

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
ZTE CORPORATION and ZTE (USA) INC.,
Petitioners

v.

E-WATCH, INC.
Patent Owner

IPR2015-00412
IPR2015-01366¹
U.S. Patent No. 7,365,871 B2

**REPLY DECLARATION OF STEVEN J. SASSON IN SUPPORT OF
INTER PARTES REVIEW OF U.S. PATENT NO. 7,365,871 B2**

Mail Stop
Patent Board
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Apple Inc.

Exh. 1014

Petitioner: Apple Inc. / Patent Owner: E-Watch, Inc.
IPR2015-00412

¹ IPR2015-01366 has been joined with IPR2015-00412.

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	LEVEL OF ORDINARY SKILL IN THE ART	2
III.	CLAIM CONSTRUCTION	5
A.	“Selectively” Displaying and Transmitting The Digitized Frame Image Means “Selecting At Least One Digitized Frame Image” (Claims 1, 6, and 12)	5
B.	“Alphanumeric Signals” Are “Characters Consisting Of Letters And/Or Digits”	8
C.	The Claims Do Not Require An “Integrated Housing”	14
D.	The Claims Require Transmission Of A “Non-Audio Digital Signal,” Such As The “Digitized Frame Image,” Not The Use Of A “Non-Audio Digital Signal” For Transmission	19
IV.	MCNELLEY AND UMEZAWA DISCLOSE ALL ELEMENTS OF CLAIMS 1-8 AND 12-14.....	25
A.	McNelley and Umezawa Selectively Display and Transmit	25
B.	McNelley and Umezawa Disclose “Alphanumeric Signals”	31
C.	McNelley Discloses “A Portable Housing” And “A Handheld Housing”	40
D.	McNelley and Umezawa Both Teach Or Suggest The Non-Audio Digital Image Signal Transmission Limitation.....	43
E.	Placing The “Display Window For Viewing The Alphanumeric Signals ... Within The Display Window For Framing The Visual Image” Was An Obvious Design Choice	46
F.	McNelley and Umezawa Disclose All The Elements of Claims 1-8 and 12-14 of the ’871 Patent.....	51
V.	CONCLUSION.....	57

I. INTRODUCTION

1. I am submitting this Reply Declaration on behalf of the Petitioner Apple Inc. to address several arguments raised in the Patent Owner's Response ("Resp.") and the Declaration of Jose Luis Melendez that were submitted by e-Watch, Inc. ("Patent Owner") in this *inter partes* review of U.S. Patent No. 7,365,871 ("the '871 patent") (Ex. 1001), IPR2015-00412.

2. Based on my review of the Patent Owner's Response and the Declaration of Jose Luis Melendez, Patent Owner and Dr. Melendez have argued that the challenged claims of the '871 Patent—claims 1-8 and 12-14—require the following: that (1) "selectively displaying" and "selectively transmitting" digitized frame images (claims 1, 6, and 12) requires selecting "from among a plurality of digitized framed images that are within memory"; (2) that "alphanumeric signals" (claims 1, 6, and 12) requires "both letters and numbers" sent "to a compatible remote receiving station" "along with digital image and/or audio signals" in a manner that permits "the receiving end user to view the inputted phone number or text message"; (3) that the preamble of claim 1 warrants reading an "integrated housing" limitation not only into claim 1 but also into claims 6 and 12; and (4) that "non-audio digital signals including a selected digitized framed image" (claim 12) is not simply a digital, non-audio signal content (like a digitized framed image),

but refers to some “non-audio digital” mode of communication. As explained further below, each of these arguments is incorrect.

II. LEVEL OF ORDINARY SKILL IN THE ART

3. Dr. Melendez asserts that a person having ordinary skill in the relevant field of art at the time of the invention would have “at least one year of experience related to the design of . . . cellular communications devices[.]” Ex. 2003, Melendez Decl., at ¶ 34. Dr. Melendez goes on to assert that “[c]ellular communication systems have improved significantly, and rapidly, over the past decades and are highly complex, such that a person not skilled in the art area would be likely to overstate the capabilities of cellular systems and/or oversimplify them, and as such would not be able to effectively develop a product with capabilities as disclosed and claimed in the ‘871 Patent.” *Id.* at ¶ 35.

4. I disagree with Dr. Melendez’s assertion that a person of ordinary skill in the art would necessarily have specialized experience related to the design of cellular communication devices, for several reasons.

5. First, the ’871 patent discloses no particular “cellular communication system,” instead referring simply to an unspecified “cellular telephone” or “cellular transmission.” *E.g.*, ’871 patent at 3:10, 4:65, 9:31-35. Dr. Melendez admitted that cellular telephones were available before the filing of the ’871 patent. Ex.

1013 at 39:16-21. And he further admitted that the '871 patent does not describe any particular cellular network or network standard. *Id.* at 84:15-25, 86:23-25 (“Q.: But, to your knowledge, the '871 patent in its entirety does not describe any particular cellular network. . . . A.: It does not describe any particular network. That’s true. . . . Yeah. I don’t think the patent’s specific to any particular cellular network.”).

6. Dr. Melendez only appears to specifically refer to cellular implementation once, with regard to the '871 patent’s description of “a cellular telephone interface.” Ex. 1013 at 83:1-84:2; *see* '871 patent at 9:31-40. But this circuitry only consists of standard buffer amplifiers and simple field effect transistor (“FET”) switches. *Id.* These are standard components used in a conventional way to interface to a bidirectional communication port, and they do not demonstrate special design elements particular to cellular technology. Specialized experience related to cellular devices is therefore not necessary to understand the '871 patent.

7. Indeed, the '871 patent specifically disclaims reliance on any one form of transmission, *see id.* at 3:8-10, 4:64-66, and it also contemplates transmission via wired and other wireless forms of communication, such as via radio or satellite transmission (again with little specificity as to any particular

network or standard). *Id.* at 9:31-35. I do not agree with Dr. Melendez’s view that a person of ordinary skill in the art requires specialized experience related to “cellular communications devices” but no particular experience whatsoever related to the number of other modes of transmission also disclosed in the ’871 patent.

8. Second, Dr. Melendez admitted in his deposition that a number of the specific technologies at issue in this proceeding were well-known in the art at the time the ’871 patent was filed. These include text messaging (Ex. 1013 at 40:10-15, 91:10-13); the ability to store an image in memory (*id.* at 55:10-21); facsimile transmission at 10 kilobits per second (*id.* at 197:8-10, 198:1-2); and the ability to transmit a video over a wireless network (*id.* at 198:13-15).

9. Third, the article Patent Owner attached to its Response to the Petition, *Adaptive Low-Rate Wireless Videophone Schemes* (Hanzo & Streit 1995), discloses means for compressing videos so they can be transmitted live via existing cellular telephone technology. The authors write that, in 1995, “mobile videotelephony is becoming realistic over *existing* mobile speech links[.]” Ex. 2010 at 13. The authors also note that the “video source rate can be fixed to any arbitrary value in order [to] be able to accommodate the videophone signal by conventional 2nd generation mobile speech channels . . . at bit rates between 6.7 and 13 kbps.” *Id.* at 12. McNelley, in particular, repeatedly refers to such

compression techniques. *See* Ex. 1006 at 1:40-44, 12:65-13:2, 18:29-48. Thus the compression of videos for cellular transmission was known in the art at the time the '871 patent was filed.

10. Fourth, Dr. Melendez admitted in his deposition that classes in cellular technology and other forms of wireless communications were available to electrical engineering undergraduate students in 1998. Ex. 1013 at 66:20-67:16.

11. While Dr. Melendez is incorrect regarding the level of ordinary skill in the art, the following analysis (and the analysis in my original Declaration) remains the same under either definition of the level of ordinary skill in the art.

