UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

DH INTERNATIONAL LTD.,
Patent Owner.

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

DECLARATION OF STUART LIPOFF

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1. Independent Claim 1 31

a. [1.pre]: "A cellular phone, comprising:" 31

b. [1.a]: "an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;" 32

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 bing operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;" 35

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;" 37

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 ditinct from said first communication link;" 39

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;" 42

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”.....45

h. [1.g]: “power means for providing power to said portable electronic device cellular phone;”.....50

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 ”.....52

[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.”.....52

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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".....65

5. Claim 5: "wherein said electronic circuit includes said switching element".....65

6. Claim 6: "wherein said electronic circuit comprises a microchip, and wherein said switching element is a series of instructions programmed onto said microchip." 66

7. Claim 7: "wherein said switching element comprises a logical circuit".....67

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 phon 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" 67

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 remte server, a remote terminal and a combination thereof" 68

10. Independent Claim 10 71

    a. [10.pre]: "A cellular phone comprising:".....71

    b. [10.a]: "an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;".....71

    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;” 71

d. [10.c]: “first and second data conveyance operations programmed in said electronic circuit;” 72

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;” 73

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;” 73

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” 73

h. [10.g] “power means, for providing power to said cellular phone;” 73

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.” 73

11. Independent Claim 11 74

a. [11.pre]: “A data exchange system comprising:” 74

b. [11.a]: “a first data exchange device;” 75

c. [11.b]: “a second data exchange device; and” 76

d. [11.c]: “a cellular phone, including:” 78

e. [11.d]: “an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;” 78

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 eing operated issue an invariable activation command, with said invariable activation command being issued when said control device is selectively triggered by the user;” 79

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;” 79

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;” 79

i. [11.h] “a cue receiver operatively linked to said electronic circuit for receiving an activation cue from said first data exchange device;” 80

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 actvation cue was received by said cue receiver; and” 80

k. [11.j] “power means for providing power to said cellular phone;” 80

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.” 80

12. Independent Claim 12 81

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 lined 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:" 81

b. [12.a]: "awaiting for an activation cue to be received at said cue receiver;" 82

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" 82

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" 82

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".....84

14. Claim 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".....86

15. Claim 15: "wherein said first and second data are identical" 88

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 throuh 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" 88

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 reprsenting said second communication link, with one of a remote portable electronic device, a remote server, a remote terminal and a combination thereof" 88

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 detecor and a combination thereof".....89

19. Independent Claim 19 89

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 eletronic 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:" 89

b. [19.a]: "awaiting for an activation cue to be received at said cue receiver;" 90

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" 90

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" 90

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:" 90

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" 91

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" 91

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:" 91

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" 91

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." 93

20. Claim 20: "wherein said control device includes said user confirmation input device." 94

XI. Conclusion 94

I. INTRODUCTION

1. I have been retained by Google LLC ("Petitioner") as an independent expert consultant in this proceeding before the Patent Trial and Appeal Board of the United States Patent and Trademark Office.

2. I am over 18 years of age and, if I am called upon to do so, I would be willing and able to testify as to the matters set forth herein.

3. My compensation is in no way contingent on the nature of my findings, the presentation of my findings in testimony, or the outcome of any related proceeding.

4. I understand that this proceeding involves U.S. Patent No. 9,022,294 ("the '294 Patent") (Ex. 1001). The application for the '294 Patent was filed October 21, 2009, as U.S. Patent Application No. 12/603,085.

5. I have been asked by Petitioner to provide my opinion on whether the claims of the '294 Patent would have been anticipated or obvious to a person of ordinary skill in the art ("POSITA") at the time of the earliest claimed priority date of the '294 Patent. In performing my analysis, I have been asked to assume that the priority date is April 14, 2003. My opinions are set forth below.

6. Throughout this declaration, I refer to specific pages, figures, or line numbers of various exhibits. These citations are illustrative and are not intended to suggest that they are the only support for the propositions for which they are cited.

II. SUMMARY OF OPINIONS

7. This declaration considers claims 1-20 of the ’294 Patent. Below, I set forth the opinions I have formed, the conclusions I have reached, and the bases for these opinions and conclusions. I believe the statements contained in this declaration to be true and correct to the best of my knowledge.

8. Based on my experience and knowledge of the art at the time of the earliest claimed priority date of April 14, 2003, it is my opinion that claims 1-20 of the ’294 Patent would have been obvious based on the asserted grounds discussed below. A person of ordinary skill in the art (“POSITA”) would have found it obvious to combine the prior art references I cite and would have been motivated to do so before the priority date.

III. QUALIFICATIONS AND BACKGROUND

9. I believe that I am well qualified to serve as a technical expert in this matter based upon my qualifications, discussed in detail below.

10. I am currently the president of IP Action Partners Inc., which is a consulting practice serving the telecommunications, information technology, media, electronics, and e-business industries.

11. I earned a Bachelor of Science degree in Electrical Engineering in 1968 and a second Bachelor of Science degree in Engineering Physics in 1969, both from Lehigh University. I also earned a Master of Science degree in Electrical

Engineering from Northeastern University in 1974 and a Master of Business Administration degree from Suffolk University in 1983.

12. I hold a Federal Communications Commission ("FCC") General Radiotelephone License. I also hold a Certificate in Data Processing ("CDP") from the Association for Computing Machinery ("ACM")-supported Institute for the Certification of Computing Professionals ("ICCP").

13. I am a registered professional engineer in the Commonwealth of Massachusetts and also in the State of Nevada.

14. I am a fellow of the Institute of Electrical and Electronics Engineers (IEEE) Consumer Electronics, Communications, Computer, Circuits, and Vehicular Technology Groups. I have been a member of the IEEE Consumer Electronics Society National Board of Governors (formerly known as Administrative Committee) from 1981, and was the Boston Chapter Chairman of the IEEE Vehicular Technology Society from 1974 to 1976. I previously served as 1996-1997 President of the IEEE Consumer Electronics Society, and have served as Chairman of the Society's Technical Activities and Standards Committee. I have served as Vice President of Publications for the Society and VP of Standards and Industrial Activities. I am currently The Historian for The IEEE Consumer Technology Society (former Consumer Electronics Society). I have also served as

chair and committee member for the IEEE Ibuka Award in the field of consumer technology.

15. I have also prepared and presented many papers at IEEE and other professional meetings. For example, in Fall 2000, I served as general program chair for the IEEE Vehicular Technology Conference on advanced wireless communications technology. I have also organized sessions at The International Conference on Consumer Electronics and was the 1984 program chairman. I also conducted an eight-week IEEE sponsored short course on Fiber Optics System Design. I was awarded IEEE's Centennial Medal in 1984 and I was awarded the IEEE's Millennium Medal in 2000. A listing of my publications is included as part of my curriculum vitae, attached as Exhibit A to this declaration.

16. As Vice President and Standards Group Chairman of the Association of Computer Users ("ACU"), I served as the ACU representative to the ANSI X3 Standards Group. I also served as Chairman of the task group on user rule compliance for the FCC's Citizens Advisory Committee on Citizen's Band ("CB") radio ("PURAC").

17. I have been elected to membership in the Society of Cable Television Engineers ("SCTE"), Cable TV Pioneers, the ACM, and The Society of Motion Picture and Television Engineers ("SMPTE"). I also served as a member of the USA advisory board to the National Science Museum of Israel, presented a short

course on international product development strategies as a faculty member of Technion Institute of Management in Israel, and served as a member of the board of directors of The Massachusetts Future Problem Solving Program.

18. I am a named inventor on seven United States patents and am the author of several publications related to data communications, including publications by Electronics Design, Microwaves, Electronic Design News (EDN), The Proceedings of the Frequency Control Symposium, Optical Spectra, and IEEE.

19. For 25 years, I worked for Arthur D. Little, Inc. ("ADL"), where I became Vice President and Director of Communications, Information Technology, and Electronics ("CIE"). At ADL, I was responsible for the firm's global CIE practice in laboratory-based contract engineering, product development, and technology-based consulting. While employed at ADL, my projects included multiple applications of technology to support next generation financial and ecommerce applications. These projects include electronic wallet applications incorporated into cellphones as well as standalone devices. I was involved in the application and study of smart card technology in financial transactions and cybersecurity.

20. Prior to my time at ADL, I served as a Section Manager for Bell & Howell Communications Company for four years. Prior to working at Bell & Howell, I served as a Project Engineer for Motorola's Communications Division

for three years. At both Bell & Howell and Motorola, I had project design responsibility for wireless communication and paging products.

21. During my career, I have been heavily engaged in the study, analysis, evaluation, design, and implementation of products and services making use of emerging technology in the overlap between telecommunications, information technology, media, and consumer electronics.

22. I am very familiar with payment cards and systems due to various related project work. I performed several projects directed to security properties of card media for an association of credit card issuers. These projects involved the consideration and evaluation of technologies including RFID, magnetic watermark, Smart Cards, optical storage cards, and holographic storage cards. Under contract to several trade associations representing the grocery industry, I developed recommendations to permit compatible electronic data interchange between suppliers and retail stores at the store level, including the use of Smart Card and digital signature technology. For Mastercard I investigated the impact of implementing new card media technologies in their credit card authorization network, including the consideration of Smart Cards, optical storage cards, card calculators, and other developing technologies.

23. My complete qualifications and professional experience are described in my curriculum vitae, a copy of which ais being filed as Exhibit 1004.

IV. MATERIALS CONSIDERED

24. In forming my opinions, I have reviewed the following documents, as well as other documents cited throughout this declaration:

Exhibit	**Description**
1001	U.S Patent No. 9,022,294 to Gaillard ("'294 Patent")
1002	Prosecution History of U.S. Application No. 12/603,085
1005	U.S. Patent No. 6,941,156 to Mooney ("*Mooney*")
1006	U.S. Patent No. 6,909,705 to Lee et al. ("*Lee*")
1007	U.S. Patent No. 6,697,638 to Larsson et al. ("*Larsson"*)
1008	U.S. Patent No. 7,278,581 to Ong ("*Ong*")
1009	U.S. Patent No. 8,862,393 to Zhou et al. ("*Zhou*")
1010	U.S. Patent No. 6,931,266 to Miyoshi et al. ("*Miyoshi*")
1011	U.S. Patent No. 6,526,287 to Lee ("*Lee 287*")
1012	U.S. Patent. No. 6,845,097 to Haller et al. ("*Haller*")

25. I have also relied on my education, experience, research, training, and knowledge in the relevant art, and my understanding of legal principles described in this declaration.

26. All of the opinions contained in this declaration are based on the documents I reviewed and my knowledge and professional judgment. My opinions

have also been guided by my understanding of how a POSITA would have understood the claims of the ’294 Patent at the time of the earliest claimed priority date.

27. I reserve the right to supplement and amend any of my opinions in this declaration based on documents, testimony, and other information that becomes available to me after the date of this declaration.

V. LEGAL STANDARDS

28. I am an engineer and not a lawyer. My understanding of the legal standards to apply in reaching the conclusions in this declaration is based on discussions with counsel for Petitioner, my experience applying similar standards in other patent-related matters, and my reading of the documents submitted in this proceeding. I have applied these legal standards in preparing this declaration.

29. I have been informed that there are two ways in which prior art may render a patent claim unpatentable. First, I have been informed that the prior art can “anticipate” a claim. Second, I have been informed that the prior art can render a claim “obvious” to a POSITA. I understand that a claim is patentable if it was not anticipated and would not have been rendered obvious by the prior art at the effective filing date of the patent.

30. I have been informed that a dependent claim is a patent claim that refers back to another patent claim. I have been informed that a dependent claim

includes all of the limitations of the claim to which it refers plus its own limitation(s).

31. I have been asked to provide my opinions as to whether the cited prior art discloses or renders obvious claims 1-20 of the ’294 Patent from the perspective of a POSITA at the time of the earliest claimed priority date of April 14, 2003, as described in more detail below.

32. I have been informed that in IPR proceedings, such as this one, the party challenging the patent bears the burden of proving unpatentability by a preponderance of the evidence. I understand that a preponderance of the evidence means “more likely than not.”

33. For purposes of this declaration, I have been asked to provide my opinions on issues regarding unpatentability. I have been informed of the following legal standards, which I have applied in forming my opinions.

A. Level of Ordinary Skill

34. I have been informed that a POSITA is determined by considering several factors, including the (i) type of problems encountered in the art; (ii) prior art solutions to those problems; (iii) rapidity with which innovations are made; (iv) sophistication of the technology; and (v) educational level of active workers in the field.

35. I have been instructed to assume that a POSITA is not a specific real individual, but rather a hypothetical individual having the qualities reflected by the factors discussed above. A POSITA is assumed to be person of ordinary creativity familiar with the prior art as of the priority date of the patent at issue.

