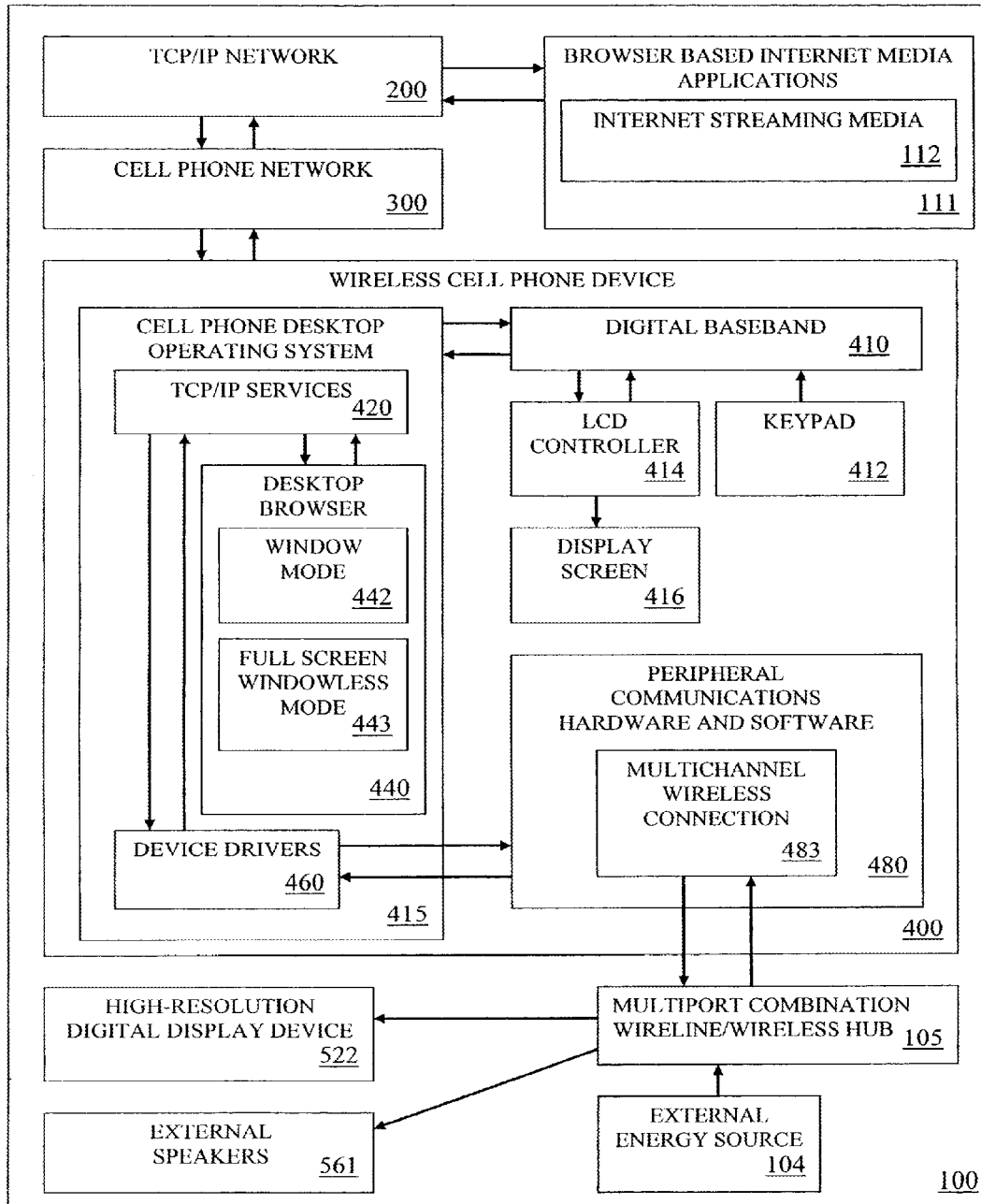


FIGURE 3C

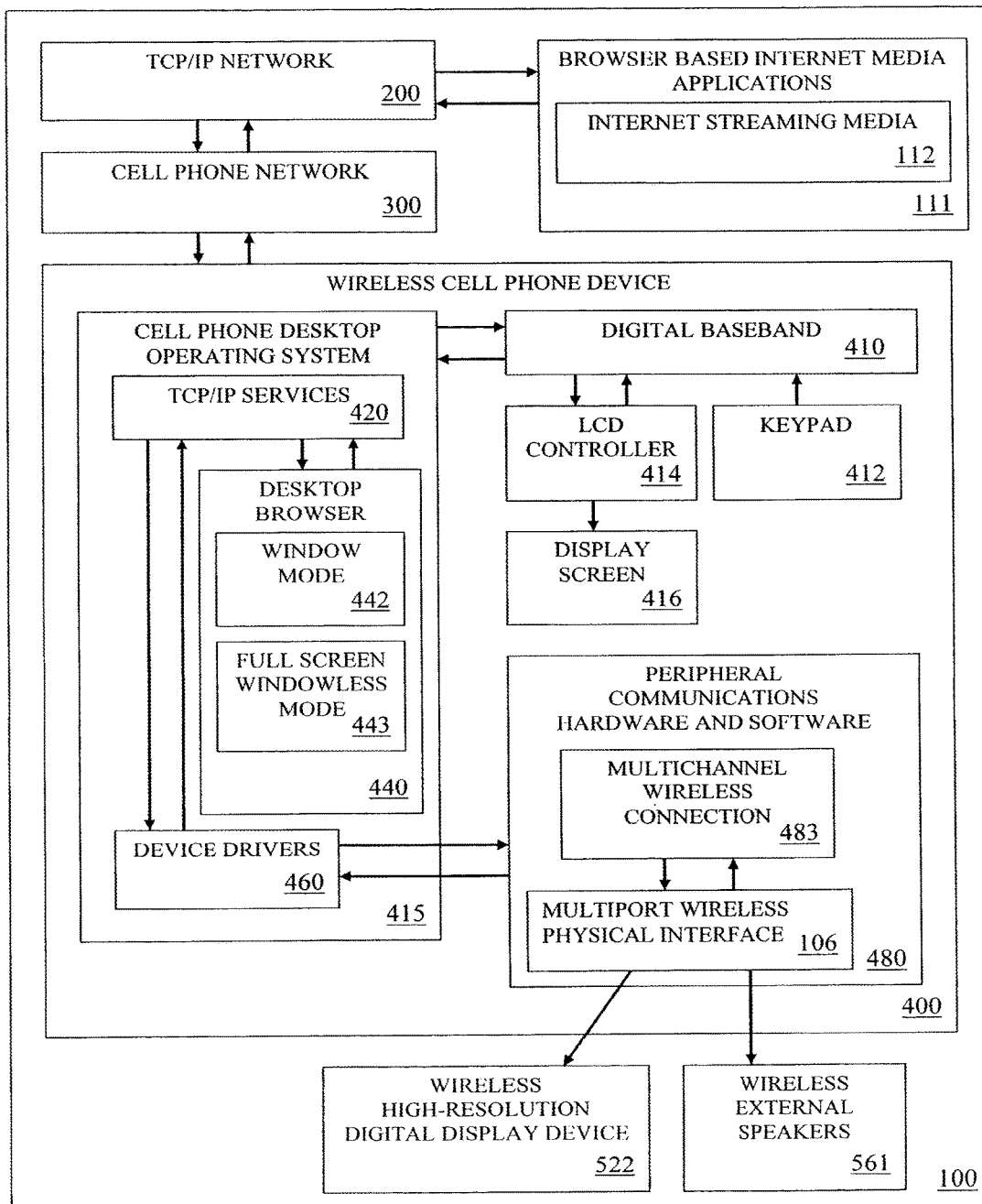


FIGURE 3D

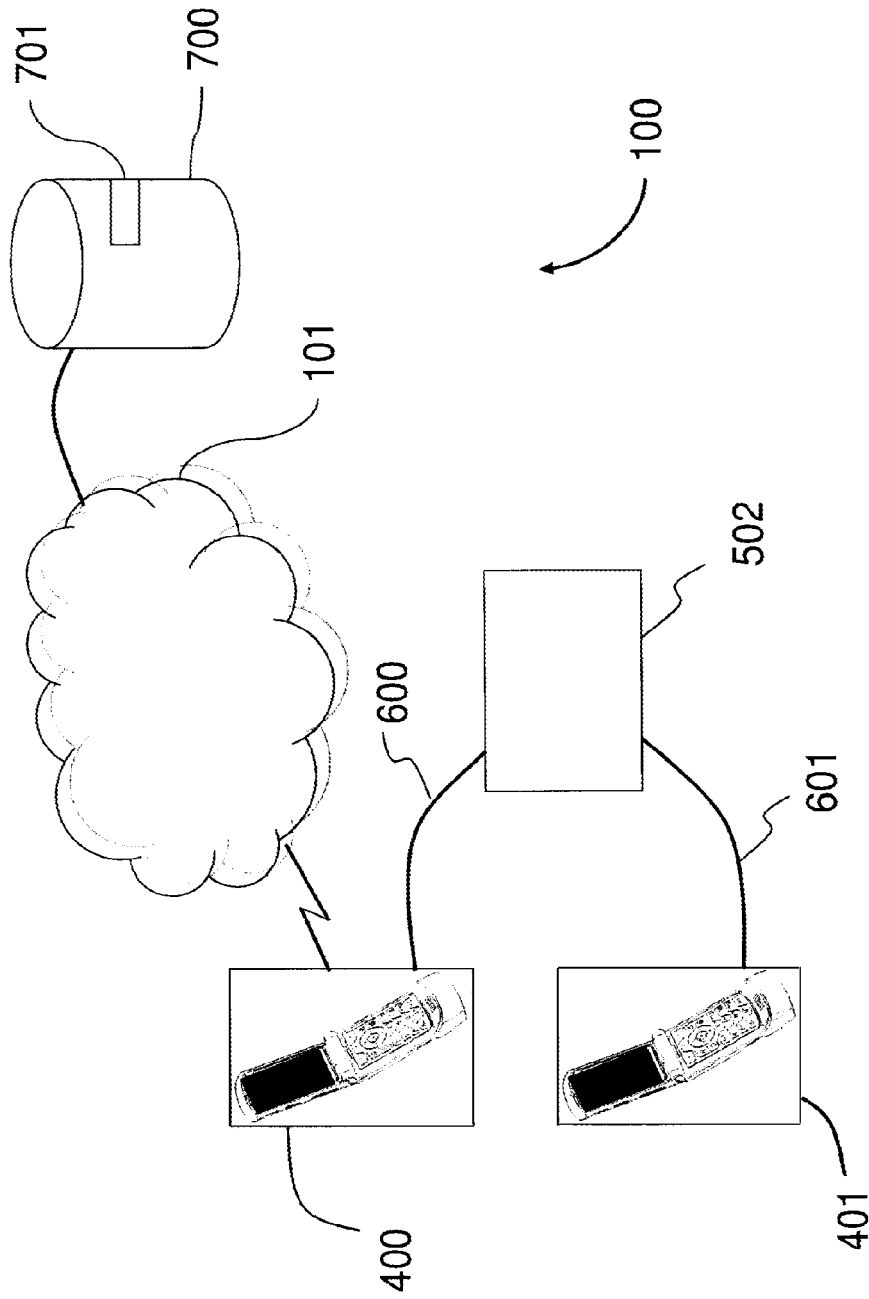


Figure 4

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**SYSTEM, METHOD AND APPARATUS FOR
USING A WIRELESS DEVICE TO CONTROL
OTHER DEVICES**

CROSS-REFERENCE TO RELATED
APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 13/418,829, filed Mar. 13, 2012, now U.S. Pat. No. 8,879,987, which is a divisional of U.S. patent application Ser. No. 11/898,912, filed Sep. 17, 2007, now U.S. Pat. No. 8,135,342, which, in turn, claims priority to U.S. Provisional application Ser. No. 60/844,645, filed Sep. 15, 2006, the entire contents of which are hereby incorporated by reference.

This application is also related to U.S. patent application Ser. No. 14/144,018, filed Dec. 30, 2013, which is a continuation of U.S. patent application Ser. No. 11/889,941, filed Aug. 17, 2007, now U.S. Pat. No. 8,620,207, which, in turn, claims priority to U.S. Provisional Application Ser. No. 60/838,438, filed Aug. 18, 2006, the entire contents of which are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to methods for using a wireless cell phone or other communications device in combination with a desktop computer monitor, keyboard and mouse to create a desktop computing environment. In particular, the invention relates to a system, method and apparatus in which the user of a wireless cell phone device establishes a direct connection with a desktop computer monitor, keyboard, mouse or other component using any combination of wireline connections and wireless connections. The present invention also relates to techniques for leveraging the use of a handheld communication device to other devices.

Description of the Related Art

Changes in the use and technological capabilities of wireless cell phone and other communications devices, e.g., Blackberry and Palm devices, have led to the rapid adoption of handheld cell phone devices as personal communications tools capable of supporting voice mail, email, calendars, contact lists and related applications. Handheld wireless devices are also commonly used to store and access music, videos and other forms of electronic entertainment and media. The increasing availability of Internet services and applications, particularly those that store a user's data in a computer server, data center or other location on the network independently of the user's handheld or desktop computer, and make that data available to other Internet or network-hosted services and applications, have given end-users the ability to access and store their important data, documents and applications on the Internet, e.g., using a browser in combination with their desktop computer hardware and software. With further technological advances, the traditional personal computer will be eclipsed by this on-going "off-shelving" process of moving data to more remote resources dedicated for this purpose.

Software applications, such as word processors, spreadsheets and database applications, generally require the use of a traditional desktop computer having a CPU, large amounts of random access memory, and one or more disk drives. Software applications and services available over the Internet, however, no longer require a high-performance CPU, large amounts of random access memory, a desktop com-

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puter disk drive or a traditional desktop computer operating system for their operation. What these Internet software applications and services do require to operate effectively is a sufficiently high bandwidth Internet or other network connection, a sufficiently capable browser, and standard desktop input and output devices, such as a digital display screen, keyboard and mouse, printer, and a speaker or a speaker system.

Although a number of companies, including Texas Instruments and Siemens, currently offer rudimentary products that allow a cell phone to project images, presentations and movies onto a wall or other nearby surface, Applicant is unaware of any product that allows a cell phone to transmit browser-based content to a nearby full-size digital display device, such as a computer monitor, or otherwise leverage the capabilities of the cell phone or other communications device in this matter.

In all cases where wireless cell phone devices are used to send and receive data, the user is confined to the use of the cell phone itself as a handheld computing device. None of the current methodologies for using a wireless cell phone device as a computer take into account the need or desire to have a full-size computer monitor or other full-size digital display device as a visual output device, as well as a full-size keyboard and full-size mouse device as user-operated input devices for manipulating data or issuing commands remotely through the handheld communications device. Specifically, the prior art fails to demonstrate any system, method or apparatus that disengages wireless cell phone and other communications device users from the ergonomic constraints of the small, low-resolution displays presently associated with handheld computing devices, and the small, portable keypad and control key input devices presently associated with handheld computing devices.

Furthermore, the prior art also fails to demonstrate any system, method or apparatus, whereby a wireless cell phone device may be used in place of a traditional computer, i.e., treat a wireless cell phone or other communications device as a thin client. In this instance, the thin client has only a TCP/IP software interface, browser software capable of supporting a high-resolution desktop monitor, the software device drivers necessary to allow desktop computer-based Internet software applications and services to communicate directly with the desktop monitor, keyboard, mouse, speakers and printer devices, and the peripheral communications hardware and software necessary to establish physical communications with the desktop monitor, keyboard, mouse, speakers and printer devices. In other words, this paradigm removes any requirements for the disk drives and other high-capacity storage mechanisms normally associated with desktop computers.

Furthermore, the prior art fails to demonstrate any system, method or apparatus that allows wireless cell phone users to access forms of digital media, including movies, music, and streaming video over the Internet or other network, and to display and otherwise transmit that media through the cell phone to full-size audio and video devices, such as desktop computer monitors, digital display screens and speaker systems directly or indirectly attached to the wireless cell phone device.

There is, therefore, a present need to provide an improved paradigm for using a wireless cell phone or other such communications device as a central component of a desktop or other such computing environment. For example, in the desktop environment this includes a desktop computer monitor or other full-size digital display device used as a visual output device, and a full-size desktop keyboard and

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mouse as a user input device, thereby allowing the wireless device user to overcome the aforementioned ergonomic and other constraints of existing handheld wireless devices, and better exploit the enhancements of the new wireless and other technologies offered, particularly as Web 3.0 concepts are enabled.

There is a further need to provide an improved paradigm for using a wireless cell phone or other communications device as a central component of a desktop or other such computing environment that includes, in addition to a desktop computer monitor and a desktop keyboard and mouse, the use of desktop speakers and a desktop printer.

SUMMARY OF THE INVENTION

In contrast to the traditional model of wireless cell phone usage, the present invention involves a system, method and apparatus that permits the use of a wireless cell phone or other such communications device as a connection, communications and control device able to connect a full-sized desktop monitor or other digital display device, keyboard, mouse, speakers, printer and other components to a wireless cell phone device, using any combination of wireline or wireless connections from the desktop devices to the wireless cell phone device. The wireless cell phone device of the present invention is used to create an Internet or other network connection capable of accessing any browser-based web site or browser-based software application commonly accessible to a standard desktop computer having an Internet connection. Once the connections between the desktop monitor, keyboard, mouse, speakers, printer and/or other components are established with the wireless cell phone device, and the Internet connection is established with the wireless cell phone device, the user may access any browser-based web site or software application using the desktop monitor, keyboard, mouse, speakers and printer. Access to Internet software, services and media includes all forms of browser-based desktop software, as well as digital movies, music, and streaming video.

It is, accordingly, an object of the present invention to provide an improved paradigm for the use of a wireless cell phone or other such communications device as a connection, communications and controlling device for desktop devices, including a digital display monitor, keyboard and mouse, where these desktop devices are used to access and operate desktop browser-based software applications and software services available over the Internet.

It is another object of the present invention to provide an improved system, method and apparatus for the use of a wireless cell phone device as a connection, communications and controlling device for additional desktop devices, including, but not limited to, a desktop printer and a desktop speaker or speaker system, where these devices are used in conjunction with desktop browser-based software applications and software services available over the Internet.

It is another object of the present invention to provide an improved system, method and apparatus for a wireless cell phone device user to connect a desktop monitor, keyboard, mouse, printer and/or other components to a wireless cell phone device using any combination of wireline or wireless connections.

It is a further object of the present invention to provide an improved system, method and apparatus for a wireless cell phone device user to specify the devices to which the wireless cell phone will connect using any combination of hardware connection devices contained in the wireless cell

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phone device and software connectivity options contained within the wireless cell phone device.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device may be used to control the display of content on the desktop computer monitor through the use of browser software designed to display visual output on full-sized digital display devices, such as a desktop computer monitor or consumer display devices, e.g., television.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device may be used to control output to an external speaker or a speaker system, a printer or other components through the use of software and hardware contained in the wireless cell phone device.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone or other communications device will use an Internet connection to access software programs and software services whose user interfaces can be displayed through a desktop computer monitor or other digital display device connected to the wireless cell phone device.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device will combine the functions of an Internet access and communication device with those of a connection, communications and controlling device for a desktop monitor, keyboard, mouse, speakers and printer.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device will, while under the control of an integrated wireless keyboard and mouse attached to the wireless cell phone device, provide Internet or other network access to various forms of digital streaming media including movies, music and video and to display and or otherwise transmit that media through the wireless cell phone device to full-size, high-resolution digital display devices and speakers or a speaker system.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device can, while simultaneously providing Internet or other network access to various forms of digital streaming media, including movies, music and video and displaying and or otherwise transmitting that media through the wireless cell phone device to full-size, high-resolution digital display devices and speakers or a speaker system, also be used as a handheld controller device to select and play said media.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of the improved system, method and apparatus of the present invention may be obtained by reference to the following Detailed Description when taken in conjunction with the accompanying Drawings wherein:

FIG. 1 illustrates an exemplary Internet-based desktop computing environment using a wireless cell phone or other communications device in accordance with the principles of the present invention;

FIG. 2A illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which various peripheral devices, including a desktop computer monitor, keyboard, mouse, speakers, printer and other external components, may be made to communicate with the wireless cell phone device using multiple wireline connections;

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FIG. 2B illustrates a further exemplary Internet-based desktop computing environment using a wireless cell phone device in which various peripheral devices, including a desktop computer monitor, keyboard, mouse, speakers, printer and other external components, may be made to communicate with the wireless cell phone device using a wireless connection with the wireless cell phone device and any combination of wireline and wireless connections with the various peripheral devices;

FIG. 2C illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which various wireless peripheral devices, including a desktop computer monitor, keyboard, mouse, speakers, printer and other external components, may be made to communicate with the wireless cell phone device using a wireless connection with the wireless cell phone device and wireless connections with the various peripheral devices;

FIG. 3A illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which high-resolution, high bandwidth digital media including movies, music and streaming video may be transmitted through the wireless cell phone device to full-size audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a combination of wireline and wireless connections;

FIG. 3B illustrates a further exemplary Internet-based desktop computing environment using a wireless cell phone device, in which high-resolution, high bandwidth digital media, including movies, music and streaming video, may be transmitted through the wireless cell phone device to full-size audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a multiport wireless physical interface contained within the wireless cell phone device;

FIG. 3C illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which high-resolution, high bandwidth digital media, including movies, music and streaming video, may be transmitted through the wireless cell phone device to full-size audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a combination of wireline and wireless connections, while at the same time the wireless cell phone device is used to select and play said media;

FIG. 3D illustrates a further exemplary Internet-based desktop computing environment using a wireless cell phone or other communications device, in which high-resolution, high bandwidth digital media, including movies, music and streaming video, may be transmitted through the wireless cell phone device to full-size wireless audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a multiport wireless physical interface contained within the wireless cell phone device, while at the same time the wireless cell phone device is used to select and play said media; and

FIG. 4 illustrates a further embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The following detailed description is presented to enable any person skilled in the art to make and use the invention.

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For purposes of explanation, specific nomenclature is set forth to provide a thorough understanding of the present invention. However, it will be apparent to one skilled in the art that these specific details are not necessarily required to practice the invention, and descriptions of specific applications are provided only as representative examples. Various modifications to the preferred embodiments will be readily apparent to one 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 invention. The present invention is not intended to be limited to the embodiments shown, but is to be accorded the widest possible scope consistent with the principles and features disclosed herein.

The present invention relates generally to improved methods for using a wireless cell phone or other communications device in combination with a desktop computer monitor, a desktop printer and desktop speakers as output devices, and a desktop computer keyboard and desktop mouse as input devices to create a desktop computing environment. In particular, the invention relates to a method and system in which the user of a wireless cell phone device establishes a direct connection with a desktop computer monitor or other form of full-sized, high-resolution digital display device, a desktop keyboard and mouse, a desktop printer and a desktop speaker or speaker system using any combination of one or more wireline connections and one or more wireless connections set forth in more detail herein below and shown in the exemplary figures.

By enabling the wireless cell phone device to transmit visual output to the computer monitor, receive data input from the keyboard and mouse device, print output on the printer, and transmit sound to the speaker or speaker system, the wireless cell phone device can be made to operate as a traditional desktop computing environment, i.e., one having a full-sized computer screen, keyboard, mouse, printer and speakers. Applications normally associated with a desktop computing environment include, but are not limited to, word processing, spreadsheets and database applications, and may be accessed over the Internet or other network as browser-enabled software applications or software services.

User inputs to these various applications and services can be made using the desktop keyboard and mouse connected to the cell phone device. Digital display information, such as provided by the network applications or software services, will be transmitted to the desktop computer monitor by the cell phone device. Audio, such as provided by the software applications and software services, is transmitted through the cell phone device to an external speaker or speaker system. Printable output, such as provided by the software applications and software services, is transmitted through the cell phone device to the printer. Other forms of media, including movies, music and streaming video, may likewise be accessed over the Internet using the desktop computing environment, and transmitted to an attached digital display screen and speakers. All of these transmissions may be made through the wireless cell phone device's browser interface, which may be made to display information in a traditional browser window for interacting with Internet programs and services or in a full-screen windowless mode for viewing movies and other forms of streaming media, as is understood in the art.

With reference now to FIG. 1 of the Drawings, there is illustrated therein a first embodiment for practicing the principles of the present invention, which operates within a distributed communications network, generally designated by the reference numeral 100. As shown in the figure, a

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wireless cell phone or other communications device **400** is connected to one or more desktop devices **500**, including but not limited to a desktop monitor **520**, a desktop keyboard **530**, a desktop mouse **540**, an external speaker or a speaker system **560**, and a desktop printer **580**, through one or more wireline or wireless connections with the wireless cell phone device's **400** peripheral communications hardware and software, generally designated by the reference numeral **480**. The wireless cell phone device **400** also uses a cell phone network **300** to access a TCP/IP network **200** that, in turn, provides access to one or more browser-based applications and/or services **110** over the wireless cell phone device's **400** digital baseband **410**.