III. CLAIM CONSTRUCTION

A. **“Selectively” Displaying and Transmitting The Digitized Frame Image Means “Selecting At Least One Digitized Frame Image” (Claims 1, 6, and 12)**

12. Patent Owner has proposed that the Board construe the terms “selectively displaying,” “selectively transmitting,” and “selected digitized framed image,” found in independent claims 1, 6, and 12 of the '871 patent, to mean “displaying a digitized framed image that has been selected *from among a plurality* of digitized framed images that are within memory.” Resp. at 5-8. But Patent Owner is incorrect because “selectively displaying,” “selectively transmitting,” and “selected digitized frame image” in claims 1, 6, and 12, under

their broadest reasonable interpretation, means “selecting at least one digitized framed image” for display or transmission.

13. No limitation in claim 1, 6, 7, or 12 describes or contemplates selecting one image only from a group of multiple, previously stored images. On the contrary, claims 1, 6, and 12 unambiguously refer to selecting an image in singular terms: “selectively transmitting . . . *the digitized framed image*” (claim 1); “select *the image data signal* for viewing and transmission” (claim 1); “accessible for selectively displaying . . . and accessible for selectively transmitting . . . *the digitized framed image*” (claim 6); “selectively display *the digitized framed image* . . . and subsequently transmit *the digitized framed image*” (claim 6); “for selectively displaying . . . and for selectively transmitting . . . the digitized frame image” (claim 12); and “the non-audio digital signals including *a selected digitized framed image*” (claim 12).

14. My opinion is consistent with the portions of the '871 patent specification cited in Patent Owner's Response. The following portion specifically describes a single image embodiment: “Two generic configurations are shown and described; the first, where each image is transmitted as it is captured . . .” Resp. at 8-9 (citing '871 patent at 5:6-10). While other portions of the specification support storing multiple images before display, selection, and transmission, none of these

portions does anything to preclude selecting “at least one” image. *See, e.g.*, ’871 patent at 6:34-43.

15. I understand that the Board and the district court have already rejected Patent Owner’s narrow reading of the “selectively” transmitting and display as requiring selection “from among a plurality.” Ex. 1011 at 2 (“According to Petitioner, the Board interpreted the various selecting limitations as requiring a selection from two or more images. That is incorrect.”); Ex. 1012 at 55 (“The Court also agrees with Defendants that a user could ‘selectively’ transmit or display a single image and is not limited to selecting an image from a group of two or more.”). The district court’s construction, “selecting at least one digitized framed image retained in memory and [transmitting/displaying] that selection” is indisputably broader, as Dr. Melendez agreed (Ex. 1013 at 117:11-15), and in my opinion are both more consistent with the understanding of one of ordinary skill in the art and more reasonable than Patent Owner’s construction. *See* Ex. 1012 at 56.

16. Furthermore, Patent Owner’s Response implies that the invention claimed in the ’871 patent would not function unless it had more than a single image in memory. But it would have been clear to a person of ordinary skill in the art, at least from the aforementioned portion of the specification, that the device claimed in the ’871 patent can function taking a single image, storing that single

image in memory, and selectively displaying and transmitting that single image instead of a plurality of images.

17. This is consistent with my prior declaration, submitted on December 10, 2014 (Ex. 1008), which explains how the ability of a user to “selectively display an image” would satisfy this limitation. *Id.* at ¶¶ 46, 50, 91, 117.

B. “Alphanumeric Signals” Are “Characters Consisting Of Letters And/Or Digits”

18. Claims 1, 6, and 12 contain limitations involving input, display, and transmission of “alphanumeric signals.” Specifically, claim 1 states “alphanumeric input keys . . . for permitting manually input digitized *alphanumeric signals* . . . the telephonic system further used for sending the digitized alphanumeric signals”; claim 6 requires “a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals”; claim 12 requires “a set of input keys . . . to permit alphanumeric signals to be manually input . . . the alphanumeric signals being presented in the display for viewing by the operator.”

19. The '871 patent does not define the term “alphanumeric” or “alphanumeric signals.”

20. “Alphanumeric signals” in claims 1, 6, and 12, under its broadest reasonable interpretation and as a person of ordinary skill in the art would understand, would be met by signals which are “characters consisting of letters and/or digits.”

21. I understand that Patent Owner has already stipulated in the district court that “alphanumeric” should be construed as “*characters* consisting of letters *and/or* digits,” and the district court adopted this construction. Ex. 1012 at 9.

22. Indeed, the American Standard Code for Information Interchange (“ASCII”) was the standard way of digitally representing letters, numbers, and/or symbols in code, and was the most common way of representing characters on the Internet until 2007. This is a 7-bit code, with 128 character options, and it would have been the likely choice by a skilled artisan to represent human readable characters on a computer device. This ASCII character code would have been used to represent a number, letter, or a symbol during that time.

23. Dictionaries define “alphanumeric” broadly: “consisting of letters or digits, or both, and sometimes including control characters, space characters, and other special characters” (Ex. 1015 at 3, *Microsoft Press Computer Dictionary* (3d Ed., 1997)); “Alphanumeric character”: “Any letter of the English alphabet, upper or lower case, or any of the decimal digits, 0 to 9,” (Ex. 1016 at 3, *Oxford*

Dictionary of Computing, (4th Ed., 1996)). The very dictionary definition of “alphanumeric” relied on by Patent Owner similarly defines “alphanumeric” as “being *a character* in an alphanumeric system.” Ex. 2009.

24. A person of ordinary skill in the art would understand that “a character,” as in this definition in Ex. 2009, cannot be both a letter and a number; it can be either a letter *or* a number. Further, each letter and number would have a unique code designation, such as in the ASCII code set. In addition, the same skilled artisan would also know that two or more such coded characters, make up “alphanumeric signals,” and can thus be two or more numbers, two or more letters, or some combination of letters and numbers. *See* Ex. 2009. “Alphanumeric signals” requires two such characters because it is used in the claim in plural form.

25. Patent Owner has not explicitly proposed a construction for “alphanumeric signals,” which appears in claims 1, 6, and 12. Dr. Melendez proposes that “alphanumeric signals” narrowly means “consisting of both letters and numbers and often other symbols.” Ex. 2003 at ¶ 31; *see* Resp. at 26. Patent Owner appears to be seeking a construction that excludes a numeric phone number from its construction of “alphanumeric signals.” *See* Ex. 1013 at 126:25-127:8, 129:13-130:10. But as previously mentioned, this is not the broadest reasonable construction of “alphanumeric signals.”

26. Though Patent Owner cites *Merriam-Webster's* online dictionary definition of “alphanumeric” to argue that “alphanumeric” must consist of “both letters and numbers,” Patent Owner neglects to cite to the latter portion of the same definition, previously mentioned, that defines “a character in an alphanumeric system” as also being “alphanumeric.” Ex. 2009. This is consistent with the understanding a person of ordinary skill in the art would apply to “alphanumeric signals” and the previous construction agreed to by Patent Owner and adopted by the district court.

27. Patent Owner and Dr. Melendez add additional limitations to “alphanumeric signals.” Specifically, Patent Owner asks the Board to narrowly construe the “alphanumeric signals” terms to require that the “alphanumeric signals” (1) be sent “to a compatible remote receiving station” (Resp. at 27-28) (2) “along with digital image and/or audio signals” (*id.* at 28); and (3) in a manner that permits “the receiving end user to view the inputted phone number or text message” (*id.* at 29). There is no support in the claims or in the specification for these limitations.

28. Patent Owner’s added limitation that the alphanumeric signals be sent “to a remote compatible receiving station” is not a limitation of the claims. Claim 12 does not mention transmission of alphanumeric signals. Resp. at 26-27; Ex.

