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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

DH INTERNATIONAL LTD.,
Patent Owner.

Case IPR2024-01322
Patent No. 9,022,294

**PETITION FOR *INTER PARTES REVIEW*
OF U.S. PATENT NO. 9,022,294**

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[1.i]: “[wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for sending data from said electronic circuit to the second external data exchange device over said second communication link.” 35

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[11.1] “[wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for exchanging data between said electronic circuit and the second external data exchange device.” 62

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 - b. [19.a]: “awaiting for an activation cue to be received at said cue receiver;” 71

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- [19.d] “[selectively triggering said control device to issue an invariable activation command whereby:] if said switching element is in said second state, forwarding second data to said second data transceiver for initiating a data exchange operation with a second external data exchange device over a second communication link that is distinct from said first communication link;” 71
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<u>Exhibit</u>	<u>Description</u>
1001	U.S. Patent No. 9,022,294 to Gaillard (“’294 Patent”)
1002	Prosecution History of U.S. Application No. 12/603,085
1003	Declaration of Stuart Lipoff (“Lipoff”)
1004	Curriculum Vitae of Stuart Lipoff
1005	U.S. Patent No. 6,941,156 to Mooney (“ <i>Mooney</i> ”)
1006	U.S. Patent No. 6,909,705 to Lee et al. (“ <i>Lee</i> ”)
1007	U.S. Patent No. 6,697,638 to Larsson et al. (“ <i>Larsson</i> ”)
1008	U.S. Patent No. 7,278,581 to Ong (“ <i>Ong</i> ”)
1009	U.S. Patent No. 8,862,393 to Zhou et al. (<i>Zhou</i>)
1010	U.S. Patent No. 6,931,266 to Miyoshi et al. (“ <i>Miyoshi</i> ”)
1011	U.S. Patent No. 6,526,287 to Lee (“ <i>Lee 287</i> ”)
1012	U.S. Patent. No. 6,845,097 to Haller et al. (“ <i>Haller</i> ”)
1013	<i>DH International Ltd v. Google LLC</i> , No. 1-23-cv-01116, Order Dismissing Case (WDTX Dec. 15, 2023)

I. Introduction

The '294 patent describes well-understood systems and methods for exchanging data between a portable electronic device and “data exchange” devices. Ex. 1001, 13:25-49, FIG. 4. Like the prior art, the disclosed portable electronic device includes a “switching element” for switching the device between a “first state” (communicating over a first communication link), and a “second state” (communicating over a second communication link). 9:28-30, 15, 4-13. The state of the switch, as was known in the art, is determined by activation cues signifying that “a data exchange opportunity between [the] portable electronic device [] and [a] data exchange device []” exists. Ex. 1001, 13:7-11. An activation cue may be “emitted” from a data exchange device to signal that communication over the first link is available. 14:64-15:13.

Finally, the device’s operation, which was disclosed in the art, relies on a user to “selective trigger[]”/ “initiat[e] a data exchange” between the portable electronic device and data exchange device by “pressing a button” on the portable electronic device. 10:52-57, 15:14-18. If the portable electronic device is in the first state when the device is selectively triggered, data is transmitted over the first link; if the device is in the second state, data is transmitted over the second link. Ex. 1001, 10:14-36, 15:14-28.

While the '294 patent indicates that it may be used for financial transactions, the claims are not so limited. Cellular phones having the disclosed and claimed features were well known before the '294 patent.

II. Precise Relief Requested

Petitioner requests review under 35 U.S.C. § 311 of claims 1-20 of the '294 patent and their cancellation in view of the following:

Grounds of Unpatentability	
1	Claims 1-20 are Obvious under 35 U.S.C. § 103 over <i>Mooney</i>
2	Claims 1-20, are Obvious under 35 U.S.C. § 103 over <i>Mooney</i> and <i>Lee</i>

III. Level of Ordinary Skill

A person of ordinary skill in the art (“POSITA”) at the time of the alleged invention of the '294 patent would have had at least a bachelor’s degree in electrical engineering, or a related field, and at least two years of experience in design, development, and/or testing of network-enabled consumer devices, and familiarity with payment cards, or the equivalent, with additional education substituting for experience and vice versa. Lipoff, ¶57.

IV. The '294 Patent

The '294 patent was filed on October 21, 2009; claiming priority to April 14, 2003. Ex. 1001, cover. It generally relates to systems and methods for exchanging data using a portable device. Ex. 1001, 1:16-18, 7:13-18; Lipoff, ¶53.

Figure 4 illustrates “data exchange system 100” including a “portable electronic device 102 that may communicate either with a first data exchange device 104 or with a [] second data exchange device 108, 109 or 110.” Ex. 1001, 13:26-32; Lipoff, ¶54.

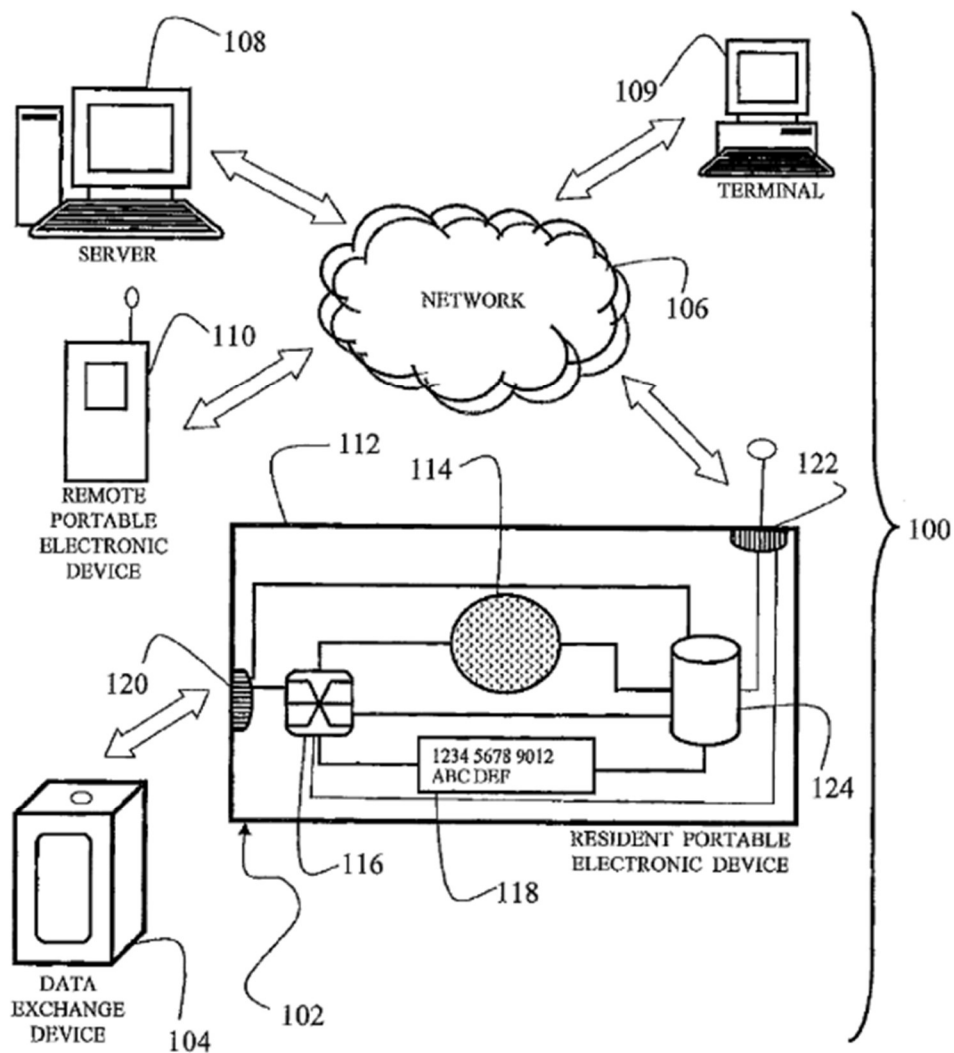


Fig. 4

Ex. 1001, FIG. 4.

Portable device 102 is “a cellular phone, a personal digital assistant (PDA), or any other suitable portable electronic device” and includes “a control device 114, an electronic circuit 116, a display screen 118, a first transceiver 120, a second transceiver 122 and power means 124.” Ex. 1001, 13:42-49; Lipoff, ¶55. The electronic circuit includes “a data forwarding switching element capable of alternate data conveyance operations responsive to reception or absence of an activation cue” and the switching element may be in “either [] a first state when portable electronic device 102 has received the activation cue, or a second state in the absence of the activation cue.” Ex. 1001, 13:50-58; Lipoff, ¶55. Using the control device, electronic device, and transceivers, the portable device 102 communicates “through a direct link” or “through a communication network” depending on its proximity to a data exchange device and “whether the switching element comprised within electronic circuit 116 is in a first state or a second state.” Ex. 1001, 13:34-41, 13:50-60, 14:53-59; Lipoff, ¶55.

If “an activation cue is received” by the transceiver (a cue receiver), “the switching element within electronic circuit 116 will be assigned its first state” (that is, “if it is already in its first state, it will remain as such; while if it is in another state, it will be switched to its first state) and communicate through the direct link. Ex. 1001, 15:4-13, 15:55-63, 16:11-15; *id.* 5:57-62; Lipoff, ¶56. Conversely, if “no

activation cue is received by the portable electronic device 102 cue receiver, the switching element within electronic circuit 116 will be assigned its second state” and communicate through the alternate communication path—the communication network. Ex. 1001, 15:4-13, 16:47-57; *id.* 5:63-67; Lipoff, ¶56.

V. Claim Construction

The Board construes claims under *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2018). Claims should only be construed to the extent necessary to resolve a controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Other than the means-plus-function limitations identified below, the Board need not construe any term of the '294 patent to resolve the underlying controversy.¹ *Toyota Motor Corp. v. Cellport Sys., Inc.*, IPR2015-00633, Paper No. 11, 16 (P.T.A.B. Aug. 14, 2015) (citing cases).

A. “power means”/“means for providing power” (claims 1, 10, 11, 19)

The term “power means” is subject to construction under 35 U.S.C. § 112, sixth paragraph (pre-AIA). A POSITA would have understood that the corresponding structure for these claim terms is *an internal power source for storing*

¹ Petitioner reserves the right to raise claim construction arguments and to respond to any construction DH International may advance.

and providing power or a component for providing power from an external power source because the '294 patent explains that power means “can be any type of power source suitable for providing power to the portable electronic device components that require power, or for receiving power from an external source to re-distribute it to the portable electronic device components that require power.” Ex. 1001, 9:50-54; Lipoff, ¶62. The corresponding function is “providing power to said portable electronic device [].” Ex. 1001, 2:10-11; Lipoff, ¶62.

B. “data conveyance switching element” (claims 1, 11, 19)

To the extent “data conveyance switching element” is subject to construction under 35 U.S.C. § 112, sixth paragraph (pre-AIA), a POSITA would have understood that the corresponding structure for this claim term is *a physical structure, a virtual program, or both* because the '294 patent explains that a switching element “can be any type of device allowing data to be conveyed according to alternate data conveyance operations,” such as “a series of instructions programmed onto [a] microchip” or a “decisional logical circuit,” and “can be a physical structure, a virtual program, or both.” Ex. 1001, 9:28-31, 9:40-41; Lipoff, ¶64.

The corresponding function is *switching between inactive and activated states based on the receipt of an activation cue*. Ex. 1001, 2:4-9, 4:18-23, 5:48-53; Lipoff, ¶64.

C. “control device” (claims 1, 10, 11, 19)

To the extent “control device” is subject to construction under 35 U.S.C. § 112, sixth paragraph (pre-AIA), the recited function is “selectively triggering ... to issue an invariable activation command.” Ex. 1001, 7:4-8, 10:63-11:2, 16:27-29. The ’294 patent explains that the control device “can be any suitable device allowing the portable electronic device holder to selectively trigger a data conveyance operation,” such as “a single manually activated button,” “a biometric parameter detector” (such as a “fingerprint scanner”), or “a keypad.” Ex. 1001, 8:29-56. A POSITA would have understood the corresponding structure for this claim term is *either a biometric parameter detector or one or more buttons*. Lipoff, ¶66.

D. “data exchange device” (claim 11) and “external data exchange device” (claims 1, 19)

To the extent “data exchange device” is subject to construction under 35 U.S.C. § 112, sixth paragraph (pre-AIA), a POSITA would have understood that the corresponding structure² is a *data transceiver coupled to a circuit* because the ’294 patent explains the data exchange device “can be any sort of data exchange device comprising an electronic circuit ... and a data transceiver,” such as a “portable electronic device,” “a computer,” or “an automatic teller machine.” Ex. 1001, 9:3-6;

² The ’294 Patent does not distinguish a “data exchange device” from an “external data exchange device.”

Lipoff, ¶¶67-68. The corresponding function is *exchanging data*”. Ex. 1001, 2:14-17, 4:7-14. Lipoff, ¶68.

VI. Grounds 1 and 2: Claims 1-20 Are Obvious Over *Mooney* (Ground 1) and *Mooney* in view of *Lee* (Ground 2)

A. Overview of Prior Art

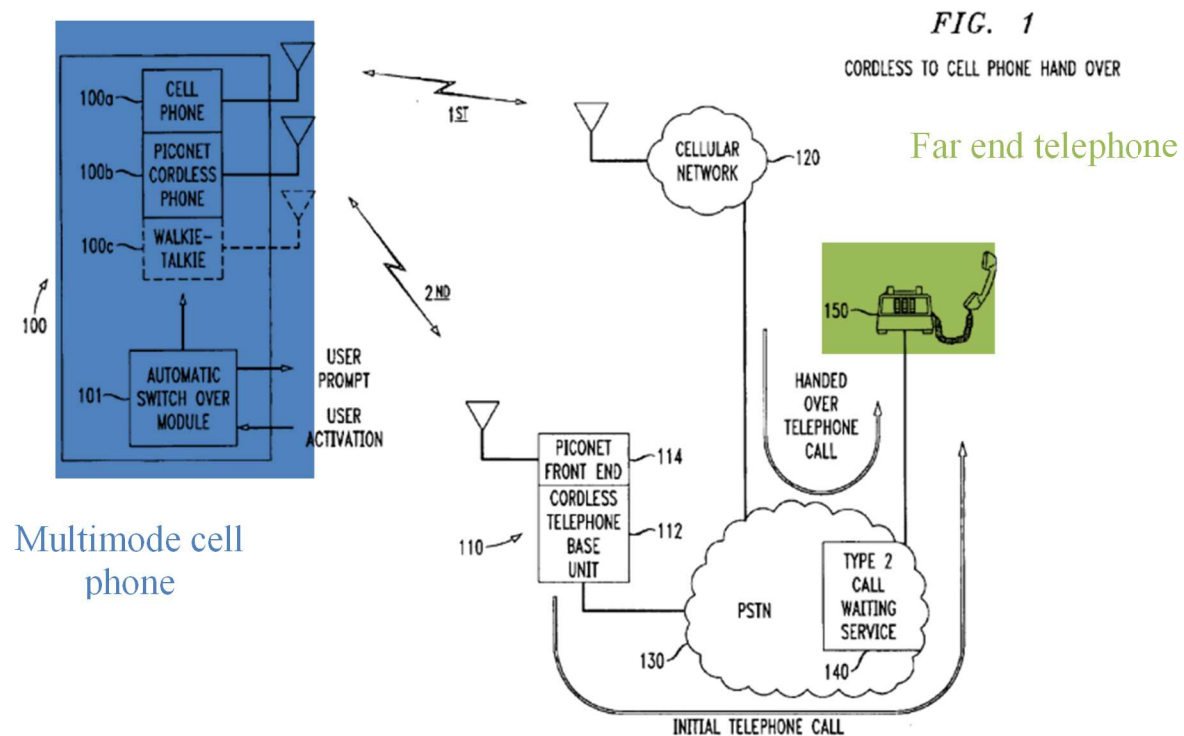
1. *Mooney* (Ex. 1005)

Mooney is prior art to the '294 patent under at least 35 U.S.C. § 102(e) because it was filed on June 26, 2001 and issued on September 6, 2005. *Mooney*, cover page.

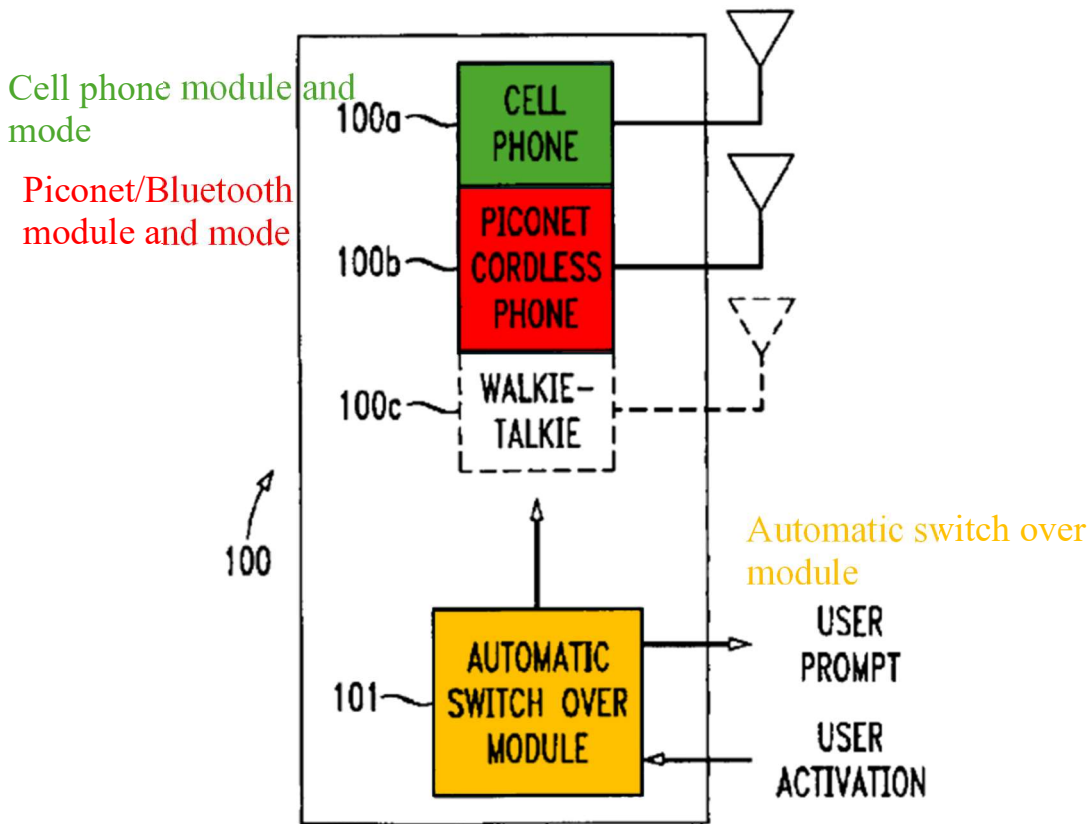
Mooney discloses “a multimode cell phone 100 includ[ing] multiple functional modes, e.g., a cell phone mode 100a, a piconet cordless telephone 100b.” *Mooney*, 3:52-55, Fig. 1. “The desired mode of the multimode cell phone 100 may be controlled through suitable communications with each communication path functionality” such that a call may be initiated using a “cellular network” when the multimode cell is in “cell phone mode” (“cellular mode”) or a “BLUETOOTH™ piconet link” (also called “RF link”) when the multimode cell is in “piconet cordless telephone” mode (“piconet mode”). *Mooney*, 3:60-63, 5:11-15, 6:45-51, Fig. 1; Lipoff, ¶72. To facilitate the switch between operational modes, *Mooney* discloses an “automatic switch over module” 101 that “operates to switch a communication path established on either the cell phone functionality or the RF communication functionality, with another communication path established on the other of the cell

phone functionality and the RF communication functionality.” Ex. 1001, 1:56-61, 3:55-62, Fig. 1; Lipoff, ¶72.