B. Prior Art

36. I have been advised and understand that the information used to evaluate whether an invention was new and not obvious when made is generally referred to as "prior art." I understand that in an IPR proceeding, prior art includes patents and printed publications that existed before the earliest claimed priority date or the earliest filing date of the patent (which I have been informed is also called the "effective filing date"). I have been informed and understand that a patent or published patent application is prior art if it was filed before the earliest filing date of the claimed invention and that a printed publication is prior art if it was publicly available before the earliest filing date.

C. Anticipation

37. I have been informed that under 35 U.S.C. § 102, a patent claim is unpatentable for anticipation if the claimed subject matter was patented or described in a printed publication before the effective filing date of the claimed invention. I have been informed that this is referred to as unpatentability by anticipation. I have been informed that a patent claim is anticipated under § 102 if

a single prior art reference discloses all the limitations of the claimed invention. I understand that limitations may be expressed or inherent such that the limitation is essential to the prior art.

D. Obviousness

38. I have been informed that for obviousness under 35 U.S.C. § 103, a patent claim is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a POSITA to which said subject matter pertains at the time the invention was made. I have been informed that this is referred to as unpatentability by obviousness.

39. I have been informed that an obviousness analysis includes the following considerations:

40. Determining the scope and content of the prior art;

41. Ascertaining the differences between the prior art and the claims at issue;

42. Resolving the level of ordinary skill in the pertinent art; and

43. Considering evidence of secondary indicia of nonobviousness (if available).

44. I have been informed that the relevant time for considering whether a claim would have been obvious to a POSITA is the time of invention. For my

obviousness analysis, counsel for Petitioner instructed me to assume that the date of invention for the challenged claims is April 14, 2003. My opinions would not change if I assumed another, e.g., later, date of invention.

45. I have been informed that a reference may be modified or combined with other references or with a POSITA's own knowledge if the person would have found the modification or combination obvious. I have also been informed that a POSITA is presumed to know all the relevant prior art, and the obviousness analysis may take into account the inferences and creative steps that a POSITA would employ.

46. I have been informed that an obviousness determination must be made from the perspective of a POSITA. I have also been informed that there is no requirement that the prior art contain an express suggestion to combine known elements to achieve the claimed invention, and that a suggestion to combine known elements to achieve the claimed invention may come from the prior art as a whole or individually. Also, the obviousness analysis may rely on the inferences and creative steps a POSITA would employ, as filtered through his or her knowledge as of the priority date. But I understand that obviousness grounds cannot be sustained by mere conclusory statements and must include some articulated reasoning and rationale to support a legal conclusion of obviousness.

47. In determining whether a prior art reference could have been combined with another prior art reference or other information known to a POSITA, I have been informed that the following principles may be considered:

a. A combination of familiar elements according to known methods is likely to be obvious if it yields predictable results;
b. The substitution of one known element for another is likely to be obvious if it yields predictable results;
c. The use of a known technique to improve similar items or methods in the same way is likely to be obvious if it yields predictable results;
d. The application of a known technique to a prior art reference that is ready for improvement to yield predictable results;
e. Any need or problem known in the field and addressed by the reference can provide a reason for combining the elements in the manner claimed;
f. A person of ordinary skill often will be able to fit the teachings of multiple references together like a puzzle; and
g. The proper analysis of obviousness requires a determination of whether a POSITA would have a "reasonable expectation of success"—but not "absolute predictability" of success—in

achieving the claimed invention by combining prior art references.

48. I have been informed that, when a work is available in one field, design alternatives and other market forces can prompt variations of it, either in the same field or in another. I have been informed that if a POSITA could have implemented a predictable variation and would have seen the benefit of doing so, that variation is likely to have been obvious. I have been informed that, in many fields, such as the mechanical or electrical arts, market demand—not scientific literature—may drive design trends. I have been informed that, when there was a design need or market pressure and there are a finite number of predictable solutions, a POSITA would have had a good reason to pursue those known options.

49. I have been informed that the law permits the application of "common sense" in examining whether a claimed invention would have been obvious to a POSITA. For example, I have been informed that combining familiar elements according to known methods and in a predictable way may suggest obviousness when such a combination would yield nothing more than predictable results. I understand, however, that a claim is not obvious merely because every claim element is disclosed in the prior art. A party asserting obviousness must provide a specific motivation to combine or modify the references as recited in the claims

and explain why one skilled in the art would have reasonably expected to succeed in doing so.

50. I have been informed that there is no rigid rule that a reference or combination of references must contain a "teaching, suggestion, or motivation" to combine references. But I also understand that the "teaching, suggestion, or motivation" test can be a useful guide in establishing a rationale for combining elements of the prior art. I have been informed that this test poses the question as to whether there is an express or implied teaching, suggestion, or motivation to combine prior art elements in a way that results in the claimed invention, and that it helps to counter the use of hindsight, which is impermissible. Likewise, if a prior art reference "teaches away" from a potential prior art combination, then a motivation to combine may not exist.

51. I am not aware of any evidence of secondary considerations, such as unexpected results, industry skepticism, long-felt unresolved need, commercial success, praise by others, or copying that would alter my opinions set forth below.

52. I have been informed that, in an obviousness analysis, prior art must be analogous art to the patent being considered. I have been informed that a prior art reference is considered to be analogous, or in the same field of art, if the reference is either (1) in the same field of endeavor as the challenged patent, regardless of the problems the challenged patent and the prior art address, or

(2) reasonably pertinent to the particular problem being solved by the challenged patent.

VI. THE ’294 PATENT

53. The ’294 patent was filed on October 21, 2009; issued on May 5, 2015; and is a Continuation-in-part of U.S. patent application No. 10/552,912, filed as application No. PCT/IB03/01523 on Apr. 14, 2003. Ex. 1001, cover. The ’294 patent generally relates to systems and methods for exchanging data using a portable device. Ex. 1001, 1:16-18, 7:13-18.

54. 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.

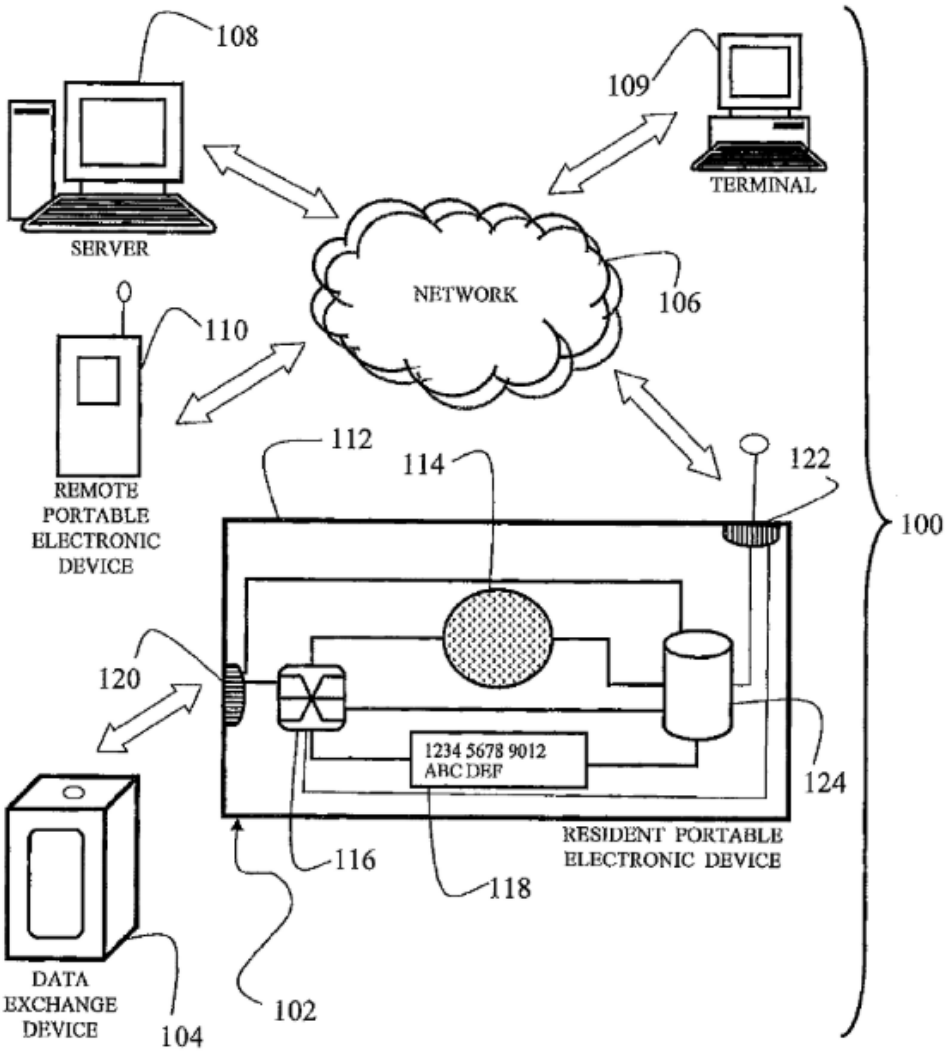


Fig. 4

Ex. 1001, FIG. 4.

55. Portable device 102 may be "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. 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. Using the control device, electronic device and transceivers, the portable device 102 may communicate "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.

56. For example, 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; *see also* 5:57-62. 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; *see also* 5:63-67.

VII. LEVEL OF ORDINARY SKILL

57. In my opinion a POSITA in the field 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.

58. At the time of the alleged invention, I would have exceeded the level of ordinary skill in the art and I am qualified to testify to what one of ordinary skill in the art would have known at that time.

VIII. CLAIM CONSTRUCTION

59. I understand that, in this proceeding, the claims are construed according to their ordinary and customary meaning, in light of the specification and prosecution history, as understood by a POSITA at the time of the invention. I understand that this is the same claim construction approach used in district court litigation.

60. In my opinion the following claim terms would have been understood to have a particular meaning, as explained below.

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

61. I have been asked to consider what structure and function correspond to the claim terms "power means" and "means for providing power."

62. 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. Thus, it is my opinion that a POSITA would have understood that the corresponding structure for these claim terms is *an internal power source for storing and providing power or a component for providing power from an external power source*. I also understand the corresponding function to be “providing power to said portable electronic device []” as recited in the claims. Ex. 1001, 2:10-11.

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

63. I have been asked to consider what structure and function correspond to the claim term “data conveyance switching element.”

64. 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. Ex. 1001, 9:28-31. Thus, in my opinion, a POSITA would have understood that, the corresponding structure for this claim term to be *a physical structure, a virtual program, or both*. I also understand the corresponding function to be switching between inactive and activated states based

on the receipt of an activation cue, as recited in the claims. Ex. 1001, 2:4-9, 4:18-23, 5:48-53.

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

65. I have been asked to consider what structure and function correspond to the claim term "control device."

66. 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. Thus, in my opinion, a POSITA would have understood the corresponding structure for this claim term to be *either a biometric parameter detector or one or more buttons*. I also understand the corresponding function to be "selectively triggering … to issue an invariable activation command" as recited in the claims. Ex. 1001, 15:14-15; *see also* 7:4-8, 10:63-11:2, 16:27-29.

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

67. I have been asked to consider what structure and function correspond to the claim terms "data exchange device" and "external data exchange device." Neither the disclosure nor the claims of the '294 Patent provide a basis for drawing a distinction between a "data exchange device" and an "external data exchange device."

68. 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. Thus, in my opinion a POSITA would have understood the corresponding structure for these claim terms to be a *data transceiver coupled to a circuit*. I also understand the corresponding function to be “exchanging data” as recited in the claims. Ex. 1001, 2:14-17, 4:7-14.

69. In my opinion, no other terms require further construction for me to provide my opinions on whether the prior art anticipates or renders obvious the claims of the ’294 patent.

IX. THE PRIOR ART

70. As explained in Section X below, it is my opinion that claims 1-20 would have been obvious over *Mooney* or *Mooney* and *Lee*, each of which I have been instructed to assume is prior art.