1013 at 130:11-131:14; Ex. 2003 at ¶ 61. Claim 6, as Dr. Melendez also admits, does not require transmission of alphanumeric signals “to a remote compatible receiving station”—and I agree. Ex. 1013 at 140:12-141:1 (“[I]t doesn’t require it to go to a compatible remote receiving station[.]”). As for Claim 1, it only states “a wireless communications device adapted for transmitting *any* of the digitized signals to the compatible remote receiving station.” It does not say “alphanumeric signals.” A person of ordinary skill in the art, applying the broadest reasonable construction, would understand that “transmitting *any* of the digitized signals” is not equivalent to “transmitting *all* of the digitized signals.” Instead, the broadest reasonable interpretation of “any” in this circumstance is akin to “one” or “some,” and is not limited to “each of the members of a set,” a much narrower interpretation, as argued by Dr. Melendez. *See* Ex. 1013 at 82:14-17. In other words, as long as one or some of the digitized signals (such as the digitized image frame) is transmitted to the compatible remote receiving station, this claim limitation is met.

29. Dictionaries, consistent with the understanding of a skilled artisan, define “any” as its primary definition as synonymous with “one” or “some”: “**1. one or some** indiscriminately of whatever kind”; “**2. one, some,** or all indiscriminately of whatever quantity.” Ex. 1017 at 3, *Webster’s New Collegiate*

Dictionary (1979) (emphases added). While some definitions may mention “all” or “every,” the broadest, reasonable interpretation of “any,” consistent with the understanding of one skilled in the art, is “one” or “some.”

30. The claims also do not require, as Patent Owner argues, transmission of the alphanumeric signal along with a digital image/audio signal in a manner that permits the end user to view that alphanumeric signal. Nothing in the specification supports such a narrow interpretation, and Patent Owner’s cited portion of the specification falls squarely within the description of a single preferred embodiment and does not mention “alphanumeric signals” at all. *See* ’871 patent at 4:58-5:2.

31. Even if claim 1 requires transmission to a “remote receiving station,” that transmission is not limited to an “end user,” as Patent Owner argues. I agree with Dr. Melendez that a “remote receiving station” is simply a “station that was accessible from a communications standpoint over whatever network it is that’s providing that access” and “could include a server.” Ex. 1013 at 142:6-14; ’871 patent at 2:42-43, 13:7-9, 13:21-23 (“remote receiving devices such as . . . network servers.”).

32. This is consistent with my prior declaration (Ex. 1008), which explains how the “dialing controls” in McNelley are “conventional alphanumeric keypad buttons with which a [person of ordinary skill in the art] would have been

well familiar with at the time the '871 patent was filed.” *Id.* at ¶ 55. This opinion is also consistent with the portion of my former declaration, in which I express the opinion that the LCD touch keypad disclosed in Umezawa consists of “alphanumeric input keys.” *Id.* at ¶ 57.

C. The Claims Do Not Require An “Integrated Housing”

33. I understand that neither Patent Owner nor Dr. Melendez has proposed an explicit construction of any term that requires an “integrated housing.” But both Patent Owner and Dr. Melendez, while presenting slightly different arguments for different claims, urge the Board to find that the claims require that the device disclosed in claims 1, 6, and 12 of the '871 patent be contained in “a singular, integrated housing.”

34. I note that the term “integrated housing” does not appear anywhere in the claims of the '871 patent. Indeed, nothing in the claims, the specification, or the file history suggests that the inventors intended the alleged invention of the '871 patent to be limited to an “integrated housing.” To the contrary, the specification describes “a modular configuration wherein any or all of the devices can exist as *integrated or independent units*.” '871 patent at 1:33-36.

35. Patent Owner purports to base this requirement on the preamble to claim 1—a “handheld self-contained cellular telephone and integrated image

processing system”—and the following limitations: “manually portable housing,” “an integral image capture device ... contained within the portable housing” and “a telephonic system in the housing.” Resp. at 21-24. Reading these limitations together, along with a selected discussion of Fig. 7A in the specification, Patent Owner extracts a requirement that claims 1, 6, and 12 require “a *singular, integrated* housing.” *Id.* at 21. Patent Owner provides no support in the claim language of claim 6 or 12 for this limitation.

36. Inconsistently, Dr. Melendez relies solely on the preamble for claim 1 and adds the preamble for claim 6. Dr. Melendez does not point to the limitations in the body of claim 1 and provides no argument regarding an “integrated housing” in claim 12. Ex. 2003 at ¶ 69; Ex. 1013 at 144:24-145:1.

37. Patent Owner is incorrect because claims 1, 6, and 12, under their broadest reasonable interpretation, would be met by a modular configuration where the various components are independent units physically connected together.

38. Claims 1 and 6 only require a “manually portable housing,” while claim 12 simply requires “a housing”—there is no mention of the level of integration. Read in the context of the specification, these claim terms would not have been understood by a person of ordinary skill in the art to require a “singular, integrated housing.” The preamble does not provide an antecedent basis for these

terms and adds no essential structure, life, meaning, or vitality to the housing limitations.

39. Patent Owner argues that the following terms find their antecedent basis in the preamble of claim 1: “compatible remote receiving station” and “wireless telephone network” of claim 1 supposedly find their antecedent basis in the preamble. Resp. at 23. Dr. Melendez adds that the following “cellular telephone network” finds its antecedent basis in the preamble of claim 6. Ex. 2003 at ¶ 69; Ex. 1013 at 144:24-145:1.

40. Neither “compatible remote receiving station” and “wireless telephone network” of claim 1 nor “cellular telephone network” in claim 6 has anything to do with whether or not the housing is “singular” or “integrated.”

41. Furthermore, the ’871 patent specification clearly envisions embodiments which are modular instead of integrated in nature. As noted above, the specification describes “a modular configuration wherein any or all of the devices can exist as integrated or independent units.” ’871 patent at 1:33-36. Fig. 6B, for example, illustrates the alleged invention operating in separate, non-integrated housings, as Patent Owner’s expert admits. ’871 patent at Fig. 6B, 4:43-45; Ex. 1013 at 146:8-147:10