The annotated Figures below illustrate a **multimode cell phone** configured to communicate with a “**far end telephone**” using either piconet/Bluetooth or cellular module/mode, and the **automatic switch over module** for switching between the communication paths associated with each mode. *Mooney*, Fig. 1; Lipoff, ¶73.



Mooney, Fig. 1 (annotated).

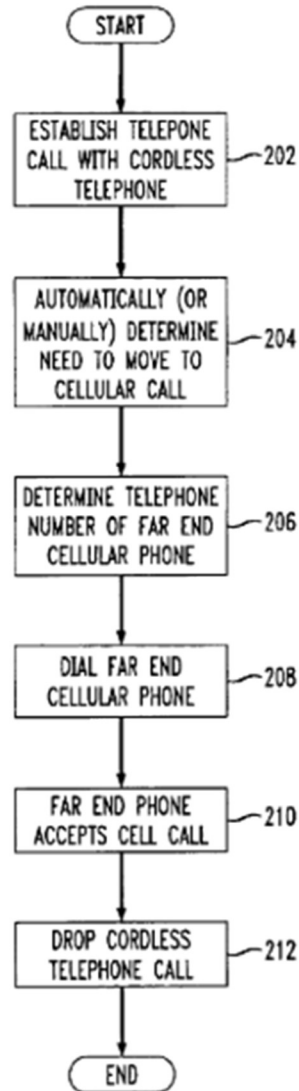


Mooney, Fig. 1 (excerpted, annotated).

Mooney explains that factors such as “the quality of the RF link (e.g., the BLUETOOTH™ piconet link)” determine which communication link (and operational mode) should be used. *Mooney*, 6:14-25, 6:45-51; Lipoff, ¶74. When a caller on the multimode cell phone is “within range of the cordless telephone base station that is matched to the cordless telephone mode of the 3-in-1 cell phone” and/or the “cordless telephone link (e.g., a piconet BLUETOOTH™ link of *good quality*) has been established with the cordless base for a given length of time (e.g., for at least two minutes),” a call may be established in cordless mode via the

BLUETOOTH™ link. *Mooney*, 4:34-37, 6:18-25, Fig. 2; *id.* 1:31-34 (“a 3-in-1 cell phone conventionally *provides establishment of a telephone call* with a wireless cell phone network, or with a local cordless telephone, depending upon which mode the phone is in” (emphasis added)), 3:49-51, 4:12-15 (Fig. 1 depicts “*an established telephone call between the multimode cellphone 100 and a far end telephone 150*”), 4:54-56 (“as shown in step 202 of Fig. 2, a cordless telephone call is established using a cordless telephone mode of the multimode cell phone 100.” (emphasis added)), Fig. 1, Fig. 2 (illustrating the call of Figure 1 established using the BLUETOOTH™ link in cordless mode); Lipoff, ¶74.

FIG. 2
CORDLESS TO CELL PHONE HAND OVER



Mooney, Fig. 2.

Mooney further explains that the “converse of the example of Figs. 1 and 2 is also possible” such that a call may be established in cellular mode. *Mooney*, 4:28-34, 5:7-11. Accordingly, a user who is “beyond” the “acceptable range” of the base

unit, e.g., a user who “is on their way home,” establishes a call “on their 3-in-1 cellphone *in cellular* (or other wireless network) mode.” *Mooney*, 4:17-19, 4:28-34; *id.* 1:31-34 (“a 3-in-1 cell phone conventionally *provides establishment of a telephone call* with a wireless cell phone network, or with a local cordless telephone, depending upon which mode the phone is in” (emphasis added)), 3:49-51; Lipoff, ¶75.

2. *Lee* (Ex. 1006)

Lee is prior art to the '294 patent under 35 U.S.C. § 102(e) because it was filed on November 2, 2000 and issued on June 21, 2005. *Lee*, cover page.

Lee discloses a “dual-enabled” device (such as a mobile phone) configured to route a call over a Bluetooth or cellular network “depending on the circumstances.” *Lee*, 3:17-28, 4:17-31, Figs. 1-2. Like the multimode phone of *Mooney*, *Lee*’s device includes transceivers for communicating with either a Bluetooth base unit (“BT Hub”) or a “cellular network” *Lee*, 3:17-27, 4:17-21, Fig. 1; Lipoff, ¶77. And like *Mooney*, *Lee* also uses signal quality to determine which communication pathway should be used. *Lee*, 3:17-27, 4:17-31, Fig. 2. Communication may be directed to a cellular network when, e.g., “the Bluetooth network 100 is unavailable or subject to interference, such as outside a building or vehicle.” 4:17-31, Fig. 2; Lipoff, ¶77.

Lee discloses “a discovery and/or registration process” through which its device’s internal logic determines whether to use a cellular or Bluetooth network

prior to routing the call. *Lee*, 4:56-5:6, Fig. 2; Lipoff, ¶78. As illustrated in Figure 2, block 202, the device “determines whether the dual-enabled BTED 120A has identified a BT Hub 118 for use in communications, as well as discovery and registration. If so, control transfers to Blocks 204 and 206” to connect to the BT Hub (step 204) and routes “Voice-over-IP (VoIP) packets to the correct destination” (step 206). *Lee*, 5:7-10; Lipoff, ¶78. If the Bluetooth network is “unavailable,” however, the device connects to the cellular network so that the call may be routed over a cellular network. *Lee*, 4:25-31, 4:66-5:6, 5:27-36, Fig. 2; Lipoff, ¶78.

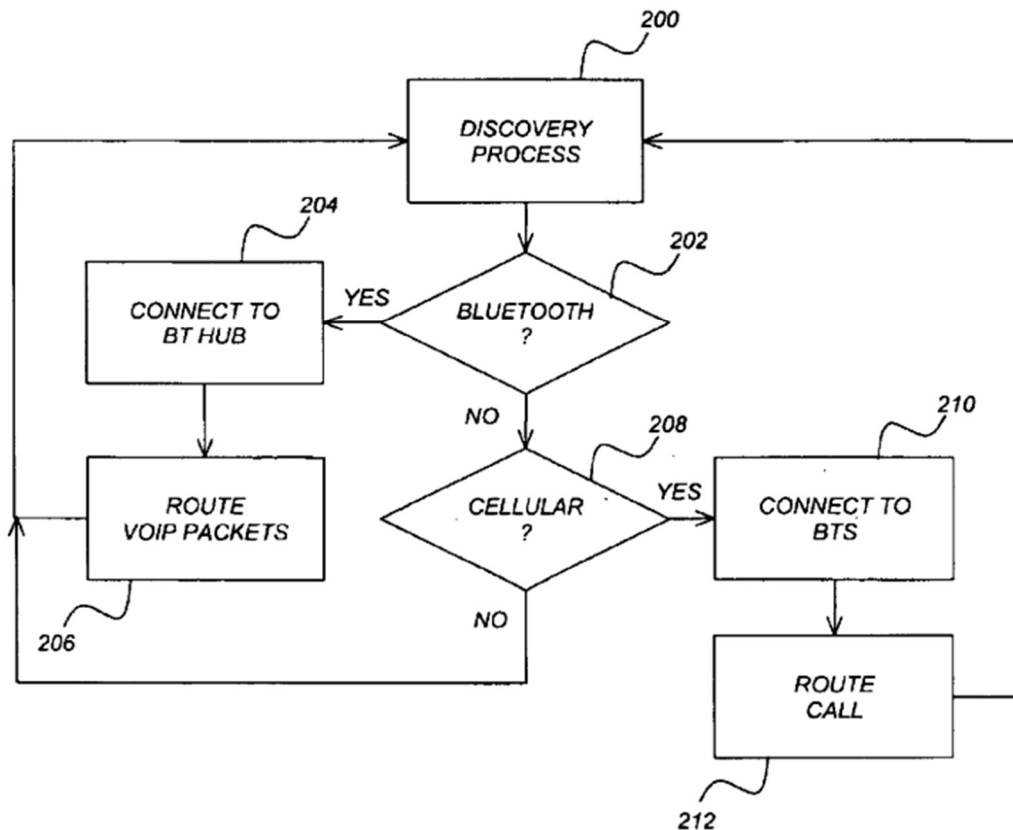


FIG. 2

Lee, Fig. 2.

B. Claims

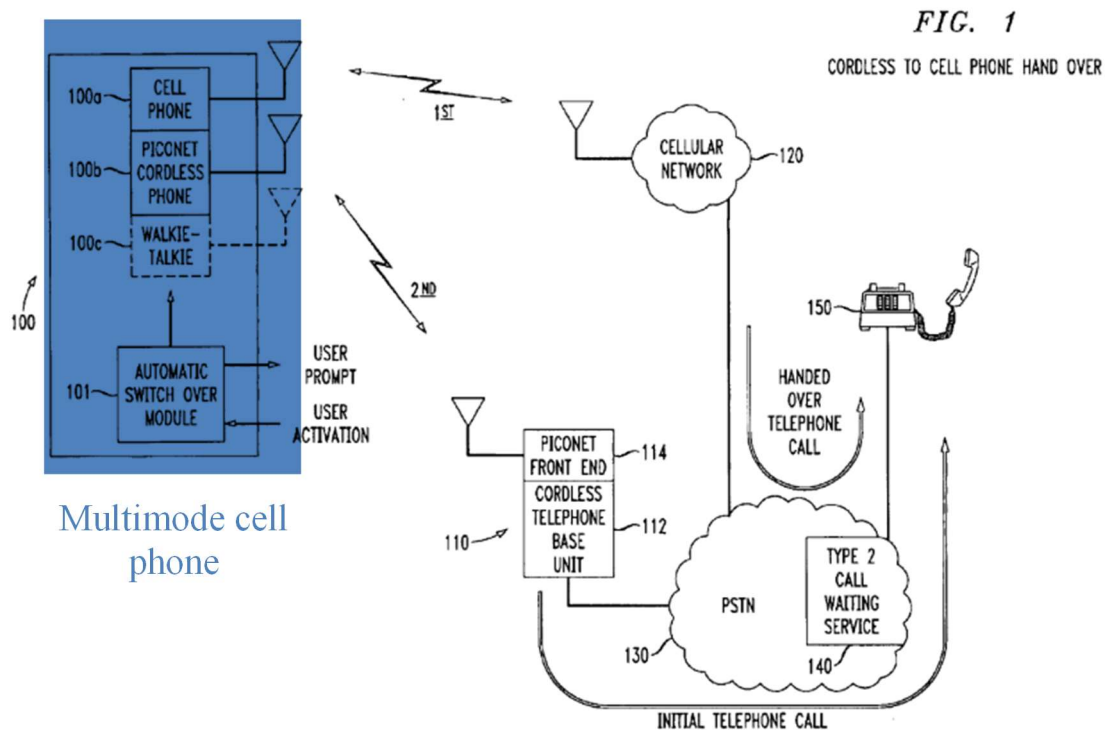
1. Independent Claim 1

a. [1.pre]: “A cellular phone, comprising:”

Mooney discloses [1.pre] because it discloses a “multimode cell phone.”

Mooney, Abstract, 1:51-54, 3:49-51, Fig. 1; Lipoff, ¶¶81.

As illustrated in Figure 1 below, *Mooney* discloses “a multimode cell phone [100] compris[ing] a cell phone functionality, and an RF communication functionality separate from the cell phone functionality.” *Mooney*, Abstract, 1:51-54, 3:49-51, Fig. 1; Lipoff, ¶¶82.



Mooney, Fig. 1 (annotated).

b. [1.a]: “an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;”

Mooney discloses [1.a] because *Mooney*’s “multimode cell phone” includes various electrically coupled electronic components, including conventional storage for storing data, “an appropriate processor” capable of processing data, and “multiple functional modes, e.g., a cell phone mode 100a, a piconet cordless telephone 100b, and a walkie-talkie mode 100c.” and “automatic switchover module” capable of data input and output (collectively, “an electronic circuit”). *Mooney*, 1:54-66, 3:52-63, 7:9-12; Lipoff, ¶83.

Regarding the claimed “storing” and “processing,” *Mooney* explains that “the 3-in-1 cell phone,” as was known in the art, “include[s] the ability and convenience of storing all phone book data, calling history and user preferences.” *Mooney*, 1:32-45; Lipoff, ¶84. *Mooney* also explains that “the need to initiate, establish and switch over to another mode (e.g., to a cordless telephone call using a piconet cordless telephone) *is determined*, either automatically or manually, *by an appropriate processor* in the multimode cell phone.” *Mooney*, 7:9-12; Lipoff, ¶84. A POSITA would have understood that the electronic circuit of *Mooney*’s multimode cell phone is capable of storing instructions (data) (in addition to “phone book data, calling history and user preferences”) that the processor processes to achieve the aforementioned “initiate, establish and switch over” functions. *Mooney*, 7:9-12; *id.*,

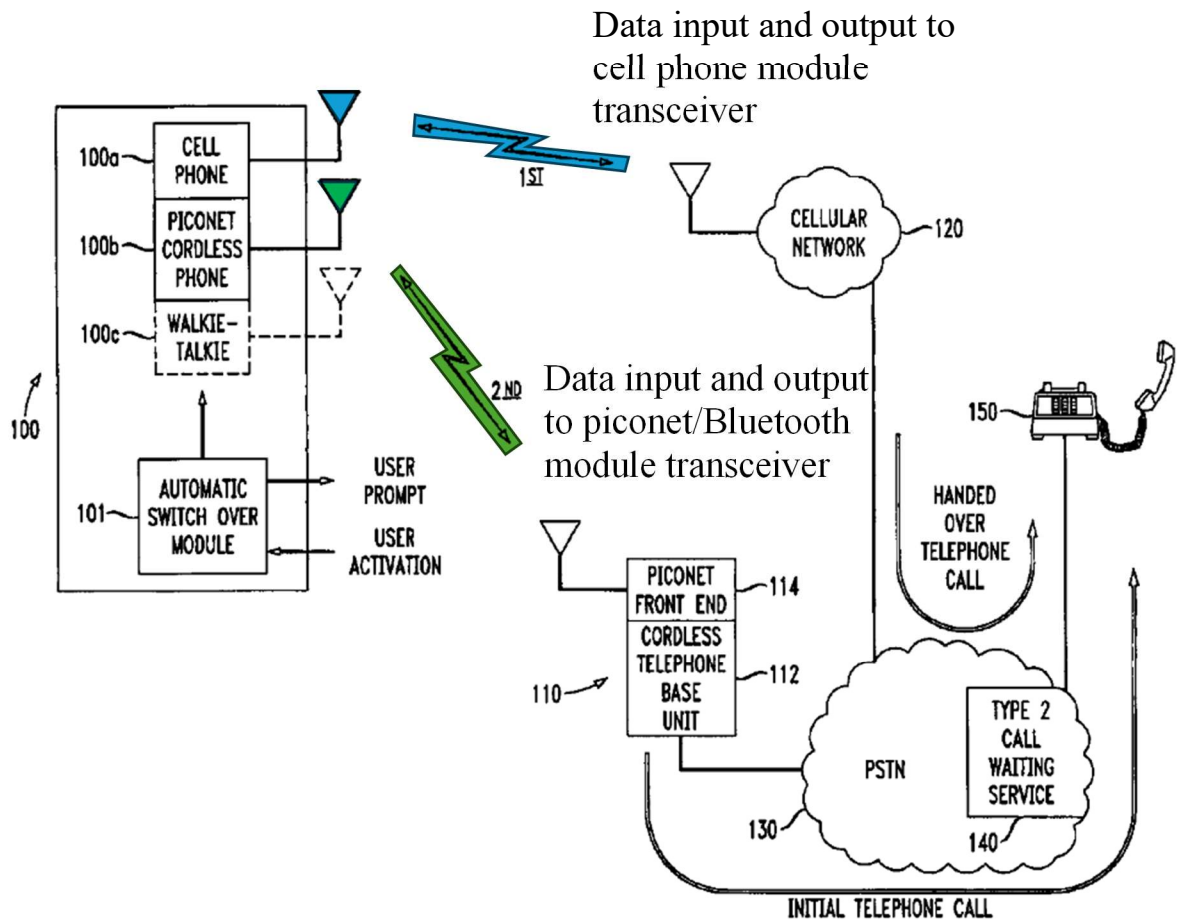
3:60-63 (“The desired mode of the multimode cell phone 100 may be controlled through suitable communications with each communication path functionality 100a–100c”); Lipoff, ¶84.

Regarding data input and output, *Mooney* discloses that its modules (e.g., cellphone module 100a and piconet cordless module 100b) “communicate” with—i.e., receive data input from and send data output to—a “far end telephone” using “a first type [of] RF communication link and a second type [of] RF communication link different from the first type [of] RF communication link” such as a cellular and piconet Bluetooth link. *Mooney*, 1:62-66, 3:52-55, 5:11-15, Fig. 1; Lipoff, ¶85. “In the cordless telephone mode, the multimode cell phone 100 communicates between handset unit 100 and a matching piconet cordless telephone base unit 110 using a suitable piconet front end 114 in the base unit 110 and a matching piconet front end within the multimode cell phone 100.” *Mooney*, 4:7-11. Alternatively, when a call is established “in cellular (or other wireless network) mode,” the cell phone module establishes a “cellular phone call” using a “cell phone link” between the multimode phone and a far end telephone over a “wireless cell phone network.” *Mooney*, 1:31-34, 1:62-66, 4:30-34, 5:41-47, 5:57-62; Lipoff, ¶85. The automatic switch over module also receives data input and output because it “is *in communication with* each communication path functionality, e.g., with the cell

phone functionality 100a, the piconet cordless telephone functionality 100b.”

Mooney, 3:56-60 ; Lipoff, ¶85.

Annotated Figure 1 below illustrates exemplary data input and output capabilities of Monney’s electronic circuit. Lipoff, ¶86.



Mooney, Fig. 1 (excerpted, annotated).

- c. **[1.b]: “a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;”**

Mooney discloses or renders obvious [1.b] because it explains that calls are “initiated” or “established” (an invariable activation command) by a user operating the multimode cell phone (a user-triggered control device configured to be operated by a user to issue the command). *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2; Lipoff, ¶87.