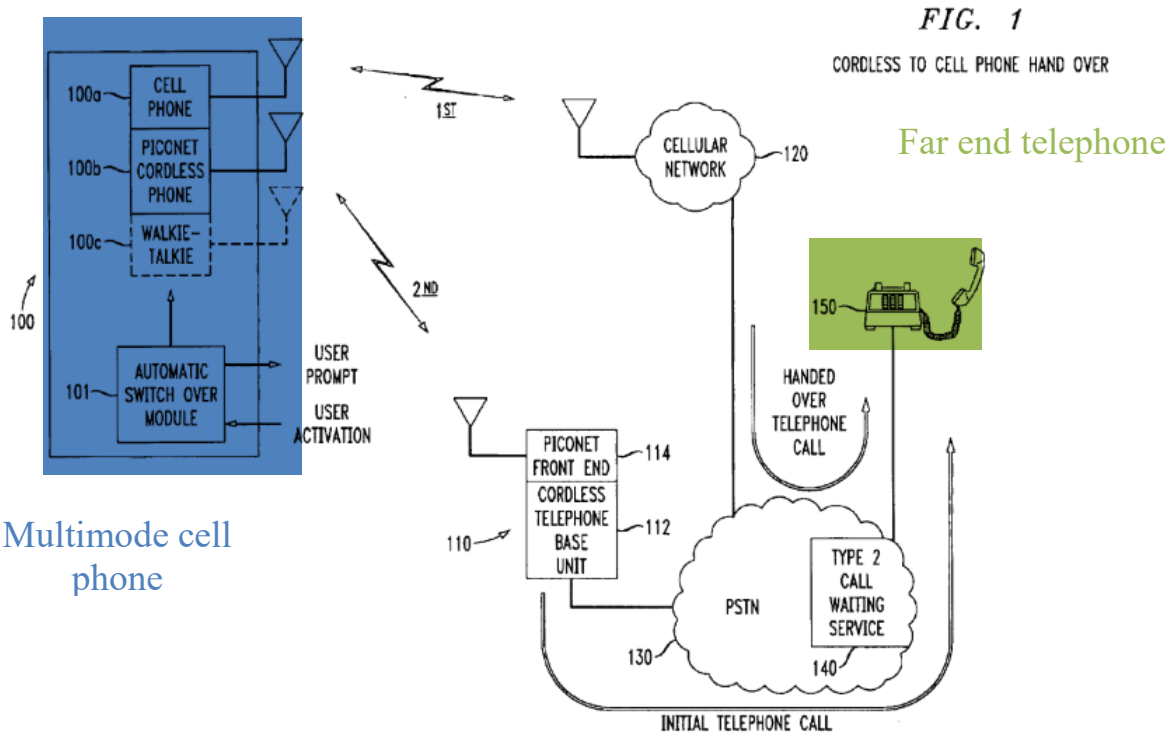
A. *Mooney* (Ex. 1005)

71. U.S. Patent No. 6,941,156 to Mooney (“*Mooney*”) was filed on June 26, 2001 and issued on September 6, 2005. *Mooney*, cover page. I understand that *Mooney* is prior art to the ’294.

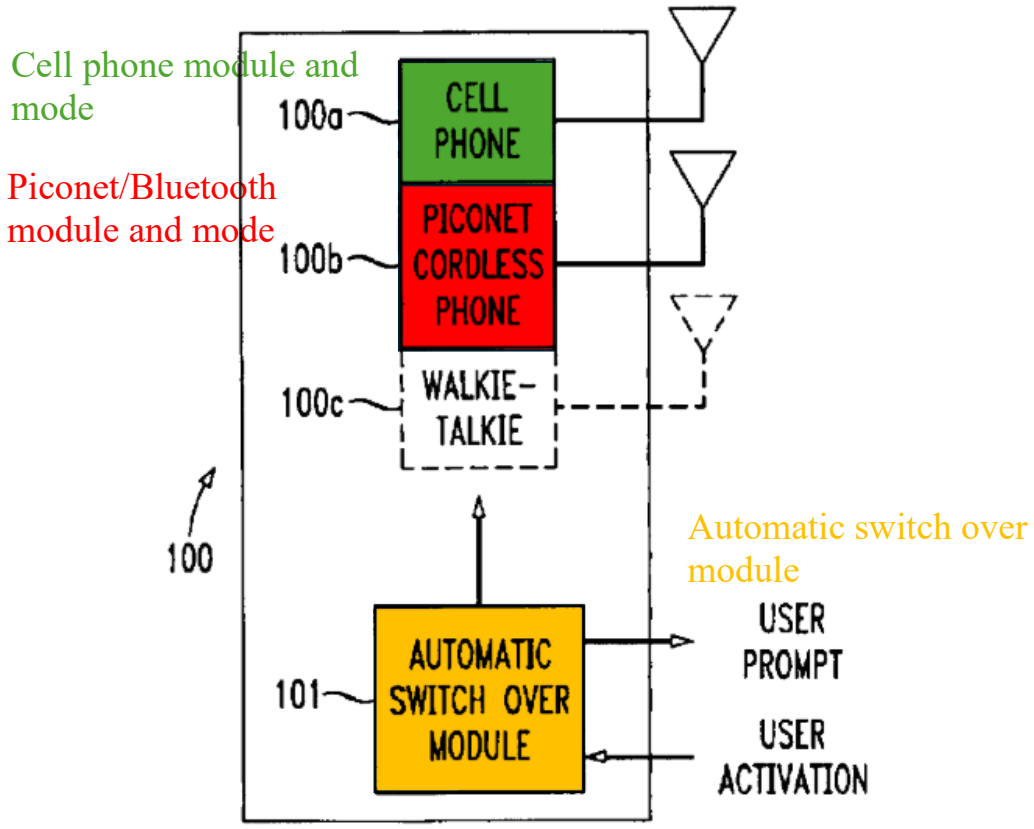
72. *Mooney* discloses a “a multimode cell phone 100 includ[ing] multiple functional modes, e.g., a cell phone mode 100a, a piconet cordless telephone

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. To facilitate the switch between operational modes, *Mooney* further 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.

73. The annotated Figures below illustrates 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 (annotated).

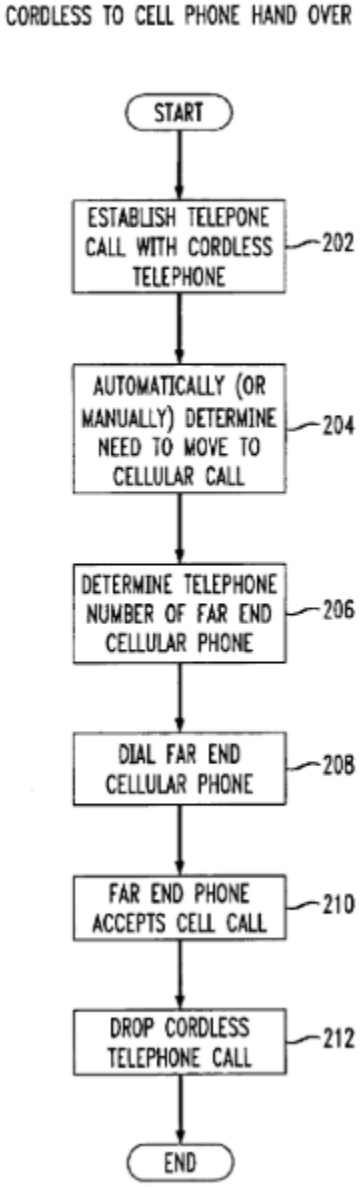


Mooney, Fig. 1 (excerpted, annotated).

74. *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. Thus, 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; *see also* 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).

FIG. 2



Mooney, Fig. 2.

75. *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 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; *see also* 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.

B. *Lee* (Ex. 1006)

76. U.S. Patent No. 6,909,705 to Lee ("*Lee*") was filed on November 2, 2000 and issued on June 21, 2005. *Lee*, cover page. I understand that *Lee* is prior art to the '294 patent.

77. *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. 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. For example, 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.

78. *Lee* further 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. 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. 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.

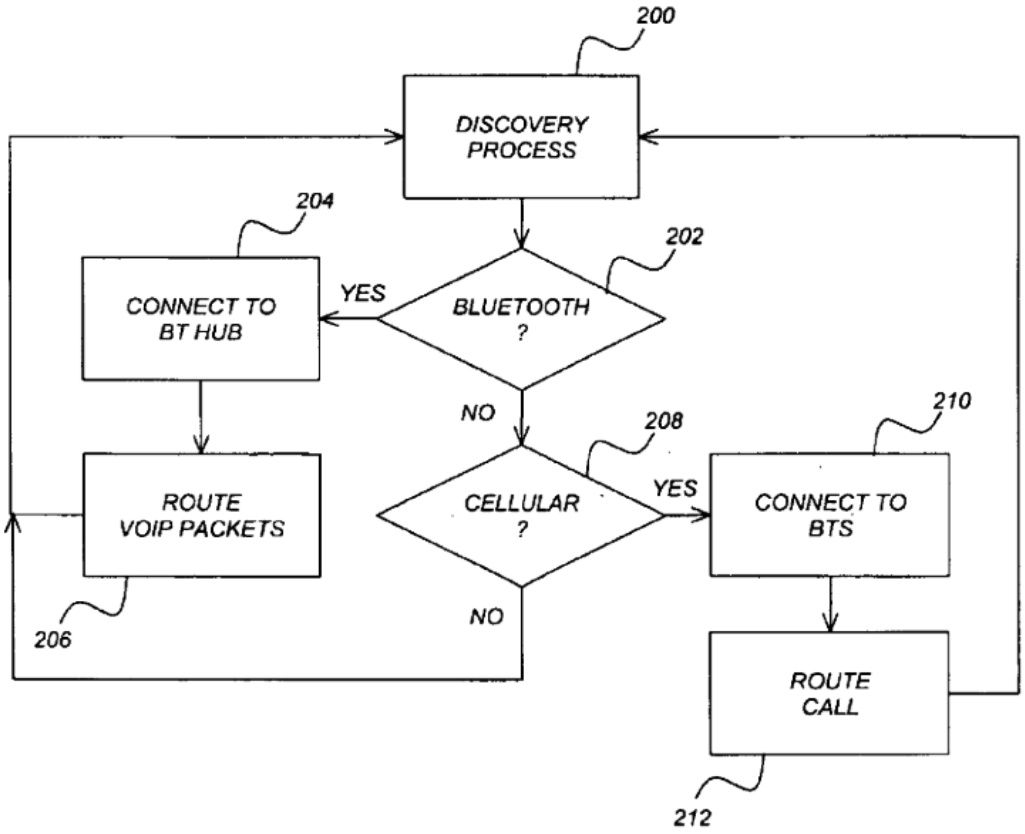


FIG. 2

Lee, Fig. 2.

X. GROUNDS OF UNPATENTABILITY

79. Based on my review of the materials set forth above, including my application of the knowledge of a POSITA, it is my opinion that claims 1-20 of the '294 Patent would have been anticipated or obvious to one of ordinary skill in the art as of April 14, 2003.

80. In particular, it is my opinion that claims 1-20 of the '294 Patent would have been obvious to a POSITA based on the following grounds:

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

A. Claims 1-20 Are Obvious Over *Mooney* (Ground 1) or *Mooney* and Lee (Ground 2)

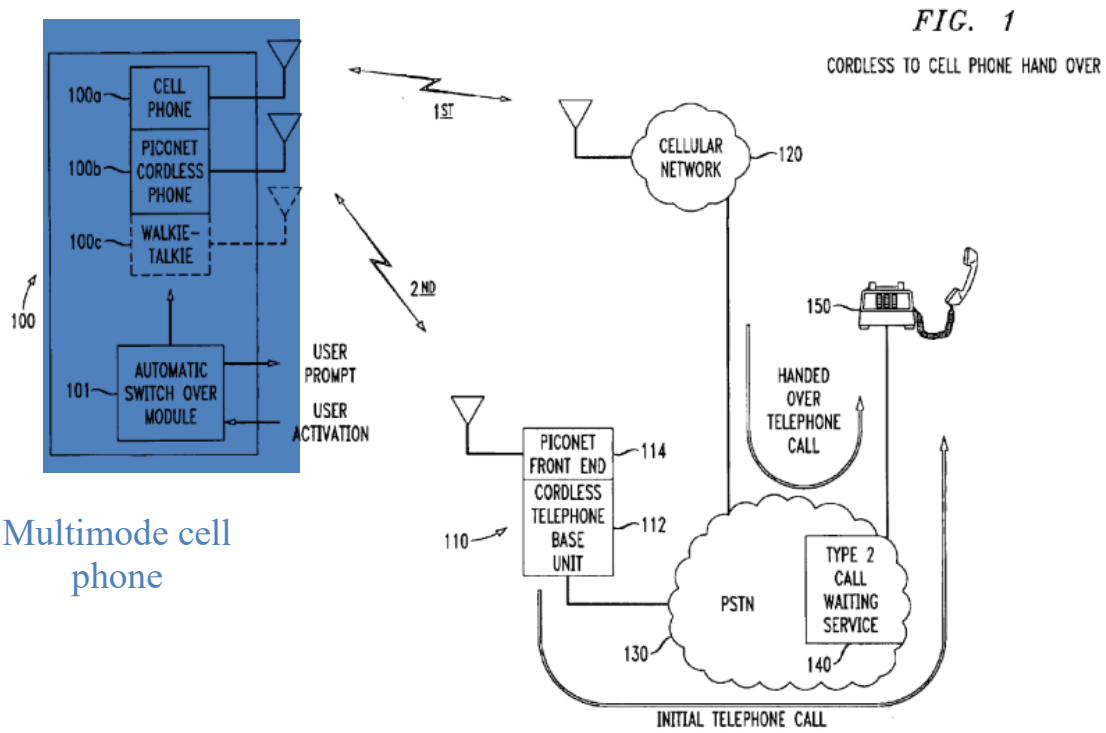
1. Independent Claim 1

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

81. In my opinion,[1] *Mooney* discloses [1.pre] because it discloses a "multimode cell phone." *Mooney*, Abstract, 1:51-54, 3:49-51, Fig. 1.