The wireless cell phone device **400** also has a cell phone desktop operating system, generally designated by the reference numeral **415**, including TCP/IP services **420**, desktop browser software **440** and device drivers **460**. As shown in FIG. 1, the user of the cell phone device **400** uses the desktop browser software **440** in conjunction with the TCP/IP services **420** to send messages and data to, and receive messages and data from the browser-based applications and/or services **110** via the digital baseband **410**. Messages and data received from the browser-based applications and services **110** are communicated to the desktop browser **440** through the TCP/IP services **420**, interpreted by the desktop browser **440**, and transmitted by the TCP/IP services **420** to the appropriate device drivers **460**, where they are communicated through the peripheral communications hardware and software **480** to one or more user output devices that may include the aforementioned desktop monitor **520**, external speakers **560**, the desktop printer **580** or other external components.

User input in the form of messages and data received from the desktop devices **500**, including the desktop keyboard **530**, the desktop mouse **540**, and other external components are received by the peripheral communications hardware and software **480**, and communicated to the TCP/IP services **420**. It should be understood that the messages and data that are intended for the desktop browser **440** are communicated by the TCP/IP services **420** to the desktop browser **440**, and other messages and data, not intended for communication to the desktop browser **440**, are instead managed by the TCP/IP services **420**. The desktop browser **440** identifies and translates the input it receives from the TCP/IP services **420** and directs those output messages and data for communication with the browser-based applications and services **110** and the TCP/IP services **420**, and transmitted to the browser-based applications and services **110** via the digital baseband **410**, cell phone network **300** and TCP/IP network **200**.

The desktop browser **440** also identifies and translates received input from the TCP/IP services **420** into output messages and data that are communicated to one or more of the desktop devices **500**, such as the aforementioned desktop monitor **520**, the external speakers **560**, the desktop printer **580**, and other external components, and transmit those messages and data to the appropriate desktop devices **500** via the aforementioned TCP/IP services **420**, device drivers **460** and peripheral communications hardware and software **480**. Once the communication between the wireless cell phone device **400** and the desktop devices **500** are established, and the communication between the wireless cell phone device and the browser-based applications and/or services **110** are established, the user may then use the desktop devices **500** to both access and use the browser-based programs and/or services **110** through the wireless cell phone device **400**.

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With reference now to FIG. 2A of the Drawings, there is illustrated therein another embodiment of the present invention, which also operates within a distributed communications network, generally designated by the reference numeral **100**. In this embodiment wireline interconnectivity between the cell phone device **400** and the desktop environment is addressed with reference again to FIG. 2A. A wireless cell phone device **400** is connected to one or more of the aforementioned desktop devices **500**, including, but not limited to, a desktop monitor **520**, a desktop keyboard **530**, a desktop mouse **540**, external speakers or a speaker system **560**, a desktop printer **580**, and other external components, through a multichannel wireline connection **482**, which is itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. It should be understood that the multichannel wireline connection **482** may provide support for one or more broadband communications protocols, including, but not limited to, the Universal Serial Bus (USB) protocol **484** and the IEEE 1394 protocol, generally designated by the reference numeral **485**, as well as future like protocols. In an effort to reduce the physical connection requirements of the peripheral communications and software **480** on the wireless cell phone device **400** to a single physical connection, a multiport wireline hub **102** may be used to physically connect the wireless cell phone device **400** to the desktop devices **500**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport wireline hub **102** may obtain its electricity from an external energy source **104**.

With reference now to FIG. 2B of the Drawings, there is illustrated therein a distributed communications network, again generally designated by the reference numeral **100**, utilizing the principles of the present invention. A wireless cell phone device **400** is connected to one or more desktop devices **500**, including, but not limited to, a desktop monitor **520**, a desktop keyboard **530**, a desktop mouse **540**, external speakers or a speaker system **560**, and a desktop printer **580**, through a multichannel wireless connection **483**, itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. As with the aforementioned multichannel wireless connection **482**, it should be understood that the multichannel wireless connection **483** may provide support for one or more broadband communications protocols, including, but not limited to, the Universal Serial Bus USB protocol **484**, the IEEE 1394 protocol **485** and the IEEE 802.11 protocol, generally designated by the reference numeral **486**, as well as future like protocols. In an effort to reduce the physical connection requirements of the peripheral communications hardware and software **480** on the wireless cell phone device **400** to a multichannel wireless connection, a multiport combination wireline/wireless hub **105** may be used to physically connect the wireless cell phone device **400** to the desktop devices **500**. The hub **105** has a wireless connection with the peripheral communications hardware and software **480** on the wireless cell phone device **400** via the multichannel wireless connection **483** and either a wireline or wireless connection with the various desktop devices **500**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport wireless hub **103**, as with the aforementioned hub **102**, may obtain its electricity from an external energy source **104**.

With reference now to FIG. 2C of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing

the principles of the present invention. A wireless cell phone device **400** is connected to one or more wireless desktop devices, generally designated by the reference numeral **501**, including, but not limited to, a wireless desktop monitor **521**, a wireless desktop keyboard **531**, a wireless desktop mouse **541**, a wireless external speaker or a speaker system **561**, and a wireless desktop printer **581**, through a multichannel wireless connection **483**, itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. It should be understood that the multichannel wireless connection **483** may provide support for one or more broadband communications protocols, including, but not limited to, the aforementioned Universal Serial Bus (USB) protocol **484**, the IEEE 1394 protocol **485** and the IEEE 802.11 protocol **486**. An internal multiport wireless physical interface **106**, also a component of the wireless cell phone device's peripheral communications hardware and software **480**, takes the place of an external hub device. The internal multiport wireless physical interface **106** provides one or more wireless multiport network connections between one or more instances of Universal Serial Bus (USB) protocol **484** communications, IEEE 1394 protocol **485** communications and IEEE 802.11 protocol **486** communications, and the wireless desktop devices **501**. When implemented as a physical device, such as a chip or other form of integrated circuit, the internal multiport wireless physical interface **106** removes the need for a physical connection between the wireless cell phone device **400** and the wireless desktop devices **501**, and also removes the need for an external multiport wireless hub.

With reference now to FIG. 3A of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing the principles of the present invention. In the figure, a wireless cell phone device **400** is connected to one or more wireless features, including, but not limited to, a wireless keyboard and mouse, preferably integrated **545**, a high-resolution digital display device **522**, and an external speaker or a speaker system **561**, through one or more wireless connections. For example, the wireless cell phone device **400** connection between the wireless integrated keyboard and mouse **545** and a multiport combination wireline/wireless hub **105**, one or more wireline and or wireless connections between the high-resolution digital display device **522** and the multiport combination wireline/wireless hub **105**, one or more wireline and or wireless connections between the external speaker or speaker system **561** and the multiport combination wireline/wireless hub **105**, and one or more wireline and or wireless connections between the multiport combination wireline/wireless hub **105** and a multichannel wireline connection **482** of the wireless cell phone device **400**, the hub **105** itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**.

In an effort to reduce the physical connection requirements of the peripheral communications and software **480** on the wireless cell phone device **400** to a single physical connection, the multiport combination wireline/wireless hub **105** may be used to physically connect the wireless cell phone device **400** to the wireless integrated keyboard and mouse **545**, the high-resolution digital display device **522** and the external speaker or speaker system **561**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport combination wireline/wireless hub **105** may obtain its electricity from an external energy source **104**.

With further reference to FIG. 3A, the wireless cell phone device **400** uses a cell phone network **300** to access a TCP/IP network **200** that, in turn, provides access to browser-based Internet media applications **111** over the wireless cell phone device's **400** digital baseband **410**. The wireless cell phone device's **400** cell phone desktop operating system **415**, consisting of TCP/IP services **420**, desktop browser software **440** and device drivers **460**, uses its desktop browser software **440** in conjunction with its TCP/IP services **420** to send messages and data to, and receive messages and data from, the browser-based Internet media applications **111** via the digital baseband **410**. Messages and data received from the browser-based Internet media applications **111** are communicated to the desktop browser **440** through the TCP/IP services **420**, interpreted by the desktop browser **440** and transmitted by the TCP/IP services **420** to appropriate device drivers **460**, where they are communicated through the peripheral communications hardware and software **480** to one or more user output devices that may include a high-resolution digital display device **522** and external speakers or speaker system **561**.

User input in the form of messages and data originating from the wireless integrated keyboard and mouse **545** are received by the peripheral communications hardware and software **480**, where they are communicated to the TCP/IP services **420**. Those messages and data that are intended for the desktop browser **440** are communicated by the TCP/IP services **420** to the desktop browser **440**. Other messages and data not intended for communication to the desktop browser **440** are managed by the TCP/IP services **420**. The desktop browser **440** identifies and translates the input received from the TCP/IP services **420**, and directs those output messages and data to the browser-based Internet media applications **111** to the TCP/IP services **420** where they are transmitted to the browser based internet media applications **111** via the digital baseband **410**, cell phone network **300** and TCP/IP network **200**. The desktop browser **440** also identifies and translates input received from the TCP/IP services **420** into output messages and data that are to be communicated to either the high-resolution digital display device **522** or the external speaker or speaker system **561**, and transmits those messages and data to the appropriate devices via the TCP/IP services **420**, device drivers **460** and peripheral communications hardware and software **480**.

Once the communications between the wireless cell phone device **400** and the wireless integrated keyboard and mouse **545**, the high-resolution digital display device **522** and the external speakers or speaker system **561** are established and the communication between the wireless cell phone device and the browser-based Internet media applications **111** are established, the user may use the wireless integrated keyboard and mouse **545** in combination with the high-resolution digital display device **522** to both access and use the browser-based Internet media applications **111** through the wireless cell phone device **400** and through the use of the browser-based Internet media applications **111**, select, download and control the Internet streaming media **112** associated with the browser-based Internet media applications.

With further reference to FIG. 3A, the wireless integrated keyboard and mouse **545** may be used to control the desktop browser **440** in a manner that optimizes the Internet streaming media **112** viewing experience of the user. By using the wireless integrated keyboard and mouse **545** to select either of two display modes of the desktop browser **440**, the user may select the window mode **442** to obtain access to the

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browser-based media applications 111, or the user may select the full-screen windowless mode 443 to display the Internet streaming media 112 without the viewer distraction of a traditional browser interface. By providing the user with the opportunity to toggle back and forth between the window mode 442 and the full-screen windowless mode 443, those methods of controlling the viewer experience, such as forward and reverse, stop, pause and resume play, may be made available through the interaction of the wireless integrated keyboard and mouse 545 with the browser-based Internet media applications.

With reference now to FIG. 3B of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral 100, utilizing the principles of the present invention. In the figure, a wireless cell phone device 400 is connected to one or more features, including, but not limited to, the aforementioned wireless integrated keyboard and mouse 545, a wireless high-resolution digital display device 522 and an external speaker or a speaker system 561, through one or more wireless connections. For example, the wireless cell phone device connection between the wireless integrated keyboard and mouse 545 and the multiport wireless physical interface 106, one or more wireless connections between the high-resolution digital display device 522 and the multiport wireless physical interface 106, one or more wireless connections between the external speakers or speaker system 561 and the multiport wireless physical interface 106, and a physical connection between the cell phone device's 400 multiport wireless physical interface 106 and a multichannel wireless connection 483 of the wireless cell phone 400.

With reference now to FIG. 3C of the Drawings, there is illustrated therein a distributed communications network, again generally designated by the reference numeral 100, utilizing the principles of the present invention. In the figure, a wireless cell phone device 400 is connected to one or more features, including, but not limited to, the aforementioned high-resolution digital display device 522 and an external speaker or a speaker system 561, through one or more wireline and or wireless connections. For example, the wireless cell phone 400 connection between the high-resolution digital display device 522 and the multiport combination wireline/wireless hub 105, one or more wireline and or wireless connections between the external speaker or speaker system 561 and the multiport combination wireline/wireless hub 105, and one or more wireline and or wireless connections between the multiport combination wireline/wireless hub 105 and the aforementioned multichannel wireline/wireless connection 483, itself a component of the wireless cell phone device's 400 peripheral communications hardware and software 480. In an effort to reduce the physical connection requirements of the peripheral communications and software 480 on the wireless cell phone device 400 to a single physical connection, the multiport combination wireline/wireless hub 105 may be used to physically connect the wireless cell phone device 400 to the high-resolution digital display device 522 and the external speaker or speaker system 561. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device 400, the multiport combination wireline/wireless hub 105 may obtain its electricity from an external energy source 104.

With further reference to FIG. 3C, the wireless cell phone device 400 uses a cell phone network 300 to access a TCP/IP network 200 that, in turn, provides access to browser-based Internet media applications 111 over the wireless cell phone device's 400 digital baseband 410. The wireless cell phone

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device's 400 cell phone desktop operating system 415, consisting of TCP/IP services 420, desktop browser software 440 and device drivers 460, uses its desktop browser software 440 in conjunction with its TCP/IP services 420 to send messages and data to, and receive messages and data from, the browser-based Internet media applications 111 via the digital baseband 410. Messages and data received from the browser-based Internet media applications 111 are communicated to the desktop browser 440 through the TCP/IP services 420, interpreted by the desktop browser 440 and transmitted by the TCP/IP services 420 to the appropriate device drivers 460, where they are communicated through the peripheral communications hardware and software 480 to one or more user output devices that may include a high-resolution digital display device 522 and the external speaker or speaker system 561.

User input in the form of messages and data originating from the wireless cell phone device's 400 keypad 412 are transmitted through the digital baseband 410 where they are communicated to the TCP/IP services 420. Those messages and data that are intended for the desktop browser 440 are communicated by the TCP/IP services 420 to the desktop browser 440. Other messages and data not intended for communication to the desktop browser 440 are managed by the TCP/IP services 420. The desktop browser 440 identifies and translates the input it receives from the TCP/IP services 420 and directs those output messages and data to be communicated to the browser-based Internet media applications 111 to the TCP/IP services 420, where they are transmitted to the browser-based Internet media applications 111 via the digital baseband 410, cell phone network 300 and TCP/IP network 200. The desktop browser 440 also identifies and translates input it receives from the TCP/IP services 420 into output messages and data that are to be communicated to the cell phone device's 400 display screen 416, the high-resolution digital display device 522 or the external speaker or speaker system 561, and transmits those messages and data to either the cell phone device's 400 display screen 416 via the digital baseband 410 and LCD controller 414 or to the high-resolution digital display device 522 or external speaker or speaker system 561 via the TCP/IP services 420, device drivers 460 and peripheral communications hardware and software 480.

Once the communications between the wireless cell phone device 400 and the high-resolution digital display device 522 and the external speaker or speaker system 561 are established and the communication between the wireless cell phone device and the browser-based Internet media applications 111 are established, the user may use the wireless cell phone device's 400 keypad 412 and display screen 416 in combination with the high-resolution digital display device 522 to both access and use the browser-based Internet media applications 111 through the wireless cell phone device 400 and through the use of the browser-based Internet media applications 111, select, download and control the internet streaming media 112 associated with the browser based internet media applications.

With further reference to FIG. 3C, the wireless cell phone device's 400 keypad 412 and display screen 416 may be used to control the desktop browser 440 in a manner that optimizes the Internet streaming media 112 viewing experience of the user. By using the wireless cell phone device's 400 keypad 412 and display screen 416 to select either of two display modes of the desktop browser 440, the user may select the window mode 442 to obtain access to the browser-based media applications 111, or the user may select the full-screen windowless mode 443 to display the internet

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streaming media **112** without the viewer distraction of a traditional browser interface. By providing the user with the opportunity to toggle back and forth between the window mode **442** and the full-screen windowless mode **443**, those methods of controlling the viewer experience, such as forward and reverse, stop, pause and resume play, may be made available through the interaction of wireless cell phone device's **400** keypad **412** and display screen **416** with the browser-based Internet media applications.

With reference now to FIG. 3D of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing the principles of the present invention. A wireless cell phone device **400** is connected to a high-resolution digital display device **522** and external speakers or a speaker system **561** through one or more wireless connections between the high-resolution digital display device **522** and the multiport wireless physical interface **106**, one or more wireless connections between the external speaker or speaker system **561** and the multiport wireless physical interface **106**, and a physical connection between the cell phone device's **400** multiport wireless physical interface **106** and the wireless cell phone device's **400** multichannel wireless connection **483**.

In practice, the principles of the present invention have a wide applicability in the consumer marketplace. As noted, users increasingly store important information, e.g., documents and applications, as well as entertainment, e.g., songs and movies, remotely on an Internet-accessible server. Instead of inserting a disk or tape, users now download an electronic version of a work and play that. Of course, numerous non-entertainment usages can be envisioned also, e.g., remotely accessing a document, spreadsheet, database, presentation or any software application, and use made pursuant to the present invention. As wireless connectivity predominates, users will tend to change traditional paradigms of data usage, and employ referential techniques, such as presented herein to access personal information, i.e., an example of the Web 3.0 movement.

Through use of the techniques of the present invention, users are freed from the contemporary physical constraints of common handheld devices, necessitating by size restrictions. Leveraging the functionality of available physical devices to provide better ergonomic conditions is a key concept of the present invention.

For example, users accessing steaming video on their cell phone may desire to watch that video or a movie on a large screen display, perhaps high definition as well. The user can provide either a wireline connection, such as a simple USB connection, or a wireless interface, such as a device hub, and readily connect the content being accessed on the cell phone to the available display for easier viewing. Similarly, a song may be played on a stereo system, thereby providing better acoustical conditions for the hearer.

Likewise, the user may wish to edit or view a document on a larger screen rather than the limited one of the cell phone, whatever its capabilities. Elderly users, for example, may access a display, personal or perhaps public, to better view text or other content. Naturally, as typing or editing would be eased by resort to a larger screen, keyboards and mouse are far more useful than existing data input and editing tools. Lastly, printing by necessity must be done by a physical device connection, e.g., the cell phone user requests a printout of a document stored on a remote server.

Gamers, for example, can better experience the graphics and multimedia functionality of a game by so leveraging remote devices associated to the user. The cell phone or

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other communications device **400** operated in this fashion, provides the gamer with flexibility of usage, e.g., use of others' equipment such as within a gaming salon or station.

It should also be understood that in the embodiment described herein, the user controls the user information or media. For example, the user, through their cell phone, may directly control various peripheral devices, e.g., through commands entered in the cell phone by the user or automatically pursuant to user instructions. For example, the user in this cell phone command mode may directly control a computer without use of any peripheral devices, e.g., keyboard or mouse, associated with that computer or other device. Alternatively, the user may transfer various controls to the peripheral devices, e.g., using the computer keyboard or mouse to navigate through the user information, a website or other media, play a game or access media, thereby making data or command entry easier with more ergonomic devices, e.g., a gamer PlayStation or other console. In addition, the user may, while displaying user information on a peripheral device, simultaneously enter commands, e.g., typing central commands on the cell phone during a movie or steaming video on a selected peripheral device.

An apparatus pursuant to the teachings of the present invention would provide the user thereof with flexibility of presentation, usage and control. For example, the user could be shopping and a vendor of some product, e.g., speakers, could provide a weblink or other information useful to the user to directly access a speaker product for sale, e.g., play a song stored in the user's personal space on the Internet or attached in an email on the desired speaker, mediated through the cell phone or other communications device. Although a preferred embodiment of the instant invention is creation of a desktop computing environment through a separate communications device, the principles also apply in similar contexts where the user leverages the communications device to increase or improve upon the characteristics of the device in hand. In other words, the principles of the present invention are not just applicable in the home, but may be employed in numerous other contexts.

With reference to FIG. 4 of the Drawings, there is illustrated a network **100**, such as the aforementioned distributed communications network. In this figure, the ultimate goal of the Web 3.0 movement is visualized. As shown in FIG. 4, a wireless cell phone or other communications device **400** operates within the network **100** and communicates via a telecommunications linkage and/or an Internet linkage, generally designated by the reference numeral **101**, but well understood by one skilled in the art, and also discussed in some detail hereinabove. As shown, information, generally designated by the reference numeral **701**, can be stored on a remote server **700**, upon which the user's (or another's) data, work space or environment information resides, in whole or in part.

Pursuant to the methodology of the present invention, and in accord with the philosophy of the Web 3.0 movement, the device **400**, whether a cell phone, Blackberry, Palm or other communicator, is the broadband "bit pipe," i.e., the device **400** provides the pathway for Internet or remote data and the one-to-one physical correspondence between the user and the Internet. The user's computer or other physical devices associated with the user, generally designated in the figure by the reference numeral **502**, are thereby virtualized, and the Application Specific Protocol (ASP) model is elevated to the top of the Internet software stack, which assumes that the other types of controllers, e.g., games, can also use the same or similar methods. It is, therefore, understood that the devices **502** can constitute the aforescribed desktop

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devices and components 501, which may be personal to the user, e.g., their PC, or otherwise utilized by the user, e.g., other's equipment.

Pursuant to another embodiment of the present invention, the user of the device 400 controls the device 502 through the device 400, as described, and also releases the device or devices 502 when done, e.g., wither private or public devise controlled by the user through the device 400, at the end of a session.

It should further be understood that although the usage of the software shown in single user, there are instances where two or more individuals may desire to attach to the same device or devices 502, e.g., in a gaming environment. As shown in FIG. 4, another user, employing a separate wireless device 401, may be connected to the same device or devices 502.

It should be understood that the interconnection between the wireless device 400, as well as wireless devices 401, to the device, devices or components 502, can be either wireless or wireline. The respective interconnections are designated by the reference numerals 600 and 601, respectively.

It should be understood that the user may control particular components within the devices 502, e.g., a speaker within a speaker system, and not the entire system. Allowing granularity of control permits the user to only access desired components, e.g., on another's system only accessing the big screen television and not the speaker system.

It should be understood that the aforementioned capabilities of interconnectivity of the cell phone to physical components represent exemplary usages. With greater bandwidth and functionality, additional capabilities may be realized.

The foregoing description of the present invention provides illustration and description, but is not intended to be exhaustive or to limit the invention to the precise one disclosed. Modifications and variations are possible consistent with the above teachings or may be acquired from practice of the invention. Thus, it is noted that the scope of the invention is defined by the claims and their equivalents.

What is claimed is:

1. A method for downloading and viewing a movie or video on a display device, the method comprising the steps of:

- (a) electrically coupling for consumer electronic entertainment purposes a display device suitable for use in a media center environment with a mobile communications device that does not form a part of the media center environment;
- (b) causing a first graphic user interface to be displayed on the display device that conveys information to a viewer of the display device about movies or videos that are individually downloadable from a server for display on the display device for consumer electronic entertainment purposes;
- (c) receiving entertainment selection commands by the mobile communications device to allow a particular one of the movies or videos to be selected for downloading from the server based on visual feedback the viewer receives by reading or interacting with the first graphic user interface shown on the display device;
- (d) receiving by the mobile communications device of the particular movie or video that is sent to it from the server based on the viewer's reading or interaction with the first graphic user interface shown on the display device;
- (e) transmitting by the mobile communications device of at least some of the particular movie or video to the

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display device for display thereon simultaneously while at least some of the particular movie or video is being downloaded from the server to the mobile communications device; and

(f) wherein the electrical coupling between the mobile communications device and the display device allows the particular movie or video to be sent there between when the mobile communications device is located a distance away from the display device at which a person watches a movie at home.

2. The method of claim 1, wherein the media center environment forms a home media center environment.

3. The method of claim 1, wherein the display device is electrically coupled to the mobile communications device by means of at least one wireless connection.

4. The method of claim 1, wherein the display device is electrically coupled to the mobile communications device by means of at least one wireline connection.

5. The method of claim 1, wherein the mobile communications device is adapted to communicate with the server via the internet.

6. The method of claim 1, wherein the download commands are generated on the mobile communications device by means of a keyboard.

7. The method of claim 1, wherein the display device comprises a high definition display device.

8. The method of claim 1, wherein the display device comprises a television set.

9. The method of claim 1, further comprising the steps of displaying a control graphic user interface on the display device while the particular movie or video is being shown on the display device:

entering display control commands into the mobile communications device and then sending those display control commands to the server to cause control actions to be performed on the particular movie or video being sent from the server through the mobile communications device and to the display device; and

sending a modified version of the particular movie or video being downloaded which embodies the display control commands.

10. The method of claim 9, wherein the control graphic user interface is shown on the display device at the same time as the stream is shown on the display device.

11. The method of claim 9, wherein the control graphic user interface is shown on the display device only at the command of the user.

12. The method of claim 1, further comprising the step of electrically coupling at least one additional device other than the display device to the mobile communications device.

13. The method of claim 1, wherein the mobile communications device comprises a cellular telephone.

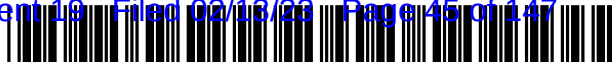
14. The method of claim 1, wherein the first graphic user interface only provides visual information about movies or videos that are available for download from the server.

15. The method of claim 1, wherein the transmitting of the particular movie or video from the mobile communications device to the display device for display thereon occurs substantially simultaneously with the downloading of the particular movie or video from the server to the mobile communications device.