A POSITA would have understood that *Mooney*’s multimode cell phone includes at least buttons (a user-triggered control device) for dialing a phone number and triggering a phone call to the far end phone (issue an invariable action command upon after being operated), as was conventional at the time of the alleged invention. Lipoff, ¶88. Indeed, *Mooney* illustrates in Figure 1 that far end phone 150 (which “can be any telephonic device, multimode or single mode”) also includes buttons (a user triggered control device) that when operated, could call another phone (issue an invariable activation command). *Mooney*, 4:12-17, Fig. 1; Lipoff, ¶88. Further, *Mooney* expressly discloses incorporating other buttons, such as a “designated button,” to control other functions. *Mooney*, 4:38-49; Lipoff, ¶88. Accordingly, a POSITA would have understood that *Mooney*’s multimode cell phone includes a

control device configured to be operated by at least a button for triggering a phone call based on its disclosure of other multimode phones having the same. Lipoff, ¶88.

To the extent this is disputed or the Board finds otherwise, a POSITA would have been motivated and found it obvious to provide *Mooney*'s cell phone with a control device configured to be operated by e.g., a conventional number keypad for dialing telephone numbers, to give the user a mechanism through which to dial phone numbers and establish phone calls. Lipoff, ¶90. A POSITA would have reasonably expected to succeed in incorporating a keypad in *Mooney*'s cell phone since such configurations were conventional in the art and would have only required routine skill to implement. Lipoff, ¶90. Indeed, a POSITA would have recognized that a cell phone without a keypad (or other user-triggered control device) for triggering phone calls (an invariable action command) would have rendered *Mooney*'s device effectively meaningless. *Mooney*, 4:54-56; Fig. 2 (step 202); Lipoff, ¶90.

- d. **[1.c]: “a first data transceiver operatively linked to said electronic circuit, said first data transceiver being for exchanging data between said electronic circuit and a first external data exchange device over a first communication link;”**

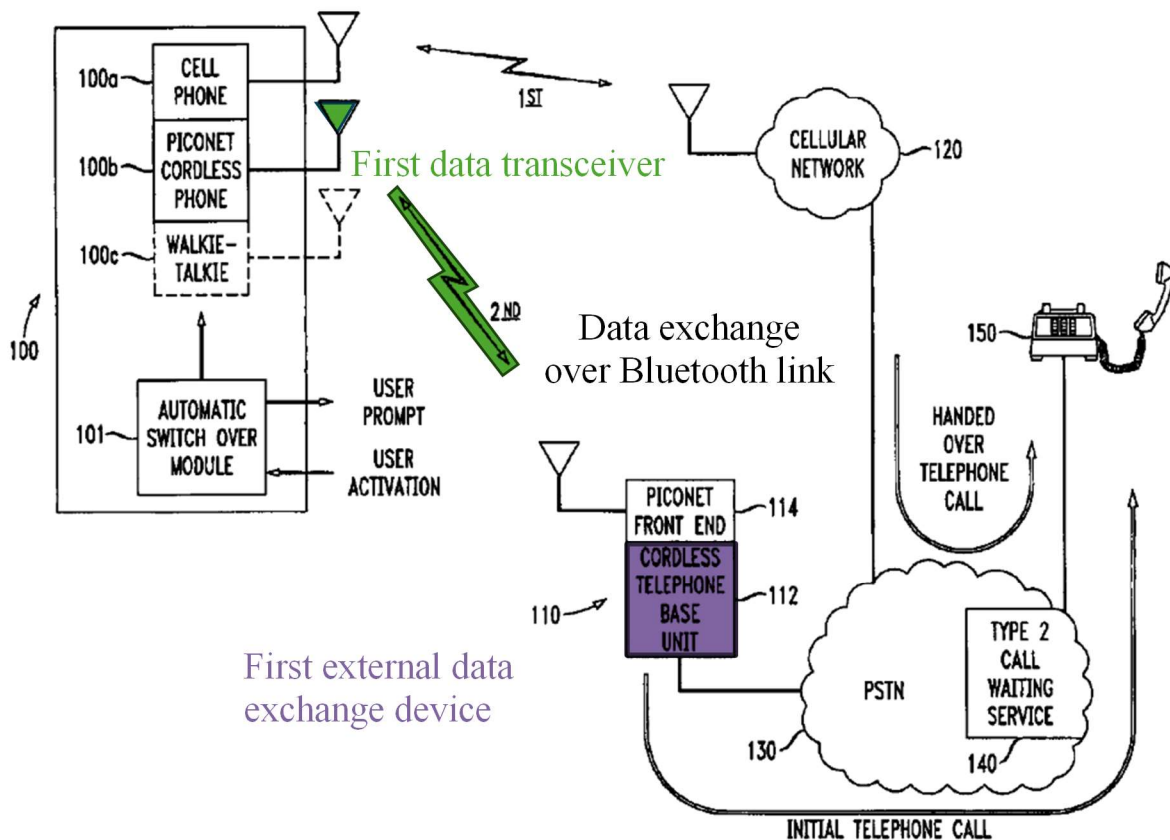
Mooney discloses [1.c] because its multimode cell phone includes a “piconet cordless module 100b” that exchanges data between the electronic circuit and a “cordless telephone base unit” (first external data exchange device) of a “far end

telephone” over “a first type [of] RF communication link” such as a Bluetooth link. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff, ¶91. A POSITA would have understood that the data exchange is facilitated by a first data transceiver of the piconet cordless module, as explained below. Lipoff, ¶¶91-93.

Mooney’s multimode cell phone includes a “piconet cordless module 100b” configured to “communicate” with—i.e., receive data input from and send data output to—a “far end telephone” using “a first type [of] RF communication link” such as a Bluetooth link. *Mooney*, 1:62-66, 3:52-55, 5:11-15, Fig. 1; Lipoff, ¶92. *Mooney* further explains that “[i]n the cordless telephone mode, the multimode cell phone 100 communicates between handset unit 100 and a matching piconet cordless telephone base unit 110 using a suitable piconet front end 114 in the base unit 110 and a matching piconet front end within the multimode cell phone 100.” *Mooney*, 4:7-11; Lipoff, ¶92. A POSITA would have understood that the data exchange (phone call) is facilitated by a transceiver operatively linked to other electronic circuit elements, e.g., the piconet cordless module, because the module receives and transmits communications (data) using the same device. *Mooney*, Fig. 1; Lipoff, ¶92. *Mooney*’s first data transceiver is also operatively linked to the processor (another element of the electronic circuit as discussed in [1.a]) because the processor instructs the multimode cell phone to communicate in either the cell phone mode or piconet Bluetooth mode using the proper transceiver. *Mooney*, 4:7-11, 4:29-

34, 7:9-12; Lipoff, ¶¶92. The first transceiver that carries out communication in the piconet Bluetooth mode is also operatively coupled to the processor of the electronic circuit so that it can receive instructions to communicate using a Bluetooth link. *Mooney*, 4:7-11, 7:9-12; Lipoff, ¶¶92.

Annotated Figure 1 below shows *Mooney*'s multimode cell phone containing a first data transceiver for exchanging data between the piconet cordless module (an element of the electronic circuit) and a cordless telephone base unit (first external data exchange device) over a piconet Bluetooth link (first communication link). *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff, ¶¶93.



Mooney, Fig. 1 (annotated, excerpted).

- e. **[1.d]: “a second data transceiver operatively linked to said electronic circuit, said second data transceiver being for exchanging data between said electronic circuit and a second external data exchange device over a second communication link that is distinct from said first communication link;”**

Mooney discloses [1.d] because the multimode cell phone includes a “cellphone module 100a” that exchanges data between the electronic circuit and a “cellular network” infrastructure (second external data exchange device) connected to the “far end telephone” over “second type [of] RF communication link different from the first type [of] RF communication link” such as a cellular link. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff, ¶94. A POSITA would have understood that the data exchange is facilitated by a second data transceiver of the cell phone module as explained below. Lipoff, ¶¶94-97.

Mooney’s multimode cell phone includes a “cellphone module 100a” configured to “communicate” with—i.e., receive data input from and send data output to—a “far end telephone” using “a second type [of] RF communication link” such as a cell phone link. *Mooney*, 1:62-66, 3:52-55, 5:11-15, 5:57-62, Fig. 1; Lipoff, ¶95. *Mooney* further explains that when the multimode cell phone is in cell phone mode, the cell phone module establishes a “cellular phone call” using a “cell phone link” between the multimode phone and a far end telephone over a “wireless cell phone network” *Mooney*, 1:31-34, 1:62-66, 5:41-47, 5:57-62; Lipoff, ¶95. A

POSITA would have understood that the data exchange (phone call) is facilitated by a transceiver operatively linked to other electronic circuit elements, e.g., the cell phone module, because the module receives and transmits communications (data) using the same device. *Mooney*, Fig. 1; Lipoff, ¶95.

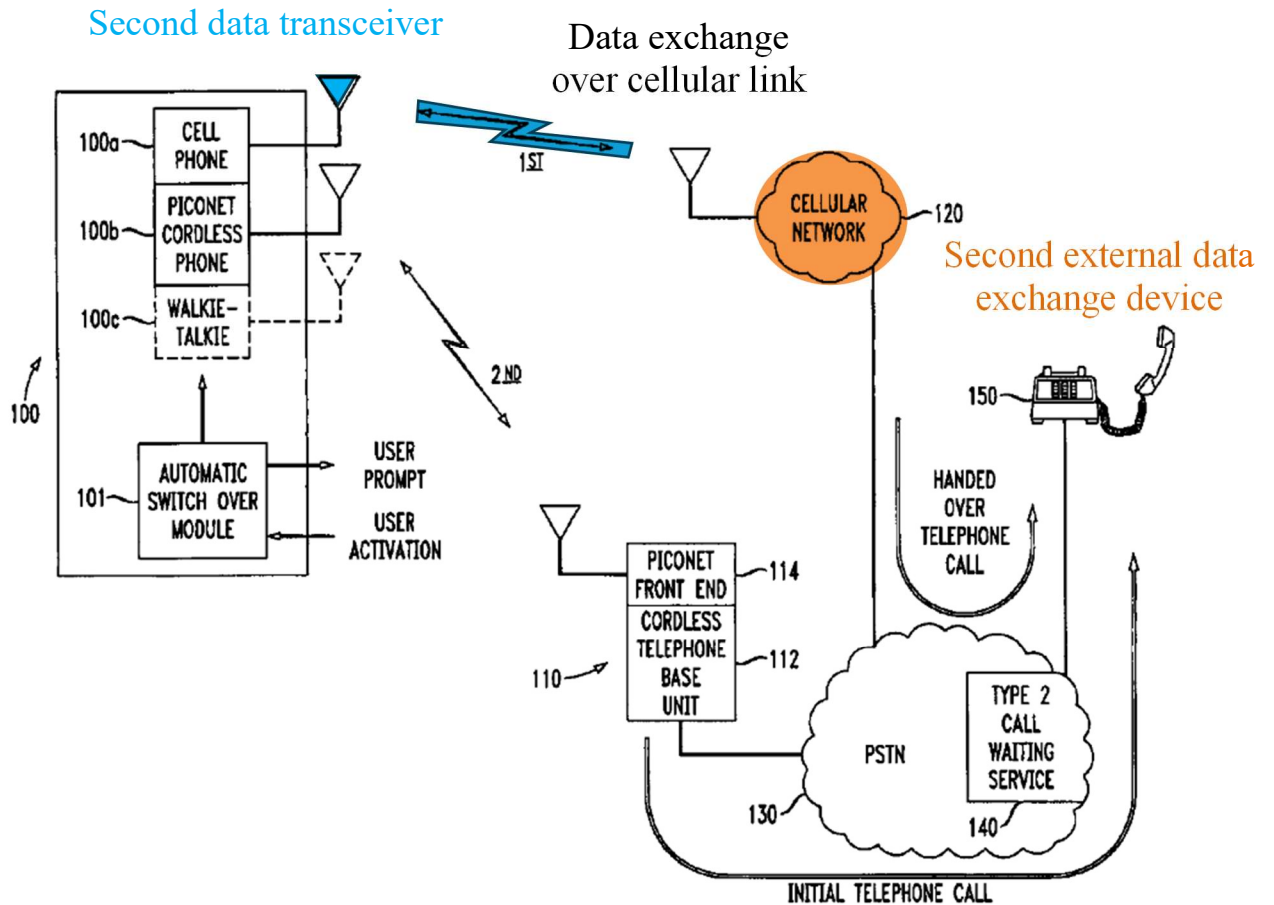
Mooney's second data transceiver is also operatively linked to the processor because the processor instructs the multimode cell phone to communicate in either the cell phone mode or piconet Bluetooth mode using the proper transceiver, as explained for [1.c]. *Mooney*, 1:62-66, 4:7-11, 4:29-34, 7:9-12; Lipoff, ¶__. The second transceiver that carries out communication in cell phone mode is also operatively coupled to the processor of the electronic circuit so that it can receive instructions to communicate over the cell phone link. *Mooney*, 1:62-66, 4:7-11, 4:29-34, 7:9-12; Lipoff, ¶96.

Annotated Figure 1 below shows *Mooney*'s multimode cell phone containing a second data transceiver for exchanging data between the cell phone module (an element of the electronic circuit) and cellular network infrastructure³ (second

³ A POSITA would have understood that the cellular network is comprised of infrastructure, including at least one base station transceiver for facilitating wireless communication between the multimode cell phone and the network, as was conventional in the art. Lipoff, ¶__ (citing *Lee*, 2:45-50).

external data exchange device) over a cellular link (second communication link).

Mooney, 1:31-34, 1:62-66, 5:41-47, 5:57-62, Fig. 1; *Lipoff*, ¶97.



Mooney, Fig. 1 (annotated, excerpted).

- f. **[1.e]: “a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone;”**

Mooney discloses [1.e] because the first transceiver⁴ (a cue receiver) is operatively linked to the piconet/Bluetooth cordless module and processor (electronic circuit) (as explained in [1.c]), and is also for receiving “quality” Bluetooth signals (an activation cue) from a “piconet front end” and “base unit” (source external to the cellular phone). *Mooney*, 1:31-34, 2:36-47, 2:53-3:7, 3:13-25, 3:49-51, 4:6-15, 4:28-36, 6:14-25, 6:45-51; Lipoff, ¶98.

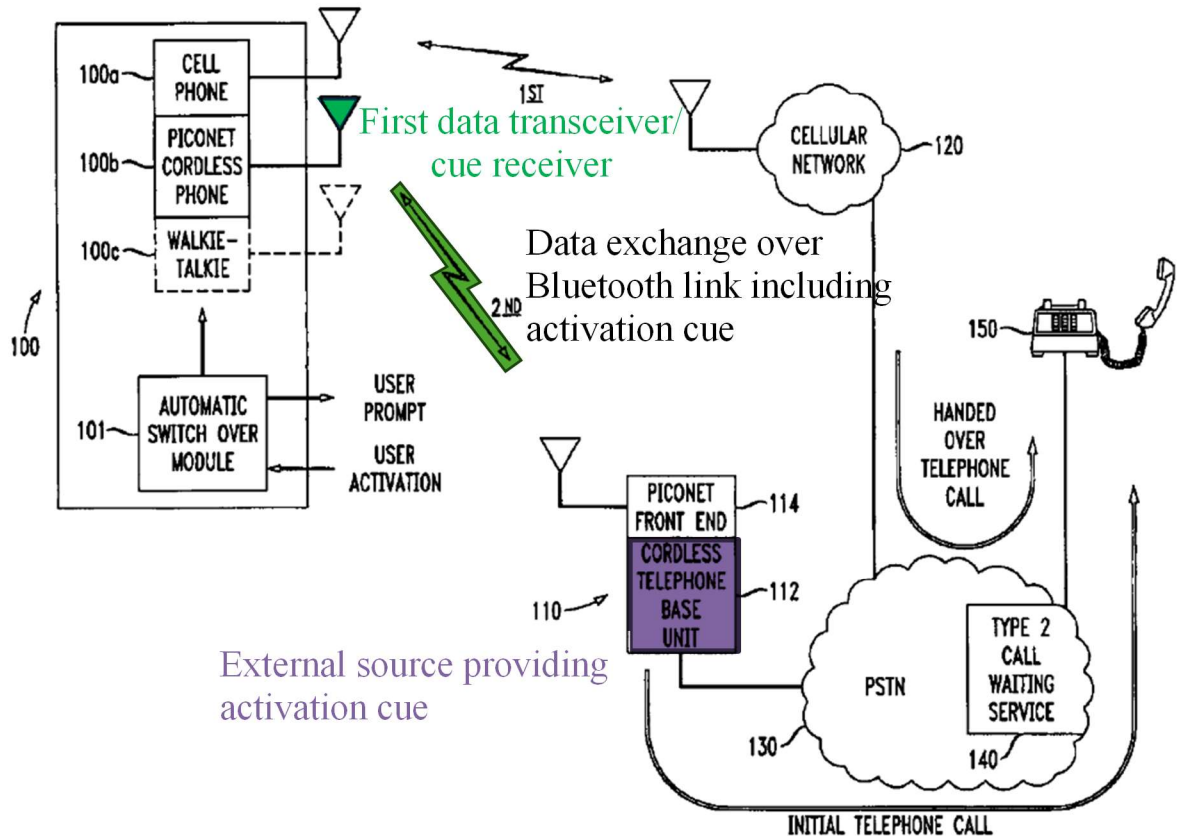
Mooney explains that factors including “the quality of the RF link (e.g., the BLUETOOTH™ piconet link)” determine which communication link (and operational mode) the multimode cell phone should use. *Mooney*, 6:14-25, 6:45-51; Lipoff, ¶99. When a caller on the multimode cell phone is “within range of the cordless telephone base station that is matched to the cordless telephone mode of the 3-in-1 cell phone” and/or the “cordless telephone link (e.g., a piconet

⁴ The '294 patent explains that its transceiver, like *Mooney*'s receiver, is a cue receiver. Ex. 1001, 9:22-24 (“Transceiver 18 is also a cue receiver, whereby an activation cue can be received by electronic device 10 from data exchange device transceiver 9 a.”), claim 3 (“wherein said first data transceiver includes said cue receiver”).

BLUETOOTH™ link of *good quality*) has been established with the cordless base for a given length of time (e.g., for at least two minutes),” the piconet/Bluetooth cordless module is informed of the signal quality (*via its first transceiver/ cue receiver*) and a call may be established in cordless mode via the BLUETOOTH™ link. *Mooney*, 2:53-3:7, 4:34-37, 6:18-25, Fig. 2; *id.*, 1:31-34 (“a 3-in-1 cell phone conventionally provides establishment of a telephone call with ... a local cordless telephone, depending upon which mode the phone is in”), 3:49-51, 4:12-15 (Fig. 1 depicts “an established telephone call between the multimode cellphone 100 and a far end telephone 150”), 4:54-56 (“as shown in step 202 of Fig. 2, a cordless telephone call is established using a cordless telephone mode of the multimode cell phone 100.”), Fig. 1, Fig. 2 (illustrating the call of Figure 1 established using the BLUETOOTH™ link in cordless mode); Lipoff, ¶99.