82. 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.

[1] I have no opinion whether the preambles of the claims are limiting. But if they are, it is my opinion that they are disclosed or rendered obvious for the reasons discussed herein.



Multimode cell phone

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;"

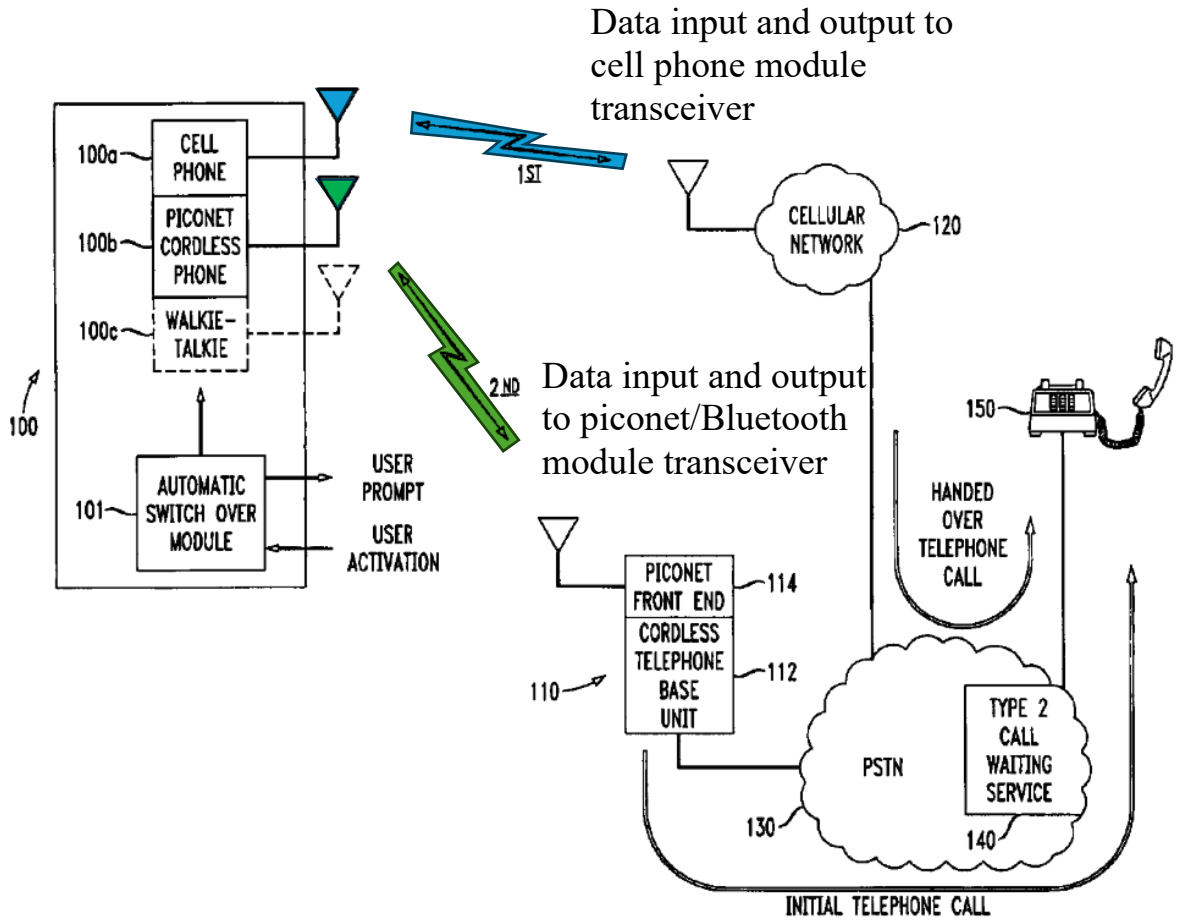
83. *Mooney* discloses [1.a] because *Mooney*'s "multimode cell phone" includes various electrically coupled electronic components, including conventional storage for storing data, "an appropriate processor" capable of processing data, and "multiple functional modes, e.g., a cell phone mode 100*a,* a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

84. 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. *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. Thus, 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; *see also* 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").

85. Regarding data input and output, *Mooney* further 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. For example, "[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. 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. The automatic switch over module also receives data input and output because, for example, it "is *in communication with* each communication path functionality, e.g., with the cell phone functionality 100*a,* the piconet cordless telephone functionality 100*b*." *Mooney*, 3:56-60.

86. Annotated Figure 1 below illustrates exemplary data input and output capabilities of Monney's electronic circuit.



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;"

87. In my opinion, *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.

88. 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. 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. Further, *Mooney* expressly discloses incorporating other buttons, such as a "designated button," to control other functions. *Mooney*, 4:38-49. 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.

89. I have also been asked to consider whether, if *Mooney* is found not to disclose [1.b], it would have been obvious to a POSITA.

90. In my opinion, 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. 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. 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).

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;"

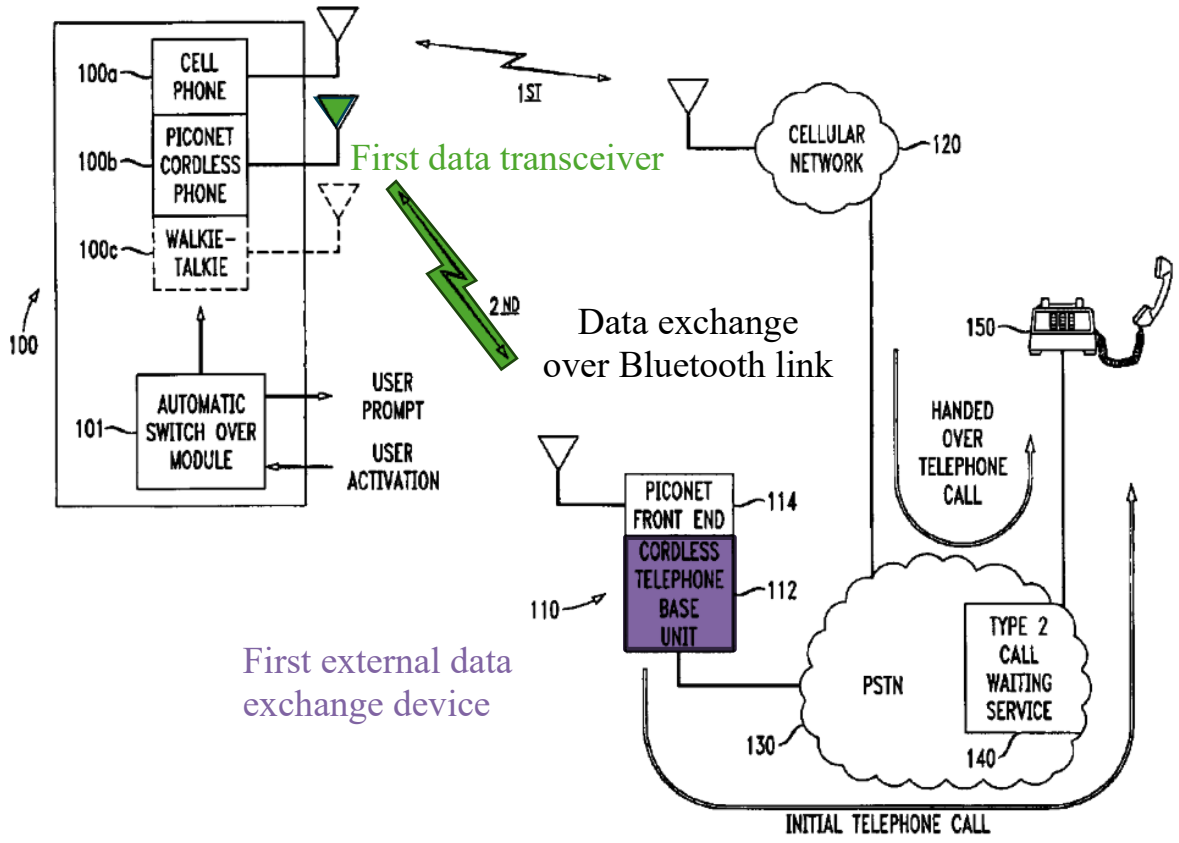
91. *Mooney* discloses [1.c] because its multimode cell phone includes a "piconet cordless module 100b" that exchanges data between the electronic circuit and a "cordless telephone base unit" (first external data exchange device) of a "far end telephone" over "a first type [of] RF communication link" such as a Bluetooth link. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1. A POSITA would have understood that the data exchange is facilitated by a first data transceiver of the piconet cordless module, as explained below.

92. *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. *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. 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. *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. Thus, 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.

93. 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.



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;"

94. *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. A POSITA would have understood that the data exchange is facilitated by a second data transceiver of the cell phone module as explained below.

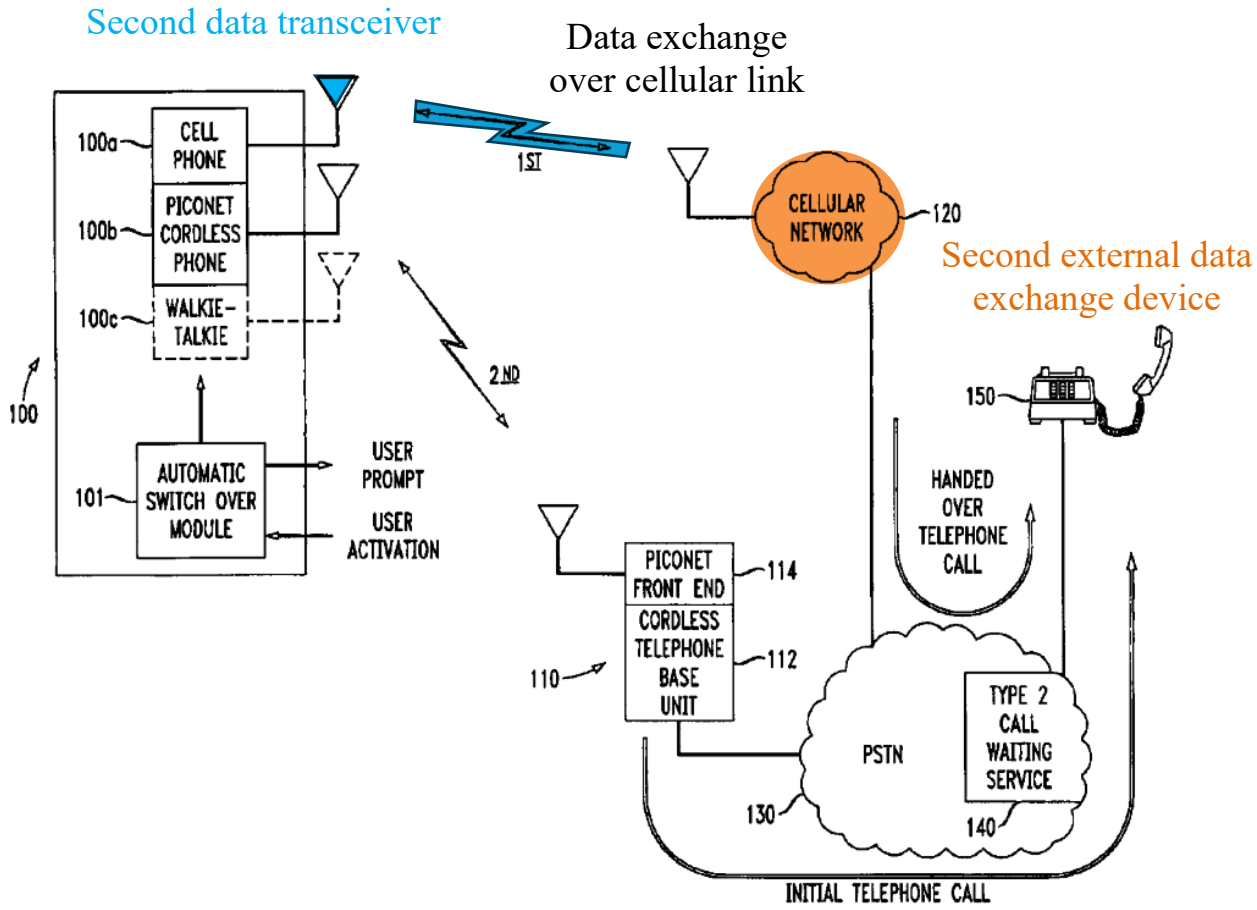
95. *Mooney*'s multimode cell phone includes a "cellphone module 100a" configured to "communicate" with—i.e., receive data input from and send data output to—a "far end telephone" using "a second type [of] RF communication link" such as a cell phone link. *Mooney*, 1:62-66, 3:52-55, 5:11-15, 5:57-62, Fig. 1. *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. 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.