16. The method of claim 1, wherein the causing step includes downloading the first GUI from the server to the mobile communications device.

* * * * *

Exhibit B



US008135342B1

(12) **United States Patent**
Harold

(10) **Patent No.:** **US 8,135,342 B1**
(45) **Date of Patent:** **Mar. 13, 2012**

(54) **SYSTEM, METHOD AND APPARATUS FOR USING A WIRELESS CELL PHONE DEVICE TO CREATE A DESKTOP COMPUTER AND MEDIA CENTER**

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2009/0197652 A1* 8/2009 Lundstrom et al. 455/574
* cited by examiner

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Primary Examiner — Sanh Phu

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1034 days.

(74) *Attorney, Agent, or Firm* — Van Dyke Law; Raymond Van Dyke

(21) Appl. No.: **11/898,912**

(22) Filed: **Sep. 17, 2007**

Related U.S. Application Data

(60) Provisional application No. 60/844,645, filed on Sep. 15, 2006.

(51) **Int. Cl.**
H04B 5/00 (2006.01)

(52) **U.S. Cl.** ... **455/41.1; 455/41.2; 455/557; 455/556.1; 455/41.3**

(58) **Field of Classification Search** 455/41.1, 455/41.2, 557, 556.1, 41.3
See application file for complete search history.

(57) **ABSTRACT**

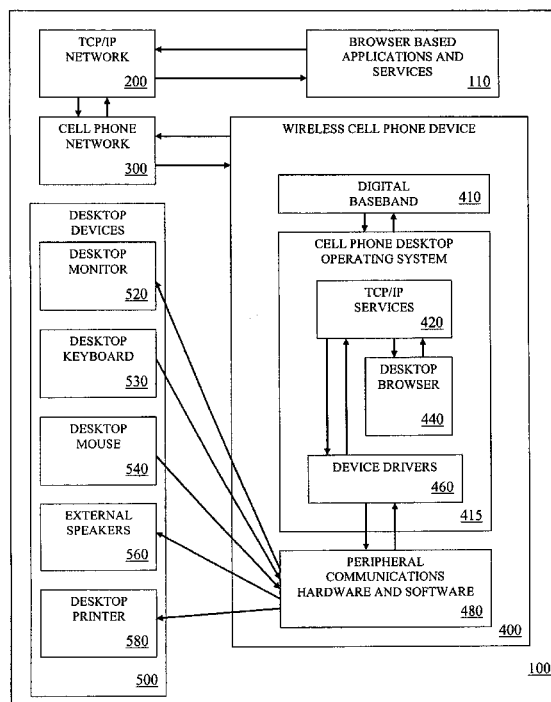
A system, method and apparatus which permits the use of a wireless cell phone or other communications device as a connection, communications and control device able to connect a full-sized desktop monitor or other digital display device, keyboard, mouse, speakers, printer and other external devices to a wireless cell phone device using any combination of wireline or wireless connections from the desktop devices to the wireless cell phone device. The wireless cell phone device is used to create an Internet or other network connection capable of accessing any browser-based web site or browser-based software application commonly accessible to a standard desktop computer having an Internet connection. Once the connections between the desktop monitor, keyboard, mouse, speakers, printer and other components are established with the wireless cell phone device and the Internet connection is established with the wireless cell phone device, the user may access any browser-based web site or software application using the desktop monitor, keyboard, mouse, speakers, printer and other components. Access to Internet software, services and media includes all forms of browser-based desktop software, as well as digital movies, music, and streaming video.