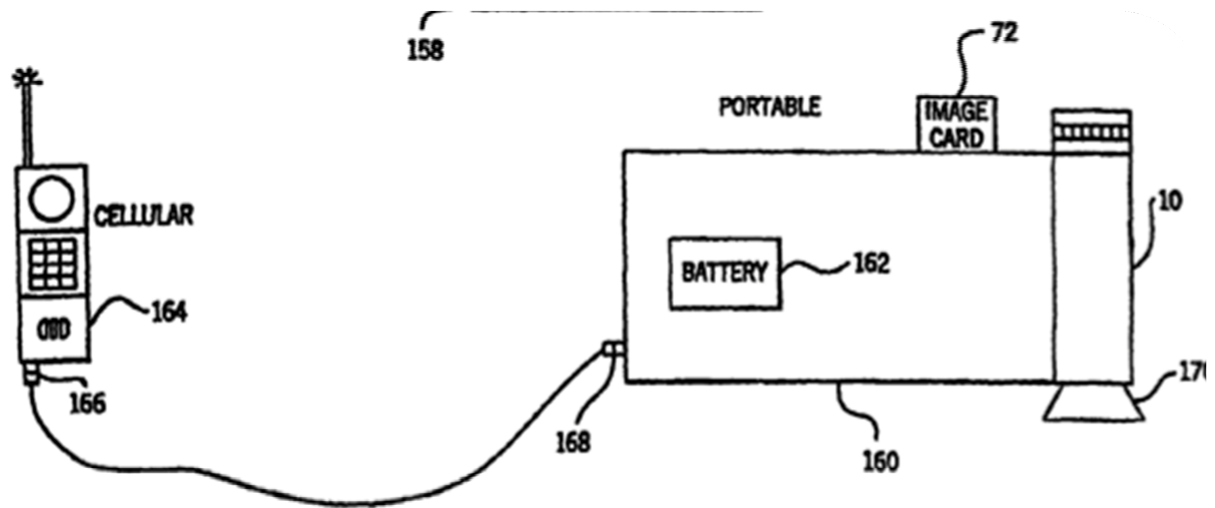
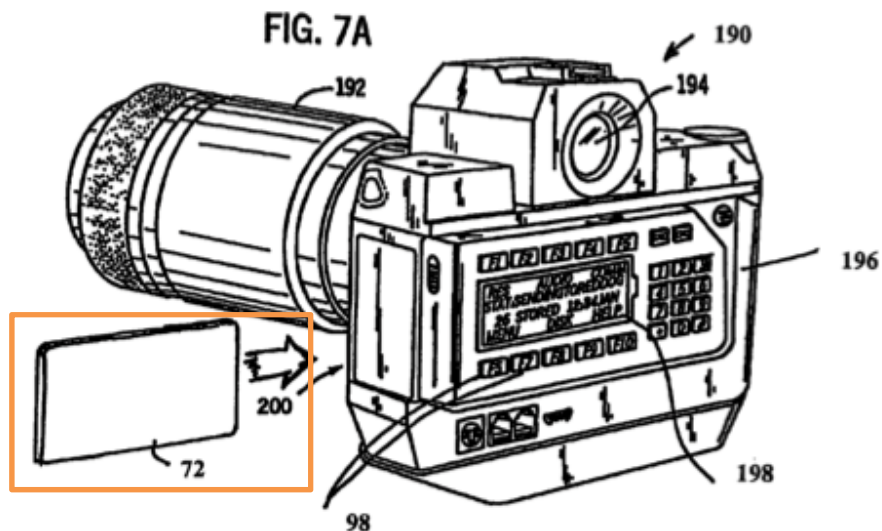
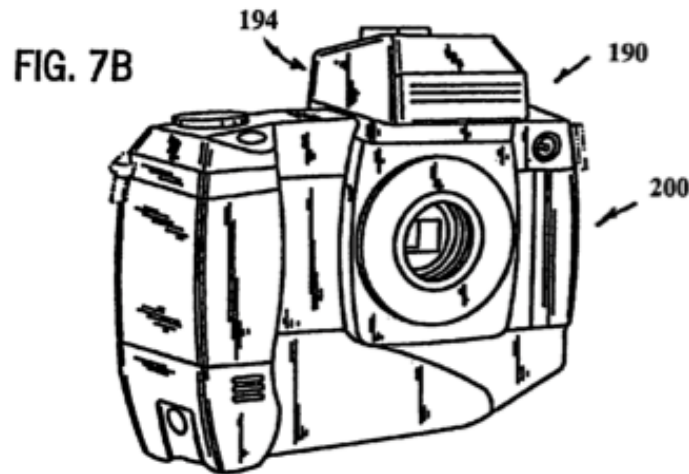


FIG. 6B

42. Claims 1, 6, and 12 require a “memory associated with the processor,” and that processor must be “in the housing.” While the Patent Owner might point to Fig. 7A, even that figure demonstrates the ability for the memory to be removed from the “integrated housing,” making the memory a modular component of the alleged invention. ’871 patent at Fig. 7A.



43. And claims 1 and 6 require, in turn, “an integral image capture device comprising an electronic camera contained within the portable housing” and an “integrated electronic camera.” But Fig. 7B shows the camera lens removed from the housing, making a basic component of the camera also a modular component of the alleged invention. ’871 patent at Fig. 7B. Indeed, this is a standard feature of a digital single-lens reflex (DSLR) camera, having a modular nature which permits the user to incorporate any number of compatible lens (modules) to enhance the photographic options available to the user.



Thus every embodiment is modular and not in a “singular, integrated housing.”

D. The Claims Require Transmission Of A “Non-Audio Digital Signal,” Such As The “Digitized Frame Image,” Not The Use Of A “Non-Audio Digital Signal” For Transmission

44. Patent Owner has argued that the Board read certain language in claim 12, “the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image...” to require “the telephone to be capable of using non-audio digital signals for transmission and receipt of the selected digitized framed image.” Resp. at 13-14. Patent Owner is incorrect.

45. Claim 12 identifies a digital image as one type of “non-audio digital signal” by reciting “**the** non-audio digital signals including **a selected digitized framed image**” (emphasis added) (*see also* Ex. 1008 at ¶¶ 121-124). Claim 12

directly contrasts “audio signals” with “non-audio signals” based on the *content* of the data (*e.g.*, speech versus images), not *how* it is transmitted. In other words, the digitized frame image transmitted *is* a type of non-audio digital signal.

46. Claim 12 describes two types of signals: “audio” and “non-audio” signals:

the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image[.]

’871 patent, cl. 12, limitation (e) (underlining added). The distinction made between audio and non-audio signals has nothing to do with their mode of transmission, but instead clearly relates to the *content* of the signals: audio versus non-audio (*e.g.*, an image signal). Audio signals are converted “into acoustic audio,” while non-audio signals include “a selected digitized framed image,” which is converted into a visible image. This is consistent with the understanding a person of ordinary skill in the art would have had at the time of the filing of the ’871 patent.

47. The broadest reasonable interpretation of the term “non-audio digital signals,” as understood by a person of ordinary skill in the art, refers to content of the transmitted signals, such as digitized framed images, and not to any particular manner of transmission. Specifically, a “non-audio digital signal,” as understood by a person of ordinary skill in the art, would be a digital signal of an input that is not audio. An example of a digital signal of an input that is not audio is a digitized signal of an image. Thus, a digital image signal is a “non-audio image signal,” consistent with the claim limitation that “the non-audio digital signals including a selected digitized framed image” in claim 12. Ex. 1013 at 155:1-8 (agreeing that an image is “not audio” and a digitized signal “is digital”).

48. Furthermore, the '871 patent specification describes no manner for using “non-audio digital signals,” as Patent Owner and Dr. Melendez urge, as the media for transmission and reception. Instead, each and every embodiment discloses transmitting digitized image data using Group-III facsimile and modems, including the systems that are shown in Figs. 1 to 5 of the specification. *See* '871 Patent at 2:13-17, 2:33-50, 5:2-28, 5:29-59, 6:15-45, 7:3-48, 8:53-65, 9:17-30, 9:46-55, 10:5-25, 10:61-67. Both means of transmission were conducted via standard telephone “audio signals” according to Dr. Melendez, who admitted that facsimile and dial-up modem transmissions are “audio signals.” *See* Ex. 1013 at

151:4-15. If the term “audio signals” was meant to refer to the form of transmission rather than the input to the digitization process as Patent Owner suggests, that interpretation would exclude the majority of the embodiments in the specification.

49. And, if the audio/non-audio terms were meant to refer to the transmission media, such an interpretation would present additional problems because the line between “audio” and “non-audio digital signals” proposed by Patent Owner is unclear at best. Patent Owner argues that “conventional cellular technology” used “audio signals” to transmit images. Resp. at 15. But Patent Owner’s expert admitted that those conventional cellular technologies could also transmit “non-audio signals” in 1998. Ex. 1013 at 156:20-23. Patent Owner’s expert opined that an “audio signal” was “signal types that the network understands to be audio.” *Id.* at 150:19-22. But Patent Owner’s expert also testified that the line between “audio” and “non-audio” was whether the signal is “capable of being heard” such that when hooked up “to a speaker, for example, you would hear it,” like the “squawks of listening to a dial-up connection.” *Id.* at 79:19-25, 80:14-23, 151:12-20; Ex. 2003 at ¶ 51.

50. Whether a digital signal is “capable of being heard” is meaningless. Any digital data transmission, regardless of carrier frequency or transmission rate,

has some appreciable energy between 50 and 15,000 hz (the range of human hearing) that could be heard when coupled to a speaker—just as one hears the clicks, ticks, and buzzing of a digital cellular telephone, such as a Blackberry, placed too close to an amplified speaker (coupled by induction).

51. At one point, Dr. Melendez testified that Ethernet transmission was non-audio because it is being transmitted as “*data, not as audio*” and that modern “4G systems like LTE” are non-audio digital signals because “it’s packetized information that is transmitted *as data, not as audio*,” Ex. 1013 at 152:2-12, 152:19-25. He then retracted that admission, denying that packetized transmission (which he admitted is “data”) is “non-audio.” *Id.* at 153:1-154:7.