Accordingly, a POSITA would have understood that a “good quality” Bluetooth signal originating from the base unit (e.g., one that is “within range” and/or “has been established with the cordless base for a given length of time”), is an activation cue that informs the multimode cell phone’s first transceiver/cue receiver of its ability to establish a call in piconet/Bluetooth cordless mode. *Mooney*, 1:31-34, 3:49-51, 4:6-15, 4:28-36, 6:14-25, 6:45-51; Lipoff, ¶100. Annotated Figure 1 below illustrates the data exchange including the quality of the Bluetooth signal

(activation cue) between the **base station (external source)** and the piconet/Bluetooth cordless module's **first transceiver (cue receiver)**. Lipoff, ¶100.



Mooney, Fig. 1 (annotated, excerpted).

- g. [1.f]: “a data conveyance switching element operatively linked to said electronic circuit, said switching element being assigned a first state upon an activation cue having been received by said cue receiver, and being assigned a second state when no activation cue was received by said cue receiver; and”

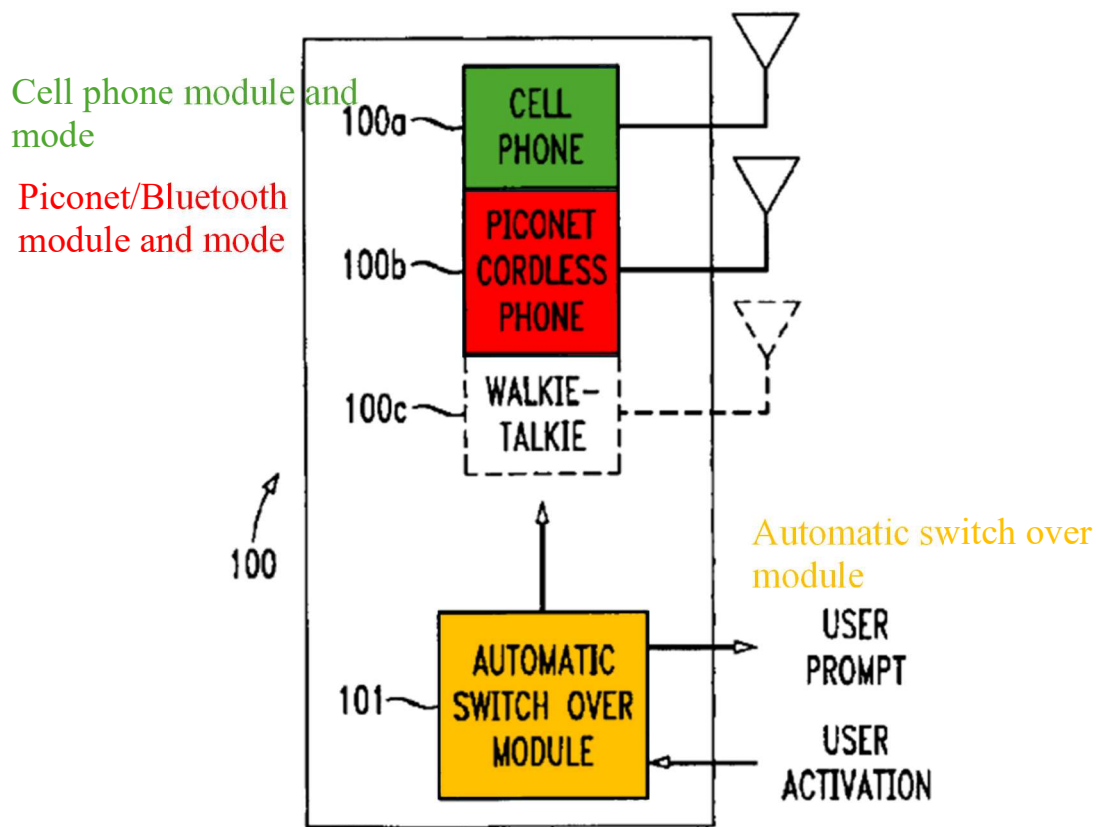
Mooney discloses [1.f] because the multimode cell phone includes an “**automatic switch over module**” (**data conveyance switching element**) operatively connected to the processor, piconet/Bluetooth cordless module, and cell phone

module (electronic circuit) that is assigned (1) a “piconet cordless telephone mode” (first state) when a quality Bluetooth signal is received by the piconet module transceiver (upon an activation cue having been received by the cue receiver) or (2) a “cell phone mode” (second state) when no quality Bluetooth signal is received by the piconet module transceiver (when no activation cue was received by said cue receiver). *Mooney*, 1:53-61, 2:36-47, 2:53-64, 2:65-3:7, 3:13-25, 3:55-62, 3:55-62, 3:64-4:1, 4:6-10, 4:28-36, 4:56-57, 5:7-20, 5:21-61, 5:57-61, 6:14-40, 7:9-12, Figs. 1-2; Lipoff, ¶101.

First, *Mooney* discloses that the switch over module is operatively linked to the processor, cell phone and piconet/Bluetooth modules (electronic circuit). *Mooney*, 1:54-61, 3:56-63, 7:9-12; Lipoff, ¶102.

Mooney explains that the “automatic switch over module 101 is *in communication with* each communication path functionality, e.g., with the cell phone functionality 100a, the piconet cordless telephone functionality 100b, and ... [t]he desired mode of the multimode cell phone 100 may be controlled through suitable communications with each communication path functionality 100a–100c.” *Mooney*, 1:54-61, 3:56-63; Lipoff, ¶103. A POSITA would have understood that the switch over module is operatively linked with the cell phone and piconet cordless modules (electronic circuit elements) because it communicates with them. Lipoff, ¶103. *Mooney* also explains that “the need to initiate, *establish and switch*” between

the modes/functionalities “(e.g., to a cellular phone call [mode]) is determined, either automatically or manually, by an appropriate processor in the multimode cell phone 100.” *Mooney*, 7:9-12. A POSITA would have also understood that the switch over module is implemented in or operatively linked to the processor (another electronic circuit element) because the processor controls the switch—i.e., assigns an operational mode (cellular or piconet/Bluetooth cordless) to the switch. Lipoff, ¶103. Annotated Figure 1 below illustrates the operative connection between the “automatic switch module” and cell phone and piconet cordless modules that correspond to cell phone and piconet cordless mode, respectively. Lipoff, ¶103.



Mooney, Fig. 1 (excerpted, annotated).

Second, *Mooney* discloses that the switch over module is assigned (by the processor, as explained above) to piconet/Bluetooth cordless mode (a first state) when a quality Bluetooth signal (activation cue) is received by the first transceiver (cue receiver) of the piconet cordless module. *Mooney*, 1:34-38, 4:41-49, 5:8-11, 6:14-24, 7:9-12; Lipoff, ¶104.

Mooney explains that “once the multimode cell phone 100 becomes within range of its matching base unit 110 ... the multimode cell phone 100 automatically establishes a wireless connection with the cordless telephone base Station 110 using,

e.g., a wireless piconet protocol conforming to the BLUETOOTH™ standard.” *Mooney*, 1:34-38, 4:41-49, 5:8-11, 6:18-24 (“when a cordless tele phone link (e.g., a piconet BLUETOOTH™ link of good quality) has been established with the cordless base for a given length of time (e.g., for at least two minutes), then the multimode cell phone handset 100 will allow switch over to the cordless telephone call.”); Lipoff, ¶105.

Accordingly, *Mooney*’s automatic switch over module (data conveyance switching element) is assigned, by the processor, to a first state (piconet/Bluetooth connection for cordless telephone mode) upon coming in range of the base unit 110 and receiving at the piconet module transceiver (cue receiver) a quality Bluetooth signal (activation cue) indicating that the phone is capable of establishing a call in piconet/Bluetooth cordless mode. *Mooney*, 5:8-11, 6:14-24; Lipoff, ¶106.

Third, *Mooney* discloses that the switch over module is assigned (by the processor) to “cell phone mode” (a second state) when no quality Bluetooth signal (activation cue) is received by the first transceiver (cue receiver) of the piconet/Bluetooth cordless module. *Mooney*, 4:17-30, 4:57-58, 6:45-51, 7:9-12; Lipoff, ¶107.

Mooney discloses that its automatic switch over module switches to cell phone mode when the multimode cell phone 100 “senses” that it has extended beyond an “acceptable” Bluetooth range—that is, when the piconet/Bluetooth cordless module

transceiver (cue receiver) no longer receives quality Bluetooth signals from the piconet base unit, the switch is assigned to cell phone mode. *Mooney*, 4:17-23, Fig. 1; Lipoff, ¶108. *Mooney* also explains that “the user may be prompted about impending loss of signal,” causing the device “switch communication path” in an “entirely automated” fashion. *Mooney*, 4:41-49. When “the need (or desire) to change communication modes to a cellular mode is determined,” due to “automatic detection of the quality of the RF link (e.g., the BLUETOOTH™ piconet link) below a preset level,” “the multimode cell phone 100 may switch from cordless mode to cell phone mode.” *Mooney*, 4:57-58, 6:45-51; Lipoff, ¶108.

Accordingly, a POSITA would have understood that *Mooney*’s automatic switch over module (data conveyance switching element) is assigned, by the processor, to a second state (cellular network for cell phone mode) when no quality Bluetooth signal (no activation cue) is received by the first transceiver (cue receiver) of the piconet cordless module. *Mooney*, 4:17-30, 4:57-58, 6:45-51, 7:9-12; Lipoff, ¶109.

Furthermore, because the determination of whether the data is to be conveyed to a “cordless telephone [Bluetooth] base unit” (first external data exchange device) using a “Bluetooth link,” or a “cellular network” (second external data exchange device) over a “cell phone link,” has already been made when the user dials a far end telephone number (upon triggering an invariable command, as explained in [1.b]), a

POSITA would have also understood that the automatic switch module is assigned to the piconet/Bluetooth mode (first state) or the cell phone mode (second state) *before* the call is “established” (data is exchanged), as explained further detail for [1.h] and [1.i] below. Lipoff, ¶110

h. [1.g]: “power means for providing power to said portable electronic device cellular phone;”

Mooney discloses or renders obvious [1.g] because its cell phone includes electrical components requiring power to operate and cell phones were known to include power means, like batteries, to power these electronic components. Lipoff, ¶111.

A POSITA would have understood that *Mooney*’s multimode cell phone includes a power means because at least its modules and processor would have required a power source to operate. Lipoff, ¶112. Indeed, as Dr. Lipoff explains, it was well known in the art to integrate power means in cell phones for the purpose of providing power to electronic components contained therein. Lipoff, ¶112 (citing Ex. 1010, 1:29-35 (“cellular phones include phones with a removable battery pack”), 1:64-2:2; Ex. 1011, Abstract (“A battery pack of a cellular phone is equipped with a battery.”)).

To the extent Patent Owner disputes this or the Board determines otherwise, a POSITA would have been motivated and found it obvious to integrate a power means, such as a battery, into the multimode cell phone of *Mooney*, to provide its

electronic components with power, thereby enabling their desired operation and functionality, as was conventional in the art. Lipoff, ¶¶114-115.

A POSITA would have reasonably expected to succeed in integrating a power means into the multimode cell phone because such configurations were conventional in the art and would have only required routine skill to implement, as Dr. Lipoff explains., Abstract; Lipoff, ¶115 (citing Ex. 1010, 1:29-35, 1:64-2:2; Ex. 1011). Indeed, a POSITA would have recognized that a cell phone without a power means for powering its electronic components would have rendered *Mooney*'s device effectively meaningless because it would not be able to conduct phone calls. Lipoff, ¶115.

- i. **[1.h] “wherein upon said control device being selectively triggered by the user to issue said invariable activation command: if said switching element is in said first state, a first data conveyance operation will be initiated through the instrumentality of said first data transceiver for sending data from said electronic circuit to the first external data exchange device over said first communication link; and ”**

[1.i]: “[wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for sending data from said

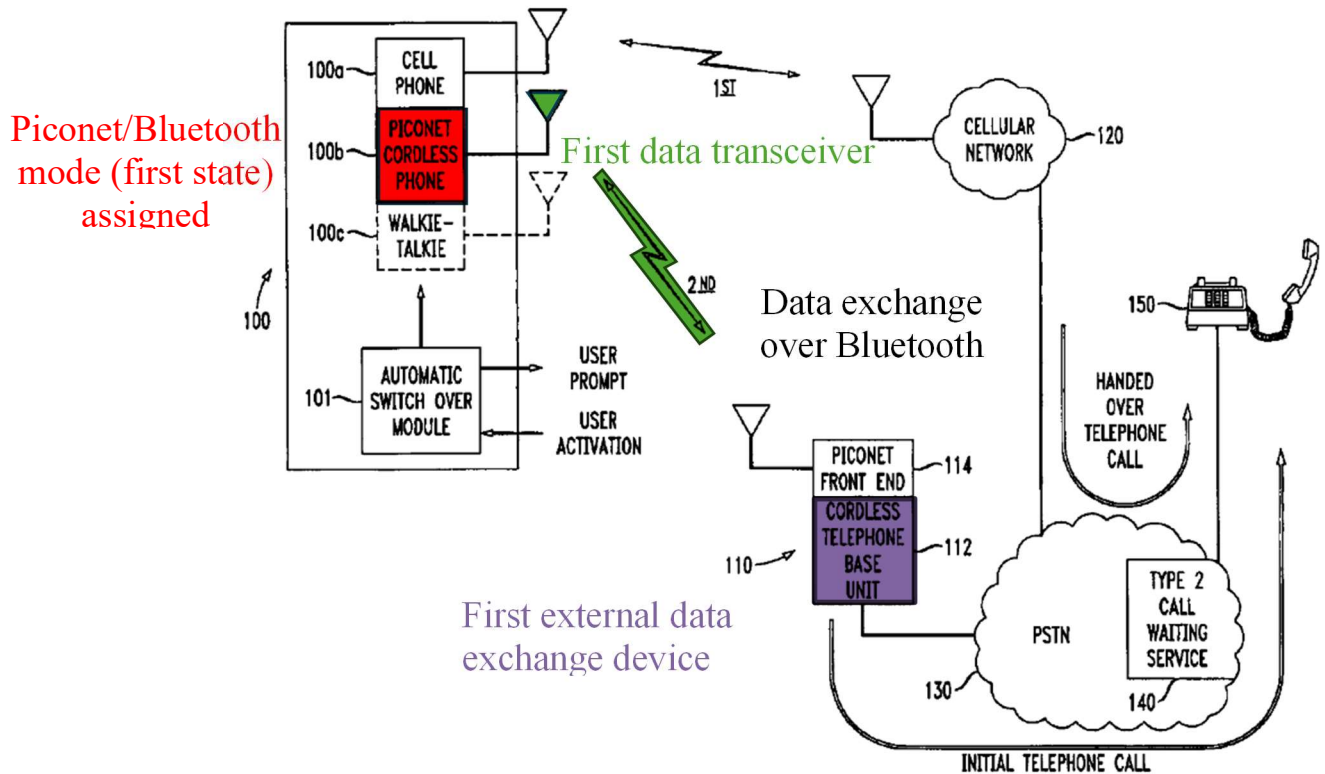
electronic circuit to the second external data exchange device over said second communication link.”

[1.h] and [1.i] recite alternative data conveyance operations, whereby data from the electronic circuit is to be conveyed to the first external data exchange device through the first data transceiver if the switching element is in the first state ([1.h]) and data from the electronic circuit is to be conveyed to the second external data exchange device through the second data transceiver if the switching element is in the second state ([1.i]). Lipoff, ¶116.

**(a) *Mooney* alone renders obvious [1.h]-[1.i]
(Ground 1)**

Mooney alone discloses or renders obvious [1.h] because when the automated switch module (switching element) is in piconet/Bluetooth cordless mode (the first state), and the user initiates a phone call by dialing a telephone number on the keypad (upon said control device being selectively triggered by the user to issue said invariable activation command), call data is communicated (conveyed) from the piconet/Bluetooth module (electronic circuit element) through its corresponding first transceiver to the piconet/Bluetooth base unit (first external data exchange device) over the “Bluetooth link” (first communication link). *Mooney*, 1:34-38, 4:41-49, 5:8-11, 6:14-24, 7:9-12; Lipoff, ¶¶117-118.

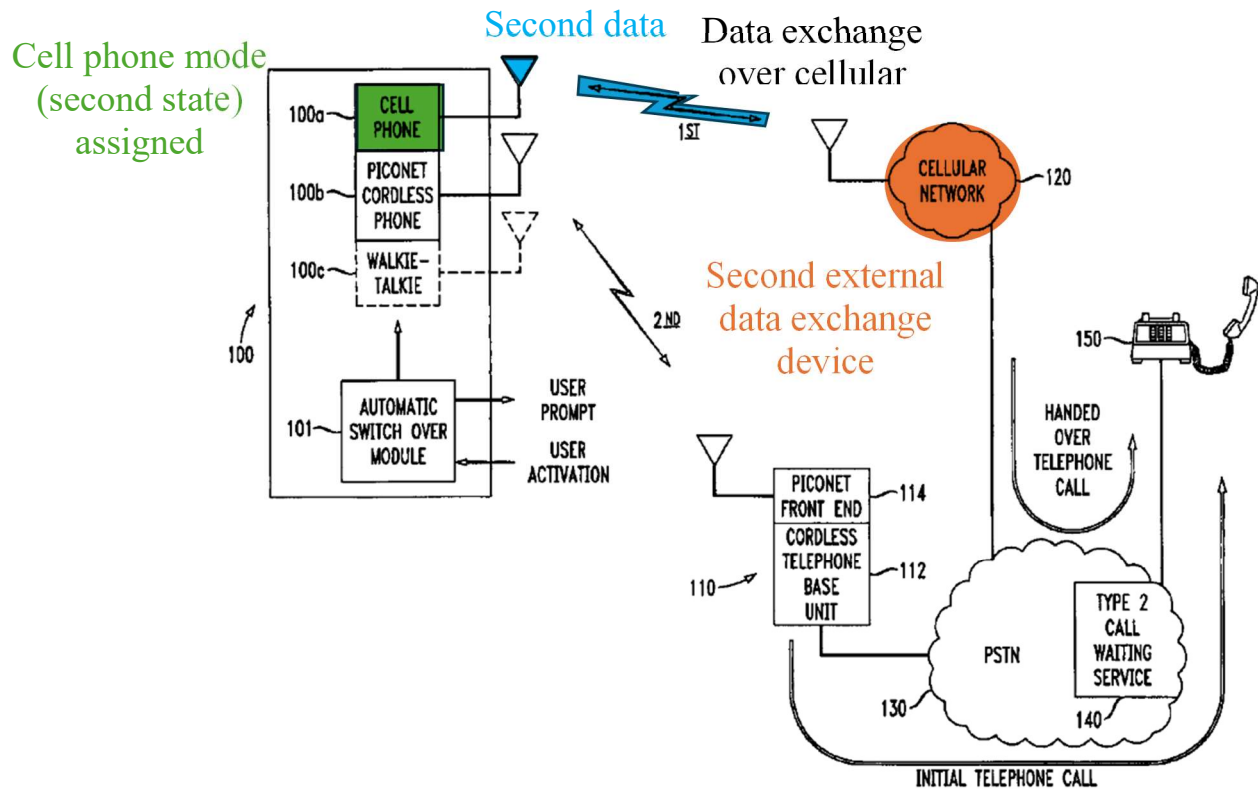
Annotated Figure 1 below illustrates the path of data conveyance in the first state, as described in [1.h]:



Mooney, Fig. 1 (annotated, excerpted).