96. *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. Thus, 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.

97. 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 infrastructure[2] (second 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.

[2] 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. *Lee*, 2:45-50.



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;"

98. *Mooney* discloses [1.e] because the first transceiver[3] (a cue receiver) is operatively linked to the piconet/Bluetooth cordless module and processor

[3] 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

(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.

99. *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. Thus, 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)," 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; *see also* 1:31-34 ("a 3-in-1 cell phone conventionally provides establishment of a telephone call with … a local

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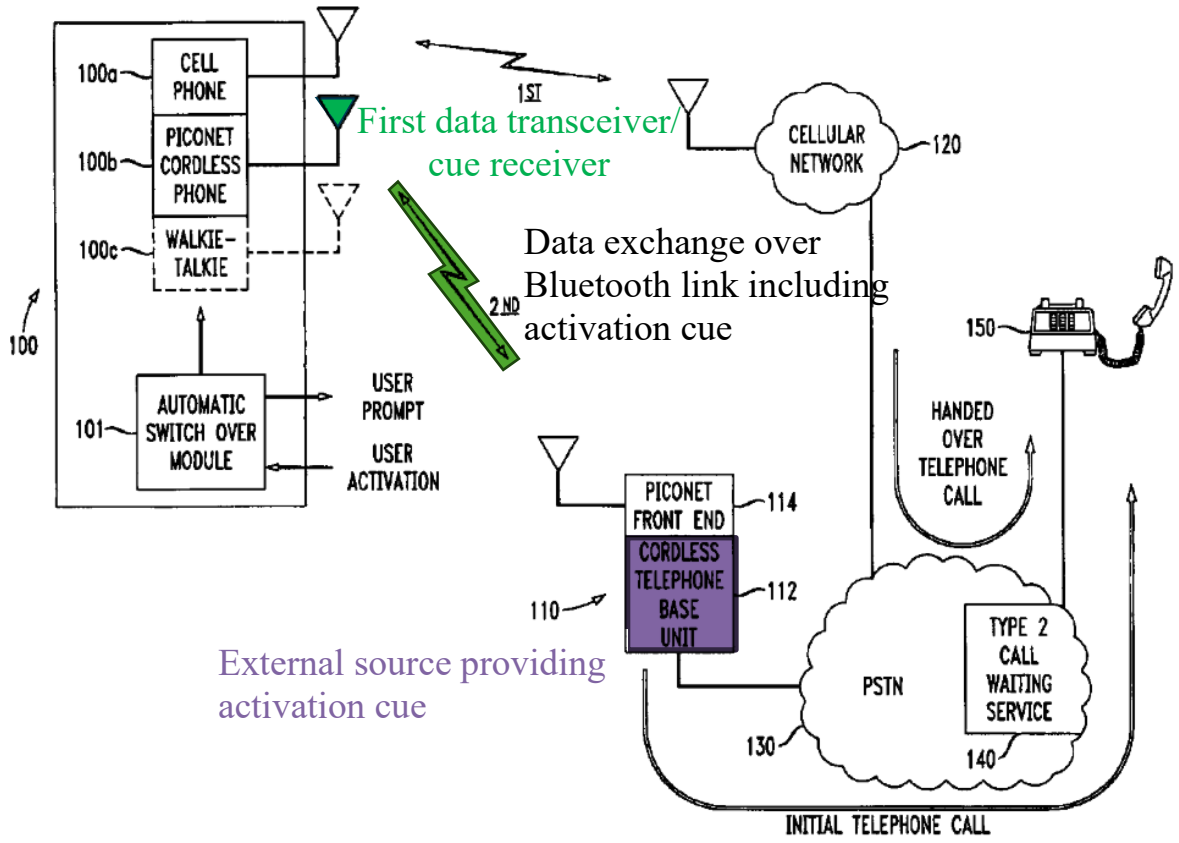
activation cue can be received by electronic device 10 from data exchange device transceiver 9 *a*."), *see also* claim 3 ("wherein said first data transceiver includes said cue receiver").

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).

100. 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. 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).



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"

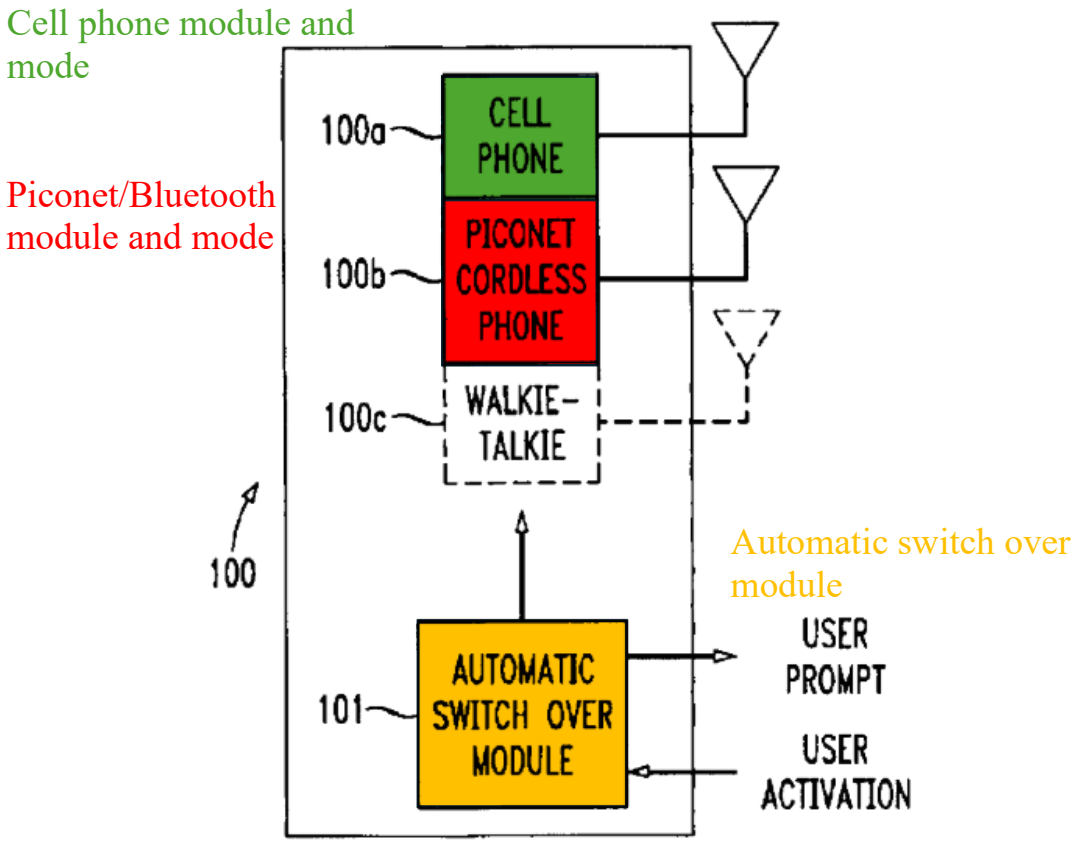
101. *Mooney* discloses [1.f] because the multimode cell phone includes an "automatic switch over module" (data conveyance switching element) operatively connected to the processor, piconet/Bluetooth cordless module, and cell phone module (electronic circuit) that is assigned **(1)** a "piconet cordless 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.

102. **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.

103. For example, *Mooney* explains that the "automatic switch over module 101 is *in communication with* each communication path functionality, e.g., with the cell phone functionality 100*a,* the piconet cordless telephone functionality 100*b*, 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. Thus, 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. *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. Thus, 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. 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.



Mooney, Fig. 1 (excerpted, annotated).

104. **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.

105. For example, *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,* 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.").

106. 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.

107. **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.

108. For example, *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. *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. Thus, 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.

109. 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.

110. 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 in further detail for [1.h] and [1.i] below.

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

111. *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.

112. 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. Indeed, 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. *Miyoshi* (Ex. 1011), 1:29-35 ("cellular phones include phones with a removable battery pack"), 1:64-2:2; *Lee 287* (Ex. 1012), Abstract ("A battery pack of a cellular phone is equipped with a battery.").

113. I have also been asked to consider whether, if *Mooney* is found not to disclose [1.g], it would have been obvious to a POSITA.

114. In my opinion, 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.

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 evidenced by *Miyoshi* and *Lee 287*. *Miyoshi*, 1:29-35, 1:64-2:2; *Lee 287,* Abstract. 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.

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."

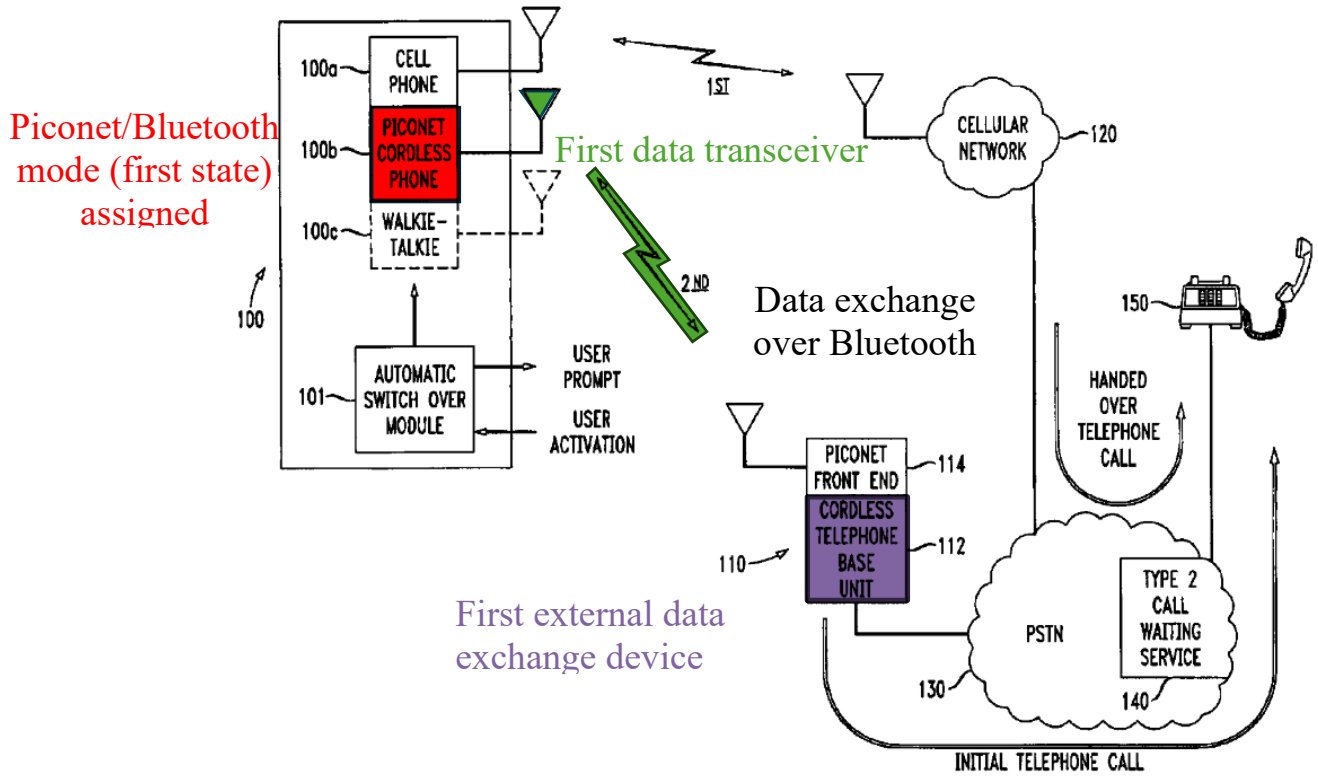
116. [1.h] and [1.i] recite alternative data conveyance operations, whereby data from the electronic circuit is to be conveyed to the first external data exchange device through the first data transceiver if the switching element is in the first state ([1.h]) and data from the electronic circuit is to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

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

117. *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.