52. The one piece of evidence relied upon by Patent Owner (but not Dr. Melendez, who provides no support for his definition of “non-audio digital signals”) is a passing statement in Ex. 2010, an article that refers to a few prevailing wireless standards as “mobile speech links” in one sentence. Ex. 2010 at 13. But this does not establish whether a given standard’s signal is “audio” or “non-audio,” provides no insight into the line between differentiating between the two, and certainly does not inform one of ordinary skill in the art at the time that he or she should understand “non-audio digital signal” to be contrary to its plain meaning to one of ordinary skill in the art.

53. While Patent Owner criticizes the McNelley reference for failing to support or comprehend the “Multi-media Messaging Service” (“MMS”) standard, claim 12 does not recite transmission of image data using MMS. Patent Owner’s expert states that transmission of digitized image data over a wireless network would allegedly require “significant ingenuity and invention” in networking and terminal technologies and thus was not possible in 1998 (Ex. 2003 at ¶¶ 44-45; Resp. at 15). But the ’871 patent lacks specific discussion of—let alone any significant ingenuity or invention related to—cellular technology (Ex. 1013 at 84:19-86:25, 89:13-16) despite the fact that, as Dr. Melendez testified, “none of the networks at the time supported the claim functionality” (*id.* at 86:8-10). Indeed, the ’871 patent’s disclosure of transmission using only conventional technologies—facsimile and modem (*e.g.*, ’871 patent at 2:13-17, 2:31-50, 5:2-64, 5:48-59, 6:15-49, 7:3-48, 8:53-65, 9:17-30, 9:46-55, 10:5-25, 10:61-67), McNelley’s described transmission of digital images over a cellular network (Ex. 1006 at 14:15-19, 14:23-37, 18:28-39), and the Hanzo article provided by Patent Owner, which describes using existing cellular technology to transmit video (Ex. 2010 at 1, 12-13), all suggest that transmission of digitized image data over a wireless network was entirely possible at the time and, contrary to Dr. Melendez’s testimony, within the level of ordinary skill in the art.

IV. MCNELLEY AND UMEZAWA DISCLOSE ALL ELEMENTS OF CLAIMS 1-8 AND 12-14.

54. Patent Owner only disputes McNelley and/or Umezawa's disclosure of certain claim elements as being missing from the proposed combination of those two references. These include: (1) disclosure of "selectively" displaying and transmitting; (2) disclosure of "alphanumeric signals"; (3) disclosure of "non-audio digital signals"; (4) disclosure of a "portable" or "handheld" housing; and (5) disclosure of placing the "display window for viewing the alphanumeric signals . . . within the display window for framing the visual image." Resp. at 13-31.

A. McNelley and Umezawa Selectively Display and Transmit

55. As noted above, Patent Owner erroneously asserts that the terms "selectively displaying," "selectively transmitting," and "selected digitized framed image," found in independent claims 1, 6, and 12 of the '871 patent, should mean "displaying a digitized framed image that has been selected from among a plurality of digitized framed images that are within memory." Resp. at 5-8. This construction is not the broadest reasonable construction of these terms for the reasons argued above. But McNelley and Umezawa each disclose these limitations under either Patent Owner's narrow construction or under the broadest reasonable construction.

56. McNelley teaches using a display to play a recorded video and discloses using the display in every mode of operation. Ex. 1006 at 11:13-47, 21:3-40, 22:1-3.

57. McNelley teaches a “camcorder” mode, which permits the user to record, store, and then selectively display multiple videos stored in memory. Ex. 1006 at 7:14-23, 21:19-23. Patent Owner essentially admits that this functionality is disclosed in McNelley. Resp. at 17.

58. McNelley also teaches a “teleconference” mode, which permits the user to record and to selectively display multiple videos stored in memory: “[t]he recording and playback device inherent in a camcorder is used in the telecamcorder to accommodate various recording and playback features useful to teleconferencing In teleconferencing mode, the recorder may record the outgoing signal” or “record or play back a separate signal while the audio and video-phone is in use” using split screen. Ex. 1006 at 11:13-47.

59. And McNelley also teaches an “answering machine” mode, which uses the same “video and audio recorder and playback component” as camcorder mode. *Id.* at 2:57-61, 13:49-52, 22:1-3.

60. A person of ordinary skill in the art would understand that one could combine features from each of the example modes of operation—camcorder mode,

teleconferencing mode, and answering machine mode—and that such features would not be limited to the particular disclosed mode of operation.

61. In answering machine mode, McNelley also “selectively transmits” prerecorded videos from a group of multiple prerecorded videos in answering machine mode. Prior to transmission, multiple greetings are prerecorded and a user designates (selects) one of those prerecorded greetings for his message box: “[m]ultiple greetings may be accessed through a menu system with multiple message ‘boxes’ designated for receiving incoming messages.” *Id.* at 13:49-52 (“each user” may have “their own box”); Ex. 1008 at ¶ 45. I agree with Dr. Melendez that McNelley discloses multiple users and each user designates a greeting before use. Ex. 1013 at 205:12-20; *see also id.* at 203:12-16, 204:13-23.

62. The designation of a greeting from among multiple greetings is a “selection” under both Patent Owner’s narrow construction (“selected from among a plurality”) and the district court’s broader construction (“selecting at least one”). One of ordinary skill in the art would know (and expect) that to make a proper selection of a greeting, the recorded greeting would have to be played back for the user to approve—an acknowledgement that increases accuracy, just like viewing a phone number on a display.

63. When McNelley's device answers a call, the memory then "plays back the [previously selected] prerecorded message and the unit transmits the message to the calling terminal." Ex. 1006 at 13:15-18. That selected, prerecorded message can optionally be displayed on the display as it is transmitted. *Id.* at 13:22-30.

64. Thus, based on the earlier selection, a designated greeting is selectively transmitted and selectively displayed. The act of a user designating a prerecorded video greeting from among multiple greetings is selective transmission and display of an image.

65. In addition, in the event of two calls answered, the first call would "selectively display the digitized frame image" and the second call would "subsequently transmit" that same image. *Id.* at 13:15-30.

66. In sum, a person of ordinary skill in the art would have understood this act of preselecting a greeting among multiple greetings for display and transmission to be selective display and transmission within the meaning of the instituted claims of the '871 patent.

67. Umezawa also discloses the "selectively displaying," "selectively transmitting," and "selected digitized framed image" limitations of independent claims 1, 6, and 12 of the '871 patent. In Umezawa, a picture is taken and then is

subsequently transmitted: “a camera which takes a picture *to-be-transmitted* for the visual communication” and “the transmission of a *photographed* picture.” Ex. 1007 at 1:61-2:8, 8:6-12. Umezawa also includes a user interface for “changing-over the picture frames of the control panel” and for “scrolling the picture frame of the control panel.” *Id.* at 8:33-35. A person of ordinary skill in the art would have understood that these changing-over and scrolling functions, as a streamlined user interface for reviewing stored options, could be used to change-over and scroll through stored images in McNelley just as they are used for the control panels in Umezawa.

68. Umezawa first discloses selective transmission, which happens when the user “selects the visual telephone function,” “enters the telephone No. of the opposite party,” and “depresses the transmission/reception key, to transmit an image.” Ex. 1007 at 10:3-22, 10:35-39. A person of ordinary skill in the art would have understood this sequence of events to be the selective transmission of an image within the meaning of the instituted claims of the ’871 patent.