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76 Claims, 9 Drawing Sheets



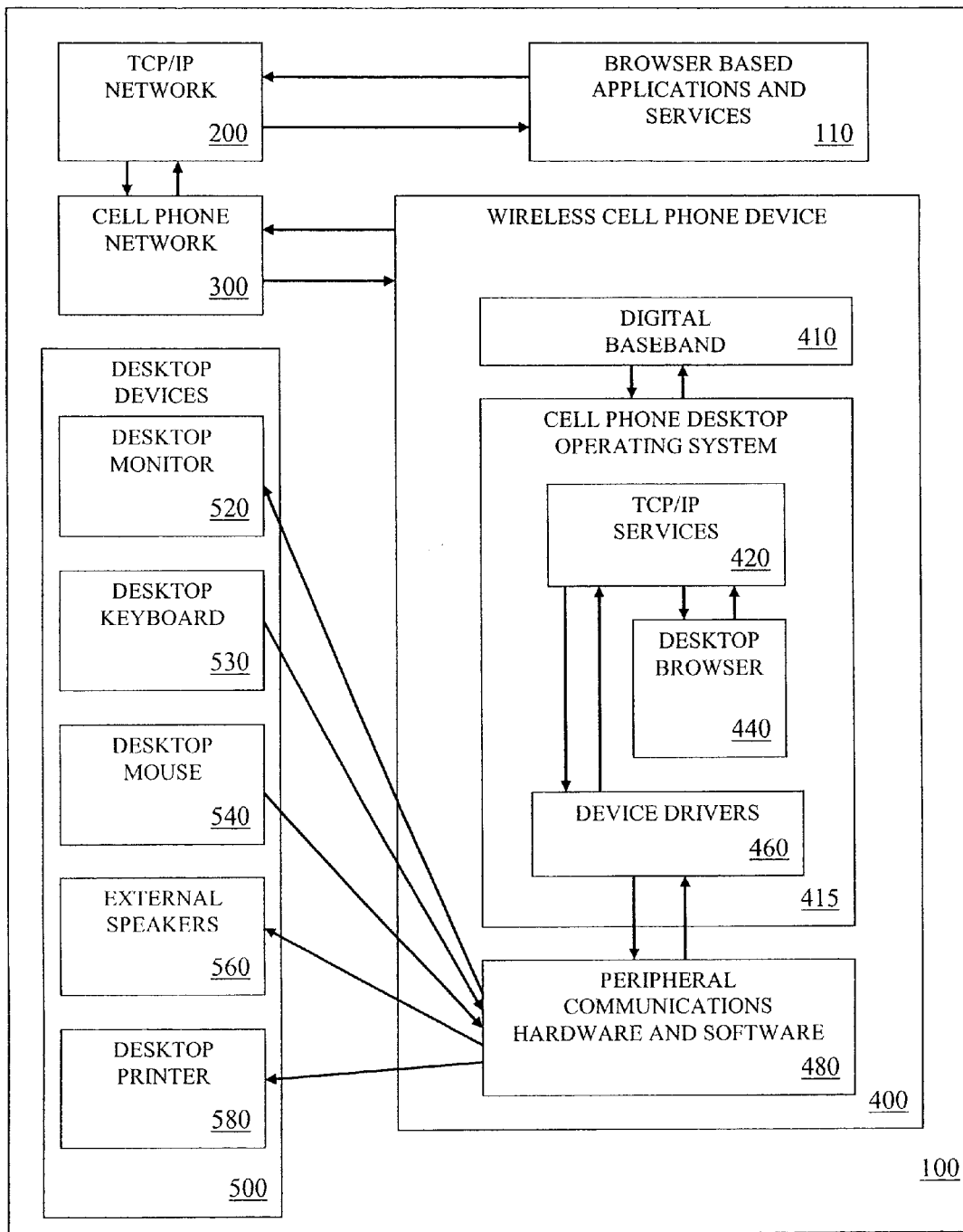


FIGURE 1

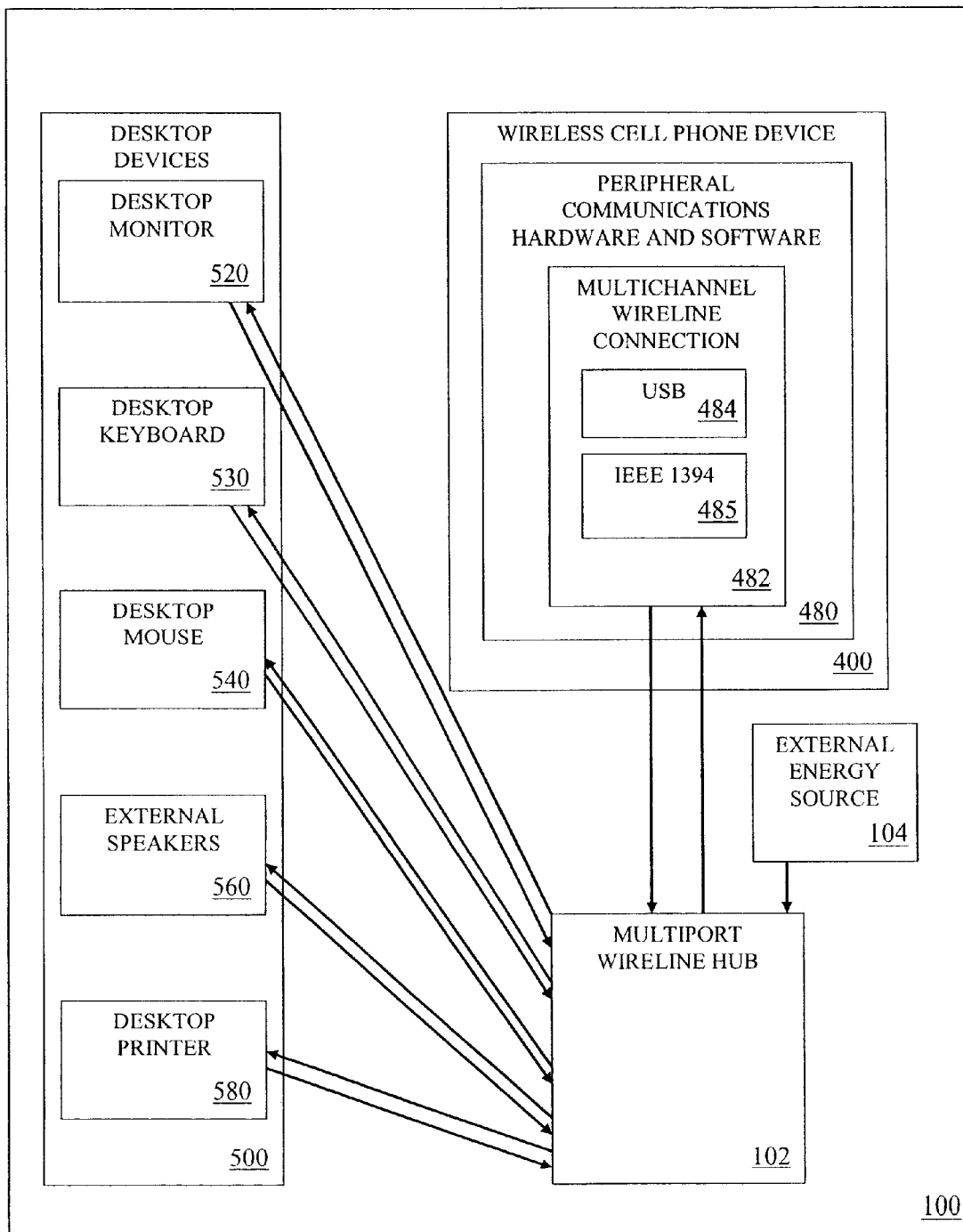


FIGURE 2A

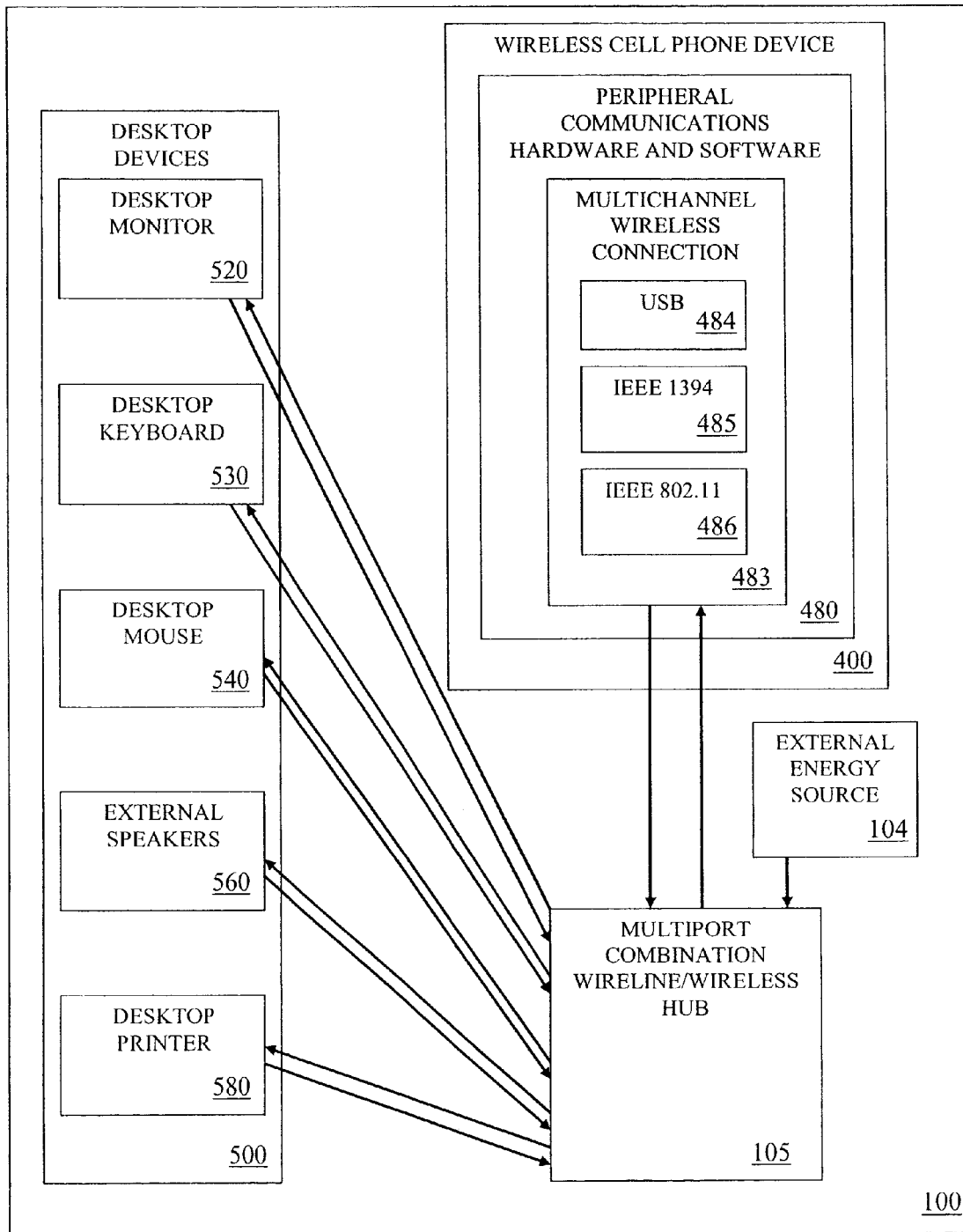


FIGURE 2B

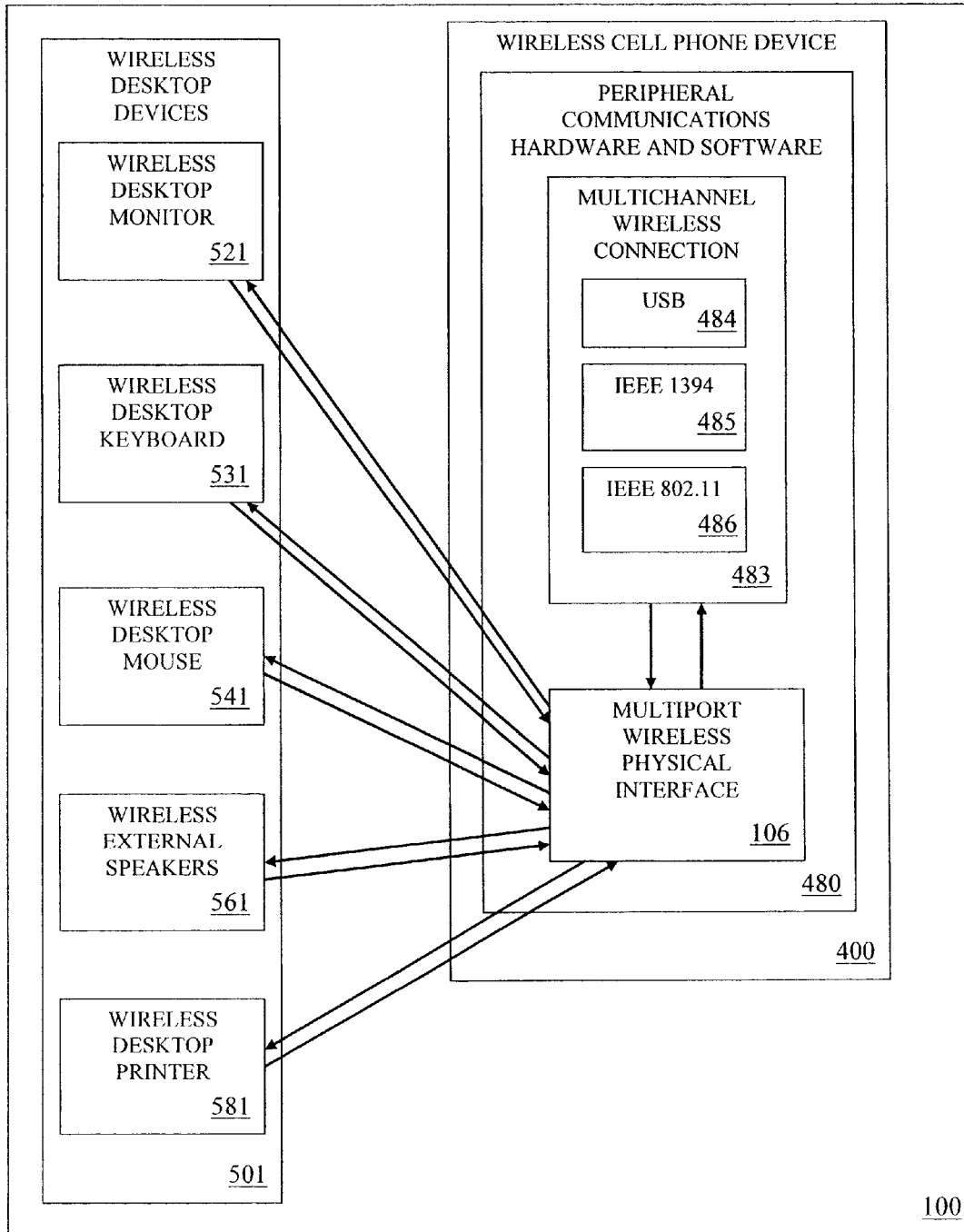


FIGURE 2C

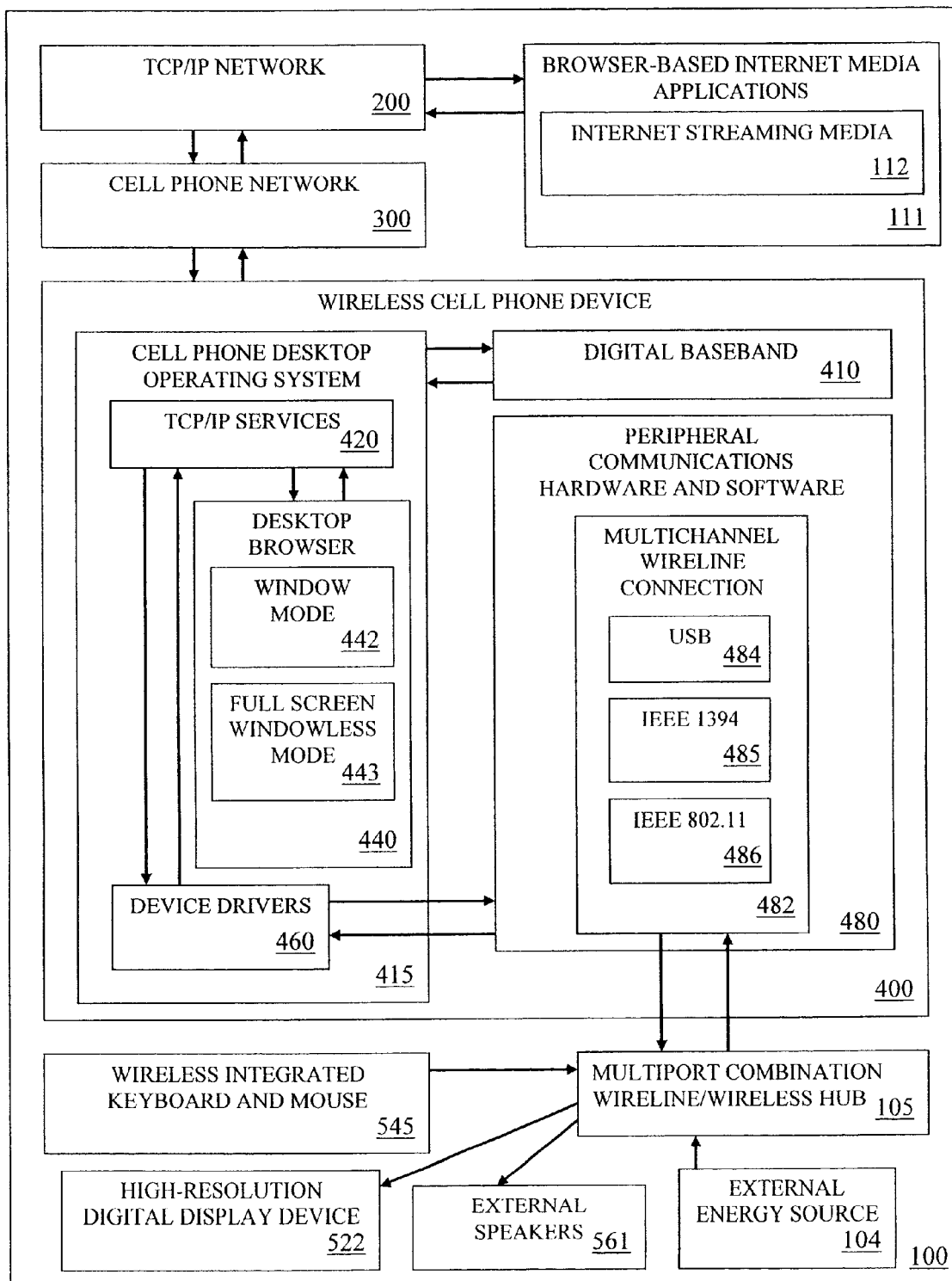


FIGURE 3A

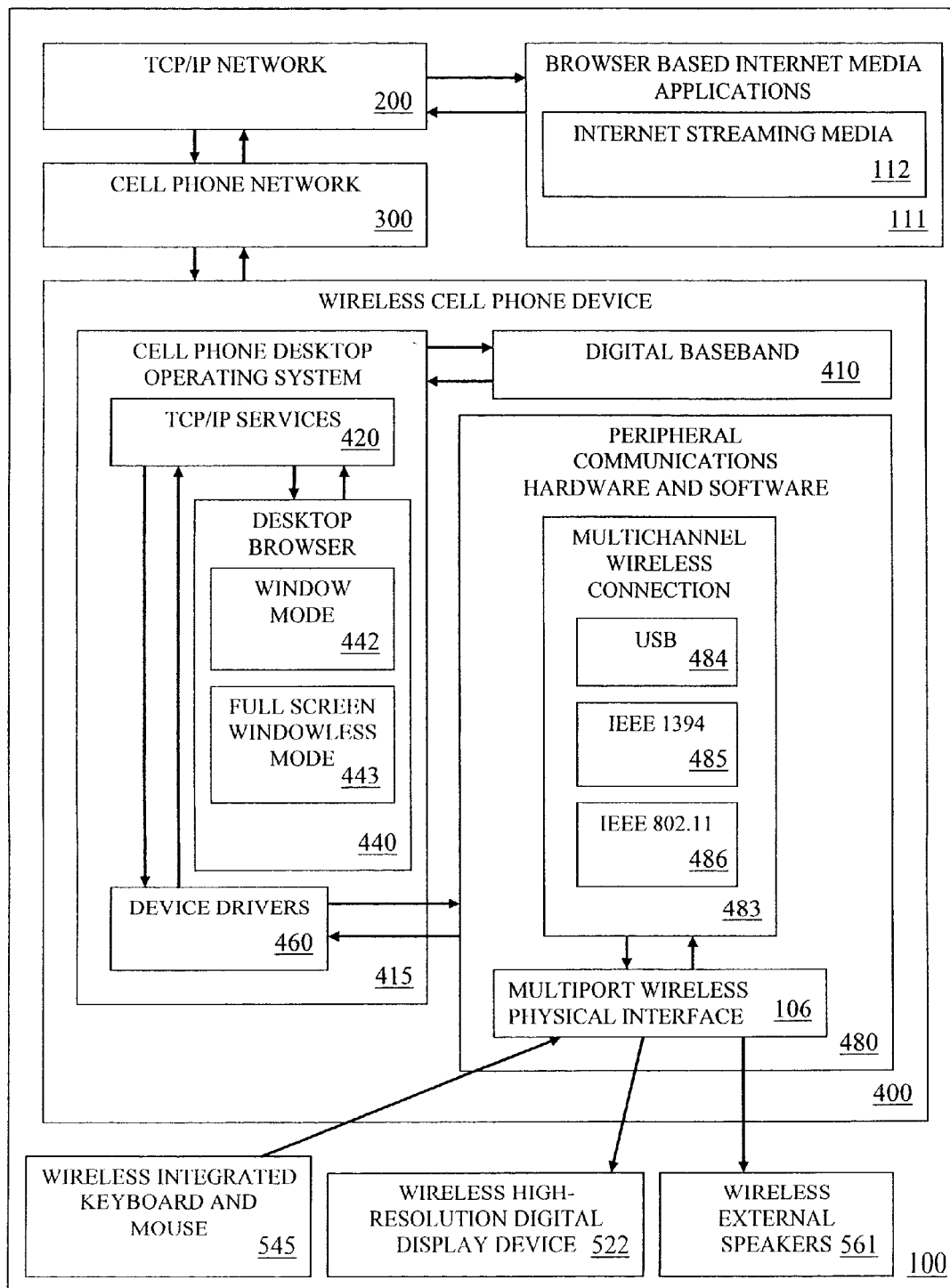


FIGURE 3B

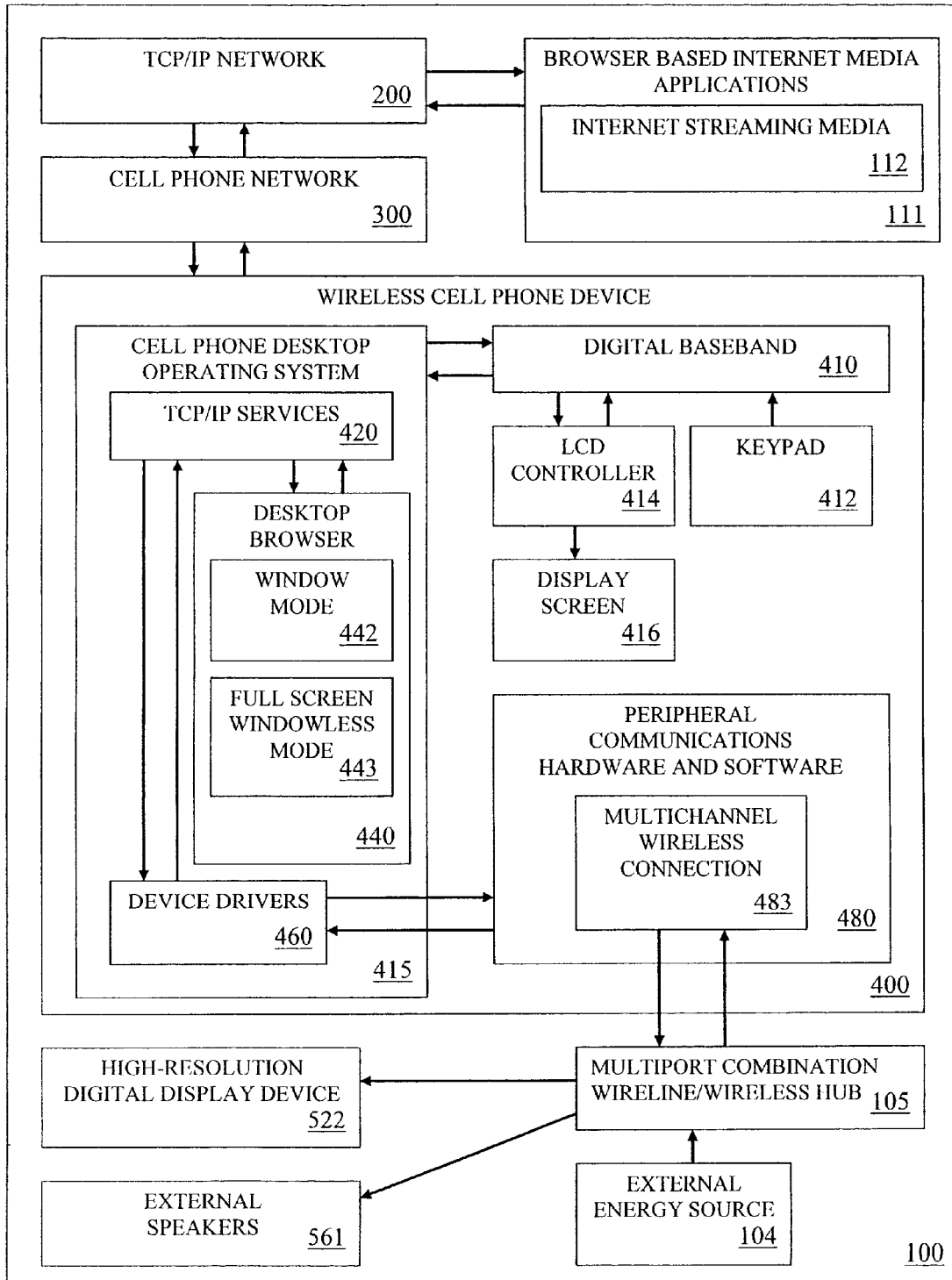


FIGURE 3C

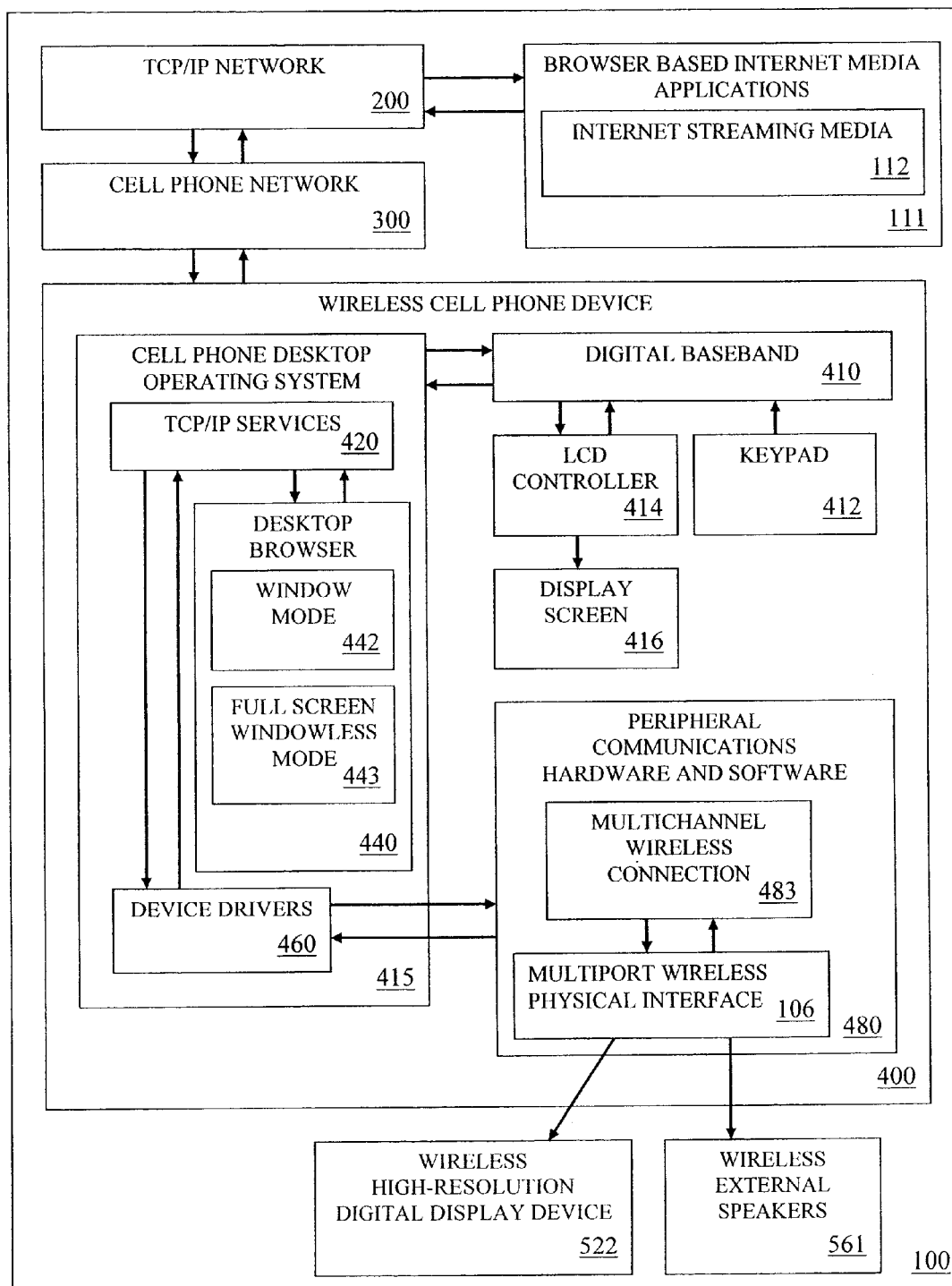


FIGURE 3D

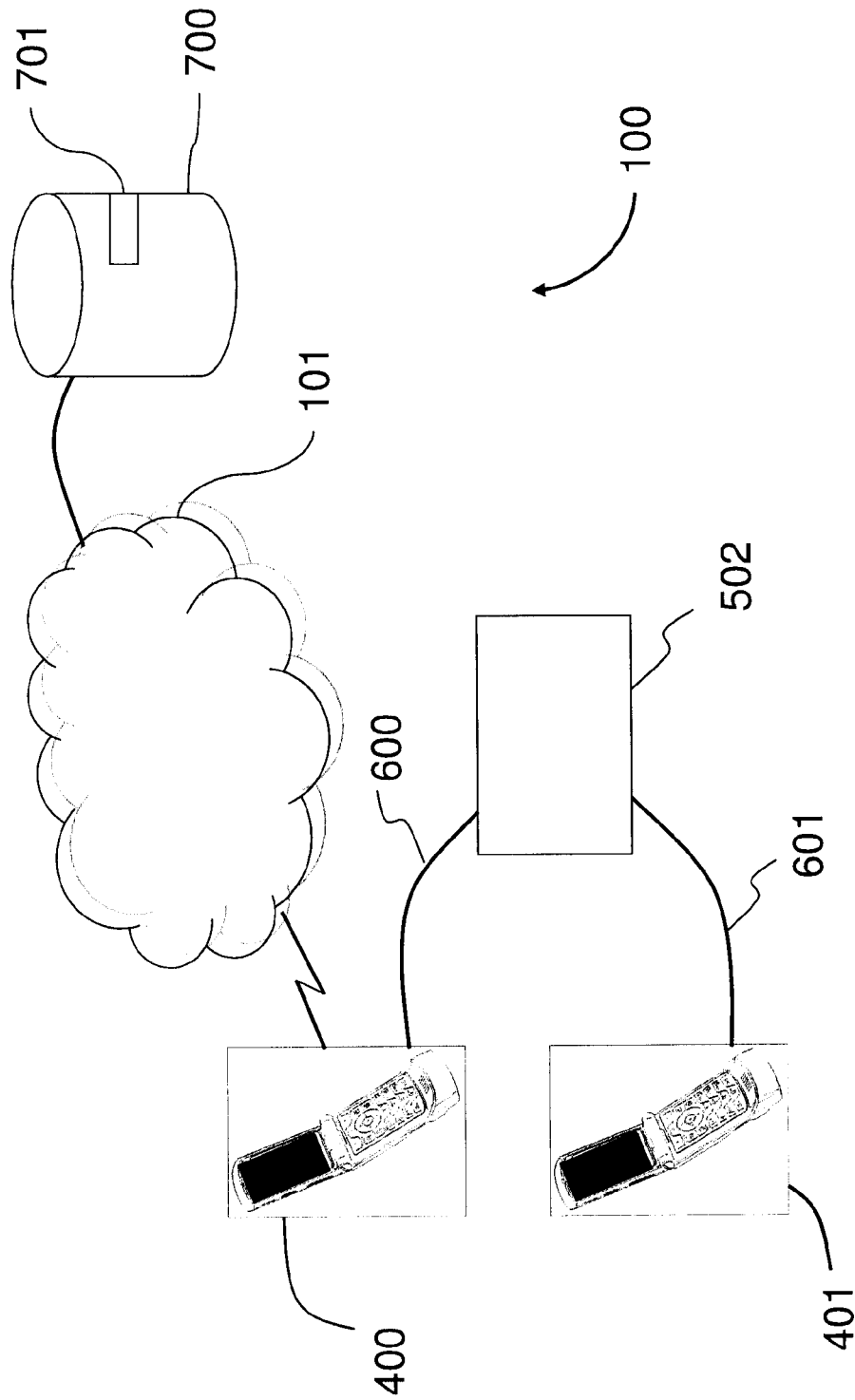


Figure 4

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**SYSTEM, METHOD AND APPARATUS FOR
USING A WIRELESS CELL PHONE DEVICE
TO CREATE A DESKTOP COMPUTER AND
MEDIA CENTER**

CROSS-REFERENCE TO RELATED
APPLICATIONS

This application claims priority to U.S. Provisional Application Ser. No. 60/844,645, filed Sep. 15, 2006, the entire contents of which are hereby incorporated by reference.

This application is also related to U.S. patent application Ser. No. 11/889,941, filed Aug. 17, 2007, the entire contents of which are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to methods for using a wireless cell phone or other communications device in combination with a desktop computer monitor, keyboard and mouse to create a desktop computing environment. In particular, the invention relates to a system, method and apparatus in which the user of a wireless cell phone device establishes a direct connection with a desktop computer monitor, keyboard, mouse or other component using any combination of wireline connections and wireless connections. The present invention also relates to techniques for leveraging the use of a handheld communication device to other devices.

2. Description of the Related Art

Changes in the use and technological capabilities of wireless cell phone and other communications devices, e.g., Blackberry and Palm devices, have led to the rapid adoption of handheld cell phone devices as personal communications tools capable of supporting voice mail, email, calendars, contact lists and related applications. Handheld wireless devices are also commonly used to store and access music, videos and other forms of electronic entertainment and media. The increasing availability of Internet services and applications, particularly those that store a user's data in a computer server, data center or other location on the network independently of the user's handheld or desktop computer, and make that data available to other Internet or network-hosted services and applications, have given end-users the ability to access and store their important data, documents and applications on the Internet, e.g., using a browser in combination with their desktop computer hardware and software. With further technological advances, the traditional personal computer will be eclipsed by this on-going "off-shelving" process of moving data to more remote resources dedicated for this purpose.

Software applications, such as word processors, spreadsheets and database applications, generally require the use of a traditional desktop computer having a CPU, large amounts of random access memory, and one or more disk drives. Software applications and services available over the Internet, however, no longer require a high-performance CPU, large amounts of random access memory, a desktop computer disk drive or a traditional desktop computer operating system for their operation. What these Internet software applications and services do require to operate effectively is a sufficiently high bandwidth Internet or other network connection, a sufficiently capable browser, and standard desktop input and output devices, such as a digital display screen, keyboard and mouse, printer, and a speaker or a speaker system.

Although a number of companies, including Texas Instruments and Siemens, currently offer rudimentary products that allow a cell phone to project images, presentations and mov-

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ies onto a wall or other nearby surface, Applicant is unaware of any product that allows a cell phone to transmit browser-based content to a nearby full-size digital display device, such as a computer monitor, or otherwise leverage the capabilities of the cell phone or other communications device in this matter.

In all cases where wireless cell phone devices are used to send and receive data, the user is confined to the use of the cell phone itself as a handheld computing device. None of the current methodologies for using a wireless cell phone device as a computer take into account the need or desire to have a full-size computer monitor or other full-size digital display device as a visual output device, as well as a full-size keyboard and full-size mouse device as user-operated input devices for manipulating data or issuing commands remotely through the handheld communications device. Specifically, the prior art fails to demonstrate any system, method or apparatus that disengages wireless cell phone and other communications device users from the ergonomic constraints of the small, low-resolution displays presently associated with handheld computing devices, and the small, portable keypad and control key input devices presently associated with handheld computing devices.

Furthermore, the prior art also fails to demonstrate any system, method or apparatus, whereby a wireless cell phone device may be used in place of a traditional computer, i.e., treat a wireless cell phone or other communications device as a thin client. In this instance, the thin client has only a TCP/IP software interface, browser software capable of supporting a high-resolution desktop monitor, the software device drivers necessary to allow desktop computer-based Internet software applications and services to communicate directly with the desktop monitor, keyboard, mouse, speakers and printer devices, and the peripheral communications hardware and software necessary to establish physical communications with the desktop monitor, keyboard, mouse, speakers and printer devices. In other words, this paradigm removes any requirements for the disk drives and other high-capacity storage mechanisms normally associated with desktop computers.

Furthermore, the prior art fails to demonstrate any system, method or apparatus that allows wireless cell phone users to access forms of digital media, including movies, music, and streaming video over the Internet or other network, and to display and otherwise transmit that media through the cell phone to full-size audio and video devices, such as desktop computer monitors, digital display screens and speaker systems directly or indirectly attached to the wireless cell phone device.

There is, therefore, a present need to provide an improved paradigm for using a wireless cell phone or other such communications device as a central component of a desktop or other such computing environment. For example, in the desktop environment this includes a desktop computer monitor or other full-size digital display device used as a visual output device, and a full-size desktop keyboard and mouse as a user input device, thereby allowing the wireless device user to overcome the aforementioned ergonomic and other constraints of existing handheld wireless devices, and better exploit the enhancements of the new wireless and other technologies offered, particularly as Web 3.0 concepts are enabled.

There is a further need to provide an improved paradigm for using a wireless cell phone or other communications device as a central component of a desktop or other such computing environment that includes, in addition to a desktop

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computer monitor and a desktop keyboard and mouse, the use of desktop speakers and a desktop printer.

SUMMARY OF THE INVENTION

In contrast to the traditional model of wireless cell phone usage, the present invention involves a system, method and apparatus that permits the use of a wireless cell phone or other such communications device as a connection, communications and control device able to connect a full-sized desktop monitor or other digital display device, keyboard, mouse, speakers, printer and other components to a wireless cell phone device, using any combination of wireline or wireless connections from the desktop devices to the wireless cell phone device. The wireless cell phone device of the present invention is used to create an Internet or other network connection capable of accessing any browser-based web site or browser-based software application commonly accessible to a standard desktop computer having an Internet connection. Once the connections between the desktop monitor, keyboard, mouse, speakers, printer and/or other components are established with the wireless cell phone device, and the Internet connection is established with the wireless cell phone device, the user may access any browser-based web site or software application using the desktop monitor, keyboard, mouse, speakers and printer. Access to Internet software, services and media includes all forms of browser-based desktop software, as well as digital movies, music, and streaming video.

It is, accordingly, an object of the present invention to provide an improved paradigm for the use of a wireless cell phone or other such communications device as a connection, communications and controlling device for desktop devices, including a digital display monitor, keyboard and mouse, where these desktop devices are used to access and operate desktop browser-based software applications and software services available over the Internet.

It is another object of the present invention to provide an improved system, method and apparatus for the use of a wireless cell phone device as a connection, communications and controlling device for additional desktop devices, including, but not limited to, a desktop printer and a desktop speaker or speaker system, where these devices are used in conjunction with desktop browser-based software applications and software services available over the Internet.

It is another object of the present invention to provide an improved system, method and apparatus for a wireless cell phone device user to connect a desktop monitor, keyboard, mouse, printer and/or other components to a wireless cell phone device using any combination of wireline or wireless connections.

It is a further object of the present invention to provide an improved system, method and apparatus for a wireless cell phone device user to specify the devices to which the wireless cell phone will connect using any combination of hardware connection devices contained in the wireless cell phone device and software connectivity options contained within the wireless cell phone device.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device may be used to control the display of content on the desktop computer monitor through the use of browser software designed to display visual output on full-sized digital display devices, such as a desktop computer monitor or consumer display devices, e.g., television.

It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless

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cell phone device may be used to control output to an external speaker or a speaker system, a printer or other components through the use of software and hardware contained in the wireless cell phone device.

5 It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone or other communications device will use an Internet connection to access software programs and software services whose user interfaces can be displayed through a desktop computer monitor or other digital display device connected to the wireless cell phone device.

10 It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device will combine the functions of an Internet access and communication device with those of a connection, communications and controlling device for a desktop monitor, keyboard, mouse, speakers and printer.

15 It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device will, while under the control of an integrated wireless keyboard and mouse attached to the wireless cell phone device, provide Internet or other network access to various forms of digital streaming media including movies, music and video and to display and or otherwise transmit that media through the wireless cell phone device to full-size, high-resolution digital display devices and speakers or a speaker system.

20 It is a further object of the present invention to provide an improved system, method and apparatus, whereby a wireless cell phone device can, while simultaneously providing Internet or other network access to various forms of digital streaming media, including movies, music and video and displaying and or otherwise transmitting that media through the wireless cell phone device to full-size, high-resolution digital display devices and speakers or a speaker system, also be used as a handheld controller device to select and play said media.

BRIEF DESCRIPTION OF THE DRAWINGS

25 A more complete understanding of the improved system, method and apparatus of the present invention may be obtained by reference to the following Detailed Description when taken in conjunction with the accompanying Drawings wherein:

30 FIG. 1 illustrates an exemplary Internet-based desktop computing environment using a wireless cell phone or other communications device in accordance with the principles of the present invention;

35 FIG. 2A illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which various peripheral devices, including a desktop computer monitor, keyboard, mouse, speakers, printer and other external components, may be made to communicate with the wireless cell phone device using multiple wireline connections;

40 FIG. 2B illustrates a further exemplary Internet-based desktop computing environment using a wireless cell phone device in which various peripheral devices, including a desktop computer monitor, keyboard, mouse, speakers, printer and other external components, may be made to communicate with the wireless cell phone device using a wireless connection with the wireless cell phone device and any combination of wireline and wireless connections with the various peripheral devices;

45 FIG. 2C illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which various wireless peripheral devices, includ-

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ing a desktop computer monitor, keyboard, mouse, speakers, printer and other external components, may be made to communicate with the wireless cell phone device using a wireless connection with the wireless cell phone device and wireless connections with the various peripheral devices;

FIG. 3A illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which high-resolution, high bandwidth digital media including movies, music and streaming video may be transmitted through the wireless cell phone device to full-size audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a combination of wireline and wireless connections;

FIG. 3B illustrates a further exemplary Internet-based desktop computing environment using a wireless cell phone device, in which high-resolution, high bandwidth digital media, including movies, music and streaming video, may be transmitted through the wireless cell phone device to full-size audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a multiport wireless physical interface contained within the wireless cell phone device;

FIG. 3C illustrates another exemplary Internet-based desktop computing environment using a wireless cell phone device, in which high-resolution, high bandwidth digital media, including movies, music and streaming video, may be transmitted through the wireless cell phone device to full-size audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a combination of wireline and wireless connections, while at the same time the wireless cell phone device is used to select and play said media;

FIG. 3D illustrates a further exemplary Internet-based desktop computing environment using a wireless cell phone or other communications device, in which high-resolution, high bandwidth digital media, including movies, music and streaming video, may be transmitted through the wireless cell phone device to full-size wireless audio and digital display devices, a speaker or a speaker system, and other external components attached to the wireless cell phone device through a multiport wireless physical interface contained within the wireless cell phone device, while at the same time the wireless cell phone device is used to select and play said media; and

FIG. 4 illustrates a further embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The following detailed description is presented to enable any person skilled in the art to make and use the invention. For purposes of explanation, specific nomenclature is set forth to provide a thorough understanding of the present invention. However, it will be apparent to one skilled in the art that these specific details are not necessarily required to practice the invention, and descriptions of specific applications are provided only as representative examples. Various modifications to the preferred embodiments will be readily apparent to one 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 invention. The present invention is not intended to be limited to the embodiments shown, but is to be accorded the widest possible scope consistent with the principles and features disclosed herein.

The present invention relates generally to improved methods for using a wireless cell phone or other communications

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device in combination with a desktop computer monitor, a desktop printer and desktop speakers as output devices, and a desktop computer keyboard and desktop mouse as input devices to create a desktop computing environment. In particular, the invention relates to a method and system in which the user of a wireless cell phone device establishes a direct connection with a desktop computer monitor or other form of full-sized, high-resolution digital display device, a desktop keyboard and mouse, a desktop printer and a desktop speaker or speaker system using any combination of one or more wireline connections and one or more wireless connections set forth in more detail herein below and shown in the exemplary figures.

By enabling the wireless cell phone device to transmit visual output to the computer monitor, receive data input from the keyboard and mouse device, print output on the printer, and transmit sound to the speaker or speaker system, the wireless cell phone device can be made to operate as a traditional desktop computing environment, i.e., one having a full-sized computer screen, keyboard, mouse, printer and speakers. Applications normally associated with a desktop computing environment include, but are not limited to, word processing, spreadsheets and database applications, and may be accessed over the Internet or other network as browser-enabled software applications or software services.