Conversely, *Mooney* alone discloses or renders obvious [1.i] because when the automated switch module (switching element) is in cellular mode (the second state), and the user initiates a phone call by dialing a telephone number on the keypad (upon said control device being selectively triggered by the user to issue said invariable activation command) data is communicated (conveyed) from the cell phone module (electronic circuit element) through its corresponding second transceiver to the cellular network infrastructure (second external data exchange device) over the “cell phone link” (second communication link). *Mooney*, 4:17-30, 4:57-58, 6:45-51, 7:9-12; Lipoff, ¶¶119-120.

Annotated Figure 1 below illustrates the path of data conveyance in the second state as described in [1.i]:



Mooney, Fig. 1 (annotated, excerpted).

As explained for [1.b], calls are “initiated” or “established” (an invariable activation command) by a user operating *Mooney*’s multimode cell phone when the user dials a telephone number on a keypad thereof (a user-triggered control device is operated by a user to issue the command). *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2; Lipoff, ¶121. The call data is conveyed over the first transceiver of the piconet/Bluetooth module when the switch is in the first mode and over the second

transceiver of the cell phone module when in the second mode as also explained in [1.c]-[1.d] and [1.f]; Lipoff, ¶121.

A POSITA would have understood that the automatic switch over module is assigned to the piconet/Bluetooth mode (first state) or the cell phone mode (second state) *before* the call is “established” (data is exchanged) because when the user dials a far end telephone number (upon triggering an invariable command, as explained in [1.b]), the determination of whether the data is to be conveyed to a “cordless telephone [Bluetooth] base unit” (first external data exchange device) using a “Bluetooth link,” or a “cellular network” (second external data exchange device) over a “cell phone link,” has already been made. *Mooney*, 1:56-61 (explaining that calls are “established on either the cell phone functionality or the RF communication functionality” from the outset, such that the operational mode may be switched at a later time), 4:54-56 (“a cordless telephone call is established using a cordless telephone mode of the multimode cell phone 100”), Fig. 2, step 202 (illustrating that the telephone call is established in cordless telephone mode when the user dials the telephone number of a far end cellular phone), 5:6-7 (“The converse of the example of Figs. 1 and 2 is also possible.”), 6:45-51 (“the multimode cell phone 100 may switch from cordless mode to cell phone mode when the user wishes to leave the proximity of the cordless telephone base unit 110. For instance, manual activation of a Suitable button, or automatic detection of the quality of the RF link (e.g., the

BLUETOOTH™ piconet link) below a preset level may initiate this feature.”); Lipoff, ¶122.

Regarding the flow chart illustrated in Figure 2 specifically, *Mooney* discloses an example in which the phone determines it is range of the Bluetooth cordless phone and starts a phone call in a first state as a cordless phone [step 202]. *Mooney*, FIG. 2. Next, the device determines the need to switch from a cordless phone first data transceiver to a cellular second data transceiver and switches from the first cordless state to the second cellular state [step 204]. *Mooney*, FIG. 2. Then, at the conclusion of the Figure 2 flow chart, the call is switched from the first cordless phone external data transceiver to the second cellular phone external data transceiver [step 212]. *Mooney*, FIG. 2. This exemplary operation in which the call begins in cordless/Bluetooth mode is consistent with *Mooney*’s disclosure in the specification: “a cordless telephone user might make telephone calls using their cell phone handset accessing their cordless telephone base unit at times when they might not otherwise use their cell phone handset, e.g., when at home in the vicinity of a cordless telephone.” *Mooney*, 1:28-30; Lipoff, ¶¶123-124. A POSITA reading *Mooney* would have understood that the nearby cordless phone Bluetooth external data transceiver acts as an activation cue to determine if the phone will send data to the first external cordless phone data transceiver versus the second external cellular phone base station external data transceiver. Lipoff, ¶124.

A POSITA would have also understood that implementing *Mooney*'s switching and data conveyance operations at the outset would have permitted *Mooney*'s multimode cell phone to quickly and efficiently connect to the mode best suited for communication (e.g. the “preferabl[e]” Bluetooth mode when quality Bluetooth signals are detected) and establish communications in the prescribed mode without degrading the user experience and ensuring quality wireless communication—express goals of *Mooney*. *Mooney*, 1:45-47, 1:23-44, 6:18-25; Lipoff, ¶125. This is consistent with the state of the art, wherein a “discovery process” is utilized to determine whether a call should be initiated over a Bluetooth or cellular network before the call is established. *Lee*, 4:38-46, 4:59-5:2, 5:7-10; Lipoff, ¶125.

Accordingly, a POSITA would have understood that when the user in *Mooney* dials a telephone number of a far end phone on the keypad of the multimode handset (upon said control device being selectively triggered by the user to issue said invariable activation command):

(1) if the automatic switching module (switching element) is in the piconet/Bluetooth cordless mode (first state), a phone call will be initiated through the piconet/Bluetooth module transceiver (a first data conveyance operation will be initiated through the instrumentality of said first data transceiver) for sending the

call (data) from the electronic circuit to the piconet/Bluetooth base unit (first external data exchange device) over the Bluetooth link (first communication link), and

(2) if the automatic switching module (switching element) is in the cell phone mode (second state), a phone call will be initiated through the cell phone module transceiver (a first data conveyance operation will be initiated through the instrumentality of said second data transceiver) for sending the call (data) from the electronic circuit to the cellular network (second external data exchange device) over the cell phone link (first communication link). *Mooney*, 1:53-61, 2:36-47, 2:53-64, 2:65-3:7, 3:13-25, 3:55-62, 3:55-62, 3:64-4:1, 4:6-10, 4:12-15, 4:28-36, 4:54-57, 5:7-20, 5:21-61, 5:57-61, 6:14-40, Figs. 1-2; Lipoff, ¶126.

To the extent Patent Owner disputes this or the Board finds otherwise, [1.h]-[1.i] would have been obvious over *Mooney* in view of *Lee* as explained for Ground 2. Lipoff, ¶128.

**(b) *Mooney* in view of *Lee* renders obvious
[1.h]-[1.i] (Ground 2)**

Lee discloses a “dual-enabled” device (such as a mobile phone) configured to route a call over a Bluetooth or cellular network “depending on the circumstances.” *Lee*, 3:17-28, 4:17-31, Figs. 1-2; Lipoff, ¶129. Like *Mooney*’s multimode phone, *Lee*’s device includes transceivers for communicating with either a Bluetooth base unit (“BT Hub”) or a “cellular network” *Lee*, 3:17-27, 4:17-21, Fig. 1; Lipoff, ¶129. And like *Mooney*, *Lee* uses signal quality (an activation cue as described in [1.e]) to

determine which communication pathway should be used. *Lee*, 3:17-27, 4:17-31, Fig. 2; Lipoff, ¶129.

Communication may be directed to “the Bluetooth network 116 exclusively when the cellular network 100 is unavailable or subject to interference, such as within a building or vehicle,” or the cellular network when, e.g., “the Bluetooth network 100 is unavailable or subject to interference, such as outside a building or vehicle.” *Lee*, 4:17-31, Fig. 2; Lipoff, ¶130.

Lee discloses “a discovery and/or registration process” through which its device’s internal logic determines whether to use a cellular or Bluetooth network *prior* to transmitting data. *Lee*, 4:56-5:6, Fig. 2; *id.*, claim 20 (“performing a discovery and/or registration process to identify whether to use either the wireless local loop network or the cellular network.”); Lipoff, ¶131. The “discovery process is conducted at regular intervals by the BTEDs 120 to identify the closest BT Hub 118. A BTED 120 then communicates its position to the BT Hub 118, which in turn takes over responsibility for transmitting data to and from the BTEDs 120.” *Lee*, 4:42-46, 4:59-56, 5:27-29; Lipoff, ¶131. As illustrated in Figure 2, block 202, the device “determines whether the dual-enabled BTED 120A has identified a BT Hub 118 for use in communications, as well as discovery and registration. If so, control transfers to Blocks 204 and 206” to connect to the BT Hub (step 204) and

routes “Voice-over-IP (VoIP) packets to the correct destination” (step 206). *Lee*, 5:7-10; Lipoff, ¶131.

Determining to communicate
via Bluetooth when Bluetooth
signal is available

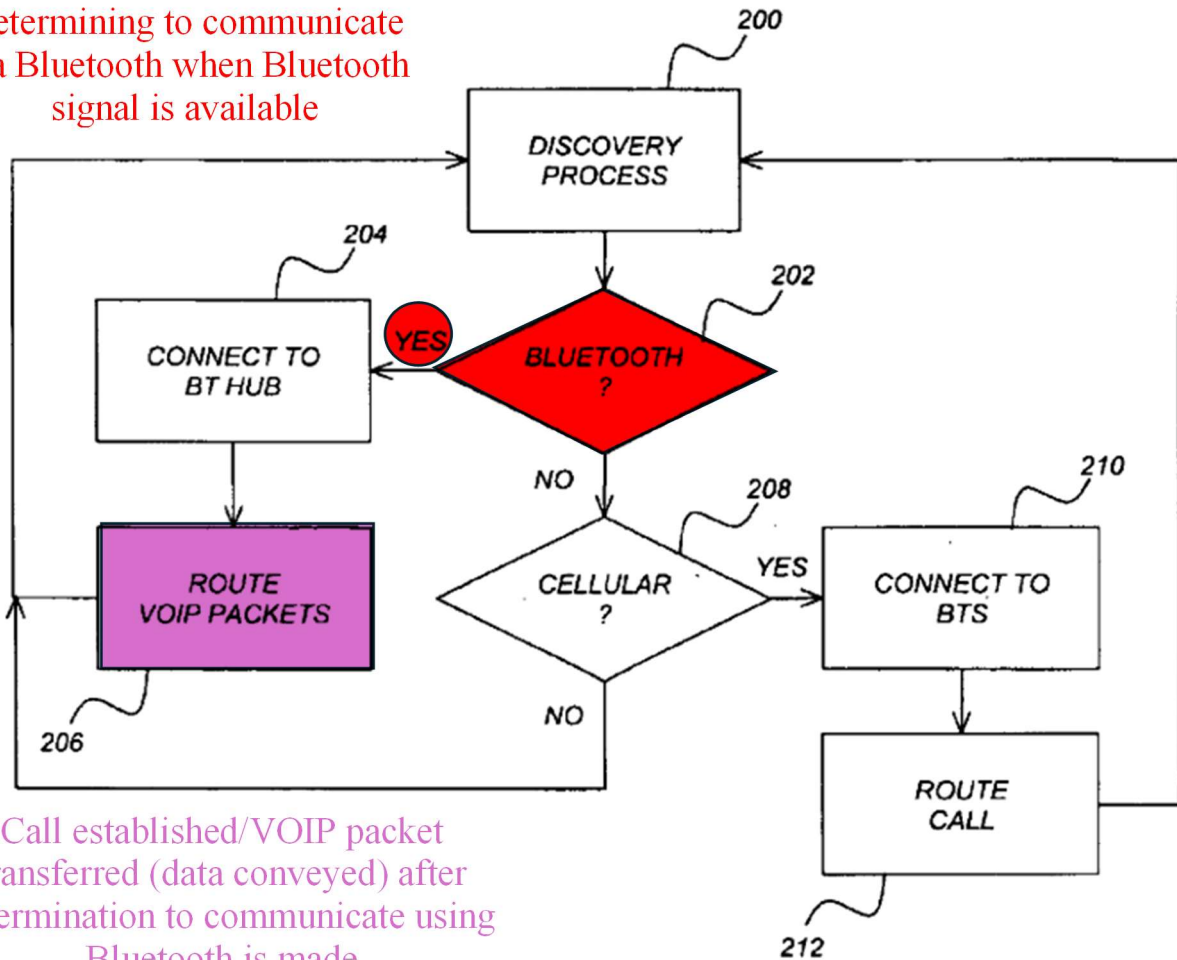
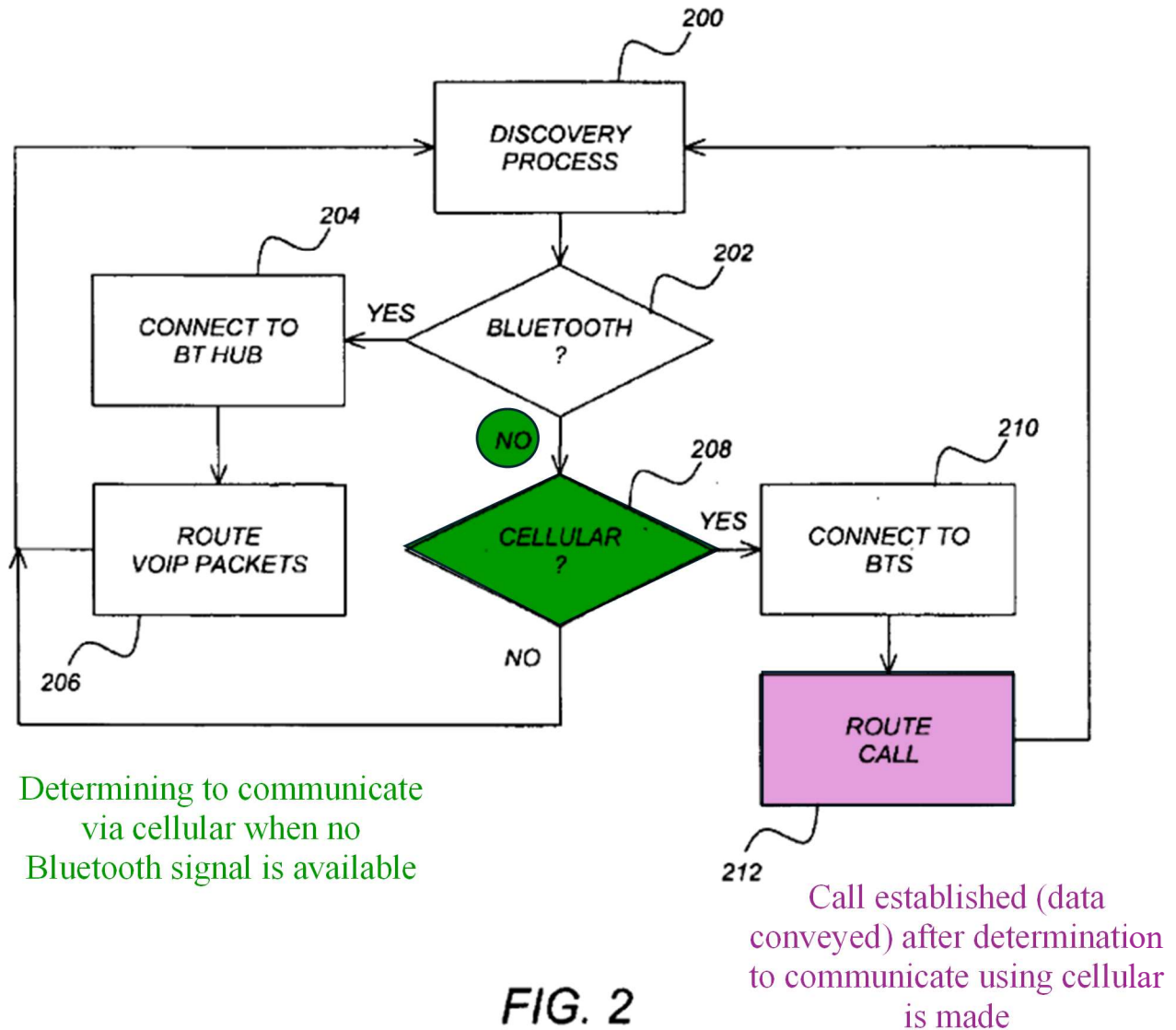


FIG. 2

Lee, Fig. 2 (annotated).

If the Bluetooth network is “unavailable,” however, the device connects to the cellular network so that the data is transmitted over a cellular network. *Lee*, 4:25-31, 4:66-5:6, 5:27-36, Fig. 2; Lipoff, ¶132.



Lee, Fig. 2 (annotated).

Lee describes numerous “advantages” of its disclosed methods, including “increased capacity” over the cellular and Bluetooth networks and “reduced congestion and interference” over both networks. *Lee*, 4:6-16; Lipoff, ¶133. A POSITA would have recognized that assessing signal (communication link) availability prior to sending data over that communication link, as taught by *Lee*,

would have been similarly advantageous for *Mooney*'s multimode cell, which like *Lee*, utilizes Bluetooth or cellular communication links depending on signal strength. [1.c]-[1.f]; Lipoff, ¶133.

A POSITA would have been motivated and found it obvious to implement “discovery process” logic, as taught by *Lee*, in *Mooney*'s multimode to reduce congestion and interference over *Mooney*'s cellular and Bluetooth networks by enabling the multimode phone to determine whether to use cellular or Bluetooth mode before sending data over the corresponding communication links. *Lee*, 4:6-16, 4:25-31, 4:66-5:6, 5:27-36 5; Lipoff, ¶134.

A POSITA would have had a reasonable expectation of success in implementing the logic, which would have only required conventional parts and routine skill to implement. Lipoff, ¶135. Indeed, *Mooney* expressly discloses that its processor is already configured to control which mode the switching module is set to, and determine “the need to initiate, *establish and switch*” between the modes/functionalities, as explained for [1.f]; therefore, a POSITA would have understood to use the processor to instruct the *Mooney* multimode cellphone to initiate, establish, and switch to Bluetooth or cellular mode because the call is established on the respective appropriate communication link. Lipoff, ¶135. The combination of *Mooney* and *Lee* reflects the combination of familiar elements according to known methods to yield predictable results—the very results of both

Mooney and *Lee*—efficiently connecting and conveying data over the most appropriate communication link for the communication. Lipoff, ¶135.

2. Claim 2: “further comprising a display screen operatively linked to said electronic circuit”

Mooney’s multimode cell phone includes a display screen because *Mooney* discloses that its multimode phone allows a user to “review CallerID information such as the telephone number and/or name of the calling party.” *Mooney*, 4:59-63, 5:45-50; Lipoff, ¶136. Because *Mooney*’s multimode phone is capable of displaying CallerID information such as telephone number and calling party name, *Mooney*’s multimode telephone includes a display screen (*Mooney*, 5:45-50). Lipoff, ¶136.

Accordingly, a POSITA would have understood that *Mooney*’s multimode cell phone includes a display screen based on its disclosure of other multimode phones having the same. Lipoff, ¶137. Indeed, a POSITA would have understood that *Mooney*’s cell phone would benefit from having a conventional display screen for displaying information (like telephone number being dialed, or “last number dialed functionality” (*Mooney*, 5:31-32)), to provide the user a mechanism to view the dialed phone numbers for establishing phone calls. Lipoff, ¶137. And display screens on cellular phones were common at the time. *e.g.*, Ex. 1012, 3:35-37 (“The system comprises a first device, having a display”), FIGS. 5A-5C; Ex. 1007, 5:23-28 (disclosing that “the handset ... displays information from the car kit.”); Lipoff, ¶137.