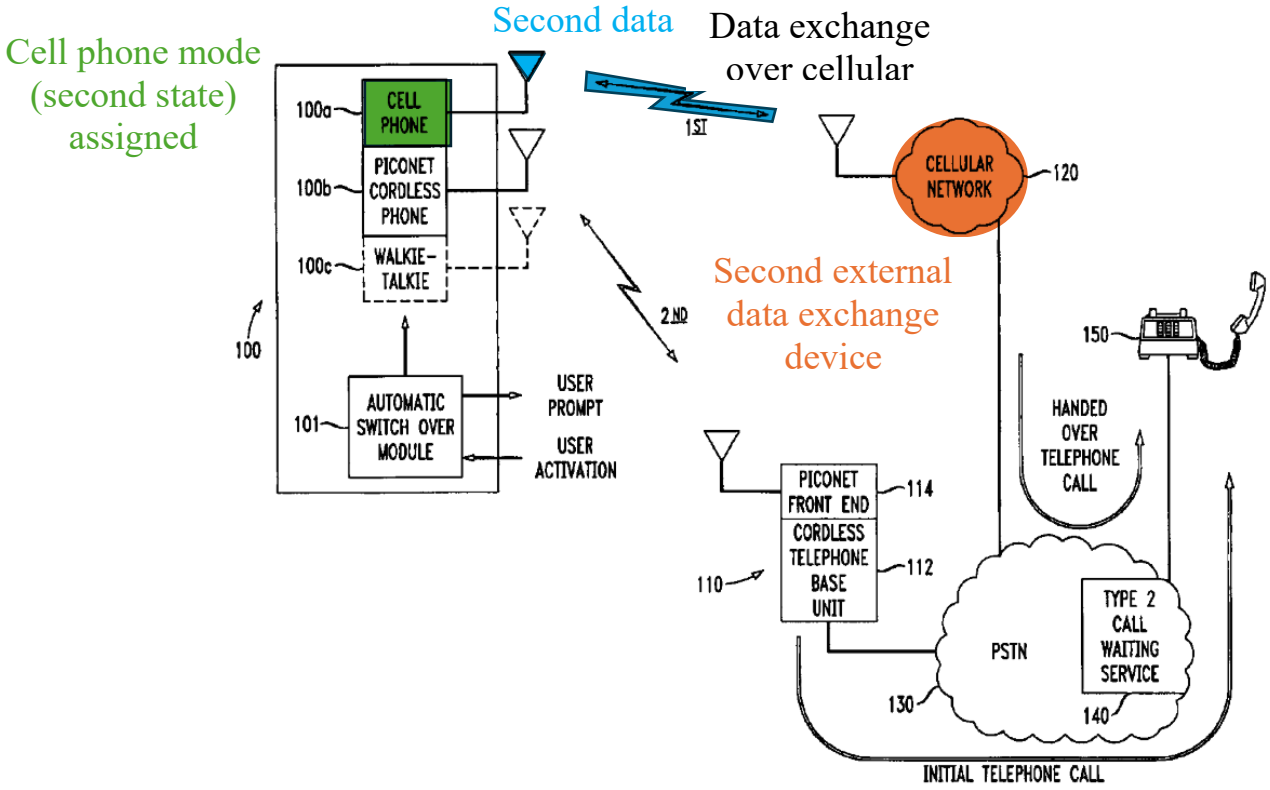
118. Annotated Figure 1 below illustrates the path of data conveyance in the first state, as described in [1.h]:



Mooney, Fig. 1 (annotated, excerpted).

119. 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.

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).

121. 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. 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].

122. 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.").

123. 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.

124. 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. Thus, Figure 2 further confirms that detecting 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.

125. 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. This is consistent with not only the express teachings of *Mooney* but 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* (Ex. 1006), 4:38-46, 4:59-5:2, 5:7-10.

126. 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.

127. I have also been asked to consider whether, if *Mooney* is found not to disclose [1.h]-[1.i], *Lee* would have rendered [1.h]-[1.i] obvious to a POSITA.

128. In my opinion, [1.h]-[1.i] would have been obvious over *Mooney* in view of *Lee* as explained for Ground 2.

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

129. *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 *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. 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.

130. For example, 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.

131. *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; *see also* claim 20 ("performing a discovery and/or registration process to identify whether to use either the wireless local loop network or the cellular network."). 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. 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.

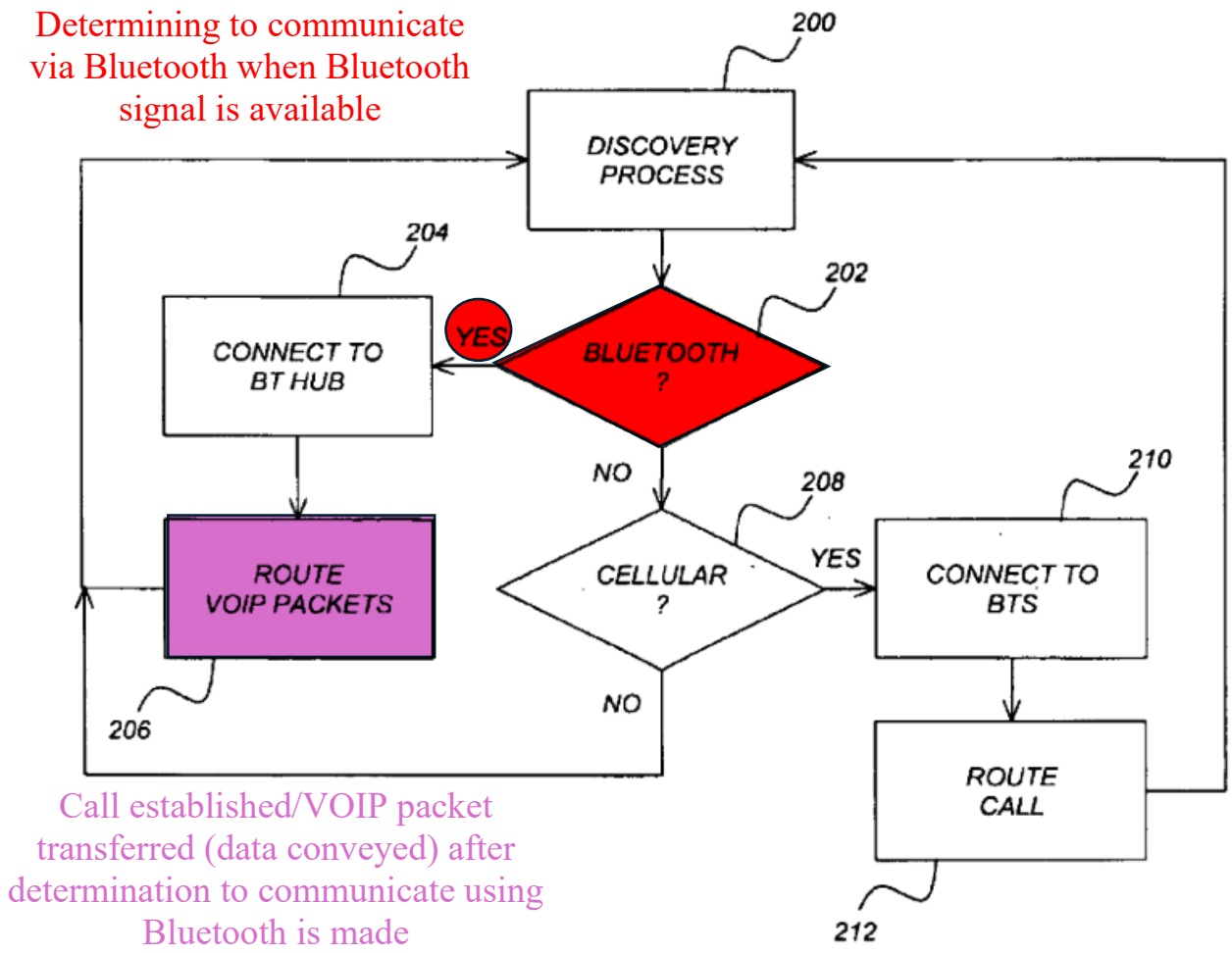


FIG. 2

Lee, Fig. 2 (annotated).

132. 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.

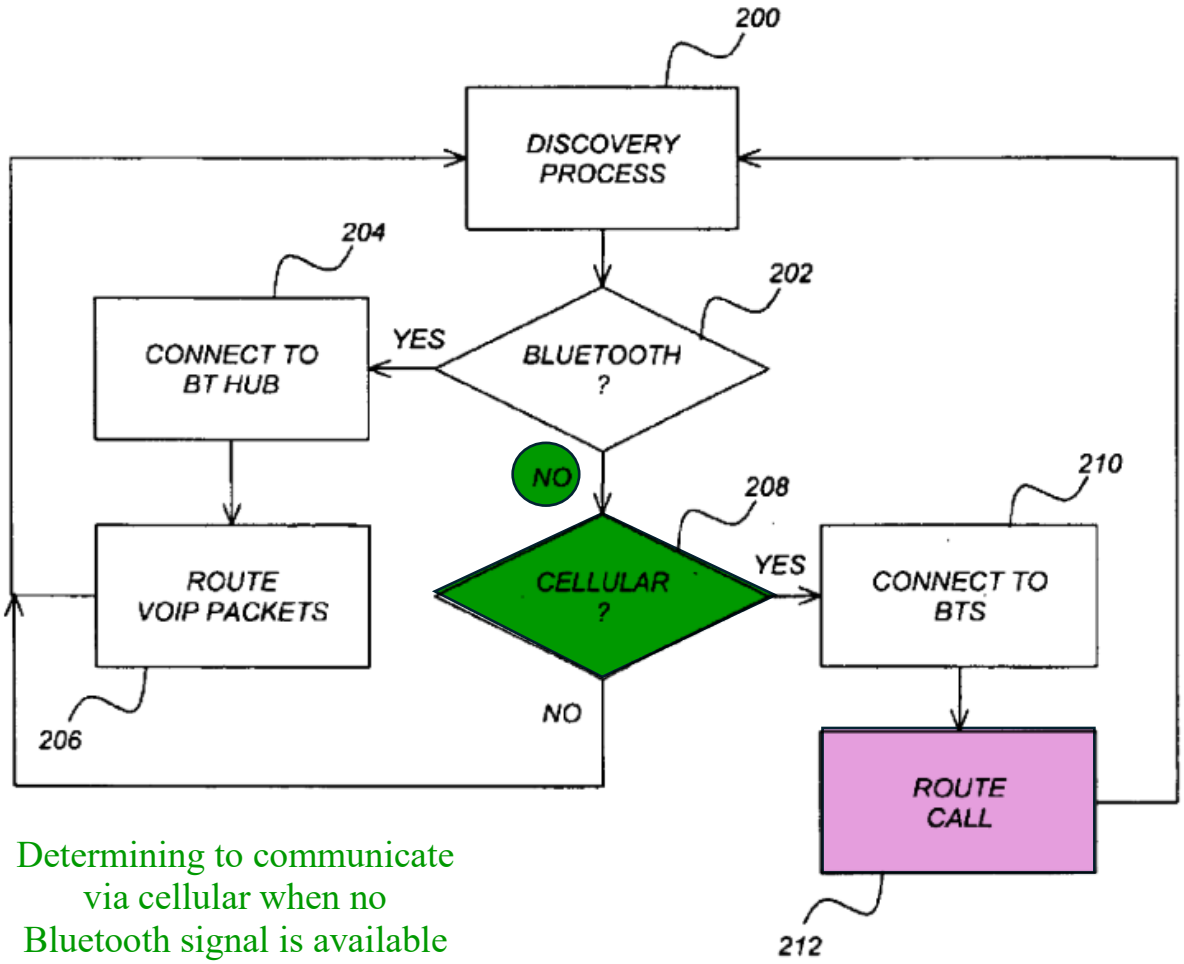


FIG. 2

Lee, Fig. 2 (annotated).

133. *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. 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. *See* [1.c]-[1.f].

134. Thus, 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 prior to sending data over the corresponding communication links. *Lee*, 4:6-16, 4:25-31, 4:66-5:6, 5:27-36 5.

135. 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. 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. 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.

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

136. *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. Because *Mooney*'s multimode phone, therefore, 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).

137. 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. 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. And display screens on cellular phones were common at the time. *e.g.*, *Haller,* 3:35-37 ("The system comprises a first device, having a display"), FIGS. 5A-5C (depicting a display screen);

Larsson, 5:23-28 (disclosing that "the handset … displays information from the car kit.").

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

138. *Mooney* discloses or at least suggests claim 3 for the reasons articulated for [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.

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"

139. *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.