User inputs to these various applications and services can be made using the desktop keyboard and mouse connected to the cell phone device. Digital display information, such as provided by the network applications or software services, will be transmitted to the desktop computer monitor by the cell phone device. Audio, such as provided by the software applications and software services, is transmitted through the cell phone device to an external speaker or speaker system. Printable output, such as provided by the software applications and software services, is transmitted through the cell phone device to the printer. Other forms of media, including movies, music and streaming video, may likewise be accessed over the Internet using the desktop computing environment, and transmitted to an attached digital display screen and speakers. All of these transmissions may be made through the wireless cell phone device's browser interface, which may be made to display information in a traditional browser window for interacting with Internet programs and services or in a full-screen windowless mode for viewing movies and other forms of streaming media, as is understood in the art.

With reference now to FIG. 1 of the Drawings, there is illustrated therein a first embodiment for practicing the principles of the present invention, which operates within a distributed communications network, generally designated by the reference numeral 100. As shown in the figure, a wireless cell phone or other communications device 400 is connected to one or more desktop devices 500, including but not limited to a desktop monitor 520, a desktop keyboard 530, a desktop mouse 540, an external speaker or a speaker system 560, and a desktop printer 580, through one or more wireline or wireless connections with the wireless cell phone device's 400 peripheral communications hardware and software, generally designated by the reference numeral 480. The wireless cell phone device 400 also uses a cell phone network 300 to access a TCP/IP network 200 that, in turn, provides access to one or more browser-based applications and or services 110 over the wireless cell phone device's 400 digital baseband 410.

The wireless cell phone device 400 also has a cell phone desktop operating system, generally designated by the reference numeral 415, including TCP/IP services 420, desktop browser software 440 and device drivers 460. As shown in FIG. 1, the user of the cell phone device 400 uses the desktop

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browser software **440** in conjunction with the TCP/IP services **420** to send messages and data to, and receive messages and data from the browser-based applications and or services **110** via the digital baseband **410**. Messages and data received from the browser-based applications and services **110** are communicated to the desktop browser **440** through the TCP/IP services **420**, interpreted by the desktop browser **440**, and transmitted by the TCP/IP services **420** to the appropriate device drivers **460**, where they are communicated through the peripheral communications hardware and software **480** to one or more user output devices that may include the aforementioned desktop monitor **520**, external speakers **560**, the desktop printer **580** or other external components.

User input in the form of messages and data received from the desktop devices **500**, including the desktop keyboard **530**, the desktop mouse **540**, and other external components are received by the peripheral communications hardware and software **480**, and communicated to the TCP/IP services **420**. It should be understood that the messages and data that are intended for the desktop browser **440** are communicated by the TCP/IP services **420** to the desktop browser **440**, and other messages and data, not intended for communication to the desktop browser **440**, are instead managed by the TCP/IP services **420**. The desktop browser **440** identifies and translates the input it receives from the TCP/IP services **420** and directs those output messages and data for communication with the browser-based applications and services **110** and the TCP/IP services **420**, and transmitted to the browser-based applications and services **110** via the digital baseband **410**, cell phone network **300** and TCP/IP network **200**.

The desktop browser **440** also identifies and translates received input from the TCP/IP services **420** into output messages and data that are communicated to one or more of the desktop devices **500**, such as the aforementioned desktop monitor **520**, the external speakers **560**, the desktop printer **580**, and other external components, and transmit those messages and data to the appropriate desktop devices **500** via the aforementioned TCP/IP services **420**, device drivers **460** and peripheral communications hardware and software **480**. Once the communication between the wireless cell phone device **400** and the desktop devices **500** are established, and the communication between the wireless cell phone device and the browser-based applications and or services **110** are established, the user may then use the desktop devices **500** to both access and use the browser-based programs and/or services **110** through the wireless cell phone device **400**.

With reference now to FIG. 2A of the Drawings, there is illustrated therein another embodiment of the present invention, which also operates within a distributed communications network, generally designated by the reference numeral **100**. In this embodiment wireline interconnectivity between the cell phone device **400** and the desktop environment is addressed with reference again to FIG. 2A. A wireless cell phone device **400** is connected to one or more of the aforementioned desktop devices **500**, including, but not limited to, a desktop monitor **520**, a desktop keyboard **530**, a desktop mouse **540**, external speakers or a speaker system **560**, a desktop printer **580**, and other external components, through a multichannel wireline connection **482**, which is itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. It should be understood that the multichannel wireline connection **482** may provide support for one or more broadband communications protocols, including, but not limited to, the Universal Serial Bus (USB) protocol **484** and the IEEE 1394 protocol, generally designated by the reference numeral **485**, as well as future like protocols. In an effort to reduce the physical con-

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nection requirements of the peripheral communications and software **480** on the wireless cell phone device **400** to a single physical connection, a multiport wireline hub **102** may be used to physically connect the wireless cell phone device **400** to the desktop devices **500**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport wireline hub **102** may obtain its electricity from an external energy source **104**.

With reference now to FIG. 2B of the Drawings, there is illustrated therein a distributed communications network, again generally designated by the reference numeral **100**, utilizing the principles of the present invention. A wireless cell phone device **400** is connected to one or more desktop devices **500**, including, but not limited to, a desktop monitor **520**, a desktop keyboard **530**, a desktop mouse **540**, external speakers or a speaker system **560**, and a desktop printer **580**, through a multichannel wireless connection **483**, itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. As with the aforementioned multichannel wireless connection **482**, it should be understood that the multichannel wireless connection **483** may provide support for one or more broadband communications protocols, including, but not limited to, the Universal Serial Bus USB protocol **484**, the IEEE 1394 protocol **485** and the IEEE 802.11 protocol, generally designated by the reference numeral **486**, as well as future like protocols. In an effort to reduce the physical connection requirements of the peripheral communications hardware and software **480** on the wireless cell phone device **400** to a multichannel wireless connection, a multiport combination wireline/wireless hub **105** may be used to physically connect the wireless cell phone device **400** to the desktop devices **500**. The hub **105** has a wireless connection with the peripheral communications hardware and software **480** on the wireless cell phone device **400** via the multichannel wireless connection **483** and either a wireline or wireless connection with the various desktop devices **500**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport wireless hub **103**, as with the aforementioned hub **102**, may obtain its electricity from an external energy source **104**.

With reference now to FIG. 2C of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing the principles of the present invention. A wireless cell phone device **400** is connected to one or more wireless desktop devices, generally designated by the reference numeral **501**, including, but not limited to, a wireless desktop monitor **521**, a wireless desktop keyboard **531**, a wireless desktop mouse **541**, a wireless external speaker or a speaker system **561**, and a wireless desktop printer **581**, through a multichannel wireless connection **483**, itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. It should be understood that the multichannel wireless connection **483** may provide support for one or more broadband communications protocols, including, but not limited to, the aforementioned Universal Serial Bus (USB) protocol **484**, the IEEE 1394 protocol **485** and the IEEE 802.11 protocol **486**. An internal multiport wireless physical interface **106**, also a component of the wireless cell phone device's peripheral communications hardware and software **480**, takes the place of an external hub device. The internal multiport wireless physical interface **106** provides one or more wireless multiport network connections between one or more instances of Universal Serial Bus (USB) protocol **484** communications, IEEE 1394 protocol **485** communications and

IEEE 802.11 protocol **486** communications, and the wireless desktop devices **501**. When implemented as a physical device, such as a chip or other form of integrated circuit, the internal multiport wireless physical interface **106** removes the need for a physical connection between the wireless cell phone device **400** and the wireless desktop devices **501**, and also removes the need for an external multiport wireless hub.

With reference now to FIG. 3A of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing the principles of the present invention. In the figure, a wireless cell phone device **400** is connected to one or more wireless features, including, but not limited to, a wireless keyboard and mouse, preferably integrated **545**, a high-resolution digital display device **522**, and an external speaker or a speaker system **561**, through one or more wireless connections. For example, the wireless cell phone device **400** connection between the wireless integrated keyboard and mouse **545** and a multiport combination wireline/wireless hub **105**, one or more wireline and or wireless connections between the high-resolution digital display device **522** and the multiport combination wireline/wireless hub **105**, one or more wireline and or wireless connections between the external speaker or speaker system **561** and the multiport combination wireline/wireless hub **105**, and one or more wireline and or wireless connections between the multiport combination wireline/wireless hub **105** and a multichannel wireline connection **482** of the wireless cell phone device **400**, the hub **105** itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**.

In an effort to reduce the physical connection requirements of the peripheral communications and software **480** on the wireless cell phone device **400** to a single physical connection, the multiport combination wireline/wireless hub **105** may be used to physically connect the wireless cell phone device **400** to the wireless integrated keyboard and mouse **545**, the high-resolution digital display device **522** and the external speaker or speaker system **561**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport combination wireline/wireless hub **105** may obtain its electricity from an external energy source **104**.

With further reference to FIG. 3A, the wireless cell phone device **400** uses a cell phone network **300** to access a TCP/IP network **200** that, in turn, provides access to browser-based Internet media applications **111** over the wireless cell phone device's **400** digital baseband **410**. The wireless cell phone device's **400** cell phone desktop operating system **415**, consisting of TCP/IP services **420**, desktop browser software **440** and device drivers **460**, uses its desktop browser software **440** in conjunction with its TCP/IP services **420** to send messages and data to, and receive messages and data from, the browser-based Internet media applications **111** via the digital baseband **410**. Messages and data received from the browser-based Internet media applications **111** are communicated to the desktop browser **440** through the TCP/IP services **420**, interpreted by the desktop browser **440** and transmitted by the TCP/IP services **420** to appropriate device drivers **460**, where they are communicated through the peripheral communications hardware and software **480** to one or more user output devices that may include a high-resolution digital display device **522** and external speakers or speaker system **561**.

User input in the form of messages and data originating from the wireless integrated keyboard and mouse **545** are received by the peripheral communications hardware and software **480**, where they are communicated to the TCP/IP services **420**. Those messages and data that are intended for

the desktop browser **440** are communicated by the TCP/IP services **420** to the desktop browser **440**. Other messages and data not intended for communication to the desktop browser **440** are managed by the TCP/IP services **420**. The desktop browser **440** identifies and translates the input received from the TCP/IP services **420**, and directs those output messages and data to the browser-based Internet media applications **111** to the TCP/IP services **420** where they are transmitted to the browser based internet media applications **111** via the digital baseband **410**, cell phone network **300** and TCP/IP network **200**. The desktop browser **440** also identifies and translates input received from the TCP/IP services **420** into output messages and data that are to be communicated to either the high-resolution digital display device **522** or the external speaker or speaker system **561**, and transmits those messages and data to the appropriate devices via the TCP/IP services **420**, device drivers **460** and peripheral communications hardware and software **480**.

Once the communications between the wireless cell phone device **400** and the wireless integrated keyboard and mouse **545**, the high-resolution digital display device **522** and the external speakers or speaker system **561** are established and the communication between the wireless cell phone device and the browser-based Internet media applications **111** are established, the user may use the wireless integrated keyboard and mouse **545** in combination with the high-resolution digital display device **522** to both access and use the browser-based Internet media applications **111** through the wireless cell phone device **400** and through the use of the browser-based Internet media applications **111**, select, download and control the Internet streaming media **112** associated with the browser-based Internet media applications.

With further reference to FIG. 3A, the wireless integrated keyboard and mouse **545** may be used to control the desktop browser **440** in a manner that optimizes the Internet streaming media **112** viewing experience of the user. By using the wireless integrated keyboard and mouse **545** to select either of two display modes of the desktop browser **440**, the user may select the window mode **442** to obtain access to the browser-based media applications **111**, or the user may select the full-screen windowless mode **443** to display the Internet streaming media **112** without the viewer distraction of a traditional browser interface. By providing the user with the opportunity to toggle back and forth between the window mode **442** and the full-screen windowless mode **443**, those methods of controlling the viewer experience, such as forward and reverse, stop, pause and resume play, may be made available through the interaction of the wireless integrated keyboard and mouse **545** with the browser-based Internet media applications.

With reference now to FIG. 3B of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing the principles of the present invention. In the figure, a wireless cell phone device **400** is connected to one or more features, including, but not limited to, the aforementioned wireless integrated keyboard and mouse **545**, a wireless high-resolution digital display device **522** and an external speaker or a speaker system **561**, through one or more wireless connections. For example, the wireless cell phone device connection between the wireless integrated keyboard and mouse **545** and the multiport wireless physical interface **106**, one or more wireless connections between the high-resolution digital display device **522** and the multiport wireless physical interface **106**, one or more wireless connections between the external speakers or speaker system **561** and the multiport wireless physical interface **106**, and a physical connection between the

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cell phone device's **400** multiport wireless physical interface **106** and a multichannel wireless connection **483** of the wireless cell phone **400**.

With reference now to FIG. 3C of the Drawings, there is illustrated therein a distributed communications network, again generally designated by the reference numeral **100**, utilizing the principles of the present invention. In the figure, a wireless cell phone device **400** is connected to one or more features, including, but not limited to, the aforementioned high-resolution digital display device **522** and an external speaker or a speaker system **561**, through one or more wireline and or wireless connections. For example, the wireless cell phone **400** connection between the high-resolution digital display device **522** and the multiport combination wireline/wireless hub **105**, one or more wireline and or wireless connections between the external speaker or speaker system **561** and the multiport combination wireline/wireless hub **105**, and one or more wireline and or wireless connections between the multiport combination wireline/wireless hub **105** and the aforementioned multichannel wireline/wireless connection **483**, itself a component of the wireless cell phone device's **400** peripheral communications hardware and software **480**. In an effort to reduce the physical connection requirements of the peripheral communications and software **480** on the wireless cell phone device **400** to a single physical connection, the multiport combination wireline/wireless hub **105** may be used to physically connect the wireless cell phone device **400** to the high-resolution digital display device **522** and the external speaker or speaker system **561**. Furthermore, in order to reduce the energy requirements associated with the operation of the wireless cell phone device **400**, the multiport combination wireline/wireless hub **105** may obtain its electricity from an external energy source **104**.

With further reference to FIG. 3C, the wireless cell phone device **400** uses a cell phone network **300** to access a TCP/IP network **200** that, in turn, provides access to browser-based Internet media applications **111** over the wireless cell phone device's **400** digital baseband **410**. The wireless cell phone device's **400** cell phone desktop operating system **415**, consisting of TCP/IP services **420**, desktop browser software **440** and device drivers **460**, uses its desktop browser software **440** in conjunction with its TCP/IP services **420** to send messages and data to, and receive messages and data from, the browser-based Internet media applications **111** via the digital baseband **410**. Messages and data received from the browser-based Internet media applications **111** are communicated to the desktop browser **440** through the TCP/IP services **420**, interpreted by the desktop browser **440** and transmitted by the TCP/IP services **420** to the appropriate device drivers **460**, where they are communicated through the peripheral communications hardware and software **480** to one or more user output devices that may include a high-resolution digital display device **522** and the external speaker or speaker system **561**.

User input in the form of messages and data originating from the wireless cell phone device's **400** keypad **412** are transmitted through the digital baseband **410** where they are communicated to the TCP/IP services **420**. Those messages and data that are intended for the desktop browser **440** are communicated by the TCP/IP services **420** to the desktop browser **440**. Other messages and data not intended for communication to the desktop browser **440** are managed by the TCP/IP services **420**. The desktop browser **440** identifies and translates the input it receives from the TCP/IP services **420** and directs those output messages and data to be communicated to the browser-based Internet media applications **111** to the TCP/IP services **420**, where they are transmitted to the

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browser-based Internet media applications **111** via the digital baseband **410**, cell phone network **300** and TCP/IP network **200**. The desktop browser **440** also identifies and translates input it receives from the TCP/IP services **420** into output messages and data that are to be communicated to the cell phone device's **400** display screen **416**, the high-resolution digital display device **522** or the external speaker or speaker system **561**, and transmits those messages and data to either the cell phone device's **400** display screen **416** via the digital baseband **410** and LCD controller **414** or to the high-resolution digital display device **522** or external speaker or speaker system **561** via the TCP/IP services **420**, device drivers **460** and peripheral communications hardware and software **480**.

Once the communications between the wireless cell phone device **400** and the high-resolution digital display device **522** and the external speaker or speaker system **561** are established and the communication between the wireless cell phone device and the browser-based Internet media applications **111** are established, the user may use the wireless cell phone device's **400** keypad **412** and display screen **416** in combination with the high-resolution digital display device **522** to both access and use the browser-based Internet media applications **111** through the wireless cell phone device **400** and through the use of the browser-based Internet media applications **111**, select, download and control the internet streaming media **112** associated with the browser based internet media applications.

With further reference to FIG. 3C, the wireless cell phone device's **400** keypad **412** and display screen **416** may be used to control the desktop browser **440** in a manner that optimizes the Internet streaming media **112** viewing experience of the user. By using the wireless cell phone device's **400** keypad **412** and display screen **416** to select either of two display modes of the desktop browser **440**, the user may select the window mode **442** to obtain access to the browser-based media applications **111**, or the user may select the full-screen windowless mode **443** to display the internet streaming media **112** without the viewer distraction of a traditional browser interface. By providing the user with the opportunity to toggle back and forth between the window mode **442** and the full-screen windowless mode **443**, those methods of controlling the viewer experience, such as forward and reverse, stop, pause and resume play, may be made available through the interaction of wireless cell phone device's **400** keypad **412** and display screen **416** with the browser-based Internet media applications.

With reference now to FIG. 3D of the Drawings, there is illustrated therein a distributed communications network, generally designated by the reference numeral **100**, utilizing the principles of the present invention. A wireless cell phone device **400** is connected to a high-resolution digital display device **522** and external speakers or a speaker system **561** through one or more wireless connections between the high-resolution digital display device **522** and the multiport wireless physical interface **106**, one or more wireless connections between the external speaker or speaker system **561** and the multiport wireless physical interface **106**, and a physical connection between the cell phone device's **400** multiport wireless physical interface **106** and the wireless cell phone device's **400** multichannel wireless connection **483**.

In practice, the principles of the present invention have a wide applicability in the consumer marketplace. As noted, users increasingly store important information, e.g., documents and applications, as well as entertainment, e.g., songs and movies, remotely on an Internet-accessible server. Instead of inserting a disk or tape, users now download an electronic version of a work and play that. Of course, numer-

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ous non-entertainment usages can be envisioned also, e.g., remotely accessing a document, spreadsheet, database, presentation or any software application, and use made pursuant to the present invention. As wireless connectivity predominates, users will tend to change traditional paradigms of data usage, and employ referential techniques, such as presented herein to access personal information, i.e., an example of the Web 3.0 movement.

Through use of the techniques of the present invention, users are freed from the contemporary physical constraints of common handheld devices, necessitating by size restrictions. Leveraging the functionability of available physical devices to provide better ergonomic conditions is a key concept of the present invention.

For example, users accessing steaming video on their cell phone may desire to watch that video or a movie on a large screen display, perhaps high definition as well. The user can either provide a wireline connection, such as a simple USB connection, or a wireless interface, such as a device hub, and readily connect the content being accessed on the cell phone to the available display for easier viewing. Similarly, a song may be played on a stereo system, thereby providing better acoustical conditions for the hearer.

Likewise, the user may wish to edit or view a document on a larger screen rather than the limited one of the cell phone, whatever its capabilities. Elderly users, for example, may access a display, personal or perhaps public, to better view text or other content. Naturally, as typing or editing would be eased by resort to a larger screen, keyboards and mouse are far more useful than existing data input and editing tools. Lastly, printing by necessity must be done by a physical device connection, e.g., the cell phone user requests a printout of a document stored on a remote server.

Gamers, for example, can better experience the graphics and multimedia functionality of a game by so leveraging remote devices associated to the user. The cell phone or other communications device 400 operated in this fashion, provides the gamer with flexibility of usage, e.g., use of others' equipment such as within a gaming salon or station.

It should also be understood that in the embodiment described herein, the user controls the user information or media. For example, the user, through their cell phone, may directly control various peripheral devices, e.g., through commands entered in the cell phone by the user or automatically pursuant to user instructions. For example, the user in this cell phone command mode may directly control a computer without use of any peripheral devices, e.g., keyboard or mouse, associated with that computer or other device. Alternatively, the user may transfer various controls to the peripheral devices, e.g., using the computer keyboard or mouse to navigate through the user information, a website or other media, play a game or access media, thereby making data or command entry easier with more ergonomic devices, e.g., a gamer playstation or other console. In addition, the user may, while displaying user information on a peripheral device, simultaneously enter commands, e.g., typing central commands on the cell phone during a movie or steaming video on a selected peripheral device.

An apparatus pursuant to the teachings of the present invention would provide the user thereof with flexibility of presentation, usage and control. For example, the user could be shopping and a vendor of some product, e.g., speakers, could provide a weblink or other information useful to the user to directly access a speaker product for sale, e.g., play a song stored in the user's personal space on the Internet or attached in an email on the desired speaker, mediated through the cell phone or other communications device. Although a

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preferred embodiment of the instant invention is creation of a desktop computing environment through a separate communications device, the principles also apply in similar contexts where the user leverages the communications device to increase or improve upon the characteristics of the device in hand. In other words, the principles of the present invention are not just applicable in the home, but may be employed in numerous other contexts.

With reference to FIG. 4 of the Drawings, there is illustrated a network 100, such as the aforementioned distributed communications network. In this figure, the ultimate goal of the Web 3.0 movement is visualized. As shown in FIG. 4, a wireless cell phone or other communications device 400 operates within the network 100 and communicates via a telecommunications linkage and/or an Internet linkage, generally designated by the reference numeral 101, but well understood by one skilled in the art, and also discussed in some detail hereinabove. As shown, information, generally designated by the reference numeral 701, can be stored on a remote server 700, upon which the user's (or another's) data, work space or environment information resides, in whole or in part.

Pursuant to the methodology of the present invention, and in accord with the philosophy of the Web 3.0 movement, the device 400, whether a cell phone, Blackberry, Palm or other communicator, is the broadband "bit pipe," i.e., the device 400 provides the pathway for Internet or remote data and the one-to-one physical correspondence between the user and the Internet. The user's computer or other physical devices associated with the user, generally designated in the figure by the reference numeral 502, are thereby virtualized, and the Application Specific Protocol (ASP) model is elevated to the top of the Internet software stack, which assumes that the other types of controllers, e.g., games, can also use the same or similar methods. It is, therefore, understood that the devices 502 can constitute the aforescribed desktop devices and components 501, which may be personal to the user, e.g., their PC, or otherwise utilized by the user, e.g., other's equipment.

Pursuant to another embodiment of the present invention, the user of the device 400 controls the device 502 through the device 400, as described, and also releases the device or devices 502 when done, e.g., wither private or public device controlled by the user through the device 400, at the end of a session.

It should further be understood that although the usage of the software shown in single user, there are instances where two or more individuals may desire to attach to the same device or devices 502, e.g., in a gaming environment. As shown in FIG. 4, another user, employing a separate wireless device 401, may be connected to the same device or devices 502.

It should be understood that the interconnection between the wireless device 400, as well as wireless devices 401, to the device, devices or components 502, can be either wireless or wireline. The respective interconnections are designated by the reference numerals 600 and 601, respectively.

It should be understood that the user may control particular components within the devices 502, e.g., a speaker within a speaker system, and not the entire system. Allowing granularity of control permits the user to only access desired components, e.g., on another's system only accessing the big screen television and not the speaker system.

It should be understood that the aforementioned capabilities of interconnectivity of the cell phone to physical components represent exemplary usages. With greater bandwidth and functionality, additional capabilities may be realized.

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The foregoing description of the present invention provides illustration and description, but is not intended to be exhaustive or to limit the invention to the precise one disclosed. Modifications and variations are possible consistent with the above teachings or may be acquired from practice of the invention. Thus, it is noted that the scope of the invention is defined by the claims and their equivalents.