3. Claim 3: “wherein said first data transceiver includes said cue receiver”

See [1.e]. *Mooney*, 1:31-34, 2:36-47, 2:53-3:7, 3:13-25, 3:49-51, 4:6-15, 4:28-36, 6:14-25, 6:45-51; Lipoff, ¶138.

4. Claim 4: “wherein said control device is one of a manually activated button, a keypad for receiving a PIN code, a biometric parameter detector and a combination thereof”

Mooney discloses or renders obvious claim 4 because a POSITA would have understood that the user dials a phone number using e.g., a button of a keypad as explained in [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2; Lipoff, ¶139.

5. Claim 5: “wherein said electronic circuit includes said switching element”

Mooney discloses claim 5 because the electronic circuit includes the automatic switch over module (switching element) as explained in [1.a] and further described in [1.f]. *Mooney*, 1:53-61, 2:36-47, 2:53-64, 2:65-3:7, 3:13-25, 3:55-62, 3:55-62, 3:64-4:1, 4:6-10, 4:28-36, 5:7-20, 5:21-61, 5:57-61, 6:14-40, 4:56-57, Figs. 1-2; Lipoff, ¶140.

6. Claim 6: “wherein said electronic circuit comprises a microchip, and wherein said switching element is a series of instructions programmed onto said microchip.”

Mooney discloses or renders obvious claim 6 because *Mooney*’s electronic circuit includes a “processor” for executing the automatic switch over module (switching element). *Mooney*, 7:9-12 (“the need to initiate, establish and Switch over to another mode (e.g., to a cellular phone call) *is determined*, either *automatically* or

manually, by an appropriate processor in the multimode cell phone 100.” (emphasis added)); Lipoff, ¶141. A POSITA would have understood *Mooney*’s processor is a microchip (a microprocessor on an integrated circuit) because electronic devices, particularly compact and portable cellular phones, routinely included the smallest possible processing components including microchips. Lipoff, ¶141.

A POSITA would have understood that the data conveyance switching element would have been implemented as a series of instructions stored and executed by *Mooney*’s processor because, as explained for [1.f], *Mooney*’s processor controls the switch—i.e., assigns an operational mode (cellular or piconet/Bluetooth cordless) in which the switch and processors operate by executing programmed instructions. Lipoff, ¶142. It was well known in the art to program a series of instructions onto a microchip, as Dr. Lipoff explains. Lipoff, ¶142 (citing Ex. 1009, 7:46-49 (describing a microchip including a microprocessor), 39:63-66, 55:12-15 (explaining that the microprocessor is programmed with instructions); Ex. 1008, 3:41-49).

7. Claim 7: “wherein said switching element comprises a logical circuit”

Mooney discloses or renders obvious claim 7 because, as explained for [1.f] and claim 6, *Mooney*’s switching element is implemented by its processor, which is a logical circuit. Lipoff, ¶143.

8. **Claim 8: “wherein said first data transceiver comprises a proximity transceiver for accomplishing a wireless data exchange with a first external data exchange device through a direct link representing said first communication link where the cellular phone is conveyed toward a close proximity of the first external data exchange device and within a range to receive the activation cue to initiate the wireless data exchange”**

Mooney discloses or renders obvious claim 8 because *Mooney*’s first data transceiver⁵ (a cue receiver) receives “quality” Bluetooth signals (an activation cue) from a “piconet front end” and “base unit” (first external data exchange device) when in close proximity to the base unit. *Mooney*, 1:31-34, 2:36-47, 2:53-3:7, 3:13-25, 3:49-51, 4:6-15, 4:28-36, 6:14-25, 6:45-51; Lipoff, ¶144.

Mooney explains that when a caller on the multimode cell phone is “*within range* of the cordless telephone base station that is matched to the cordless telephone mode of the 3-in-1 cell phone,” the piconet/Bluetooth cordless module is informed of the signal quality (via its first transceiver/ cue receiver) and a call may be established in cordless mode via the BLUETOOTH™ link. *Mooney*, 2:53-3:7, 4:34-

⁵ The ’294 patent explains that its transceiver, like *Mooney*’s receiver, is a cue receiver. Ex. 1001, 9:22-24 (“Transceiver 18 is also a cue receiver, whereby an activation cue can be received by electronic device 10 from data exchange device transceiver 9 *a.*”); *id.*, claim 3 (“wherein said first data transceiver includes said cue receiver”).

37, 6:18-25, Fig. 2; [1.h]. A POSITA would have understood that the transceiver's ability to determine whether it is "within range"—that is, within proximity to—the base station, makes it a proximity transceiver. Lipoff, ¶145.

9. Claim 9: “wherein said second data transceiver comprises a communication network transceiver for wireless communication through a communication network that represents said second communication link, with one of a remote portable electronic device, a remote server, a remote terminal and a combination thereof”

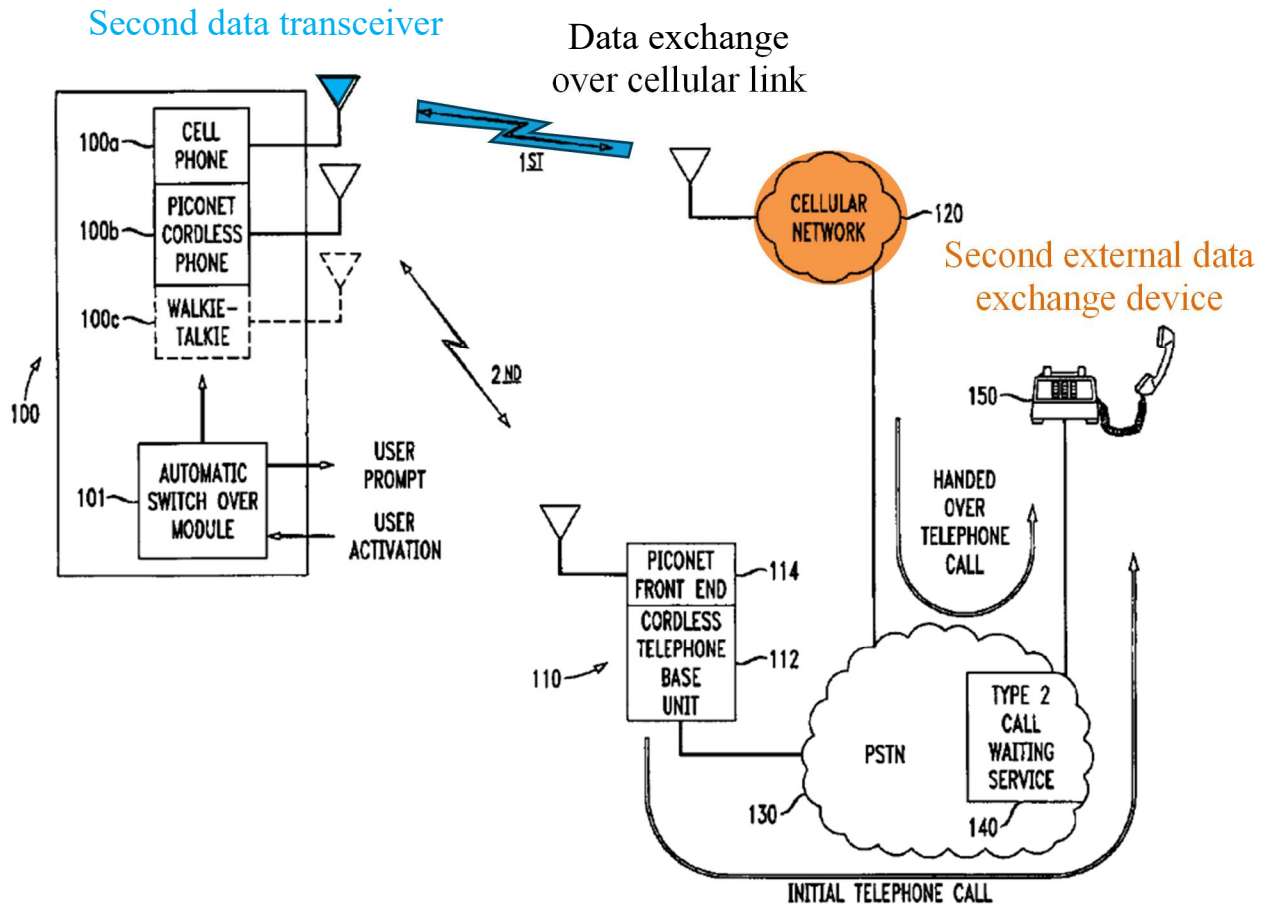
Mooney discloses or renders obvious claim 9 because, as explained for [1.d], *Mooney*'s second data transceiver communicates over cellular networks (a second communication link) with cellular infrastructure (remote server) and, ultimately, a “far end telephone” (remote terminal), including a combination thereof. Lipoff, ¶146.

First, annotated Figure 1 below shows *Mooney*'s multimode cell phone containing a second data transceiver for exchanging data with cellular network infrastructure⁶ (second external data exchange device) over a cellular link (second

⁶ A POSITA would have understood that the cellular network is comprised of infrastructure, including at least one base station transceiver for facilitating wireless communication between the multimode cell phone and the network, as was conventional in the art. Lipoff, ¶147 (citing *Lee*, 2:45-50).

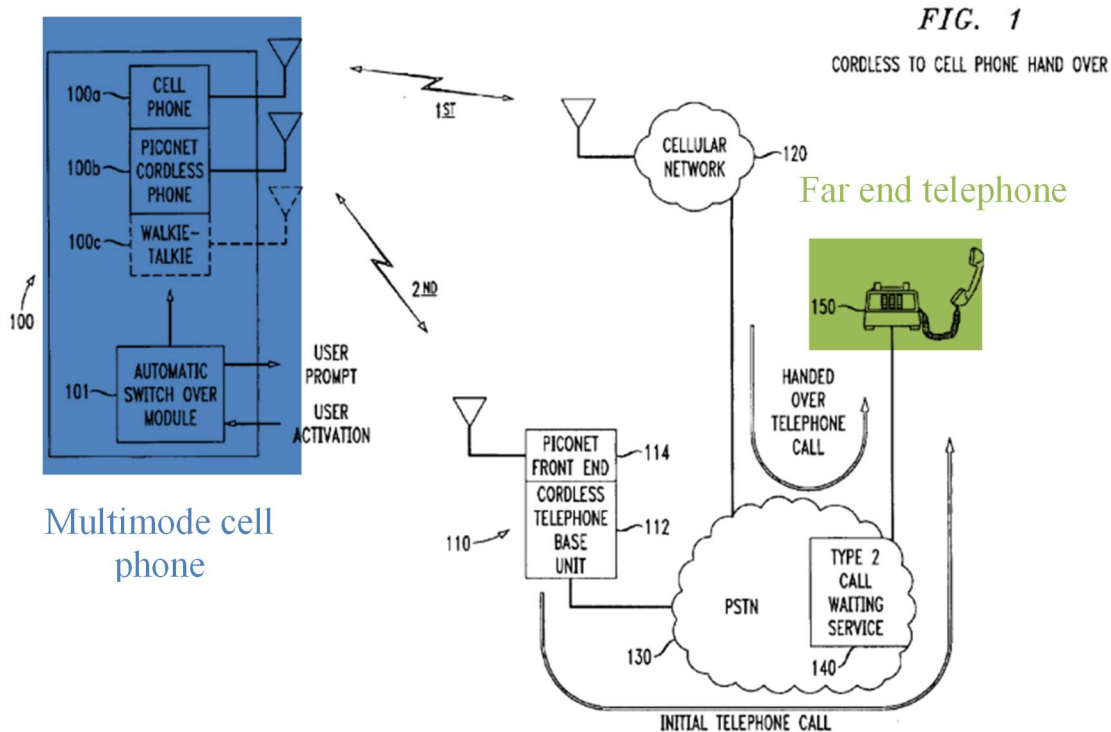
communication link). *Mooney*, 1:31-34, 1:62-66, 5:41-47, 5:57-62, Fig. 1; Lipoff,

¶147.



Mooney, Fig. 1 (annotated).

Second, *Mooney* explains that when the multimode cell phone is in cell phone mode, the cell phone module establishes a “cellular phone call” using a “cell phone link” between the multimode phone and a far end telephone over a “wireless cell phone network,” as shown in annotated Figure 1. *Mooney*, 1:31-34, 1:62-66, 5:41-47, 5:57-62; Lipoff, ¶148.



Mooney, Fig. 1 (annotated).

10. Independent Claim 10

a. [10.pre]: “A cellular phone comprising:”

See [1.pre]. Mooney, Abstract; 1:51-54, 3:49-51, Fig. 1; Lipoff, ¶149.

b. [10.a]: “an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;”

See [1.a]. Mooney, 154-66, 3:55-63, 7:9-12; Lipoff, ¶150.

c. [10.b]: “a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command,

with said invariable activation command being issued when said control device is triggered by the user;”

See [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2; Lipoff, ¶151.

d. [10.c]: “first and second data conveyance operations programmed in said electronic circuit;”

Mooney discloses [10.c] because its processor controls whether the multimode device conveys data (a telephone call) in a piconet/Bluetooth mode or a cell phone mode, as explained for [1.a] and [1.f] above. Lipoff, ¶152.

Mooney explains that “the need to initiate, establish and switch over to another mode (e.g., to a cordless telephone call using a piconet cordless telephone) *is determined*, either automatically or manually, *by an appropriate processor* in the multimode cell phone.” *Mooney*, 7:9-12 (emphasis added); Lipoff, ¶153. A POSITA would have understood that the electronic circuit of *Mooney*’s multimode cell phone stores instructions (programmed operations) that the processor processes to achieve the aforementioned “initiat[ion]” and “establish[ment]” of Bluetooth or cellular data conveyance. *Mooney*, 7:9-12; *id.*, 3:60-63 (“The desired mode of the multimode cell phone 100 may be controlled through suitable communications with each communication path functionality 100a–100c”); Lipoff, ¶153.

- e. **[10.d]: “a first data transceiver operatively linked to said electronic circuit, said first data transceiver being operable for data exchange over a first communication link;”**

See [1.c]. Mooney, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff,

¶154.

- f. **[10.e]: “a second data transceiver operably linked to said electronic circuit, said second data transceiver being operable for data exchange over a second communication link that is distinct from said first communication link;”**

See [1.d]. Mooney, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff,

¶155.

- g. **[10.f] “a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone; and”**

See [1.e]. Mooney, 1:31-34, 2:36-47, 2:53-3:7, 3:13-25, 3:49-51, 4:6-15, 4:28-

36, 6:14-25, 6:45-51; Lipoff, ¶156.

- h. **[10.g] “power means, for providing power to said cellular phone;”**

See [1.g]. Lipoff, ¶157.

- i. **[10.h] “wherein upon said control device being selectively triggered by the user to issue said invariable activation command: if an activation cue was received by said cue receiver, said electronic circuit will accomplish said first data conveyance operation to convey data from said electronic circuit to said first data transceiver for transmitting data through said first data transceiver; and”**

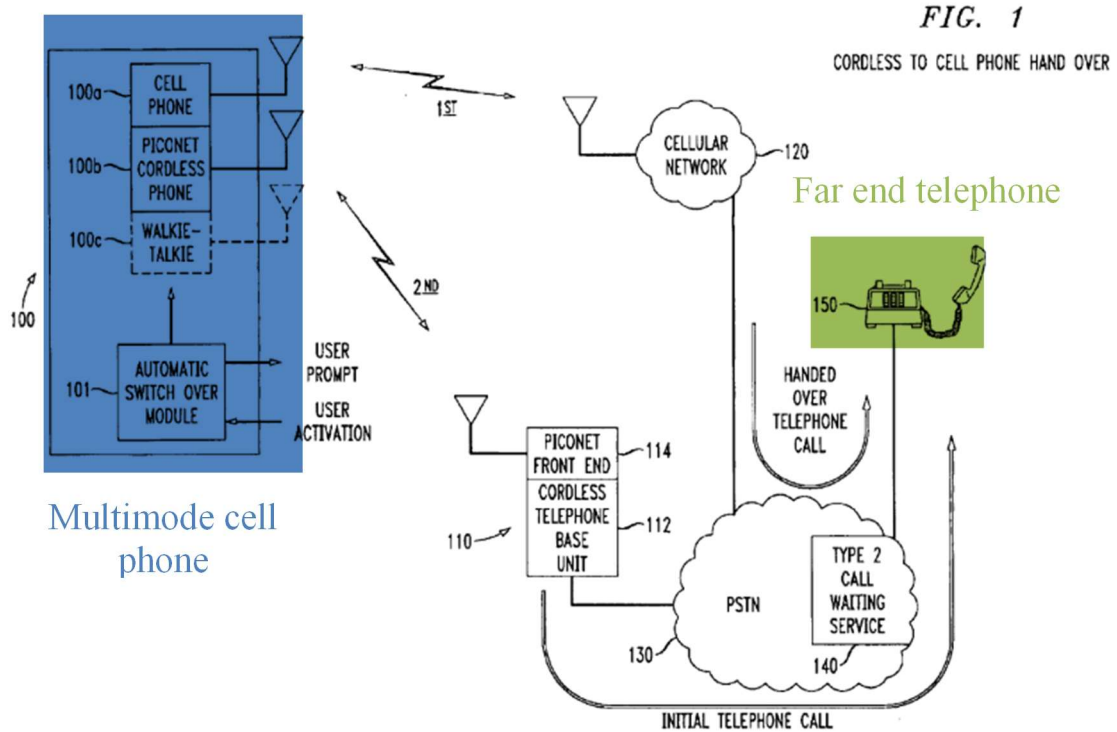
[10.i] “[wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if no activation cue was received by said cue receiver, said electronic circuit will accomplish said second data conveyance operation to convey data from said electronic circuit to said second data transceiver for transmitting data through said second data transceiver.”

Mooney alone (Ground 1) discloses or renders obvious [10.h] and [10.i] for reasons articulated in [1.h] and [1.i]. Lipoff, ¶158. *Mooney* in combination with *Lee* (Ground 2) also renders obvious [10.h] and [10.i] for reasons articulated in [1.h] and [1.i]. Lipoff, ¶159.

11. Independent Claim 11

- a. **[11.pre]: “A data exchange system comprising:”**

Mooney discloses [11.pre] because it discloses a system for exchanging data between a multimode phone and a far end telephone via a cellular network or Bluetooth base unit, as explained for [1.a] and [1.c]-[1.d]. Lipoff, ¶160.