69. Umezawa also provides for selective transmission when it provides for a pausing and unpausing of transmission. In Umezawa, the user presses a pause button, and “the photographing operation of the camera” and “the transmission of a photographed picture” are temporarily stopped. Ex. 1007 at 8:6-

12. When the pause is in effect, a “specified display picture,” such as a blue screen, is transmitted instead. *Id.* This means that the pause button effectively permits the user to choose between one of two images—the image captured by the “photographing operation of the camera” and the “specified display picture” or blue screen—to be transmitted. A person of ordinary skill in the art would have understood this sequence of events to be the selective transmission of an image within the meaning of the instituted claims of the ’871 patent. Furthermore, it is my understanding that Dr. Melendez admitted that transmitting this “predetermined and/or designated” photograph using the pause functionality results in two different pictures being transmitted (Ex. 1013 at 224:19-22, 226:5-6, 229:5-9)—which a person of ordinary skill in the art would understand to be a “selection” between two stored images meeting even Patent Owner’s narrow definition of “selectively transmitted.”

70. Even if the Board were to agree with Patent Owner that the selecting limitations require selecting an image “from among a plurality of digitized framed images that are within memory,” Resp. at 8-10, then such functionality would have been obvious and well-known to a person of ordinary skill in the art to enable the device to choose between one of two files stored in McNelley and Umezawa. For example, it would be useful to be able to select any one of several images stored in

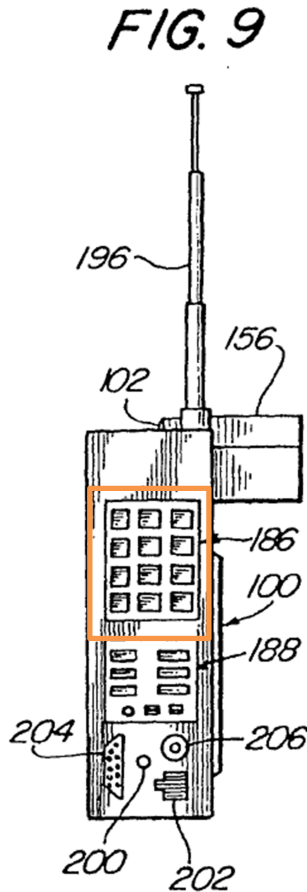
memory, as opposed to being forced to display and/or transmit all of the images or simply the most recent image.

B. McNelley and Umezawa Disclose “Alphanumeric Signals”

71. As noted above, Patent Owner erroneously asserts that the terms “alphanumeric” and “alphanumeric signals,” found in independent claims 1, 6, and 12 of the ’871 patent, should mean “consisting of both letters and numbers and often other symbols.” Resp. at 26 (underlining added). This construction is not the broadest reasonable construction of these terms for the reasons argued above.

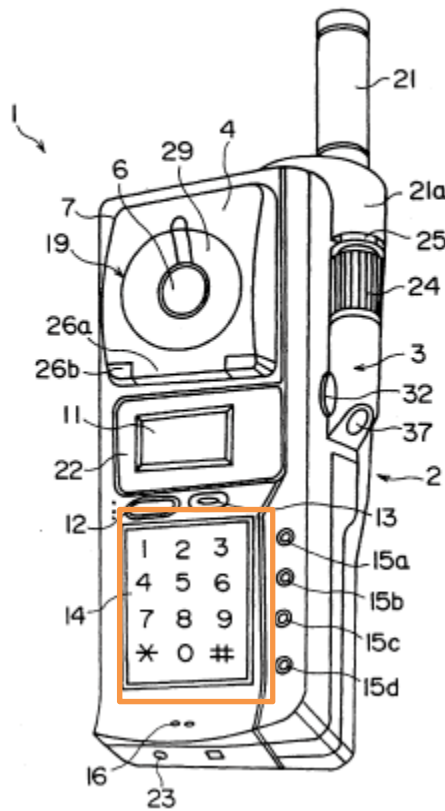
72. First, Patent Owner has admitted that, under the correct construction of “alphanumeric signals” of “characters consistent of letters and/or digits” (as Patent Owner previously stipulated to and the district court adopted), McNelley and Umezawa discloses the input, sending/transmission, and display of alphanumeric signals. Resp. at 29 (“[McNelley and Umezawa] merely disclose the ability to type telephone numbers into a display ... and then the use of that telephone number to place a call to an appropriate second end user’s device.”); *see also id.* at 28 (Umezawa “discloses the input and display of ‘numeric’ signals”). Patent Owner is correct: McNelley and Umezawa clearly disclose the input, display, and transmission of alphanumeric signals in the form of telephone numbers.

73. For example, McNelley provides for a dialing function and “dialing controls.” Ex. 1006 at 4:25-26, 8:10-15, 14:59-62. Combined with the disclosure of, for example, Fig. 9 in McNelley, which depicts a standard ten-key telephone keypad (see Ex. 1010), a person of ordinary skill in the art would have understood McNelley to disclose transmission of alphanumeric signals in the form of telephone numbers (see Ex. 1006 at Fig. 9).



74. Umezawa similarly discloses the input, selection, and transmission of a telephone number: “it is also possible to store a large number of telephone Nos. in the memory beforehand and to select the telephone No. of the opposite party for the transmission from among the stored telephone Nos.” Ex. 1007 at 10:24-31. Fig. 1 in Umezawa also discloses a standard ten-key telephone keypad, like the one disclosed in McNelley. Ex. 1007 at Fig. 1.

FIG. 1



75. But even if the term “alphanumeric” were to require both letters and numbers, as well as the number of additional limitations proposed by Patent Owner in its response, a person of ordinary skill in the art would have understood all of these limitations to be met by the well-known functionality enabled through the use of a standard ten-key telephone keypad shown in greater detail in Exhibit 1010 as the ten-key telephone keypad shown in McNelley and Umezawa.² And a person of ordinary skill in the art would have understood Fig. 1 in Umezawa and Fig. 9 in McNelley to be precisely the type of keypad shown in Exhibit 1010, which is displayed below:

² Exhibit 1010 is a fair and accurate representation of a common keypad found on both ordinary telephones and cellular telephones during and before 1998, and it would be a helpful aid to the Board’s determination of Petitioners’ claims with regard to the input of alphanumeric signals.



76. The use of a standard number pad (*see* Ex. 1010), such as those on McNelley and Umezawa, to input text was well-known and such a number pad was available on cell phones in 1998, just as Dr. Melendez testified. Ex. 1013 at 41:25-42:4, 45:10-13, 46:3-5, 47:13-16; *see also* Ex. 1008 at ¶¶ 55, 75, 125. Such a function was widely available during and before 1998 on a variety of commercially available cellular telephones. Dr. Melendez admitted that using a standard number pad to enter text as available on cell phones in 1998. *See* Ex. 1013 at 41:25-42:4, 45:10-13, 46:3-5, 47:13-16. Other cellular devices well-known to persons of ordinary skill in the art in 1998 used keyboards with both text and numbers at the time. *Id.* at 54:25-55:8.

77. I also agree with Dr. Melendez that one common method in use during and before 1998 was known as “multi-tap,” a common text-entry and

display system for mobile phones used for text messaging or information entry in January 1998. *See id.* at 42:6-21.

78. Patent Owner also alludes to this function when it admitted that the short message service (“SMS”) function for sending text messages was available before the filing of McNelley or the ’871 patent. Resp. at 15. Indeed, text messaging using cellular phones was well-known by persons of ordinary skill in the art during this time period. During and before 1998, the SMS function and text messaging in general was largely exercised via the “multi-tap” functionality which used the standard ten-key telephone keypad—a function which I personally used.

79. The “multi-tap” user enters text via a standard ten-key telephone keypad, by pressing each key a particular number of times to enter the desired character. With reference to the keypad shown in Exhibit 1010, a user desiring to enter the word “APPLE” would press the number “2” key once to enter the letter “A,” would press the number “7” key once to enter the letter “P,” and then, after waiting a short time for the first “P” to be registered, would press the number “7” key once again to enter another letter “P,” would press the number “5” key three times to enter the letter “L,” and would press the “3” key twice to enter the letter “E.” The system then recognizes and displays this input as the corresponding text

characters, not just a sequence of numbers. As noted above, this functionality would have been familiar to a skilled artisan at the time.