5. Claim 5: "wherein said electronic circuit includes said switching element"

140. *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.

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

141. *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)).). A POSITA would have understood *Mooney*'s processor to be a microchip (a microprocessor on an integrated circuit) because electronic devices, particularly cellular phones that were intended to be compact and portable, routinely included the smallest possible components including microprocessors or microchips.

142. 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. Indeed, it was well known in the art to program a series of instructions onto a microchip , as evidenced by *Zhou* and *Ong*. *See Zhou*, 7:46-49 (describing a microchip including a microprocessor), 39:63-66,

55:12-15 (explaining that the microprocessor is programmed with instructions); *Ong,* 3:41-49.

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

143. *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.

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"

144. *Mooney* discloses or renders obvious claim 8 because *Mooney*'s first transceiver[4] (a cue receiver) receives "quality" Bluetooth signals (an activation cue) from a "piconet front end" and "base unit" (first external data exchange

[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*."); *see also* claim 3 ("wherein said first data transceiver includes said cue receiver").

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.

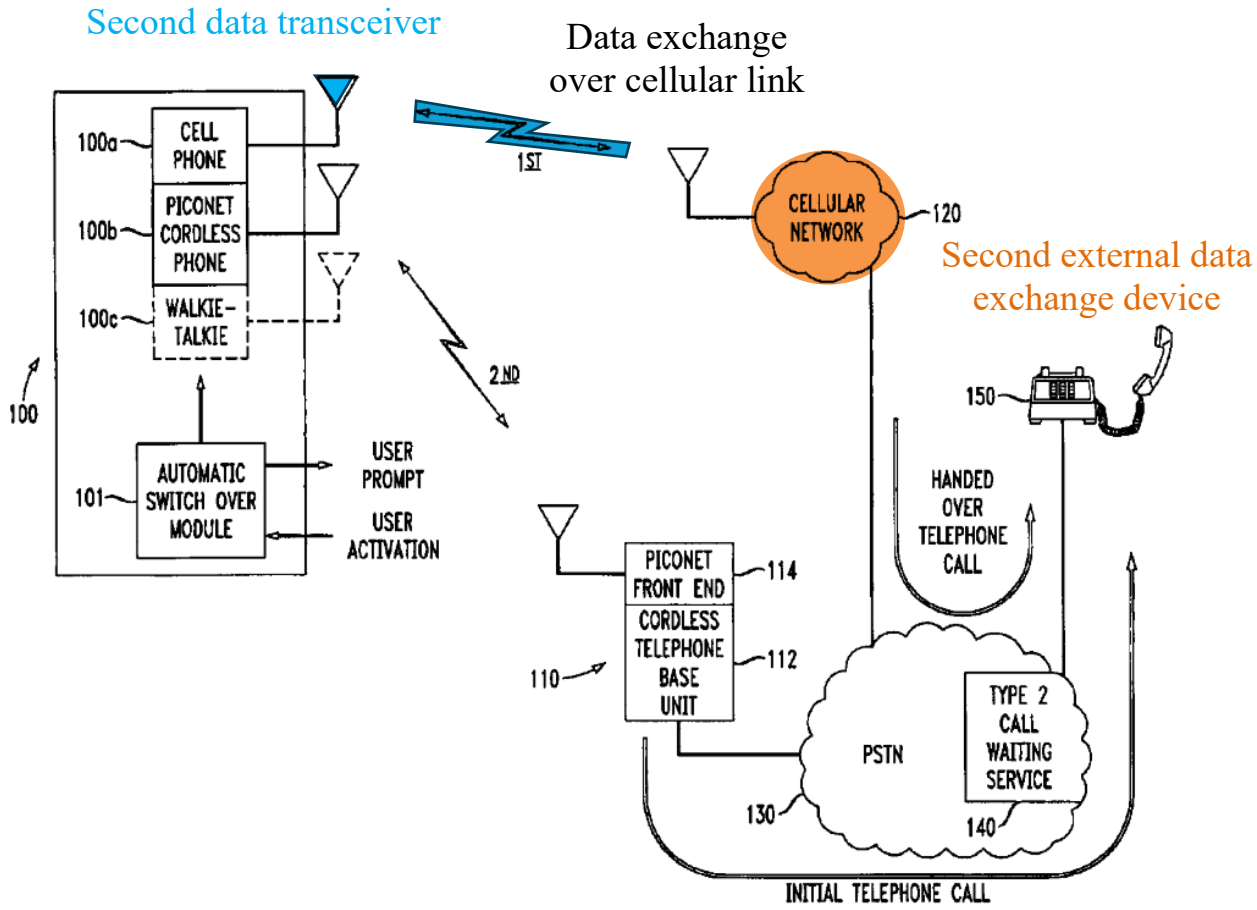
145. *Mooney* explains that when a caller on the multimode cell phone is "*within range* of the cordless telephone base station that is matched to the cordless telephone mode of the 3-in-1 cell phone," the piconet/Bluetooth cordless module is informed of the signal quality (via its first transceiver/ cue receiver) and a call may be established in cordless mode via the BLUETOOTH™ link. *Mooney*, 2:53-3:7, 4:34-37, 6:18-25, Fig. 2; *see also* [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.

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"

146. *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.

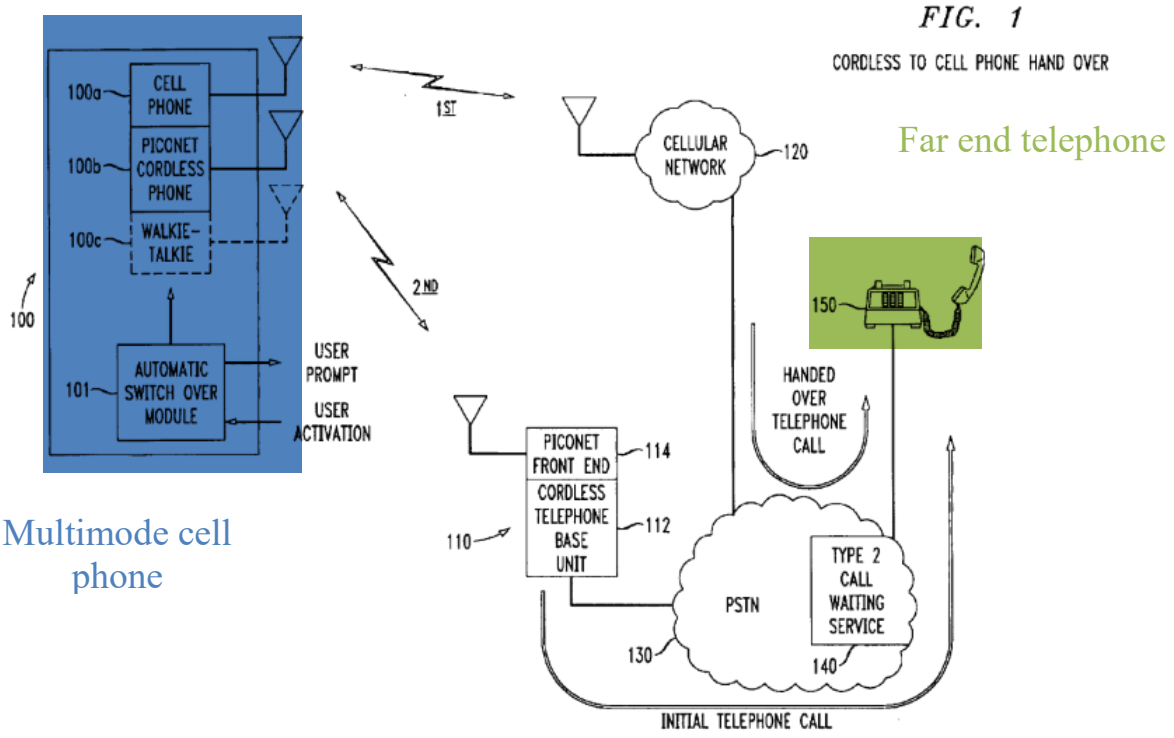
147. **First**, annotated Figure 1 below shows *Mooney*'s multimode cell phone containing a second data transceiver for exchanging data with cellular network infrastructure[5] (second external data exchange device) over a cellular link (second communication link). *Mooney*, 1:31-34, 1:62-66, 5:41-47, 5:57-62, Fig. 1.

[5] 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. *Lee*, 2:45-50.



Mooney, Fig. 1 (annotated).

148. **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.



Mooney, Fig. 1 (annotated).

10. Independent Claim 10

a. [10.pre]: "A cellular phone comprising:"

149. *Mooney* discloses [10.pre] for reasons articulated in [1.pre]. *Mooney*, Abstract; 1:51-54, 3:49-51, Fig. 1.

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

150. *Mooney* discloses [10.a] for reasons articulated in [1.a]. *Mooney*, 154-66, 3:55-63, 7:9-12.

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;"

151. *Mooney* discloses or renders obvious [10.b] for reasons articulated in [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2.

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

152. *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.

153. For example, *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. Thus, 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; *see also* 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").

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;"

154. *Mooney* discloses [10.d] for reasons articulated in [1.c]. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1.

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;"

155. *Mooney* discloses [10.e] for reasons articulated in [1.d]. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1.

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"

156. *Mooney* discloses [10.f] for reasons articulated in [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.

h. [10.g] "power means, for providing power to said cellular phone;"

157. *Mooney* discloses or renders obvious [10.g] for reasons articulated in [1.g].

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."

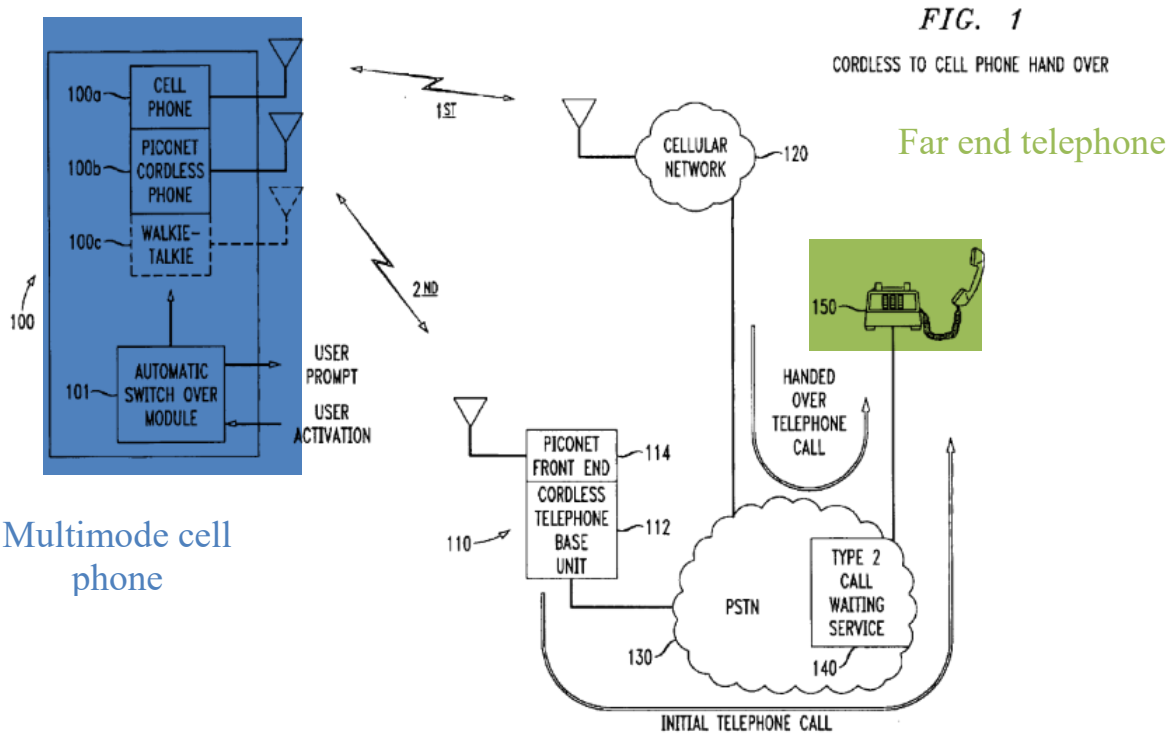
158. *Mooney* alone (Ground 1) discloses or renders obvious [10.h] and [10.i] for reasons articulated in [1.h] and [1.i].

159. *Mooney* in combination with *Lee* (Ground 2) also renders obvious [10.h] and [10.i] for reasons articulated in [1.h] and [1.i].

11. Independent Claim 11

a. [11.pre]: "A data exchange system comprising:"

160. *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].