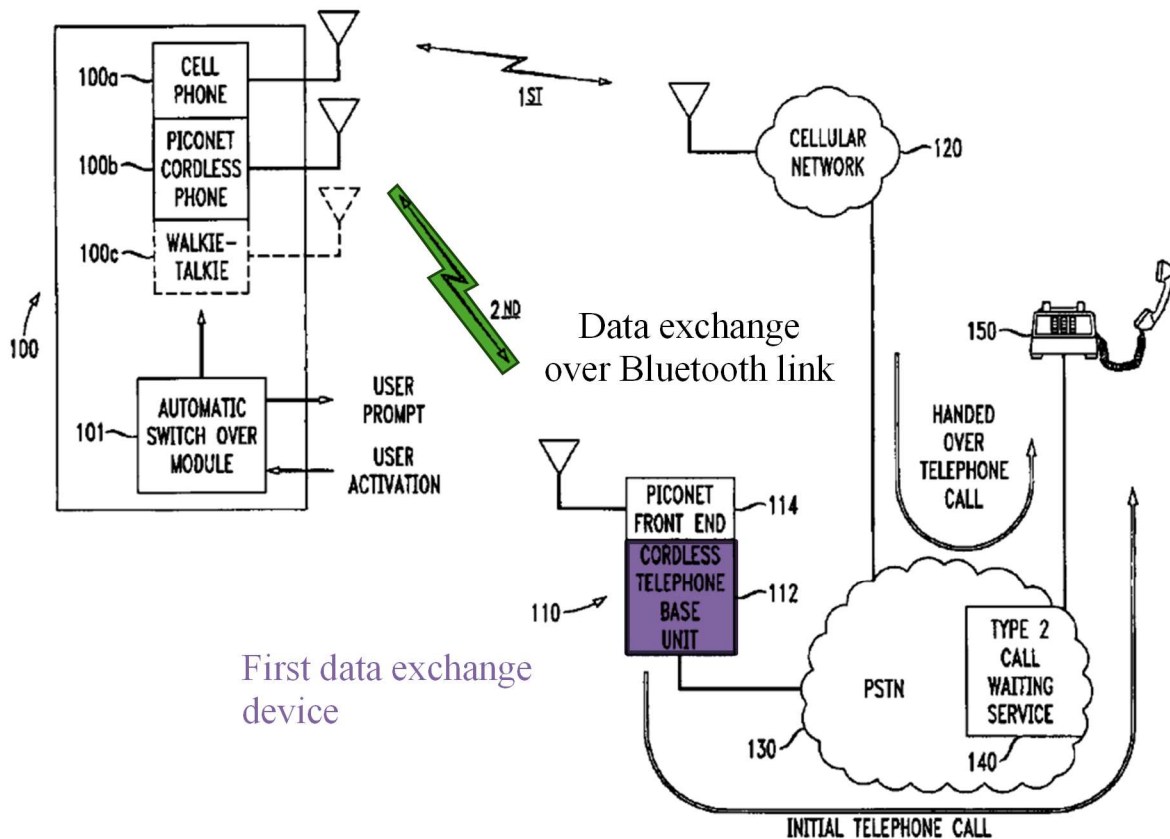


Mooney, Fig. 1 (annotated).

b. [11.a]: “a first data exchange device;”

Mooney discloses [11.a] because it discloses a “cordless telephone base unit” as explained in [1.c]. Lipoff, ¶161.

Annotated Figure 1 below shows Mooney’s multimode cell phone exchanging data between its piconet/Bluetooth cordless module and a cordless telephone base unit (first data exchange device) over a piconet Bluetooth link. Mooney, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff, ¶162.

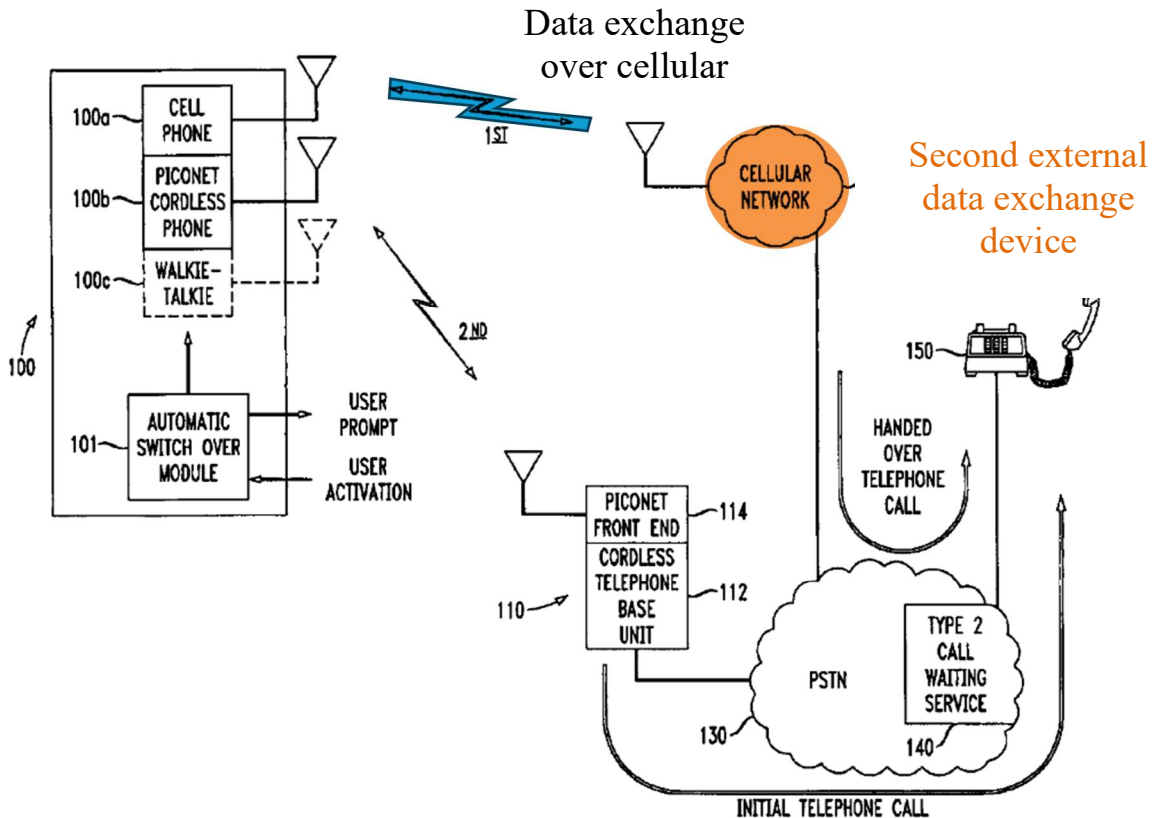


Mooney, Fig. 1 (annotated, excerpted).

c. [11.b]: “a second data exchange device; and”

Mooney discloses [11.b] because its “cellular network” infrastructure (second data exchange device) is connected to the “far end telephone” over “second type [of] RF communication link different from the first type [of] RF communication link” such as a cellular link. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff, ¶163.

Annotated Figure 1 below shows *Mooney*'s multimode cell phone exchanging data between its cell phone module and **cellular network infrastructure**⁷ (**second data exchange device**) over a **cellular link** (**second communication link**). *Mooney*, 1:31-34, 1:62-66, 5:41-47, 5:57-62, Fig. 1; Lipoff, ¶164.



⁷ A POSITA would have understood that the cellular network is comprised of infrastructure, including at least one base station transceiver (a device) for facilitating wireless communication between the multimode cell phone and the network, as was conventional in the art. Lipoff, ¶164 (citing *Lee*, 2:45-50).

Mooney, Fig. 1 (annotated, excerpted).

d. [11.c]: “a cellular phone, including:”

See [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2; Lipoff, ¶165.

e. [11.d]: “an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;”

See [1.a]. *Mooney*, 154-66, 3:55-63, 7:9-12; Lipoff, ¶166.

f. [11.e]: “a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;”

See [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2; Lipoff, ¶167.

g. [11.f] “a first data transceiver operatively linked to said electronic circuit, said first data transceiver being for exchanging data between said electronic circuit and said first data exchange device through a direct link;”

See [1.c]. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff,

¶168.

- h. [11.g] “a second data transceiver operatively linked to said electronic circuit, said second data transceiver being for exchanging data between said electronic circuit and said second data exchange device through a communication network that is distinct from said direct link;”**

See [1.d]. Mooney, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1; Lipoff,

¶169.

- i. [11.h] “a cue receiver operatively linked to said electronic circuit for receiving an activation cue from said first data exchange device;”**

See [1.e]. Mooney, 1:31-34, 2:36-47, 2:53-3:7, 3:13-25, 3:49-51, 4:6-15, 4:28-

36, 6:14-25, 6:45-51; Lipoff, ¶170.

- j. [11.i] “a data conveyance switching element operatively linked to said electronic circuit, said switching element being assigned a first state upon an activation cue having been received by said cue receiver, and being assigned a second state when no activation cue was received by said cue receiver; and”**

Mooney discloses [11.i] as explained in [1.f] (and incorporating the discussion of [1.h] and [1.i]). Mooney, 1:53-61, 2:36-47, 2:53-64, 2:65-3:7, 3:13-25, 3:55-62, 3:55-62, 3:64-4:1, 4:6-10, 4:28-36, 5:7-20, 5:21-61, 5:57-61, 6:14-40, 4:56-57, Figs. 1-2; Lipoff, ¶171.

- k. [11.j] “power means for providing power to said cellular phone;”**

See [1.g]. Lipoff, ¶172.

- l. **[11.k] “wherein upon said control device being selectively triggered by the user to issue said invariable activation command: if said switching element is in said first state, a first data conveyance operation will be initiated through the instrumentality of said first data transceiver for exchanging data between said electronic circuit and the first external data exchange device; and”**

[11.l] “[wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for exchanging data between said electronic circuit and the second external data exchange device.”

Mooney alone (Ground 1) discloses or renders obvious [11.k] and [11.l] as explained in [1.h] and [1.i]. Lipoff, ¶173. *Mooney* in combination with *Lee* (Ground 2) also renders obvious [11.k] and [11.l] as explained in [1.h] and [1.i]. Lipoff, ¶174.

12. Independent Claim 12

- a. **[12.pre]: “A method for data conveyance with a cellular phone of the type comprising: an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output, a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, first and second data transceivers operatively linked to said electronic circuit, a cue receiver operatively linked to said electronic circuit, a data conveyance switching element operatively linked to said electronic circuit and capable of being in either one of a first and a second state, and power means for providing power to said cellular phone, said method comprising the steps of:”**

[12.pre] is the same as [1.pre]-[1.g]. *Mooney* discloses or renders obvious

[12.pre] as explained in [1.pre]-[1.g]. Lipoff, ¶175.

- b. **[12.a]: “awaiting for an activation cue to be received at said cue receiver;”**

See [1.e]. *Mooney*, 1:31-34, 2:36-47, 2:53-3:7, 3:13-25, 3:49-51, 4:6-15, 4:28-36, 6:14-25, 6:45-51; Lipoff, ¶176.

- c. **[12.b]: “if an activation cue is received at said cue receiver, assigning said first state to said switching element, while if no activation cue is received at said cue receiver, assigning said second state to said switching element; and”**

Mooney discloses [12.b] as explained in [1.f] (incorporating [1.h] and [1.i]).

Mooney, 1:53-61, 2:36-47, 2:53-64, 2:65-3:7, 3:13-25, 3:55-62, 3:55-62, 3:64-4:1, 4:6-10, 4:28-36, 5:7-20, 5:21-61, 5:57-61, 6:14-40, 4:56-57, Figs. 1-2; Lipoff, ¶177.

- d. **[12.c]: “a user selectively triggering said control device to issue an invariable activation command whereby: if said switching element is in said first state, forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device over a first communication link; and”**

[12.d]: “[a user selectively triggering said control device to issue an invariable activation command whereby:] if said switching element is in said second state, forwarding second data to said second data transceiver for initiating a data exchange operation with a second external data exchange device over a first communication link.”

Mooney alone (Ground 1) discloses [12.c] and [12.d] as explained in [1.h] and [1.i]. Lipoff, ¶178. *Mooney* in combination with *Lee* (Ground 2) renders obvious [12.c] and [12.d] as explained in [1.h] and [1.i]. Lipoff, ¶179.

As explained for [1.h] and [1.i], a POSITA would have understood from *Mooney*’s disclosure that triggering the control device to initiate a call and issue the activation command would have caused the first or second data to be forwarded to

the respective first or second transceiver for initiating a data exchange operation with the respective first or second data exchange device, according to the state of the switching element. *Mooney*, 4:28-49; Lipoff, ¶180. First or second data would necessarily have to be forwarded to the respective transceiver for initiating a data exchange with the respective exchange device for communication to occur. Lipoff, ¶180.

To the extent Patent Owner disputes that *Mooney* suggests that first and second data is forwarded according to the claim language, *Lee* teaches the first and second data. Lipoff, ¶181.

Lee discloses that the dual-enabled BTED 120A (Fig. 1) connects to the BT Hub 118A, as illustrated in Fig. 2. *Lee*, 5:7-12, Fig. 2. After connecting to the BT Hub 118A, *Lee* states that the BT Hub 118A “rout[es] the Voice-over-IP (VoIP) packets (the first data) to the correct destination,” as illustrated in step 206 of Fig. 2. *Lee*, 5:7-10, Fig. 2. Those packets must necessarily be first transmitted from the BTED 120A to the BT HUB 118A before the BT HUB 118A can route them to the correct destination. Lipoff, ¶182. Alternatively, as illustrated in Block 210, the dual-enabled BTED 120A connects to the cellular-based BTS 106 when no Bluetooth cue was received. *Lee*, 5:32-33; Lipoff, ¶183. After connecting to the BTS 106, the BTS 106 “rout[es] the call from the dual-enabled BTED 120A to the correct destination,” as illustrated in step 212 of Fig. 2. *Lee*, 5:32-33. That call includes data, representing

the claimed second data, and must necessarily be first transmitted from the BTED 120A to the BTS 106 before the BTS 106 routes the call to the correct destination. Lipoff, ¶183.

- 13. Claim 13: “further comprising the following step before the step of forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device: forwarding third data to and displaying said third data on a display screen provided on said cellular phone, wherein said third data is representative of the content of said first data”**

Mooney renders obvious claim 13. Lipoff, ¶¶184-187.

Mooney discloses forwarding audio tones (third data representative of the content of the first data) to the user of the multimode phone to notify the user when the multimode cell phone is about to use piconet/bluetooth mode. The “multimode cell phone 100 may send, e.g., a quick DTMF’7’ followed by a DTMF’9’ (i.e., representing the characters ‘SW’) notifying the near end user ... that a switch is about to happen,” i.e., what mode the call is to be placed in. *Mooney*, 6:26-29; Lipoff, ¶185. Because the audio tone represents that the call (first data) will occur over a particular communication pathway (Bluetooth), a POSITA would have understood that the audio tone is also representative of the content of first data because it informs the user which pathway will be used to place the call. Lipoff, ¶185. This is consistent with the ’294 patent which explains that “third data being representative of the first data means that the third data may indicate the type, nature or content of data

included in the first data, may include a portion of the data included in the first data, or may literally be identical to the first data.” Ex. 1001, 15:34-38 (emphasis added); Lipoff, ¶185.

A POSITA would have understood that there are various ways to notify a cell phone user of its operational mode, including visual or tactile feedback, and would have also been motivated and found it obvious to forward one or more kinds of notifications (third data) to ensure the user is properly notified. Lipoff, ¶186. A POSITA would have been motivated and found it obvious to display, e.g., the word *Bluetooth*, on a screen⁸ of the multimode phone (in addition to or instead of forwarding audio tones), to ensure the user is notified of the impending use of Bluetooth mode. Such a configuration would have been particularly useful to notify hearing-impaired users or users holding the phone away from their ear. Lipoff, ¶186.

A POSITA would have had a reasonable expectation of success in configuring the multimode cell phone to forward the visual notification (third data) to a screen (display) of the multimodal phone, which would have only required conventional parts and routine skill to implement. Lipoff, ¶187. Indeed, *Mooney*’s multimode

⁸ *Mooney*’s multimode phone includes a screen display. *Mooney*, 5:45-50

(explaining that a user of a multimode phone may “review CallerID information such as the telephone number and/or name of the calling party.”

phone already includes a processor for controlling various functions of the phone (as explained for [1.f]), and further describes a screen for allowing the user to “review” information; therefore, a POSITA would have understood to use the processor to instruct the multimode phone to forward the visual notification to, and display the visual notification on, the phone’s display. *Mooney*, 5:45-50, 7:9-12; Lipoff, ¶187.

14. Claim 14: “wherein after the step of forwarding said third data to the display screen, the method comprises the following step: awaiting for an authorization command to be inputted through a user confirmation input device provided on said cellular phone before forwarding said first data to said first data transceiver”

Mooney renders obvious claim 14 because *Mooney* discloses that the multimode phone may await the user’s permission (authorization command) “to permit establishment of and ultimately transfer to an alternative type communication path;” whereby the permission is inputted through a “designated button” (a user confirmation input device) of the multimode phone. *Mooney*, 4:41-47; Lipoff, ¶188.

As explained for claim 13, *Mooney* discloses notifying the user of an impending use of a communication path and renders obvious displaying, e.g., the word *Bluetooth*, on a screen of the multimode phone (in addition to or instead of forwarding audio tones), to ensure the user is notified of the impending use of Bluetooth mode. *Mooney*, 6:26-29; Lipoff, ¶189.

Mooney discloses that after the multimode phone determines which communication pathway is suitable for calling a far end telephone, the user “may be prompted to *permit establishment of and ultimately transfer to an alternative type communication path*” by “activat[ing] a suitable button, e.g., a dedicated button called, e.g., ‘Switch to Cell Network’”, or simply ‘Switch Communication Path’.” *Mooney*, 4:41-47; Lipoff, ¶190. A POSITA would have understood that the multimode phone waits for the user to activate a “suitable button” such as a “switch communication path” button (an authorization command to be inputted through a user confirmation input device provided on said cellular phone) before “establish[ing] and “ultimately transfer[ing]” the call via “an alternative type of communication path” using the piconert/Bluetooth module transceiver (forwarding said first data to said first data transceiver). *Mooney*, 4:41-27; *id.*, claim 13 and [1.c]; Lipoff, ¶190.

15. Claim 15: “wherein said first and second data are identical”

Mooney alone (Ground 1) or *Mooney* in combination with *Lee* (Ground 2) renders obvious claim 15 as explained for [12.c]-[12.d] because both grounds teach conducting the same data exchange over the first communication link or second communication link. Lipoff, ¶191. A POSITA would have understood that because the content of the communication remains unchanged, and only the means for

communicating and the exchange device communicated with is modified based on the receipt of an activation cue, the first and second data are identical. Lipoff, ¶191.

- 16. Claim 16: “wherein said first data transceiver is a proximity transceiver and the step of forwarding said first data to said first transceiver is for initiating a wireless data exchange operation with a proximate first external data exchange device through a direct link representing said first communication link where the cellular phone is conveyed toward a close proximity of the first external data exchange device and within a range to receive the activation cue to initiate the wireless data exchange”**

Claim 16 is substantially similar to claim 8. *Mooney* discloses or renders obvious claim 16, as explained for claim 8. Lipoff, ¶192.

- 17. Claim 17: “wherein said second data transceiver is a communication network transceiver and the step of forwarding said second data to said second data transceiver is for initiating a wireless data conveyance operation through a communication network representing said second communication link, with one of a remote portable electronic device, a remote server, a remote terminal and a combination thereof”**

Claim 17 is substantially similar to claim 9. *Mooney* discloses or renders obvious claim 17, as explained for claim 9. Lipoff, ¶193.

- 18. Claim 18: “wherein the step of selectively triggering said control device to issue the invariable activation command comprises selectively triggering one of the manually activated button, the keypad for receiving a PIN code, the biometric parameter detector and a combination thereof”**

Claim 18 is substantially similar to claim 4. *Mooney* discloses or renders obvious claim 18 as explained for claim 4. Lipoff, ¶184.