What is claimed is:

1. A method for facilitating user connectivity, comprising:
 - downloading, by a user on a wireless device in a communications network from a server in said communications network, user information to said wireless device;
 - transmitting, under user control on said wireless device, the downloaded user information from said wireless device to a peripheral device; and
 - operating said peripheral device from said wireless device, wherein said peripheral device, controlled by said user from said wireless device, is connected to a separate system, and
 - wherein said peripheral device includes a display screen, and
 - using, responsive to an output from said display screen, at least one input peripheral device, thereby enabling interactive and real time communications between the peripheral device and the server.
2. The method according to claim 1, further comprising:
 - in said transmitting, said display screen comprises an interactive multi-touch display screen; and
 - using, responsive to an output from said interactive multi-touch display screen, at least one input capability of said multi-touch display screen.
3. The method according to claim 1, wherein the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.
4. The method according to claim 1, wherein said peripheral device receives a wireline communication containing said downloaded user information transmitted from said wireless device.
5. The method according to claim 1, wherein said peripheral device comprises personal equipment of said user.
6. The method according to claim 1, wherein said peripheral device comprises personal equipment of a third party being used by said user.
7. The method according to claim 1, wherein said transmitting comprises a wireline connection between said wireless device and said peripheral device.
8. The method according to claim 1, wherein said transmitting comprises a wireless connection between said wireless device and said peripheral device.
9. The method according to claim 1, wherein said peripheral device comprises an input device,
 - said user inputs commands into said input device, and
 - said commands being relayed through said wireless device.
10. The method according to claim 1, further comprising:
 - controlling, by said user, said peripheral device at a wireless input device.
11. A wireless device for facilitating user connectivity, comprising:
 - means for connecting a user of said wireless device to user information stored on a server in a communications network;
 - means for downloading said user information to said wireless device;

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- means for relaying the downloaded user information, at the control of said user, to a peripheral device; and
- means for operating said peripheral device from said wireless device,
- wherein said peripheral device, controlled by said user from said wireless device, is connected to a separate system, and
- wherein said peripheral device comprises a hub, whereby a plurality of components connected to said peripheral device are accessible therethrough.
12. The wireless device according to claim 11, further comprising:
 - means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and
 - means for employing, at said peripheral device, said downloaded user information.
13. The wireless device according to claim 11, further comprising:
 - means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and
 - means for employing, at said peripheral device, said downloaded user information.
14. The wireless device according to claim 11, wherein said peripheral device comprises personal equipment of said user.
15. The wireless device according to claim 11, wherein said peripheral device comprises personal equipment of a third party being used by said user.
16. The wireless device according to claim 11, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.
17. The wireless device according to claim 11, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.
18. The wireless device according to claim 11, wherein said peripheral device comprises an input device, and
 - wherein said user inputs commands into said input device, said commands being relayed through said wireless device.
19. The wireless device according to claim 11, wherein said peripheral device is controlled by said user at a wireless input device.
20. A peripheral device control system, comprising:
 - a peripheral device;
 - an interconnector, said interconnector connecting, at the control of a user, a wireless device to said peripheral device, and downloading user information to said peripheral device,
 - said user information being stored on a server in a communications network; and
 - said peripheral device, upon receipt of the downloaded user information, employing said user information at the control of said user,
 - wherein said peripheral device, controlled by said user from said wireless device, is part of a separate system, and
 - wherein said downloaded user information employed by said peripheral device creates an environment selected from the group consisting of desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.
21. The peripheral device control system according to claim 20, further comprising:

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means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and means for employing, at said peripheral device, said downloaded user information.

22. The peripheral device control system according to claim 20, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and means for employing, at said peripheral device, said downloaded user information.

23. The peripheral device control system according to claim 20, wherein said peripheral device comprises personal equipment of said user.

24. The peripheral device control system according to claim 20, wherein said peripheral device comprises personal equipment of a third party being used by said user.

25. The peripheral device control system according to claim 20, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.

26. The peripheral device control system according to claim 20, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

27. The peripheral device control system according to claim 20, wherein said peripheral device comprises an input device, and

wherein said user inputs commands into said input device, said commands being relayed through said wireless device.

28. The peripheral device control system according to claim 20, wherein said peripheral device is controlled by said user at a wireless input device.

29. The peripheral device control system according to claim 28, wherein, under respective user control on said respective wireless devices, downloaded user information is transmitted to said peripheral device.

30. The peripheral device control system according to claim 28, wherein said peripheral device is operated from at least one of said wireless devices.

31. The peripheral device control system according to claim 28, wherein, in response to an output from said peripheral device, input devices connected to the respective wireless devices are used.

32. The peripheral device control system according to claim 28, wherein said peripheral device is selected from the group consisting of a display screen, a speaker system and combinations thereof.

33. The peripheral device control system according to claim 20, wherein a plurality of users on a respective plurality of wireless devices download user information from said server to said plurality of wireless devices.

34. A method for facilitating user connectivity, comprising: downloading, by a user on a wireless device in a communications network from a server in said communications network, user information to said wireless device; transmitting, under user control on said wireless device, the downloaded user information from said wireless device to a peripheral device in the form of a display screen, operating said peripheral device from said wireless device; and

responding to an output from said peripheral device by using input devices available on the wireless device to communicate with the server,

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wherein said peripheral device, controlled by said user from said wireless device, is connected to a separate system,

thereby enabling interactive and real time communications between the peripheral device and the server.

35. The method according to claim 34, wherein the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

36. The method according to claim 34, wherein said peripheral device receives a wireline communication containing said downloaded user information transmitted from said wireless device.

37. The method according to claim 34, wherein said peripheral device comprises personal equipment of said user.

38. The method according to claim 34, wherein said peripheral device comprises personal equipment of a third party being used by said user.

39. The method according to claim 34, wherein said transmitting comprises a wireline connection between said wireless device and said peripheral device.

40. The method according to claim 34, wherein said transmitting comprises a wireless connection between said wireless device and said peripheral device.

41. The method according to claim 34, wherein said peripheral device comprises an input device,

said user inputs commands into said input device, and said commands being relayed through said wireless device.

42. The method according to claim 34, further comprising: controlling, by said user, said peripheral device at a wireless input device.

43. The method according to claim 34, wherein said peripheral device comprises a display screen.

44. The method according to claim 43, wherein said display screen comprises an interactive multi-touch display screen, and further comprising:

using, responsive to an output from said interactive multi-touch display screen, at least one input capability of said multi-touch display screen.

45. A method for facilitating user connectivity, comprising: downloading, by a plurality of users, onto a respective plurality of wireless devices in a communications network from a server in said communications network, user information to said wireless devices;

transmitting, under respective user control on respective wireless devices, the downloaded user information from said wireless devices to at least one display screen,

operating said at least one display screen from at least one of said wireless devices; and

responding to an output from said at least one display screen by using input devices connected to the respective said wireless devices, thereby communicating with the server,

wherein said at least one display screen, controlled by said respective users, is connected to a separate system, thereby enabling interactive and real time communications between the at least one display screen and the server.

46. The method according to claim 45, wherein the downloaded user information on said display screen creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

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47. The method according to claim 45, wherein said display screen receives a wireline communication containing said downloaded user information transmitted from at least one of said wireless devices.

48. The method according to claim 45, wherein said display screen comprises personal equipment of one of said plurality of users.

49. The method according to claim 45, wherein said display screen comprises personal equipment of a third party being used by one of said plurality of users.

50. The method according to claim 45, wherein said transmitting comprises a wireline connection between at least one of said wireless devices and said display screen.

51. The method according to claim 45, wherein said transmitting comprises a wireless connection between at least one of said wireless devices and said display screen.

52. The method according to claim 45, wherein said display screen comprises an input device, said user inputs commands into said input device, and said commands being relayed through said wireless device.

53. The method according to claim 45, further comprising: controlling, by at least one of said plurality of users, said display screen at a wireless input device.

54. The method according to claim 45, wherein said display screen comprises an interactive multi-touch display screen, and further comprising: using, responsive to an output from said interactive multi-touch display screen, at least one input capability of said multi-touch display screen.

55. The method according to claim 45, wherein said transmitting, under respective user control on respective wireless devices, transmits the downloaded user information from said wireless devices to at least one display screen and at least one speaker system.

56. The method according to claim 55, wherein said operating operates said at least one display screen and said at least one speaker system from at least one of said wireless devices.

57. The method according to claim 55, wherein said responding responds to an output from said at least one display screen or said at least one speaker system by using input devices connected to the respective said wireless devices.

58. A wireless device for facilitating user connectivity, comprising:

means for connecting a user of said wireless device to user information stored on a server in a communications network;

means for downloading said user information to said wireless device;

means for relaying the downloaded user information, at the control of said user, to a peripheral device, said peripheral device being connected to another device selected from the group consisting of a portable PC, tablet computer, desktop computer and media center; and

means for operating said peripheral device from said wireless device,

whereby said peripheral device is selected from the group consisting of a keyboard, a monitor, a mouse, speakers, a wireline hub, and combinations thereof.

59. The wireless device according to claim 58, wherein the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

60. The wireless device according to claim 58, further comprising:

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means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and means for employing, at said peripheral device, said downloaded user information.

61. The wireless device according to claim 58, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and means for employing, at said peripheral device, said downloaded user information.

62. The wireless device according to claim 58, wherein said peripheral device comprises personal equipment of said user.

63. The wireless device according to claim 58, wherein said peripheral device comprises personal equipment of a third party being used by said user.

64. The wireless device according to claim 58, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.

65. The wireless device according to claim 58, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

66. The wireless device according to claim 58, wherein said peripheral device comprises an input device, and wherein said user inputs commands into said input device, said commands being relayed through said wireless device.

67. The wireless device according to claim 58, wherein said peripheral device is controlled by said user at a wireless input device.

68. A wireless device for facilitating user connectivity, comprising:

means for connecting a user of said wireless device to user information stored on a server in a communications network;

means for downloading said user information to said wireless device;

means for relaying the downloaded user information, at the control of said user, to a peripheral device, said peripheral device being connected to a separate system; and means for operating said peripheral device from said wireless device,

whereby the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

69. The wireless device according to claim 68, further comprising:

means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and means for employing, at said peripheral device, said downloaded user information.

70. The wireless device according to claim 68, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and means for employing, at said peripheral device, said downloaded user information.

71. The wireless device according to claim 68, wherein said peripheral device comprises personal equipment of said user.

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72. The wireless device according to claim 68, wherein said peripheral device comprises personal equipment of a third party being used by said user.

73. The wireless device according to claim 68, wherein said means for relaying comprises a wireline connection 5 between said wireless device and said peripheral device.

74. The wireless device according to claim 68, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

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75. The wireless device according to claim 68, wherein said peripheral device comprises an input device, and wherein said user inputs commands into said input device, said commands being relayed through said wireless device.

76. The wireless device according to claim 68, wherein said peripheral device is controlled by said user at a wireless input device.

* * * * *

(12) **INTER PARTES REVIEW CERTIFICATE** (839th)

**United States Patent
Harold**

(10) **Number:** US **8,135,342 K1**
(45) **Certificate Issued:** Feb. 21, 2018

(54) **SYSTEM, METHOD AND APPARATUS FOR
USING A WIRELESS CELL PHONE
DEVICE TO CREATE A DESKTOP
COMPUTER AND MEDIA CENTER**

(75) **Inventor:** Michael D. Harold

(73) **Assignee:** SOCKEYE LICENSING TX LLC

Trial Numbers:

IPR2016-00989 filed Apr. 30, 2016

IPR2016-01052 filed May 17, 2016

Inter Partes Review Certificate for:

Patent No.: 8,135,342

Issued: Mar. 13, 2012

Appl. No.: 11/898,912

Filed: Sep. 17, 2007

The results of IPR2016-00989 and IPR2016-01052 are reflected in this inter partes review certificate under 35 U.S.C. 318(b).

INTER PARTES REVIEW CERTIFICATE

U.S. Patent 8,135,342 K1

Trial No. IPR2016-00989

Certificate Issued Feb. 21, 2018

1

2

AS A RESULT OF THE INTER PARTES
REVIEW PROCEEDING, IT HAS BEEN
DETERMINED THAT:

Claims 1, 3-11, 14-20, 23, 24, 27-43, 45-53, 55-59, 62-68⁵
and 71-76 are cancelled.

* * * * *

Exhibit C

Nokia N92

From Wikipedia, the free encyclopedia

The **Nokia N92** is a smartphone part of the multimedia Nseries. It was announced on November 2, 2005 and was the world's first mobile phone with an integrated DVB-H tuner (excluding the experimental 7710). As a result, Nokia marketed it as a phone for watching TV.^[1] It featured the same swivel design as the N90. It runs on Symbian OS v9.1 and the S60 3rd Edition interface.

Interesting features of the handset's DVB-H receiver include the program guide and the recording facility. The phone has a constant 30 second rolling record function for instant replay and can record broadcasts to memory card. Providers may charge for some of these features.

Elsewhere the N92 was also advanced, featuring a large 2.8" display (the largest at the time, excluding the Communicators), dedicated multimedia keys, 3G, Wi-Fi, UPnP, and a 2 megapixel camera with flash. Its CPU runs at a clock speed of 268 MHz. However it was considerably heavy (at 191 g), despite its size.

Design

The keypad is unusual as it has numbers viewable in both portrait and landscape modes. This is to accommodate for the screen, which can be opened in two different positions:

1. Horizontal "clamshell"-like opening (like the Nokia 9300)
2. Open, twist then fold (like the Nokia N93)

Because of its unusual keypad, some users refer to it as confusing.^[2]

References

1. <http://company.nokia.com/en/news/press-releases/2005/11/02/presenting-the-nokia-n92-tv-goes-mobile>
2. http://www.allaboutsymbian.com/features/item/Nokia_N92_Preview.php All About Symbian

External links

- Official Nokia N92 product page (<http://www.nokia.com/n92>)
- N Series Talk (<http://www.nseriestalk.com>) Nokia N Series Forums and Community

Retrieved from "https://en.wikipedia.org/w/index.php?title=Nokia_N92&oldid=750503718"

Categories: Nokia mobile phones | UPnP Devices | Smartphones

Nokia N92

Compatible networks	UMTS (3G), Quad band GSM / GPRS / EDGE GSM 850, GSM 900, GSM 1800, GSM 1900
Availability by country	2006
Related	Nokia N90 Nokia N93
Dimensions	107x58x25 mm
Weight	191 g
Operating system	Symbian OS v9.1, S60 3rd Edition
Memory	160 MB (internal) + MiniSD Memory Card up to 2 GB
Rear camera	2 Megapixels
Connectivity	PC via USB 2.0, Bluetooth 2.0, Wi-Fi, UPnP, Infrared

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Exhibit D

Presenting the Nokia N92: TV goes Mobile

The world's first integrated DVB-H mobile device makes prime time any time

Nokia Mobility Conference 2005, Barcelona, Spain/Espoo, Finland - At the Nokia Mobility Conference, Nokia today proudly presented the Nokia N92, the first integrated DVB-H mobile device in the Nokia Nseries range for watching broadcast TV programs. The Nokia N92 offers easy access to TV programs without having to sit in front of a television set. Users can set reminders to watch their favorite TV programs, create personal channel lists and subscribe to TV channel packages. The outstanding new form factor offers a highly ergonomic user-experience. The usability is further enhanced by the large 2.8" anti-glare QVGA screen with 16 million colors and the dedicated media keys that deliver a rich viewing experience.

"The Nokia N92 is the first in a range of products bringing together the rich experience of conventional broadcast TV with the connected experience of mobility to create a new category - mobile TV," said Richard Sharp, Vice President of Rich Media at Nokia. "We are confident that mobile TV will be an exciting new service for consumers, as well as generate new opportunities for innovation and growth in the mobile and media industries."

The Nokia N92 has four different modes for simple and easy usage. The new view mode is especially designed for watching TV and video. To start watching mobile TV*, users simply need to open the Nokia N92 in view mode and press the Multimedia key. The Electronic Service Guide (ESG) contains information about the available TV channels, programs and services. Other mobile TV features include watching time of up to four hours, recording and 30 seconds replay.

The cellular connectivity means people can interact with the TV, through services such as voting, program feedback and additional web discovery. Further, the Nokia N92 supports the new Nokia Web Browser with Mini Map, which provides a semi-transparent zoomed-out view of a web page that enables users to quickly orient themselves on a small screen. With an overall view of the web page, users can intuitively navigate to all corners of it as well as see the web page as it was originally designed.

The Nokia N92 is also an XpressMusic device, with up to 2 GB memory card support, offering storage for up to 1500 songs delivered through the built-in stereo speakers or a stereo headset. The entertainment experience is further complimented by FM radio with Visual Radio support*. Additional Nseries features include 2 megapixel camera for print-quality photos and email attachment support.

The Nokia N92 provides a rich range of connectivity options such as Wi-Fi, infrared, Bluetooth wireless technology as well as USB 2.0 (Mass Storage Class), which allows users to connect the Nokia N92 directly to a compatible PC for quick and convenient file transfers or downloads.

The Nokia N92, which is based on S60 3rd Edition and Symbian OS, is planned to be commercially available in mid 2006 in Europe, Africa and Asia, in countries where DVB-H services are available, with an estimated, unsubsidized sales price of approximately 600 euros.

*To check the availability and cost of the service, contact your network operator or service provider.

Notes to the editors

DVB-H technology enables the TV service you are familiar with at home to be broadcast to your mobile device. DVB-H provides the best user experience in the mobile environment with excellent picture and reduced battery consumption. Up to 50 TV channels can be delivered with low cost, over one network. With extensive pilots of broadcast mobile TV currently taking place across the globe, involving leading broadcasters, mobile operators, broadcast network operators and

handset manufacturers, the market for commercial broadcast services is expected to spread during 2006.

About Nokia Nseries

Nokia Nseries is a range of high performance multimedia devices that delivers unparalleled mobile multimedia experiences by combining the latest technologies with stylish design and ease of use. With Nokia Nseries products, consumers can use a single device to enjoy entertainment, access information and to capture and share pictures and videos, whenever and wherever they want.

About Nokia

Nokia is a world leader in mobile communications, driving the growth and sustainability of the broader mobility industry. Nokia connects people to each other and the information that matters to them with easy-to-use and innovative products like mobile phones, devices and solutions for imaging, games, media and businesses. Nokia provides equipment, solutions and services for network operators and corporations.

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www.nokia.com

www.nokia.com/mobiletv

Please visit the Nokia Mobility Conference 2005 website for more information at:

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30 Jun 2017

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30 Jun 2017

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27 Jun 2017

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13 Jun 2017

Nokia Announces Pricing and Early Results for its Tender Offers and Consent Solicitation

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Nokia commences Tender Offers for outstanding notes and Consent Solicitation from certain note holders

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Exhibit E

Mobile

THIRD GENERATION MOBILE PHONES

Mobile

THIRD GENERATION MOBILE PHONE

Rapid shift to third-generation mobile phones with emergence of 3.5-generation mobile phones expected soon

Mobile phones are the backbone of mobile communications and have experienced explosive growth. Since the year 2000, mobile phone growth within Japan has slowed due to the high level of market penetration and the limited number of consumers that do not already own a mobile phone. Currently, the mobile phone market is mainly supported by consumers replacing their old models with newer ones.

Third-generation mobile phones* (hereafter referred to as "3G mobiles") are expected to be extremely popular and fuel further replacement demand. Telecommunication firms all over the world are preparing to deploy third-generation networks. 3G mobiles provide a next generation mobile phone service that aims to offer high-speed 2M/second communication using high transmission efficiency in the high frequency 2GHz band. This will allow multi-media communication (such as animated images), a typical example of which is viewing TV on a mobile phone. This offers a groundbreaking way to use mobile phones.



Imminent is the practical application of new technology called "3.5G" which realizes further high-speed data communication by developing the technology base of the 3G mobile. This not only realizes maximum 12Mbps transmission speed but was developed with fixed-rate communications in mind, so together with the high transmission speed of maximum 12M bits/second, a cheaper and more comfortable mobile environment is about to be realized.

*3rd generation mobile phone

Mobile phone (mobile communication) use has undergone the changes shown below.

First-generation mobile phone (1G):	Used mainly as a car phone service, started in December 1979, provided using analog technology.
Second-generation mobile phone (2G):	Used digital technology launched in March 1993 (PDC format was used inside Japan). After services other than communication services such as i-mode were added, became also referred to as 2.5 generation (2.5G).
Third-generation mobile phone (3G):	Uses high-speed communication and the highly efficient W-CDMA technology. The first 3G service in Japan was NTT DoCoMo's "FOMA", which started in October 2001. A mobile phone based on high-speed communication technology called "3G" which realizes 3M bits/second or over by developing the current 3G technology will be on the market soon.



Supplying high-performance devices to enable convenient use of various applications

The mobile phone is functionally divided into the communication part and application part. The evolution of the former is as stated above, but the latter part is also rapidly becoming multifunctional by utilizing high-speed communications. Some examples are: high pixel built-in digital cameras; accurate capturing of location information by GPS (Global Positioning System); evolution of sound sources such as termination sounds with a greater range of expression; and built-in electronic money functions. Viewing of terrestrial digital broadcasts is also about to become possible.

In order to use these functions with ease, screens are becoming high precision. Also, a technology to make the screen connection cables thinner is now necessary in order to use the tilting biaxial mechanism that rotates the screen to any direction for viewing. And in order to contain in a palm-size device all the performance of the PCs of several generations before, many difficult hurdles must be overcome. Examples include reducing power consumption to extremely low levels; high-speed signal processing; and small packaging with excellent heat radiation capability. NEC Electronics is responding to such sophisticated demands by taking the following three approaches:

- (1) At present, we provide various semiconductors including CPUs for both communication processing (digital base band) parts and parts that process higher applications such as digital cameras, GPS, sound sources, and TV tuners. In the future we will focus in particular on semiconductors for the latter, and provide a variety of value-added products for mobile phones.
- (2) 3G mobile will be using more LCD (Liquid Crystal Display) and multi-panels. To drive these devices more smoothly, we will provide LCD driver/controllers for color TFTs and large panels. Also, we have started developing a technology to make the connection cable between the cards and LCD screen thinner by making them serial cables.
- (3) In order to perform the processing described above, a number of high capacity memory types are required. At the same time, only a limited amount of space is available inside the mobile phone and the physical memory size must be kept as small as possible. To satisfy these contradictory requirements, high-density memory and custom IC mounting are used. A package solution will be provided that places everything into a single package using SIP (System in Package) technology.

NEC Electronics will also provide various devices that can be used with conventional second-generation mobile terminals. Please see the following block diagram.

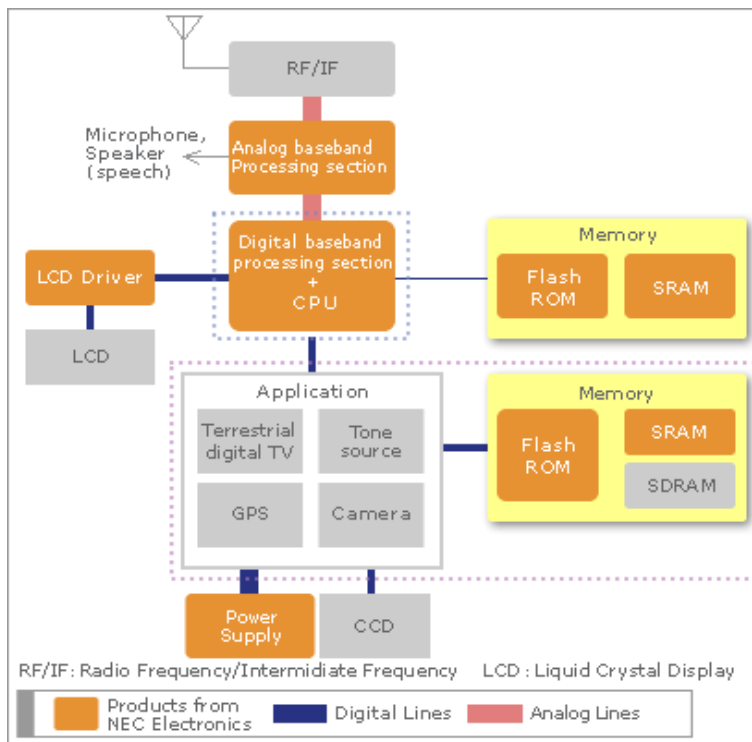


Figure 1:Functional block diagram of a third generation mobile phone

-- Expansion of baseband LSI to overseas markets and our initiatives to that end --

At NEC Electronics we are proud to command the largest share of the Japanese 3G mobile phone market. Hoping to expand this cutting edge technology to overseas markets, in addition to the domestically acquired "W-CDMA" 3G mobile phone standard, in cooperation with NEC, we are developing dual mode baseband LSI able to function with the "GSM/GPRS/EDGE" 2G/2.5G standards currently most common in other countries.

** Part enclosed in red dotted lines in the block diagram above.

When marketing this LSI, up to the communication protocol software processing part will be packaged, making it fairly easy to design a dual mobile terminal supporting 2G/2.5G as well as 3G. Also, the data communication section will contain HSDPA, next generation high-speed communication technology, thus allowing building of the high-speed data communication environment for which 3G mobile phones are designed.

We will also actively market this baseband LSI to companies outside the NEC group, with the aim of establishing a global business standard for 3G base band LSI.

We are also planning to integrate into this baseband LSI the parallel application processor unveiled on September 27, 2004, allowing us to offer integrated solution for the world of 3G mobile phones.

***The block diagram shows the portion surrounded by green dotted lines being integrated into the portion surrounded by red dotted lines.

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[For Mobile Phones](#)

Digital baseband

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* Purchasing or developing the base-band section LSI requires prior licensing agreement between licensor and you, a customer. Contact with our sales staffs in our company for detailed information.

Memory

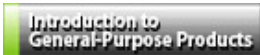
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Exhibit F

U.S. Patent Application Serial No. 11/898,912

Amendment dated May 31, 2011

Reply to Office Action of November 30, 2010

REMARKS

Claims 9-31 are pending, claims 1-8 canceled, claims 9, 10, 19 and 20 are amended, and new claims 23-31 are added. Support for new claims 23-31 is found throughout the Specification and the Figures. Applicant respectfully submits that no new matter has been added.