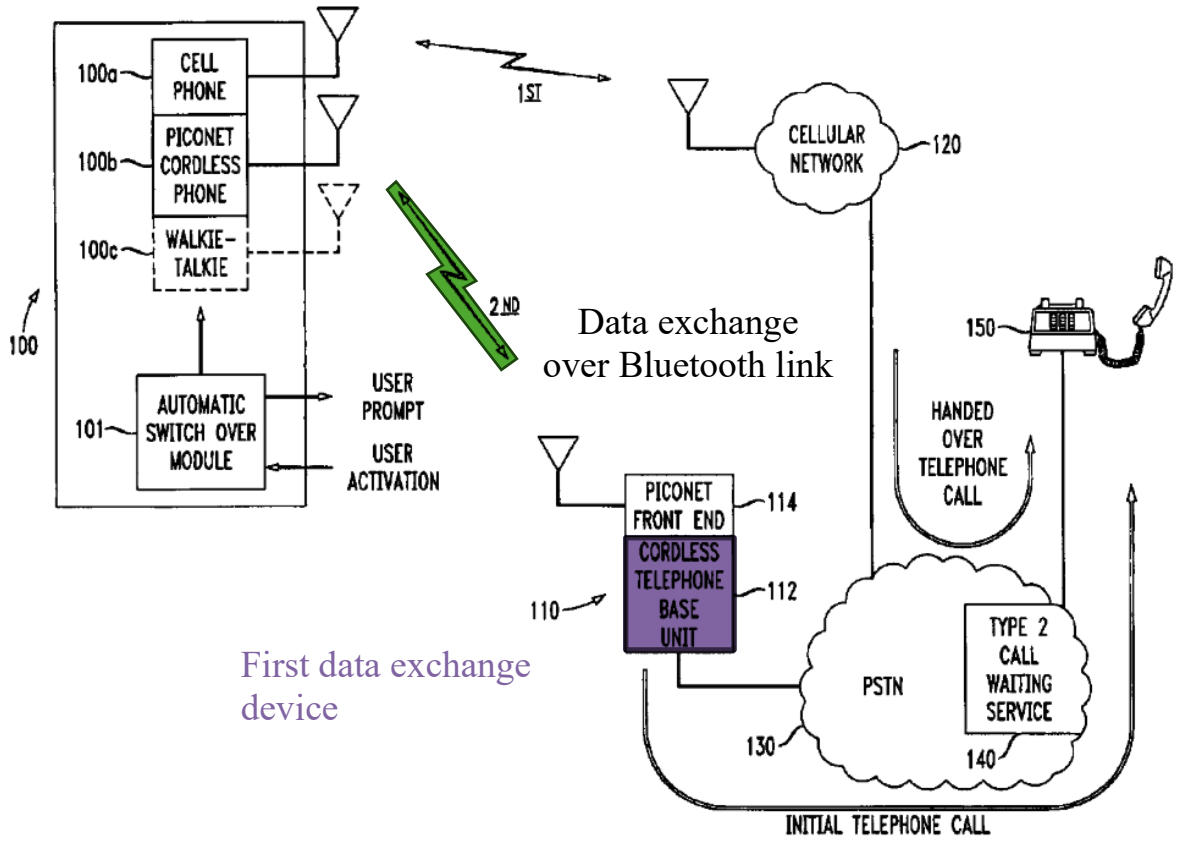


Mooney, Fig. 1 (annotated).

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

161. *Mooney* discloses [11.a] because it discloses a "cordless telephone base unit" as explained in [1.c].

162. 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, as explained in [1.c]. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1.



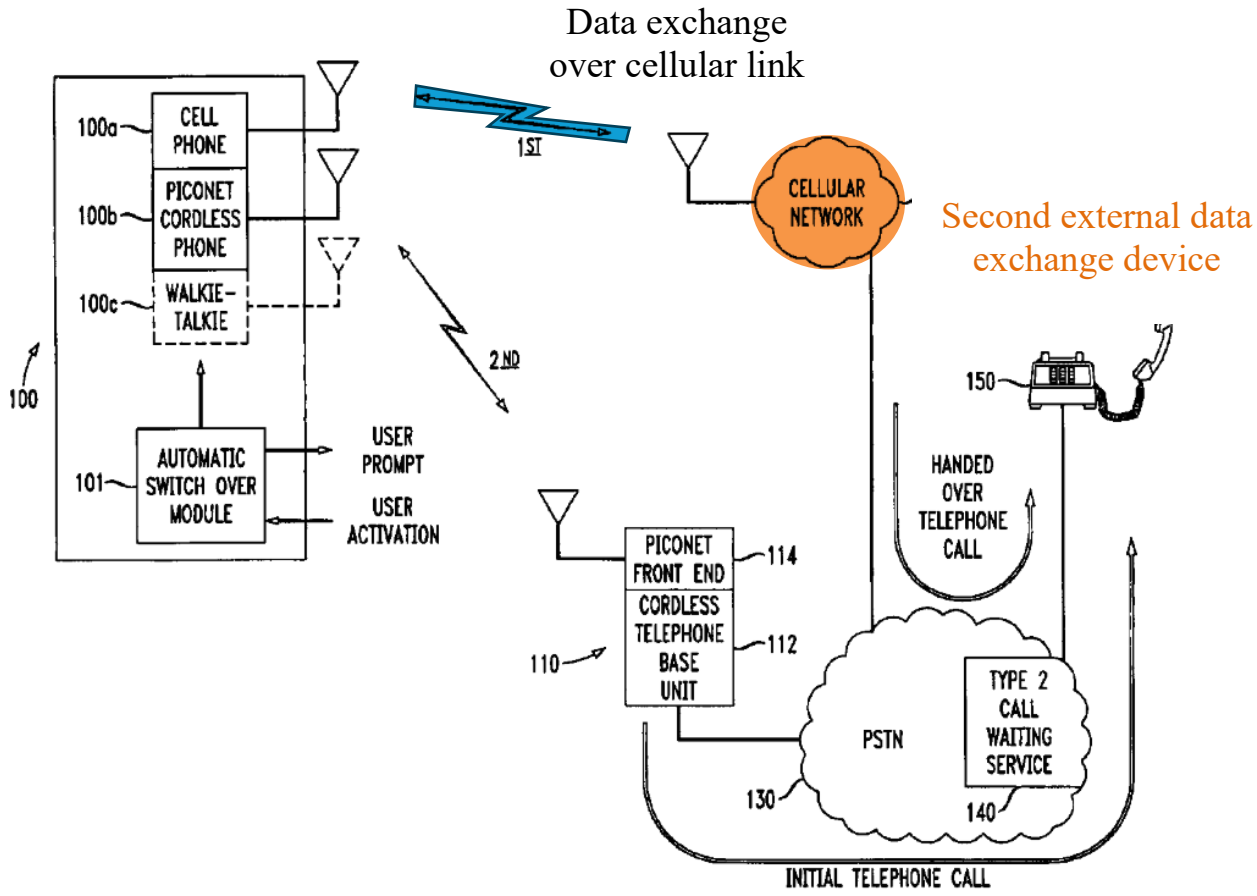
Mooney, Fig. 1 (annotated, excerpted).

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

163. *Mooney* discloses [11.b] because it discloses a "cellular network" infrastructure (second 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.

164. Annotated Figure 1 below shows *Mooney*'s multimode cell phone exchanging data between its cell phone module and cellular network infrastructure[6] (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.

[6] 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. *Lee*, 2:45-50.



Mooney, Fig. 1 (annotated, excerpted).

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

165. *Mooney* discloses [11.c] for reasons articulated in [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2.

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

166. *Mooney* discloses [11.d] for reasons articulated in [1.a]. *Mooney*, 154-66, 3:55-63, 7:9-12.

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;"

167. *Mooney* discloses or renders obvious [11.e] for reasons articulated in [1.b]. *Mooney*, 4:12-15, 4:54-56, 5:36-41, Fig. 2.

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;"

168. *Mooney* discloses [11.f] for reasons articulated in [1.c]. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1.

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;"

169. *Mooney* discloses [11.g] for reasons articulated in [1.d]. *Mooney*, 3:4-7, 3:49-51, 4:34-37, 4:54-56, 6:15-24, Fig. 1.

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

170. *Mooney* discloses [11.h] for reasons articulated in [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.

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"

171. *Mooney* discloses [11.i] for reasons articulated 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.

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

172. *Mooney* discloses or renders obvious [11.j] for reasons articulated in [1.g].

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."

173. *Mooney* alone (Ground 1) discloses or renders obvious [11.k] and [11.l] for reasons articulated in [1.h] and [1.i].

174. *Mooney* in combination with *Lee* (Ground 2) also renders obvious [11.k] and [11.l] for reasons articulated in [1.h] and [1.i].

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:"

175. [12.pre] includes the same elements recited in [1.pre]-[1.g]. *Mooney* discloses or renders obvious [12.pre] for reasons articulated in [1.pre]-[1.g].

b. [12.a]: "awaiting for an activation cue to be received at said cue receiver;"

176. *Mooney* discloses [12.a] for reasons articulated for [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.

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"

177. *Mooney* discloses [12.b] for reasons articulated 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.

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"

178. *Mooney* alone (Ground 1) discloses [12.c] and [12.d] for reasons articulated in [1.h] and [1.i].

179. *Mooney* in combination with *Lee* (Ground 2) also renders obvious [12.c] and [12.d] for reasons articulated in [1.h] and [1.i].

180. 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 thus 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. 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.

181. I have also been asked to consider whether, if *Mooney* is found not to disclose that that first and second data is forwarded as recited in [12.c]-[12.d], *Lee teaches it*. In my opinion *Lee* does.

182. *Lee* further 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.

183. 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. 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.

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"

184. *Mooney* renders obvious the additional limitations of claim 13.

185. *Mooney* further 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. For example, "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. 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. 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).

186. 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. For example, a POSITA would have been motivated and found it obvious to display, e.g., the word *Bluetooth*, on a screen[7] of the multimode phone (in addition to or instead of forwarding audio tones), to ensure the user is notified of the

[7] *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."

impending use of Bluetooth mode. Such a configuration would have been particularly useful to notify hearing-impaired users or a users holding the phone away from their ear.

187. 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 mutimodal phone, which would have only required conventional parts and routine skill to implement. Indeed, *Mooney*'s multimode 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 mulltimode phone to forward the visual notification to, and display the visual notification on, the phone's display. *Mooney*, 5:45-50, 7:9-12.

14. Claim 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"

188. *Mooney* renders obvious the additional limitations of claim 14 because *Mooney* further 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.

189. 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.

190. *Mooney* further 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. Thus, 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; *see also* claim 13 and [1.c].

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

191. *Mooney* alone (Ground 1) or *Mooney* in combination with *Lee* (Ground 2) renders obvious claim 15 for the reasons explained for [12.c]-[12.d] because both grounds teach conducting the same data exchange over the first communication link or second communication link. Thus, 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.

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"

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

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"

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

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"

194. Claim 18 is substantially similar to claim 4. *Mooney* discloses or renders obvious claim 18 as explained for claim 4.

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:"

195. [19.pre] includes the same elements recited in [1.pre]-[1.g]. *Mooney* discloses or renders obvious [19.pre] for reasons articulated in [1.pre]-[1.g].

b. [19.a]: "awaiting for an activation cue to be received at said cue receiver;"

196. *Mooney* discloses [19.a] for reasons articulated for [12.a].

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"

197. *Mooney* discloses [19.b] for reasons articulated for [12.b].

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"

198. *Mooney* alone (Ground 1) discloses [19.c] and [19.d] for reasons articulated in [12.c] and [12.d].

199. *Mooney* in combination with *Lee* (Ground 2) also renders obvious [19.c] and [19.d] for reasons articulated in [12.c] and [12.d].

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:"

200. *Mooney* renders obvious [19.e] for at least the same reasons presented above for claim 13.

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"

201. *Mooney* renders obvious [19.f] for at least the same reasons presented above for claim 13.

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"

202. *Mooney* discloses or at least suggests [19.g] for at least the reasons presented above for claim 14.

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:"

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

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"

204. *Mooney* renders obvious the additional limation of claim [19.i].

205. *Mooney* further 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. For example, "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. 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.

206. 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. 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.

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."

207. *Mooney* discloses or renders obvious [19.j] because as explained for claim 14, *Mooney* further 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.

208. 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.

209. *Mooney* further 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.

210. 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; *see also* claim 19.i and [1.d], above.

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

211. *Mooney* discloses or renders obvious the additional limitations of claim 20 because the control device includes the key and button as explained for [19.pre] and [1.b].

XI. Conclusion

212. For the reasons set forth in Section X, it is my opinion that one skilled in the art would have found claims 1-20 of the '294 Patent anticipated or obvious.

213. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in this case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

214. I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Date: September 11, 2024

Respectfully submitted,

Stuart Lipoff