19. Independent Claim 19

- a. **[19.pre]: “A method for data conveyance with a cellular phone of the type comprising: an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output, a control device operatively linked to said electronic circuit, first and second data transceivers operatively linked to said electronic circuit, a cue receiver operatively linked to said electronic circuit, a data conveyance switching element operatively linked to said electronic circuit and capable of being in either one of a first and a second state, and power means for providing power to said cellular phone, said method comprising the steps of:”**

[19.pre] is the same as [1.pre]-[1.g]. *Mooney* discloses or renders obvious [19.pre] as explained in [1.pre]-[1.g]. Lipoff, ¶195.

- b. **[19.a]: “awaiting for an activation cue to be received at said cue receiver;”**

See [12.a]. Lipoff, ¶196.

- c. **[19.b]: “if an activation cue is received at said cue receiver, assigning said first state to said switching element, while if no activation cue is received at said cue receiver, assigning said second state to said switching element; and”**

See [12.b]. Lipoff, ¶197.

- d. **[19.c] “selectively triggering said control device to issue an invariable activation command whereby: if said switching element is in said first state, forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device over a first communication link; and”**

[19.d] “[selectively triggering said control device to issue an invariable activation command whereby:] if said switching element is in said second state, forwarding second data to said second data transceiver for initiating a data exchange operation with a second external data exchange device over a second communication link that is distinct from said first communication link;”

Mooney alone (Ground 1) discloses [19.c] and [19.d] as explained in [12.c] and [12.d]. Lipoff, ¶198. *Mooney* in combination with *Lee* (Ground 2) renders obvious [19.c] and [19.d] as explained in [12.c] and [12.d]. Lipoff, ¶199.

- e. **[19.e] “wherein said method further comprises the following steps before the step of forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device:”**

See claim 13. Lipoff, ¶200.

- f. **[19.f] “forwarding third data to and displaying said third data on a display screen provided on said cellular phone, wherein said third data is representative of the content of said first data; and”**

See claim 13. Lipoff, ¶201.

- g. **[19.g] “awaiting for an authorization command to be inputted through a user confirmation input device provided on said cellular phone before forwarding said first data to said first data transceiver; and”**

See claim 14. Lipoff, ¶202.

- h. [19.h] “wherein said method further comprises the following steps before the step of forwarding second data to said second data transceiver for initiating a data exchange operation with a second external data exchange device:”**

Mooney renders obvious [19.h] as explained in [19.i] and [19.j] below. Lipoff, ¶203.

- i. [19.i] “forwarding fourth data to and displaying said fourth data on said display screen, wherein said fourth data is representative of the content of said second data; and”**

Mooney renders obvious the additional limitation of claim [19.i]. Lipoff, ¶¶204-206.

Mooney discloses forwarding audio tones (fourth data representative of the content of the second data) to the user of the multimode phone to notify the user when the multimode cell phone is about to use cellular mode. The “multimode cell phone 100 may send, e.g., a quick DTMF’7’ followed by a DTMF’9’ (i.e., representing the characters ‘SW’) notifying the near end user ... that a switch is about to happen,” i.e., what mode the call is to be placed in. *Mooney*, 6:26-29; Lipoff, ¶205. Because the audio tone represents that the call (second data) will occur over a particular communication pathway (cellular), a POSITA would have understood that the audio tone is also representative of the content of second data because it informs the user which pathway will be used to place the call. Lipoff, ¶205.

As explained for claim 13, a POSITA would have understood that there are various ways to notify a cell phone user of its operational mode, including visual or tactile feedback, and would have also been motivated and found it obvious to forward one or more kinds of notifications (third data) to ensure the user is properly notified. Lipoff, ¶206. Accordingly, a POSITA would have been motivated and found it obvious to display, e.g., the word *cellular*, on a screen of the multimode phone (in addition to or instead of forwarding audio tones) to notify the user which communication pathway the phone would use, and had a reasonable expectation of success in doing so, for reasons articulated in claim 13. Lipoff, ¶206.

j. [19.j] “awaiting for an authorization command to be inputted through said user confirmation input device before forwarding said second data to said second data transceiver.”

Mooney renders obvious [19.j] because, as explained for claim 14, *Mooney* discloses that the multimode phone may await the user’s permission (authorization command) “to permit establishment of and ultimately transfer to an alternative type communication path;” whereby the permission is inputted through a “designated button” (a user confirmation input device) of the multimode phone. *Mooney*, 4:41-47; Lipoff, ¶207.

As explained for claim [19.i], *Mooney* discloses notifying the user of an impending use of a communication path and renders obvious displaying, e.g., the word *cellular*, on a screen of the multimode phone (in addition to or instead of

forwarding audio tones), to ensure the user is notified of the impending use of Bluetooth mode. *Mooney*, 6:26-29; Lipoff, ¶208.

Mooney discloses that after the multimode phone determines which communication pathway is suitable for e.g., calling a far end telephone, the user “may be prompted to *permit establishment of and ultimately transfer to an alternative type communication path*” by “activat[ing] a suitable button, e.g., a dedicated button called, e.g., ‘Switch to Cell Network’”, or simply ‘Switch Communication Path’.” *Mooney*, 4:41-47; Lipoff, ¶209.

Like in claim 14, a POSITA would have understood that the multimode phone waits for the user to activate a “suitable button” such as a “switch communication path” button (an authorization command to be inputted through said user confirmation input device provided on said cellular phone) before “establish[ing] and “ultimately transfer[ing]” the call via “an alternative type of communication path” using the cell phone module transceiver (forwarding said second data to said second data transceiver). *Mooney*, 4:41-27; *id.*, claim 19.i and [1.d], above; Lipoff, ¶210.

20. Claim 20: “wherein said control device includes said user confirmation input device.”

Mooney discloses or renders obvious claim 20 because the control device includes the key and button, as explained for [19.pre] and [1.b]. Lipoff, ¶211.

VII. Discretionary Denial Is Not Warranted

A. 35 U.S.C. § 325(d) Does Not Warrant Discretionary Denial

The Board should not exercise its discretion to deny institution under § 325(d) because none of the references cited in this Petition were previously presented to or evaluated by the Examiner. Ex. 1002. Accordingly, the first part of the *Advanced Bionics* framework is not satisfied because this Petition includes grounds based on combinations of prior art not previously considered by the Office. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8-9 (Feb. 13, 2020) (precedential).

To the extent the Board determines an analysis under part 2 of *Advanced Bionics* is warranted, Petitioner's Grounds demonstrate that the Examiner erred when evaluating the prior art. The prior art here discloses the "cellular phone" and data exchange over a "first communication link" and a "second communication link that is distinct from the first communication link," identified as "allowable subject matter" by the Examiner during prosecution.

Ex. 1002, 7, 10-11.

Accordingly, this Petition presents evidence and facts that warrant reconsideration and Petitioner respectfully requests the Board institute review.

B. 35 U.S.C. § 314(a) Does Not Warrant Discretionary Denial

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5-6 (Mar. 20, 2020) (precedential), and the Office's interim guidelines dated June 21, 2022 ("Guidance

Memo”), do not warrant discretionarily denying institution because there is no active litigation against Petitioner.

The previous district court litigation against Petitioner was voluntarily dismissed without prejudice on December 15, 2023, mere months after Patent Owner filed its complaint on September 15, 2023. Ex. 1013. The *Fintiv* factors favor institution because there is no case to stay or trial date (factors 1 and 2), minimal investment by the parties (factor 3), no overlapping issues (factor 4), and factor 5 is at worst neutral.

VIII. Mandatory Notices

A. Real Party-in-Interest Under 37 C.F.R. § 42.8(b)(1)

The Petitioner and real party-in-interest is Google LLC.⁹

B. Related Matters Under 37 C.F.R. § 42.8(b)(2)

DH International has asserted the '294 patent in the following litigations:

- *DH International Ltd. v. Google LLC*, No. 1:23-cv-01116 (W.D. Tex., Sept. 15, 2023) (voluntarily dismissed Dec. 15, 2023); and

⁹ Google LLC is a subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc. XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest to this proceeding.

- *DH International Ltd. v. Apple Inc.*, No. 1:23-cv-01114 (W.D. Tex., Sept. 15, 2023).¹⁰

¹⁰ G Holdings Ltd. previously asserted the '294 patent in *G Holdings Ltd., v.*

Samsung Electronics Co., Ltd., No. 2:20-cv-342-JRG (E.D. Tex., Oct. 29, 2020)

(voluntarily dismissed Aug. 19, 2021).

C. Lead and Back-Up Counsel Under 37 C.F.R. § 42.8(b)(3)

Lead Counsel	Back-up Counsel
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D. Service Information Under 37 C.F.R. § 42.8(b)(4)

Please address correspondence to lead and backup counsel at the addresses above and Google-DHinternational-IPRs@finnegan.com. Petitioner consents to electronic service by e-mail.

IX. Standing

Petitioner certifies the '294 patent is available for *inter partes review* and that Petitioner is not barred or estopped.

X. Conclusion

Petitioner requests the Board institute *inter partes review* and cancel the challenged claims.

Respectfully submitted,

Dated: September 11, 2024

By: /Erika H. Arner/
Erika H. Arner (Reg. No. 57,540)

CLAIM APPENDIX

- [1.pre] 1. A cellular phone, comprising:
- [1.a] an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;
- [1.b] a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;
- [1.c] a first data transceiver operatively linked to said electronic circuit, said first data transceiver being for exchanging data between said electronic circuit and a first external data exchange device over a first communication link;
- [1.d] a second data transceiver operatively linked to said electronic circuit, said second data transceiver being for exchanging data between said electronic circuit and a second external

data exchange device over a second communication link

that is distinct from said first communication link;

[1.e] a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone;

[1.f] a data conveyance switching element operatively linked to said electronic circuit, said switching element being assigned a first state upon an activation cue having been received by said cue receiver, and being assigned a second state when no activation cue was received by said cue receiver; and

[1.g] power means for providing power to said portable electronic device cellular phone;

[1.h] wherein upon said control device being selectively triggered by the user to issue said invariable activation command: if said switching element is in said first state, a first data conveyance operation will be initiated through the instrumentality of said first data transceiver for sending data from said electronic circuit to the first external data exchange device over said first communication link; and

- [1.i] [wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for sending data from said electronic circuit to the second external data exchange device over said second communication link.
- [2] 2. A cellular phone as defined in claim 1, further comprising a display screen operatively linked to said electronic circuit.
- [3] 3. A cellular phone as defined in claim 1, wherein said first data transceiver includes said cue receiver.
- [4] 4. A cellular phone as defined in claim 1, wherein said control device is one of a manually activated button, a keypad for receiving a PIN code, a biometric parameter detector and a combination thereof.
- [5] 5. A cellular phone as defined in claim 1, wherein said electronic circuit includes said switching element.

- [6] 6. A cellular phone as defined in claim 5, wherein said electronic circuit comprises a microchip, and wherein said switching element is a series of instructions programmed onto said microchip.
- [7] 7. A cellular phone as defined in claim 1, wherein said switching element comprises a logical circuit.
- [8] 8. A cellular phone as defined in claim 1, wherein said first data transceiver comprises a proximity transceiver for accomplishing a wireless data exchange with a first external data exchange device through a direct link representing said first communication link where the cellular phone is conveyed toward a close proximity of the first external data exchange device and within a range to receive the activation cue to initiate the wireless data exchange.
- [9] 9. A cellular phone as defined in claim 8, wherein said second data transceiver comprises a communication network transceiver for wireless communication through a communication network that represents said second communication link, with one of a remote portable electronic device, a remote server, a remote terminal and a combination thereof.
- [10.pre] 10. A cellular phone comprising:

- [10.a]** an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;
- [10.b]** a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is triggered by the user;
- [10.c]** first and second data conveyance operations programmed in said electronic circuit;
- [10.d]** a first data transceiver operatively linked to said electronic circuit, said first data transceiver being operable for data exchange over a first communication link;
- [10.e]** a second data transceiver operably linked to said electronic circuit, said second data transceiver being operable for data exchange over a second communication link that is distinct from said first communication link;

- [10.f] a cue receiver operatively linked to said electronic circuit for receiving an activation cue from a source external to said cellular phone; and
- [10.g] power means, for providing power to said cellular phone;
- [10.h] wherein upon said control device being selectively triggered by the user to issue said invariable activation command: if an activation cue was received by said cue receiver, said electronic circuit will accomplish said first data conveyance operation to convey data from said electronic circuit to said first data transceiver for transmitting data through said first data transceiver; and
- [10.i] [wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if no activation cue was received by said cue receiver, said electronic circuit will accomplish said second data conveyance operation to convey data from said electronic circuit to said second data transceiver for transmitting data through said second data transceiver.
- [11.pre] 11. A data exchange system comprising:
- [11.a] a first data exchange device;

- [11.b] a second data exchange device; and
- [11.c] a cellular phone, including:
- [11.d] an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;
- [11.e] a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;
- [11.f] a first data transceiver operatively linked to said electronic circuit, said first data transceiver being for exchanging data between said electronic circuit and said first data exchange device through a direct link;
- [11.g] a second data transceiver operatively linked to said electronic circuit, said second data transceiver being for exchanging data between said electronic circuit and said second data

exchange device through a communication network that
is distinct from said direct link;

[11.h] a cue receiver operatively linked to said electronic circuit for
receiving an activation cue from said first data exchange
device;

[11.i] a data conveyance switching element operatively linked to said
electronic circuit, said switching element being assigned
a first state upon an activation cue having been received
by said cue receiver, and being assigned a second state
when no activation cue was received by said cue
receiver; and

[11.j] power means for providing power to said cellular phone;

[11.k] wherein upon said control device being selectively triggered by
the user to issue said invariable activation command: if
said switching element is in said first state, a first data
conveyance operation will be initiated through the
instrumentality of said first data transceiver for
exchanging data between said electronic circuit and the
first external data exchange device; and

[11.] [wherein upon said control device being selectively triggered by the user to issue said invariable activation command:] if said switching element is in said second state, a second data conveyance operation will be initiated through the instrumentality of said second data transceiver for exchanging data between said electronic circuit and the second external data exchange device

[12.pre] 12. A method for data conveyance with a cellular phone of the type comprising: an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output, a user-triggered control device operatively linked to said electronic circuit, said user-triggered control device configured to be operated by a user via one of a button, a keypad, a tactile screen, and a biometric parameter detector, and after being operated issue an invariable activation command, first and second data transceivers operatively linked to said electronic circuit, a cue receiver operatively linked to said electronic circuit, a data conveyance switching element operatively linked to said electronic circuit and capable of being in either one of a first and a second state, and power means for providing power to said cellular phone, said method comprising the steps of:

- [12.a] awaiting for an activation cue to be received at said cue receiver;
- [12.b] if an activation cue is received at said cue receiver, assigning said first state to said switching element, while if no activation cue is received at said cue receiver, assigning said second state to said switching element; and
- [12.c] a user selectively triggering said control device to issue an invariable activation command whereby: if said switching element is in said first state, forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device over a first communication link; and
- [12.d] [a user selectively triggering said control device to issue an invariable activation command whereby:] if said switching element is in said second state, forwarding second data to said second data transceiver for initiating a data exchange operation with a second external data exchange device over a first communication link.
- [13] 13. A method as defined in claim 12, further comprising the following step before the step of forwarding first data to said first data

transceiver for initiating a data exchange operation with a first external data exchange device: forwarding third data to and displaying said third data on a display screen provided on said cellular phone, wherein said third data is representative of the content of said first data

[14] 14. A method as defined in claim 13, wherein after the step of forwarding said third data to the display screen, the method comprises the following step: awaiting for an authorization command to be inputted through a user confirmation input device provided on said cellular phone before forwarding said first data to said first data transceiver.

[15] 15. A method as defined in claim 12, wherein said first and second data are identical.

[16] 16. A method as defined in claim 12, wherein said first data transceiver is a proximity transceiver and the step of forwarding said first data to said first transceiver is for initiating a wireless data exchange operation with a proximate first external data exchange device through a direct link representing said first communication link where the cellular phone is conveyed toward a close proximity of the

first external data exchange device and within a range to receive the activation cue to initiate the wireless data exchange.

- [17] 17. A method as defined in claim 12, wherein said second data transceiver is a communication network transceiver and the step of forwarding said second data to said second data transceiver is for initiating a wireless data conveyance operation through a communication network representing said second communication link, with one of a remote portable electronic device, a remote server, a remote terminal and a combination thereof.
- [18] 18. A method as defined in claim 12, wherein the step of selectively triggering said control device to issue the invariable activation command comprises selectively triggering one of the manually activated button, the keypad for receiving a PIN code, the biometric parameter detector and a combination thereof.
- [19.pre] 19. A method for data conveyance with a cellular phone of the type comprising: an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output, a control device operatively linked to said electronic circuit, first and second data transceivers operatively linked to said electronic circuit, a

cue receiver operatively linked to said electronic circuit, a data conveyance switching element operatively linked to said electronic circuit and capable of being in either one of a first and a second state, and power means for providing power to said cellular phone, said method comprising the steps of:

- [19.a] awaiting for an activation cue to be received at said cue receiver;
- [19.b] if an activation cue is received at said cue receiver, assigning said first state to said switching element, while if no activation cue is received at said cue receiver, assigning said second state to said switching element; and
- [19.c] selectively triggering said control device to issue an invariable activation command whereby: if said switching element is in said first state, forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device over a first communication link; and
- [19.d] [selectively triggering said control device to issue an invariable activation command whereby:] if said switching element is in said second state, forwarding second data to said

second data transceiver for initiating a data exchange operation with a second external data exchange device over a second communication link that is distinct from said first communication link;

[19.e] wherein said method further comprises the following steps before the step of forwarding first data to said first data transceiver for initiating a data exchange operation with a first external data exchange device:

[19.f] forwarding third data to and displaying said third data on a display screen provided on said cellular phone, wherein said third data is representative of the content of said first data; and

[19.g] awaiting for an authorization command to be inputted through a user confirmation input device provided on said cellular phone before forwarding said first data to said first data transceiver; and

[19.h] wherein said method further comprises the following steps before the step of forwarding second data to said second data transceiver for initiating a data exchange operation with a second external data exchange device:

- [19.i] forwarding fourth data to and displaying said fourth data on
said display screen, wherein said fourth data is
representative of the content of said second data; and
- [19.j] awaiting for an authorization command to be inputted through
said user confirmation input device before forwarding
said second data to said second data transceiver.
- [20] 20. A method as defined in claim 19, wherein said control device
includes said user confirmation input device.

CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that the foregoing **Petition for *Inter Partes* Review** contains 13,965 words, excluding those portions identified in 37 C.F.R. § 42.24(a), as measured by the word-processing system used to prepare this paper.

Dated: September 11, 2024

/Erika H. Arner/

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 9,022,294, the associated Power of Attorney, and Exhibits 1001 through 1013 were served on September 11, 2024 by FedEx Priority Overnight® on the correspondence address of record indicated in the Patent Office's Patent Center system for U.S. Patent No. 9,022,294.

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