Applicant was requested to make an election, and claims 9-22 (Group II) were selected for consideration. Claims 1-8 (Group I), accordingly, were withdrawn, subject to a restriction requirement, and are canceled herein. Applicant respectfully submits that withdrawn claims 1-8 will be filed in a subsequent divisional or continuation application.

Claims 9, 10 and 20 are amended for clarity, i.e., to better indicate that the peripheral devices are controlled by the wireless device user through the cell phone or PDA without the host computer involvement (apart from connectivity). Pending claim 19 is amended to correct a typographical error.

Turning to the instant Office Action rejections, claims 9-15, 17 and 19-22 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. US2009/0197652 to Lundstrom et al. (hereinafter "Lundstrom"). Applicant respectfully traverses this rejection.

The present invention is directed to an innovative approach to employ a cell phone or like PDA, through connectivity to the peripheral components of a desktop computer or electronic system, to create a media center controlled by the user through the cell phone – without the usage of the computing power of the peripherals' PC. With the cell phone as a connectivity conduit to remote user information, such as a song or movie, a cell phone or PDA user can control various constituent or peripheral parts of a PC (or other system such as a stereo or display) remotely.

U.S. Patent Application Serial No. 11/898,912

Amendment dated May 31, 2011

Reply to Office Action of November 30, 2010

Applicant respectfully submits that Lundstrom is directed to a different technology and technological paradigm than that of the instant invention, as claimed.

Fist, Applicant objects to the equivalency drawn by the Examiner between the connection between the I/O devices in a portable PC and the I/O devices in a desktop PC of Lundstrom with the connection between the cell phone or PDA and various “peripheral” devices of the instant invention. There is a significant difference between the two approaches. Indeed, there is a significant difference between connection to a PC (and all of its constituent parts) and a connection to a “peripheral” device. By definition, a “peripheral is a device attached to a host computer, but not part of it, and is more or less dependent on the host. It expands the host’s capabilities. But does not form part of the core computer architecture.” See, Wikipedia definition of “Peripheral.” Furthermore, the common definition of a computer is a CPU and the core components, such as the motherboard and memory, i.e., the “computer itself --and not the monitor, keyboard and mouse.” See, Wikipedia definition of “Computer.”

Further, the peripheral components of the claimed invention, following this definition, constitute “dumb” devices, such as speakers, monitors, displays, keyboards, a computer mouse, and other separate and peripheral devices, all of which are directly controlled by the cell phone or PDA, which acts as the “CPU.” The host PC is not controlling. Thus, by definition the instant claims differ markedly from the disclosure of Lundstrom. Furthermore, Lundstrom does not define peripheral devices, and also fails to disclose or suggest the direct connectivity of peripheral devices to the cell phone.

U.S. Patent Application Serial No. 11/898,912

Amendment dated May 31, 2011

Reply to Office Action of November 30, 2010

Second, Lundstrom merely describes a conventional tethering operation of a cell phone to a computer, and not the peripheral cell phone control of the claimed invention. Indeed, in Lundstrom, the connectivity is actually between two computers, where a PC or laptop connects to the Internet via another PC's or a cell phone's wireless Internet connection, providing a bridge connection but not ceding control. The instant invention, as claimed, does not use a cell phone to connect a "computer" to the Internet, as with Lundstrom. Quite the reverse, the instant invention connects peripheral devices (connected to the computer) to the cell phone to create a desktop computing environment on the cell phone. Indeed, the instant invention combines a cell phone or like PDA with peripheral devices to create a desktop PC, a portable PC, a digital tablet and/or media center that relies on the processor, memory and computational capabilities of the cell phone in combination with various peripheral devices, such as monitors, keyboards, mice, speaker systems, and various combinations thereof.

Applicant respectfully submits that the paradigms of operation are radically different. So different, that Applicant respectfully submits that one skilled in the art would not implement the present invention using Lundstrom alone. Lundstrom fails as an anticipatory reference, and the paradigm of Lundstrom in no way suggests the teachings of the present invention.

Nonetheless, in an effort to better clarify the instant invention and distinguish it from the prior art, such as Lundstrom, Applicants herein amend claims 9, 10 and 20 to better reflect the differences between the two paradigms. Applicant respectfully submits that the above argument and this clarification readily distinguish the instant invention from that of the likes of Lundstrom.

In view of the aforementioned amendments, arguments and remarks, Applicants respectfully submit that the rejection has been overcome. Reconsideration and withdrawal of the § 102(e) rejection of claims 9-15, 17 and 19-22 are respectfully requested. Applicants further respectfully submit that the instant invention, as claimed, is not rendered obvious in view of Lundstrom and its ilk at least for the reasons set forth above.

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Amendment dated May 31, 2011

Reply to Office Action of November 30, 2010

Turning again to the instant Office Action rejections, claims 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Lundstrom in view of U.S. Patent Application Publication No. 2008/0192806 to Wyper et al. (hereinafter "Wyper"). Applicants respectfully traverse this rejection also.

The many and serious deficiencies of Lundstrom have been discussed, the least of which are the paradigmical differences. Wyper adds little and fails to cure the aforementioned deficiencies. As with Lundstrom, Wyper is directed to Bluetooth capabilities, and fails to correct the aforementioned different paradigm of Lundstrom or provide an elaboration on mechanisms to change it to one nearer that of the claimed invention.

Accordingly, Applicant respectfully submits that Wyper not only fails to cure the aforementioned deficiencies of Lundstrom, but leads one of skill in the art in the opposite direction as the present invention, as claimed.

Applicant respectfully submits that Wyper utterly fails to cure the aforementioned deficiencies of Lundstrom as a primary reference against the instant invention. The proposed combination Wyper to Lundstrom fails to suggest the present invention, and does not render the instant invention obvious. One of skill in the art of Lundstrom would not look to Wyper for inspiration for the instant invention, as claimed.

Applicant, therefore, respectfully submits that the proposed combination of Lundstrom and Wyper is deficient on numerous grounds and fails to suggest the present invention, as claimed. Reconsideration and withdrawal of the § 103(a) rejection of claims 16 and 18 are, accordingly, respectfully requested.

Reconsideration and withdrawal of all of the aforementioned §§102(b) and 103(a) rejections are respectfully requested in view of the arguments and amendments presented herein. Applicant respectfully submits that new claims 23-31 are also novel and nonobvious at least in view of the references cited herein and distinguishing arguments cited hereinabove.

U.S. Patent Application Serial No. 11/898,912

Amendment dated May 31, 2011

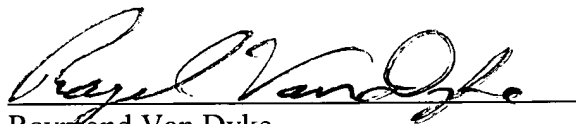
Reply to Office Action of November 30, 2010

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference or personal Interview would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number for an Interview, whether telephonic or personal. Applicant's representative prefers to personally interview, at least initially.

Respectfully submitted,

Raymond Van Dyke
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Date: May 31, 2011



Raymond Van Dyke
Registration No. 34,746

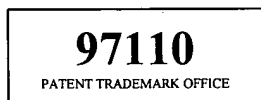


Exhibit G

S/N 11/898,912

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Michael D. Harold	Examiner:	PHU, SANH D
Serial No.:	11/898,912	Group Art Unit:	2618
Filed:	September 17, 2007	Docket No.:	Harold - 200
Title:	SYSTEM, METHOD AND APPARATUS FOR USING A WIRELESS CELL PHONE DEVICE TO CREATE A DESKTOP COMPUTER AND MEDIA CENTER		

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Box AF

Dear Madam:

In response to the Final Office Action mailed August 16, 2011, please amend the above-identified application as follows:

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

Amendments to the Claims are reflected in the listing of claims that begin on page 5 of this paper.

Remarks begin on page 29 of this paper.

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Amendment dated January 17, 2012

Reply to Office Action of August 16, 2011

Amendments to the Specification:

Please substitute the attached Substitute Specification for the one on file.

Please amend the Specification as follows (noting the formatting in the Substitute Specification):

[006] Although a number of companies, including Texas Instruments and Siemens, currently offer rudimentary products that allow a cell phone to project images, presentations and movies onto a wall or other nearby surface, Applicant is unaware of any product that allows a cell phone to transmit browser-based content to a nearby full-size digital display device, such as a computer monitor, or otherwise leverage the capabilities of the cell phone or other communications device in this matter.

[049] With further reference to FIGURE 3A, the wireless integrated keyboard and mouse 545 may be used to control the desktop browser 440 in a manner that optimizes the Internet streaming media 112 viewing experience of the user. By using the wireless integrated keyboard and mouse 545 to select either of two display modes of the desktop browser 440, the user may select the window mode 442 to obtain access to the browser-based media applications 111, or the user may select the full-screen windowless mode 443 to display the Internet streaming

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media 112 without the viewer distraction of a traditional browser interface. By providing the user with the opportunity to toggle back and forth between the window mode 442 and the full-screen windowless mode 443, those methods of controlling the viewer experience, such as forward and reverse, stop, pause and resume play, may be made available through the interaction of the wireless integrated keyboard and mouse 545 with the browser-based Internet media applications.

[055] With further reference to FIGURE 3C, the wireless cell phone device's 400 keypad 412 and display screen 416 may be used to control the desktop browser 440 in a manner that optimizes the Internet streaming media 112 viewing experience of the user. By using the wireless cell phone device's 400 keypad 412 and display screen 416 to select either of two display modes of the desktop browser 440, the user may select the window mode 442 to obtain access to the browser-based media applications 111, or the user may select the full-screen windowless mode 443 to display the internet streaming media 112 without the viewer distraction of a traditional browser interface. By providing the user with the opportunity to toggle back and forth between the window mode 442 and the full-screen windowless mode 443, those methods of controlling the viewer

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experience, such as forward and reverse, stop, pause and resume play, may be made available through the interaction of wireless cell phone device's 400 keypad 412 and display screen 416 with the browser-based Internet media applications.

[060] Likewise, the user may wish to edit or view a document on a larger screen rather than the limited one of the cell phone, whatever its capabilities. Elderly users, for example, may access a display, personal or perhaps public, to better view text or other content. Naturally, as typing or editing would be eased by resort to a larger screen, keyboards and mouse are far more useful than existing data input and editing tools. Lastly, printing by necessity must be done by a physical device connection, e.g., the cell phone user requests a printout of a document stored on a remote server.

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Amendments to the Claims:

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

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)

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9. (Currently Amended) A method for facilitating user connectivity, comprising:

downloading, by a user on a wireless device in a communications network from a server in said communications network, user information to said wireless device;

transmitting, under user control on said wireless device, the downloaded user information from said wireless device to a peripheral device; and

operating said peripheral device from said wireless device,

wherein said peripheral device, controlled by said user from said wireless device, is connected to a separate system, and

wherein said peripheral device includes a display screen, and

using, responsive to an output from said display screen, at least one input peripheral device,

thereby enabling interactive and real time communications between the peripheral device and the server.

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10. (Currently Amended) A wireless device for facilitating user connectivity, comprising:

means for connecting a user of said wireless device to user information stored on a server in a communications network;

means for downloading said user information to said wireless device;

means for relaying the downloaded user information, at the control of said user, to a peripheral device; and

means for operating said peripheral device from said wireless device,

wherein said peripheral device, controlled by said user from said wireless device, is connected to a separate system, and

wherein said peripheral device comprises a hub,

whereby a plurality of components connected to said peripheral device are accessible therethrough.

11. (Original) The wireless device according to claim 10, further comprising:

means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and

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means for employing, at said peripheral device, said downloaded user information.

12. (Original) The wireless device according to claim 10, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and

means for employing, at said peripheral device, said downloaded user information.

13. (Original) The wireless device according to claim 10, wherein said peripheral device comprises personal equipment of said user.

14. (Original) The wireless device according to claim 10, wherein said peripheral device comprises personal equipment of a third party being used by said user.

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15. (Original) The wireless device according to claim 10, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.

16. (Original) The wireless device according to claim 10, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

17. (Currently Amended) The wireless device according to claim 10, wherein said peripheral device ~~comprises~~ comprises an input device, and wherein said user inputs commands into said input device, said commands being relayed through said wireless device.

18. (Original) The wireless device according to claim 10, wherein said peripheral device is controlled by said user at a wireless input device.

19. (Canceled)

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20. (Currently Amended) A peripheral device control system, comprising:

a peripheral device;

an interconnector, said interconnector connecting, at the control of a user, a wireless device to said peripheral device, and downloading user information to said peripheral device,

said user information being stored on a server in a communications network;

and

said peripheral device, upon receipt of the downloaded user information, employing said user information at the control of said user,

wherein said peripheral device, controlled by said user from said wireless device, is part of a separate system, and

wherein said downloaded user information employed by said peripheral device creates an environment selected from the group consisting of desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

21. (Canceled)

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22. (Canceled)

23. (Canceled)

24. (Currently Amended) The method according to claim 9, further ~~comprises~~ comprising:

~~in said transmitting, under user control on said wireless device, the downloaded user information from said wireless device to said display screen~~ comprises an interactive multi-touch display screen; and

~~responding using, responsive to an output from said interactive multi-touch display screen, output by using~~ at least one input capability of said multi-touch display screen;

~~thereby enabling interactive and real time communications between the peripheral device and the server.~~

25. (Canceled)

26. (Canceled)

27. (Canceled)

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28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (New) The method according to claim 9, wherein the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

33. (New)The method according to claim 9, wherein said peripheral device receives a wireline communication containing said downloaded user information transmitted from said wireless device.

34. (New)The method according to claim 9, wherein said peripheral device comprises personal equipment of said user.

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35. (New)The method according to claim 9, wherein said peripheral device comprises personal equipment of a third party being used by said user.

36. (New)The method according to claim 9, wherein said transmitting comprises a wireline connection between said wireless device and said peripheral device.

37. (New)The method according to claim 9, wherein said transmitting comprises a wireless connection between said wireless device and said peripheral device.

38. (New)The method according to claim 9, wherein said peripheral device comprises an input device,

said user inputs commands into said input device, and

said commands being relayed through said wireless device.

39. (New)The method according to claim 9, further comprising:

controlling, by said user, said peripheral device at a wireless input device.

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40. (New) A method for facilitating user connectivity, comprising:

downloading, by a user on a wireless device in a communications network from a server in said communications network, user information to said wireless device;

transmitting, under user control on said wireless device, the downloaded user information from said wireless device to a peripheral device in the form of a display screen,

operating said peripheral device from said wireless device; and

responding to an output from said peripheral device by using input devices available on the wireless device to communicate with the server,

wherein said peripheral device, controlled by said user from said wireless device, is connected to a separate system,

thereby enabling interactive and real time communications between the peripheral device and the server.

41. (New) The method according to claim 40, wherein the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media

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center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

42. (New)The method according to claim 40, wherein said peripheral device receives a wireline communication containing said downloaded user information transmitted from said wireless device.

43. (New)The method according to claim 40, wherein said peripheral device comprises personal equipment of said user.

44. (New)The method according to claim 40, wherein said peripheral device comprises personal equipment of a third party being used by said user.

45. (New)The method according to claim 40, wherein said transmitting comprises a wireline connection between said wireless device and said peripheral device.

46. (New)The method according to claim 40, wherein said transmitting comprises a wireless connection between said wireless device and said peripheral device.

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47. (New)The method according to claim 40, wherein said peripheral device comprises an input device,

said user inputs commands into said input device, and

said commands being relayed through said wireless device.

48. (New)The method according to claim 40, further comprising:

controlling, by said user, said peripheral device at a wireless input device.

49. (New)The method according to claim 40, wherein said peripheral device comprises a display screen.

50. (New)The method according to claim 49, wherein said display screen comprises an interactive multi-touch display screen, and further comprising:

using, responsive to an output from said interactive multi-touch display screen, at least one input capability of said multi-touch display screen.

51. (New) A method for facilitating user connectivity, comprising:

downloading, by a plurality of users, onto a respective plurality of wireless devices in a communications network from a server in said communications network, user information to said wireless devices;

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transmitting, under respective user control on respective wireless devices, the downloaded user information from said wireless devices to at least one display screen,

operating said at least one display screen from at least one of said wireless devices; and

responding to an output from said at least one display screen by using input devices connected to the respective said wireless devices, thereby communicating with the server,

wherein said at least one display screen, controlled by said respective users, is connected to a separate system,

thereby enabling interactive and real time communications between the at least one display screen and the server.

52. (New)The method according to claim 51, wherein the downloaded user information on said display screen creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

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53. (New)The method according to claim 51, wherein said display screen receives a wireline communication containing said downloaded user information transmitted from at least one of said wireless devices.

54. (New)The method according to claim 51, wherein said display screen comprises personal equipment of one of said plurality of users.

55. (New)The method according to claim 51, wherein said display screen comprises personal equipment of a third party being used by one of said plurality of users.

56. (New)The method according to claim 51, wherein said transmitting comprises a wireline connection between at least one of said wireless devices and said display screen.

57. (New)The method according to claim 51, wherein said transmitting comprises a wireless connection between at least one of said wireless devices and said display screen.

58. (New)The method according to claim 51, wherein said display screen comprises an input device,

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said user inputs commands into said input device, and
said commands being relayed through said wireless device.

59. (New)The method according to claim 51, further comprising:
controlling, by at least one of said plurality of users, said display screen at a
wireless input device.

60. (New)The method according to claim 51, wherein said display screen
comprises an interactive multi-touch display screen, and further comprising:
using, responsive to an output from said interactive multi-touch display
screen, at least one input capability of said multi-touch display screen.

61. (New)The method according to claim 51, wherein said transmitting,
under respective user control on respective wireless devices, transmits the
downloaded user information from said wireless devices to at least one display
screen and at least one speaker system.

62. (New) The method according to claim 61, wherein said
operating operates said at least one display screen and said at least one speaker
system from at least one of said wireless devices.

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63. (New) The method according to claim 61, wherein said responding responds to an output from said at least one display screen or said at least one speaker system by using input devices connected to the respective said wireless devices.

64. (New) A wireless device for facilitating user connectivity, comprising:

means for connecting a user of said wireless device to user information stored on a server in a communications network;

means for downloading said user information to said wireless device;

means for relaying the downloaded user information, at the control of said user, to a peripheral device, said peripheral device being connected to another device selected from the group consisting of a portable PC, tablet computer, desktop computer and media center; and

means for operating said peripheral device from said wireless device,

whereby said peripheral device is selected from the group consisting of a keyboard, a monitor, a mouse, speakers, a wireline hub, and combinations thereof.

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65. (New) The wireless device according to claim 64, wherein the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

66. (New) The wireless device according to claim 64, further comprising:
means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and

means for employing, at said peripheral device, said downloaded user information.

67. (New) The wireless device according to claim 64, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and

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means for employing, at said peripheral device, said downloaded user information.

68. (New) The wireless device according to claim 64, wherein said peripheral device comprises personal equipment of said user.

69. (New) The wireless device according to claim 64, wherein said peripheral device comprises personal equipment of a third party being used by said user.

70. (New) The wireless device according to claim 64, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.

71. (New) The wireless device according to claim 64, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

72. (New) The wireless device according to claim 64, wherein said peripheral device comprises an input device, and

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wherein said user inputs commands into said input device,
said commands being relayed through said wireless device.

73. (New) The wireless device according to claim 64, wherein said peripheral device is controlled by said user at a wireless input device.

74. (New) A wireless device for facilitating user connectivity,
comprising:

means for connecting a user of said wireless device to user information stored on a server in a communications network;

means for downloading said user information to said wireless device;

means for relaying the downloaded user information, at the control of said user, to a peripheral device, said peripheral device being connected to a separate system; and

means for operating said peripheral device from said wireless device,

whereby the downloaded user information on said peripheral device creates an environment selected from the group consisting of a desktop computing environment, a media center environment, a portable PC computing environment, a tablet computer computing environment and combinations thereof.

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75. (New) The wireless device according to claim 74, further comprising:

means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and

means for employing, at said peripheral device, said downloaded user information.

76. (New) The wireless device according to claim 74, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and

means for employing, at said peripheral device, said downloaded user information.

77. (New) The wireless device according to claim 74, wherein said peripheral device comprises personal equipment of said user.

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78. (New) The wireless device according to claim 74, wherein said peripheral device comprises personal equipment of a third party being used by said user.

79. (New) The wireless device according to claim 74, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.

80. (New) The wireless device according to claim 74, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

81. (New) The wireless device according to claim 74, wherein said peripheral device comprises an input device, and
wherein said user inputs commands into said input device,
said commands being relayed through said wireless device.

82. (New) The wireless device according to claim 74, wherein said peripheral device is controlled by said user at a wireless input device.

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83. (New) The peripheral device control system according to claim 20, further comprising:

means for receiving, at said peripheral device, a wireless communication containing said downloaded user information transmitted from said wireless device; and

means for employing, at said peripheral device, said downloaded user information.

84. (New) The peripheral device control system according to claim 20, further comprising:

means for receiving, at said peripheral device, a wireline communication containing said downloaded user information transmitted from said wireless device; and

means for employing, at said peripheral device, said downloaded user information.

85. (New) The peripheral device control system according to claim 20, wherein said peripheral device comprises personal equipment of said user.

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86. (New) The peripheral device control system according to claim 20, wherein said peripheral device comprises personal equipment of a third party being used by said user.

87. (New) The peripheral device control system according to claim 20, wherein said means for relaying comprises a wireline connection between said wireless device and said peripheral device.

88. (New) The peripheral device control system according to claim 20, wherein said means for relaying comprises a wireless connection between said wireless device and said peripheral device.

89. (New) The peripheral device control system according to claim 20, wherein said peripheral device comprises an input device, and
wherein said user inputs commands into said input device,
said commands being relayed through said wireless device.

90. (New) The peripheral device control system according to claim 20, wherein said peripheral device is controlled by said user at a wireless input device.

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91. (New) The peripheral device control system according to claim 20, wherein a plurality of users on a respective plurality of wireless devices download user information from said server to said plurality of wireless devices.

92. (New) The peripheral device control system according to claim 90, wherein, under respective user control on said respective wireless devices, downloaded user information is transmitted to said peripheral device.

93. (New) The peripheral device control system according to claim 90, wherein said peripheral device is operated from at least one of said wireless devices.

94. (New) The peripheral device control system according to claim 90, wherein, in response to an output from said peripheral device, input devices connected to the respective wireless devices are used.

95. (New) The peripheral device control system according to claim 90, wherein said peripheral device is selected from the group consisting of a display screen, a speaker system and combinations thereof.

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REMARKS

Claims 9-18, 20, 24 and 32-95 are pending, claims 1-8 canceled, claims 9, 10, 20 and 24 are amended, and new claims 32-95 are added. Applicant respectfully submits that no new matter has been added.

Applicant submits herewith a Substitute Specification with paragraph formatting. Applicant also notes a few typographical errors in the original Specification and corrects same herein, e.g., the terminal word in paragraph 6, changing reference numerals 422 and 423, respectively, to 442 and 443 in paragraphs 49 and 55 (to accord with the figures), and the proper use of the word “mouse” in paragraph 60. Applicant respectfully submits that no new matter has been introduced.

In the Official Action dated August 16, 2011, the Examiner indicated as allowable all of the features set forth in claims 19 and 21-31. Applicant respectfully submits that all of the new claims, i.e., claims 32-95 find full support in the allowable subject matter, as expressly indicated by the Examiner. Amended method claim 9, for example, includes allowed claim 23, new method claim 40 includes allowed claim 25, and new method claim 51 includes allowed claim 26. Amended device claim 10 includes allowed claim 19, new device claim 64 includes allowed claims 28-31, and new device claim 74 includes allowed claims 21, 22, 28 and 29. System claim 20 is amended to include allowed claims 21, 22, 28 and 29. Various dependent claims, i.e., claims 32-39, 41-50, 52-63, 65-73 and 75-95 are all based on original dependent claims and the aforementioned allowed features.

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Applicant thanks the Examiner for withdrawing all of the rejections set forth in the initial Office Action, i.e., withdrawing the 35 U.S.C. § 102(e) anticipation rejection of claims 9-18 and 20 over U.S. Patent Application Publication No. US2009/0197652 to Lundstrom et al. (hereinafter “Lundstrom”), and withdrawing the 35 U.S.C. § 103(a) obviousness rejection of claims 16 and 18 over Lundstrom in view of U.S. Patent Application Publication No. 2008/0192806 to Wyper et al. (hereinafter “Wyper”).

As noted, in the Action, the Examiner noted that claims 19, 21-22 and 28-31 are allowable, subject to being rewritten in independent format. Similarly, the Examiner also noted that claims 23-27 are allowable, subject to handling minor objections. In view of the indicated allowability of these claims over the art of record, the pending claims submitted herewith have been written to all contain allowable elements from allowed/allowable claims 19 and 21-31, as indicated by the Examiner, and should be allowed accordingly.