80. Furthermore, the '871 patent states that “transmitted imaging tagging” was “readily understood by those who are skilled in the art,” which included tagging an image with “information such as, by way of example, date, time and location” as part of the transmitted signal. '871 patent at 6:7-12. I agree. It was well-known during and before 1998 that such information could be manually specified for digital images using a keypad such as in Ex. 1010.

81. A person of ordinary skill in the art would also have known that McNelley's disclosure of “transmitting/receiving data other than audio and video” would include use of the standard ten-key telephone keypad in Ex. 1010 to enter and transmit text messages or tagged image information. Ex. 1006 at 20:56-68. It would have been desirable to use McNelley and Umezawa's standard ten-key telephone keypad to enter information which could then be associated with a particular image. This information could include, for example, the time, date, and a label describing the image. As noted in the '871 patent, this functionality was well-known in the art, '871 patent at 6:7-12, and would be useful to enable a “receiving station” to “monitor a plurality of remote image data capture systems” or to determine the date and time of capture for a large number of previously stored

or printed images, *id.* at 6:12-15. Indeed, such functionality was included in digital cameras that were commercially available in January 1998.

82. As for transmission of alphanumeric signals to a “remote receiving station,” as previously stated, I agree with Patent Owner’s expert that the “remote receiving station” of claim 1 is just a “station that was accessible from a communications standpoint over whatever network it is that’s providing that access” and “could include a server.” Ex. 1013 at 142:6-14.

83. A person of ordinary skill in the art would have understood that digitized alphanumeric signals from McNelley’s network access controls 186 or Umezawa’s LCD touch keypad, could be sent across the wireless network, *e.g.*, for network access. *See* Pet. 24-25, 29-31, 42-44; Ex. 1008 at ¶¶ 55-58, 75-78, 125-128. That alphanumeric signal would be received by a network server, as described in McNelley. *E.g.*, Ex. 1006, 21:27-40, Fig. 30, Ex. 1008 at ¶ 59.

84. Alternatively, a skilled artisan at the time would have also understood that the entire point of text-messaging and image tagging methods was to send that alphanumeric signal to an end-user device for viewing. Indeed, the ’871 patent specifically discloses that the image tagging feature would have been useful to enable a receiving station to monitor several remote “image data capture systems,” as the tagging could provide the date, time, and location of capture. ’871 patent at

6:8-15. The '871 patent also discloses that it would be helpful to use the image tagging feature to determine the date and time of capture for a large number of previously stored or printed images. *Id.*

85. Finally, I understand Patent Owner also argues that McNelley and Umezawa do not disclose “a display window for viewing the manually input alphanumeric signals,” found in claim 6. Resp. at 27-28. But both McNelley and Umezawa have a display window for viewing the alphanumeric signals. McNelley discloses both a display and “dialing controls 186” or “telecamcorder controls 188.” Ex. 1006 at 6:41-45, 7:14-16, 7:58-59, 8:10-15, Figs. 8-9. And Umezawa explicitly discloses using the “ten-keys displayed on the control panel” to “enter[] the telephone No. of the opposite party” which is “displayed on the display panel” so the user can “acknowledge[] it.” Ex. 1007 at 10:16-22. Displaying alphanumeric signals on a display as they are input, so they can be reviewed by the user before transmission, was well-known and convention in the art prior to the filing of the '871 patent and a person of skill in the art reading McNelley and Umezawa would have understood from the disclosures in those references that the alphanumeric signals would have been displayed as they were input in those systems.

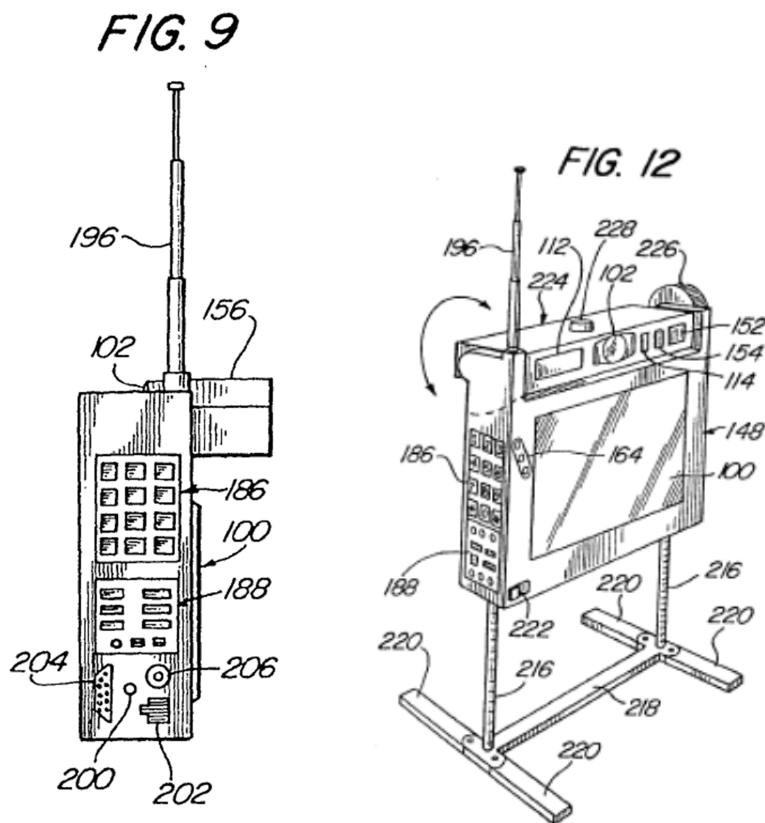
C. McNelley Discloses “A Portable Housing” And “A Handheld Housing”

86. As noted above, Patent Owner erroneously asserts that the terms “handheld self-contained cellular telephone and integrated image processing system,” “manually portable housing,” “an integral image capture device ... contained within the portable housing” and “a telephonic system in the housing.” require that the device be enclosed in a “singular, integrated housing.” Resp. at 21-26. This construction is not the broadest reasonable construction of these terms for the reasons argued above.

87. Even so, McNelley discloses an integrated housing even under Patent Owner’s narrow construction. McNelley describes a “telecamcorder configured for use as a *self-contained* teleconferencing terminal as well as a camcorder” that can be held in front of the user. Ex. 1006 at 6:35-57, 10:16-18. Numerous figures illustrate this unitary housing. *Id.* at Figs. 9, 10, 11, 12.

88. Specifically, Fig. 9 shows an integrated telephone and video camera *i.e.*, the “telecamcorder,” with “the dialing controls 186 and the telecamcorder controls 188 built into the main housing 148.” Ex. 1006 at 8:10-15, Fig. 9. Fig. 12 illustrates a single housing as well. Both figures, when viewed by a person of