Turning to the instant Official Action, the Examiner noted some typographical errors in claims 17 and 23-27, particularly, the inadvertent usage of the term “compromising” for comprising. Applicant has amended claims 17 and 24 accordingly. The other claims, all allowed, are canceled.

Applicant respectfully notes, however, that with the complete withdrawal of all rejections and references cited against the claims, and citation of a completely new prior art reference, the instant finality is inappropriate. Indeed, the only reason provided for such finality is that Applicant’s “amendment necessitated the new ground(s) of rejection presented in the Office Action.” Applicant would appreciate

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more detail in this reasoning, particularly in view of Applicant's efforts in the last response to clarify and not expand the claim coverage, efforts to cooperate with the Examiner, and evisceration of all prior rejections. Reconsideration and withdrawal of the finality are respectfully requested.

In the instant Office Action rejections, claims 9-18 and 20 now stand rejected under 35 U.S.C. § 102(b) as being anticipated by newly-cited and applied U.S. Patent Application Publication No. US2002/0054345 to Tomida et al. (hereinafter "Tomida"). Applicant respectfully traverses this rejection substantively and procedurally, as noted hereinabove and further hereinbelow.

The present invention is directed to an innovative approach to employ a cell phone or like PDA, through connectivity to the peripheral components of a desktop computer or electronic system, to create a media center controlled by the user through the cell phone – without the usage of the computing power of the peripherals' PC. With the cell phone as a connectivity conduit to remote user information, such as a song or movie, a cell phone or PDA user can control various constituent or peripheral parts of a PC (or other system such as a stereo or display) remotely.

In view of the amendments made to the claims, i.e., incorporating allowable claim language in independent claims 9, 10 and 20, Applicant considers that the instant rejection over Tomida is now moot. Reconsideration and withdrawal of the § 102(b) rejection are respectfully requested.

U.S. Patent Application Serial No. 11/898,912

Amendment dated January 17, 2012

Reply to Office Action of August 16, 2011

In any event, Tomida and art of this nature are neither anticipatory nor obvious over the instant invention, as claimed. Tomida is expressly directed to a traditional client/server model. The “two step” process elaborated upon in Tomida involve first, the establishment of a connection between the portable device and the network, e.g., to register the data for download. No other devices are involved in this communication. See, Tomida, paragraph 108. Once the data exchange is done pertaining to a particular peripheral device, the connection is then severed, and then in a second step a new connection is established between the network and the peripheral device, enabled by the portable device. See, Tomida, paragraph 113.

At this stage, the portable device is but a mere tether, modem or conduit, and has zero control – the network server is running things directly. Again, this is the traditional client/server relationship. The server instructs the peripheral device, such as a printer, what to print, with no input from intermediate conduit devices. Figures 5 and 7 in Tomida describe the first step and FIGURE 6 describes the second step of the tethering process.

Clearly, the Tomida two-step paradigm in no way anticipates the instant invention, which expressly involves and claims control of the peripheral device by the portable device, not at network control. The user of the portable device is in control. Tomida and the like utterly fail to address this innovative aspect, rendering Tomida inapposite to the present invention, as claimed. Tomida, encompassing the traditional paradigm of client/server device relationships, fails to suggest control by an intermediate user, such as in the claimed invention.

U.S. Patent Application Serial No. 11/898,912

Amendment dated January 17, 2012

Reply to Office Action of August 16, 2011

Accordingly, Applicant respectfully submits that Tomida cannot render the instant claims obvious at least for the reasons stated herein.

Reconsideration and withdrawal of all of the aforementioned §102(b) rejections and claim objections are respectfully requested in view of the arguments and amendments presented herein. Applicant respectfully submits that claims 9-18, 20 and 24, as previously presented, and new claims 32-95 are novel and nonobvious at least in view of the references cited herein and distinguishing arguments cited hereinabove, and in view of the indicated allowability.

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference or personal Interview would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number for an Interview, whether telephonic or personal.

Respectfully submitted,

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Exhibit H

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Michael D. Harold	Examiner:	Sanh D. PHU
Serial No.:	14/531,641	Group Art Unit:	2647
Filed:	November 3, 2014	Docket No.:	Harold - 102
Title:	SYSTEM, METHOD AND APPARATUS FOR USING A WIRELESS DEVICE TO CONTROL OTHER DEVICES		

DECLARATION OF MICHAEL D. HAROLD UNDER 37 C.F.R. § 1.132

I, Michael D. Harold, hereby declare and say that:

1. I believe that I am the first, original and sole inventor of the subject matter described and claimed in the above-captioned patent application. I also believe that I am the first, original and sole inventor of the subject matter described and claimed in U.S. Patent Nos. 8,135,342 and 8,879,987 (the "342 and '987 patents"), both of which I understand are related to the above-captioned patent application. I have reviewed and understand both the '342 and '987 patents.

2. I have a BA in Sociology from Louisiana State University. During and after college, I took several college courses in computer science, programming, statistics and quantitative methods. I also have taken multiple technical courses in the areas of computer programming, systems architecture, network administration and server administration, paid for by my employers.

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3. As an urban planner, I developed mainframe travel demand forecasting software in Fortran used in support of federal and state transportation programs. I developed computer education curricula and taught data processing for five years in a post-secondary technical college. I worked as a programmer/analyst supporting all clinical applications (i.e., Laboratory, Microbiology, Radiology, Surgery, etc.) in a multiple facility hospital system. While a Senior Technical Advisor working in FedEx Global Logistics, I designed and helped manage the development of one of the first global Enterprise Application Integration (EAI) platforms. As a CTO and systems architect for several companies, I have both designed and managed the development of applications and service platforms in the following computing sectors: Last-mile Computing, Cloud Computing and Enterprise Information Archiving (EIA).

4. I believe that I am the sole, original and first inventor of the subject matter disclosed and claimed in US Patent No. 8,620,207 (the "207 patent"). The title of the '207 patent is "System, Method and Apparatus For Distributed Content Dissemination."

5. I understand that the last Office Action for this application references US Patent Publication No. 2003/0069921 ("Lamming"), US Patent No. 7,911,493 ("Sarma") and US Patent No. 7,962,854 ("Vance"). I have read and understood the Lamming, Sarma and Vance references.

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6. Attached hereto as Exhibit A is list of claims 41-56 that I understand will replace the claims currently pending in this application. I believe that I am the original, first and sole inventor of the invention of new claims 41-56.

7. I also believe that new claims 41-56 are clearly supported by the originally filed disclosure for this application. A supporting analysis follows. For ease of reference, I make citations to the grand-parent '542 patent.

a. Exemplary support for the new claims is found, for example, in the summary of the invention ("SOTI") in which the following statements are made:

1) The "present invention involves" a "method" that "permits the use of a wireless cell phone" as "a connection, communications and control device able to connect" a "full size desktop monitor or other digital display device" to the "wireless cell phone." SOTI, ¶1.

2) The phone "is used to create an Internet or other network connection capable of accessing any browser-based web site" that is "commonly accessible to a standard desktop computer having an Internet connection." SOTI, ¶1.

3) Examples of what can be downloaded from "any browser-based web sites" include, for example, "digital movies" and "streaming video." SOTI, ¶1.

4) The "user may access" the movies and videos "using the desktop monitor" (SOTI, ¶1) because, for example, the "user interfaces" of the web

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site providing this content “can be displayed through” the “desktop monitor.” SOTI, ¶8. Those “user interfaces” are sent to the “desktop monitor” by means of the “wireless cell phone.” SOTI, ¶1.

5) It is “a further object of the present invention to provide” a “method” whereby a “cell phone” can “simultaneously” provide “network access” to “movies” and “video” while also being “used as a handheld controller device to select and play” the “movie” or “video.” SOTI, ¶11.

6) The specification of this application draws a distinction between consumer electronic entertainment applications of my invention and applications that are not related to that subject matter. For example, col. 12, line 61 – col. 13, line 4 of the ‘542 patent state that an example of a consumer electronic entertainment application is a movie that is located remotely on an internet-accessible server. On the other hand, this same section of the ‘542 patent recognizes that non-entertainment embodiments relate to, for example, remotely accessing a document, spreadsheet or software application. Significantly, all of the new claims attached as Exhibit A are specifically limited to the consumer electronic entertainment applications and embodiments of my invention.

b. Figure 3A of this application shows an exemplary cell phone 400 that can be used in connection with the “method” described above in paragraphs 7(a)(1-4) of this declaration. A brief summary of how cell phone 400 works in accordance with the above-described information follows.

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1) Cell phone 400 can be used to, for example, download a movie or video stored on the remote server (formed by media applications 111 and media 112) so that it can be shown on the high-resolution digital display device 522. Display 522 typically forms a part of a viewer's media center environment that can be at the viewer's home. This display is not an accessory to the cell phone – rather, it is, for example, a TV suitable for use in a movie room in a person's home.

2) To download a movie or video from the remote server, the viewer first obtains a first graphic user interface (“GUI”) associated with the website hosted on the remote server from which movies or videos can be downloaded. For example, the first GUI is provided to the cell phone 400 via an internet connection between the cell phone 400 and the remote server. When the user reads or otherwise interacts with the first GUI as it is shown on the display 522, the viewer is informed about what movies or videos are available for download from the remote server for consumer electronic entertainment purposes.

3) After the viewer of the display 522 has reviewed the first GUI and selected a movie or video, the viewer interacts with the cell phone 400 to enter entertainment selections commands into the cell phone 400. These commands are based on the visual feedback the viewer obtained by reading or otherwise interacting with the first GUI. The server processes the download commands, sends the requested movie or video from the remote server, to the cell phone 400, and then to the display 522 for viewing by the viewer on the display 522. One main

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advantage of the present invention is that, for example, the viewer can select, download, control and experience a downloaded movie or video on the large media center display 522 as opposed to the small display screen associated with the cell phone 400.

4) The cell phone 400 can be connected to the display 522 in a number of different ways. For example, Figure 3A shows a Wi-Fi chip 486 that allows the phone 400 to communication with the display device over, for example, wireless connections between the phone 400 and the hub 105 and the display 522. The Wi-Fi 33 chip can operate in accordance with the 802.11 standards.

5) All embodiments of the present invention allow the cell phone 400 to be located a distance away from the display 522 at which a viewer may wish to watch a movie at home (e.g. 10-15 feet) while still providing a high quality viewing experience. Bluetooth technology in existence as of the filing date of my application was not capable of this. The Wi-Fi links discussed above are exemplary support for the “wherein” clause of the new claim 41 that describes the electrical coupling between the claimed wireless communication device and the display device.

8. Each one of the features of new independent claim 41 is labelled in Exhibit A with (a) – (f). A brief discussion of how each claim element is supported by the originally filed disclosure in this application follows.

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a) Exemplary support for feature “a” of new claim 41 which recites a step of electronically coupling a display device with a mobile communications device is discussed above in, for example, paragraphs 7(a)(1-2 and 4-5) and 7(b)(1) of this declaration.

b) Exemplary support for feature “b” of new claim 41 which recites a step of causing a first GUI to be shown on the display is discussed above in, for example, paragraphs 7(a)(4-6) and 7(b)(2) of this declaration.

c) Exemplary support for feature “c” of new claim 41 which recites a step of entering entertainment selection commands into the mobile communication device is discussed above in, for example, paragraphs 7(a)(1 and 4-5) and 7(b)(3) of this declaration.

d) Exemplary support for feature “d” of new claim 41 which recites a step of receiving by the mobile communications device of the particular movie or video is discussed above in, for example, paragraphs 7(a)(1-5) and 7(b)(3 and 5) of this declaration.

e) Exemplary support for feature “e” of new claim 41 which recites a step of transmitting by the mobile communications device of the particular movie or video is discussed above in, for example, paragraphs 7(a)(3-6) and 7(b)(1, 3 and 5) of this declaration.

f) Exemplary support for feature “f” of new claim 41 which further describes the electrical coupling between the mobile communications device and the

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display device is discussed above in, for example, paragraph 7(b)(5) of this declaration.

9. I also believe that new claims 41-55 are patentable over the Lamming reference for several different reasons.

a. First, each new claim recites a step by which a display device suitable for use in a media center environment is electrically coupled with a mobile computing device that does not form a part of the media center environment. Most importantly, the electrical coupling is done for consumer electronic entertainment purposes as discussed, for example, at col. 12, line 60 – col 13, line 4 of the '542 patent.

Lamming does not teach this claim feature for a number of reasons. The words “consumer” and “entertainment” are not used at all in Lamming. Moreover, I understand that the reference to “Xerox Corporation” on the cover page of Lamming indicates that Lamming is owned by Xerox, which is a company not in the consumer electronic entertainment business. For this reason alone, I believe that the new claims are patentable over Lamming.

b. Second, each new claim requires a step of causing a first GUI to be shown on the display device that conveys information to a viewer about movies or videos that are individually downloadable from a remote server for display on the display device, again for consumer electronic entertainment purposes. This reads on, for example, the user interfaces mentioned in paragraph 8 of the SOTI.

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Lamming does not disclose, teach or suggest this claim element at least for the reason that, as discussed above, I believe that Lamming has nothing to do with consumer electronic entertainment. Moreover, while Figures 4-9 and 18-19 of Lamming show various user interfaces, none of them are shown on an output device like the display 206 shown in Figure 2. There is no disclosure of any modification to Lamming that would allow the user interfaces to be shown on the display 206. As such, Lamming affirmatively does not disclose, teach or suggest the claim element listed above which requires that a consumer electronic entertainment related GUI to be shown on the large display device that is suitable for use in a media center environment. By doing this, the user can select a movie or video for downloading by visual feedback from the large display screen. Lamming has no such capability. For these additional reasons, I believe that each new claim should be found to be patentable over Lamming.

1) Paragraph 3 of Lamming does mention the word “video.” However, that word is used in paragraph 3 to describe the contents of a particular *document* that arguably may be accessible by Lamming’s document management system. Any videos referenced in Lamming are not individually accessible nor downloadable, as would be the case with a movie/video downloading website. Nor are any such videos used for electronic entertainment for consumers – note the distinction drawn in the specification at col. 12, line 61 – col. 13, line 4 of the ‘542 patent between “entertainment” (*i.e.*, movies) and non-entertainment

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related things like accessing “documents.” I believe, therefore, that paragraph 3 does not provide a legitimate basis to say that Lamming teaches a movie or video downloading system consistent with my invention of the new claims.

2) Figure 13 of Lamming shows a device functionality 1314 that is described in paragraph 112 of Lamming as possibly being a video camera. However, Figure 13 specifically shows that “the document server 108, the document services 116, the file service 118 and the device functionality” such as a video camera 1314 “are integrally coupled together in an input device 1302.” Paragraph 113 of Lamming states that the video camera 1314 “makes the document server aware of recorded image data.” However, there is no disclosure contained in Figure 13 or in Lamming that the device functionality 1314 allows videos taken by the camera to be downloadable to a user of the phone 110 either as a part of a document or by themselves. Consistent with this is the fact that none of the graphic user interfaces shown in Lamming provide any movie or video accessing functionality. Moreover, as discussed above, Lamming’s system is not consumer electronic entertainment related as required by my invention of the new claims.

So, any videos taken by the camera integral with the server are not for consumer electronic purposes, assuming for the sake of argument that they are taken at all. As such, I believe that portions of Lamming do not provide a legitimate basis to say that Lamming teaches a movies or video downloading system consistent with my invention of the new claims.

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c. Third, each new claim requires a step of entering entertainment selection commands into the mobile communications device to select a movie or video based on the visual feedback a user receives by reading or interacting with the first GUI on the display device. Lamming does not teach this claim element for several reasons. First, as discussed above, it does not contain any disclosure of movies that are individually accessible and downloadable. Second, Lamming only utilizes a small display screen of a phone to select a document which, therefore, makes it impossible for it to disclose downloading of documents based on visual feedback obtained from a viewer reading or otherwise interacting with a GUI shown on a large display screen. Indeed, Lamming explicitly discourages the solution pursued in my invention, characterizing the “small display (or user interface” of the “mobile computing device” as “not a disadvantage” in spite of the fact that it “limits the extent to which documents may be viewed.” Lamming at ¶8. Lamming would not have motivated the skilled artisan to pursue the solution of my invention, which “disengages wireless cell phone and other communications device users from the ergonomic constraints of small, low-resolution displays.” [542 patent, col. 2 ll. 19-21]. Lamming encouraged complacency regarding the very limitations that my invention regards as problematic. For this additional reason, the new claims are patentable over Lamming.

d. Each new claim recites a step of receiving by the mobile communications device of the movie or video a viewer selected based on the visual

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feedback obtained by reading or interacting with the first GUI shown on the display device. To the extent that Lamming discloses GUIs, it only does so in non-consumer electronic entertainment applications that are shown on the very small screen of its mobile computing device. As such, it is not possible for Lamming to teach the claim element because there is no visual feedback provided to a user by a large display screen. For this additional reason, I believe that the new claims are patentable over Lamming.

e. Each new claim recites a step of the mobile communications device transmitting at least some of the movie or video for display on the display device simultaneously while at least some of it is being downloaded from the server to the mobile communications device. To the extent that Lamming discloses the downloading of videos as stated in paragraph 3, Lamming only does so in the case where the video is a part of a document being downloaded by a document processing service. The video-containing document has to be fully downloaded and opened *before* the video can be used. For example, Lamming teaches that “*after* retrieving the document,” a “driver is loaded if necessary...for the specified output device...to process the format in which the retrieved document exists.” Lamming ¶ 71. (emphasis added) Similarly, Lamming teaches that “[*a*fter retrieving and formatting a document...the token-aware document delivery server 1238 delivers the formatted document to a driver.” Lamming at ¶ 104. (emphasis added). That directly teaches away from the claim element at issue which requires that there be

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at least some overlap in time between when display takes place on the large display and when the movie or video is downloaded. For this additional reason, I believe that the new claims are patentable over Lamming.

10. Assuming, for the sake of argument, that it is proper to combine Sarma with Lamming, I do not believe that Sarma provides the teachings missing from Lamming to render new claims 41-56 obvious.

a. First, Sarma does not disclose, teach or suggest the step of each new claim which a display device suitable for use in a media center environment is electrically coupled with a mobile computing device for a number of reasons. For example, while Figure 1 of Sarma shows a display, the specification describes it as being a “display accessory 10” to the mobile device 20. A display that is an accessory to a cell phone is not suitable for a media center environment such as, for example, that which can be found in a person’s home. The display devices covered by the claimed invention are non-portable devices that can be fixed, for example in a theatre room in someone’s home, which is something that Sarma does not teach. For this reason alone, I believe that the new claims are patentable over a purported combination of Lamming and Sarma.

b. Second, Sarma does not disclose, teach or suggest the step of each new claim by which a first GUI is shown on the display device that conveys information to a viewer about movies or videos that are individually downloadable from a remote server. Sarma teaches away from this because, for example, Figure 5

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of Sarma clearly shows that the “content” is downloaded at step 160 *before* the mobile device 20 “detects” the display accessory. As such, it is impossible for Sarma to have a content selection GUI shown on the display accessory to allow the user to select content for downloading. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming and Sarma.

c. Third, each new claim requires a step of entering entertainment selection commands into the mobile communications device to select a movie or video based on the visual feedback a user receives by reading or interacting with the first GUI on the display device. Sarma cannot teach this claim element because, for example, Sarma is limited to content downloading *before* the display accessory is even detected. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming and Sarma.

d. Each new claim recites a step of receiving by the mobile communications device of the movie or video a viewer selected based on the visual feedback obtained by reading or interacting with the first GUI shown on the display device. Again, it is not possible for Sarma to disclose this claim element because, for example, the downloading of content is done *before* the display is detected. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming and Sarma.

e. It is not possible for Sarma to teach step of each new claim by which the mobile communications device transmits at least some of a movie or video

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for display simultaneously while at least some of it is being downloaded from the server to the mobile communications device. As discussed above, Sarma cannot do this as its teachings are limited to content downloading *before* the display is detected. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming and Sarma.

11. Assuming, for the sake of argument, that it is proper to combine Vance with Lamming and Sarma, I do not believe that Vance provides the teachings missing from both Lamming and Sarma to render new claims 41-56 obvious.

a. First, Sarma does not disclose, teach or suggest step (a) of each new claim for a number of reasons. For example, all of the embodiments disclosed in Sarma relate to videoconferencing. Videoconferencing is not consumer electronic entertainment. For this reason, I believe that the new claims are patentable over a purported combination of Lamming, Sarma and Vance.

b. Second, Sarma does not disclose, teach or suggest the step of each new claim by which a first GUI is shown on the display device that conveys information to a viewer about movies or videos that are individually downloadable from a remote server. For example, Sarma only discloses video conferencing, not a consumer electronic entertainment system for downloading movies or videos. Moreover, it is not possible for the external display screen 160 to be involved in the content selection process because, for example, Vance teaches that a video conference is routed to the external display *only after* a video conference is received

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or initiated (Vance, col. 6, lines 33-37). For this reason alone, I believe that the new claims are patentable over a purported combination of Lamming, Sarma and Vance.

c. Third, Vance teaches away from the step of each new claim requiring the entry of entertainment selection commands into the mobile communications device to select a movie or video based on the visual feedback a user receives by reading or interacting with the first GUI on the display device. As discussed above, video conferences are sent to the external display *only after* the video conference is initiated or received. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming, Sarma and Vance.

d. Each new claim recites a step of receiving by the mobile communications device of the movie or video a viewer selected based on the visual feedback obtained by reading or interacting with the first GUI shown on the display device. Again, it is not possible for Vance to disclose this claim element because, for example, video conferences are sent to the external display *only after* the video conference is initiated or received. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming, Sarma and Vance.

e. Vance does not teach step of each new claim by which the mobile communications device transmits at least some of a movie or video for display simultaneously while at least some of it is being downloaded from the server to the mobile communications device. In Vance, nothing is downloaded. Instead, video

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conferences are routed between phones or other video conferencing devices. For this additional reason, I believe that the new claims are patentable over a purported combination of Lamming, Sarma and Vance.

12. I hereby declare that all statements made herein of my knowledge are true and that all statements made upon 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 Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

Michael D. Harold
Michael D. Harold

Sept. 7, 2016
Date

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Exhibit A

41. (New) A method for downloading and viewing a movie or video on a display device, the method comprising the steps of:

(a) electrically coupling for consumer electronic entertainment purposes a display device suitable for use in a media center environment with a mobile communications device that does not form a part of the media center environment;

(b) causing a first graphic user interface to be displayed on the display device that conveys information to a viewer of the display device about movies or videos that are individually downloadable from a server for display on the display device for electronic entertainment purposes;

(c) entering entertainment selection commands into the mobile communications device to select a particular one of the movies or videos for downloading from the server based on visual feedback the viewer receives by reading or interacting with the first graphic user interface shown on the display device;

(d) receiving by the mobile communications device of the particular movie or video that is sent to it from the server based on the viewer's reading or interaction with the first graphic user interface shown on the display device;

(e) transmitting by the mobile communications device of at least some of the particular movie or video to the display device for display thereon simultaneously while at least some of the particular movie or video is being downloaded from the server to the mobile communications device; and

(f) wherein the electrical coupling between the mobile communications device and the display device allows the particular movie or video to be sent therebetween when the mobile communications device is located a distance away from the display device at which a person watches a movie at home.

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42. (New) The method of claim 41, wherein the media center environment forms a home media center environment.

43. (New) The method of claim 41, wherein the display device is electrically coupled to the mobile communications device by means of at least one wireless connection.

44. (New) The method of claim 41, wherein the display device is electrically coupled to the mobile communications device by means of at least one wireline connection.

45. (New) The method of claim 41, wherein the mobile communications device is adapted to communicate with the server via the internet.

46. (New) The method of claim 41, wherein the download commands are generated on the mobile communications device by means of a keyboard.

47. (New) The method of claim 41, wherein the display device comprises a high definition display device.

48. (New) The method of claim 41, wherein the display device comprises a television set.

49. (New) The method of claim 41, further comprising the steps of displaying a control graphic user interface on the display device while the particular movie or video is being shown on the display device:

entering display control commands into the mobile communications device and then sending those display control commands to the server to cause control actions to be performed on the particular movie or video being sent from the server through the mobile communications device and to the display device; and

sending a modified version of the particular movie or video being downloaded which embodies the display control commands.

50. (New) The method of claim 49, wherein the control graphic user interface is shown on the display device at the same time as the stream is shown on the display device.

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51. (New) The method of claim 49, wherein the control graphic user interface is shown on the display device only at the command of the user.

52. (New) The method of claim 41, further comprising the step of electrically coupling at least one additional device other than the display device to the mobile communications device.

53. (New) The method of claim 41, wherein the mobile communications device comprises a cellular telephone.

54. (New) The method of claim 41, wherein the first graphic user interface only provides visual information about movies or videos that are available for download from the server.

55. (New) The method of claim 41, wherein the transmitting of the particular movie or video from the mobile communications device to the display device for display thereon occurs substantially simultaneously with the downloading of the particular movie or video from the server to the mobile communications device.

56. (New) The method of claim 41, wherein the causing step includes downloading the first GUI from the server to the mobile communications device.