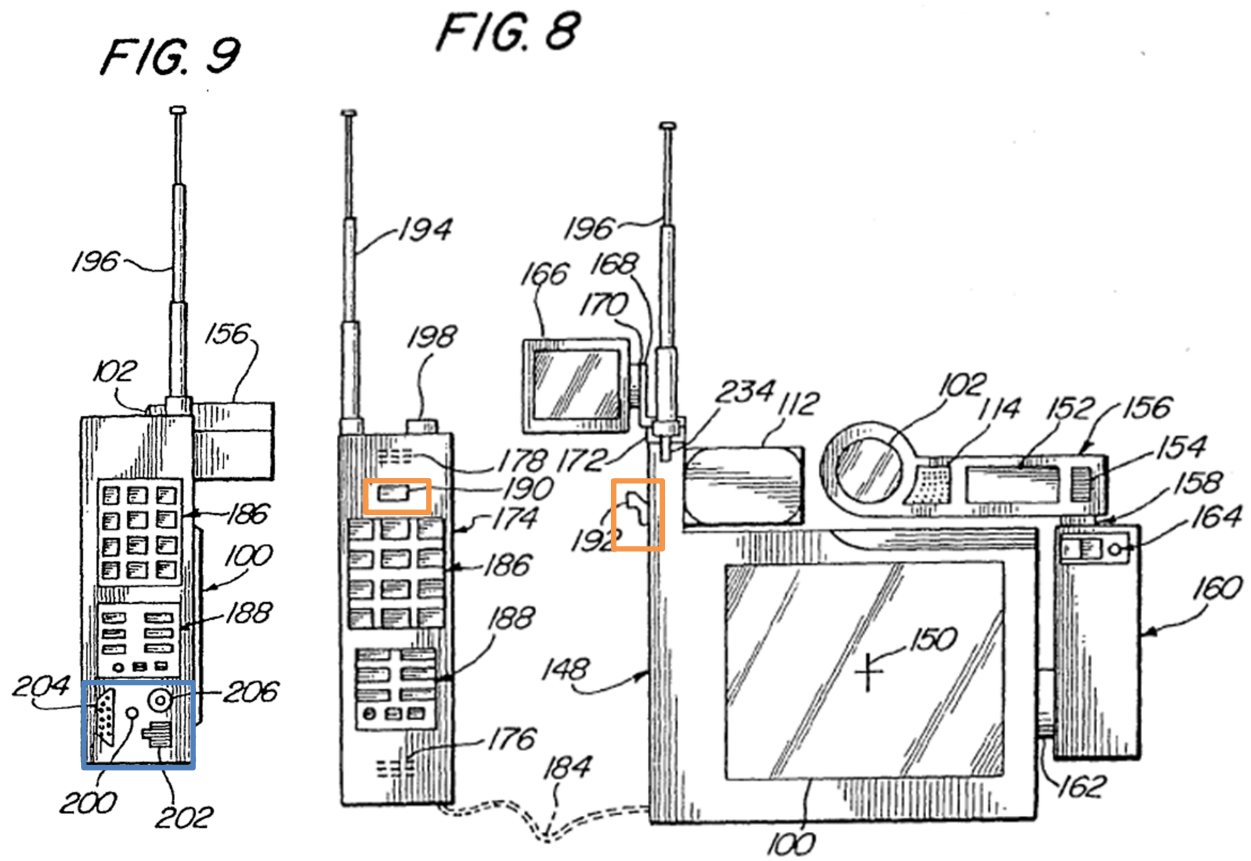
ordinary skill in the art (whether in isolation or with the supporting text of the specification), would teach a unitary housing:



89. Patent Owner argues that Fig. 9 in McNelley is just “depict[ing] the separate phone handset 174 [from Figure 8] attached to the camcorder body 148.” Resp. at. 25. In other words, Patent Owner argues that Fig. 9 simply discloses another view of the modular device of Fig. 8, where the handset module is depicted as attached to the camera module instead of as separate from the camera module. But this cannot be so, for several reasons.

90. Fig. 9 does not show simply another view of the identical device shown in Fig. 8, but instead shows a separate embodiment of the same invention disclosed in McNelley. Fig. 8 discloses an embodiment of the invention in which a “separate handset unit . . . may serve in addition to or in lieu of the previously-mentioned built in speaker phone.” Ex. 1006 at 7:39-41. But Fig. 9 illustrates an additional set of dialing controls 186 and the telecamcorder controls 188 “built into” the main housing that serve “*in lieu* of the controls on the handset 174 [from Fig. 8].” *Id.* at 8:11-14. And I agree with Dr. Melendez that “in lieu of” means “instead of.” *See* Ex. 1013 at 214:18-20 (“Q.: What does the word [sic] ‘in lieu of’ mean to you? A.: Instead of.”). In other words, the handset 174 in Fig. 8 is a distinct component from these built-in controls in Fig. 9. *See also* Ex. 1006 at 7:38-40 (the handset is “in addition to or in lieu of the . . . built-in speaker phone”).

91. To illustrate this difference between the handset and the built-in controls, several of the ports with the built-in controls in Fig. 9, highlighted in light blue below, are not found on the handset depicted in Fig. 8. *See id.* at Figs. 8-9. Latching handset 174 to the main housing 148 would obscure the face of the handset due to the placement of the latch 190, depicted in light orange below. *Id.* at 7:58-60. Fig. 9 cannot simply depict Fig. 8 from another view, as alleged by Patent Owner.



D. McNelley and Umezawa Both Teach Or Suggest The Non-Audio Digital Image Signal Transmission Limitation

92. As noted above, Patent Owner erroneously asserts that the language in claim 12, “the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image...” requires “the telephone to be capable of using non-audio digital signals for transmission and receipt of the selected digitized framed image.” Resp. at 13-14. This construction is not the broadest reasonable construction of these terms for the reasons argued above.

93. McNelley discusses transmission of non-audio digital signals in several places when it discusses transmission of video and images. *E.g.*, Ex. 1006 at 5:1-7, 14:16-18. McNelley discloses a “digital all the way” system and thus discusses transmitting and receiving a number of such “non-audio digital signals” such as images and video. Ex. 1006 at [57], 5:1-7, 13:2-8, 14:16-18. Furthermore, McNelley states that it was capable of “transmitting/receiving data other than audio and video,” such as “software for telecamcorder functioning, special effects, titling, and other functions may be download-able and stored[.]” Ex. 1006 at 20:56-68, 14:19-21 (“The telecamcorder is also applicable to numerous interactive and multimedia applications.”). Umezawa also discloses sending pictures, which are non-audio digital signals. Ex. 1007 at 1:5-10, 1:41-47, 1:61-2:8, 5:55-62.

94. And McNelley and Umezawa disclose these limitations even under Patent Owner’s overly narrow construction, which requires the use of a “non-audio digital” communication protocol. Nothing in McNelley teaches that its embodiments are limited to any specific communication protocol. To the contrary, McNelley specifically describes its invention as “applicable to any type of network” and that “[i]n the near future, video-phone networks will use one or a combination of phone lines, television cables and wireless networks (*i.e.*, cellular

phone systems).” Ex. 1006 at 14:15-19. And McNelley describes the use of “easily . . . added” signal converters “to ensure compatibility with different networks and transmission technologies,” including wireless networks, cable networks, and networks which utilize standard telephone or fiber optic wiring. *Id.* at 14:23-37, 18:32-34. A person of ordinary skill in the art would understand that this universal network compatibility in McNelley could include “non-audio digital” transmission protocols both then-available or available “in the near future” under Patent Owner’s definition.

95. McNelley’s disclosure is also much more robust than the ’871 patent, which, as Dr. Melendez and I agree, provides no discussion of any particular cellular technology whatsoever. Ex. 1013 at 84:19-86:25, 89:13-16.

96. In addition, nothing in Umezawa teaches that its embodiments must be limited to any specific communication protocol. While Umezawa does not contain McNelley’s explicit statement regarding a specific cellular network, a person of ordinary skill in the art would have understood Umezawa to teach embodiments that function with any available communication protocol, which would include any “non-audio digital” protocol available at the time or shortly thereafter.

97. Patent Owner's expert states that I "gloss over the 'non-audio' digital signals limitation and make no argument whatsoever as to where McNelley or Umezawa makes such a disclosure nor why it would be obvious to a POSITA." Ex. 2003, Melendez Decl., ¶ 43. But this is simply untrue. In my earlier declaration, I specifically noted, consistent with this Reply, that McNelley "discloses that the telecamcorder is applicable to any type of network including wireless networks (*i.e.*, cellular phone systems)." Ex. 1008 at ¶ 121. And I specifically note McNelley's statement that "in the near future, video-phone networks will use one or a combination of phone lines, television cables and wireless networks (*i.e.*, cellular phone systems)." *Id.* at ¶ 131 (citing Ex. 1006 at 14:16-18, 14:28-31).

E. Placing The "Display Window For Viewing The Alphanumeric Signals ... Within The Display Window For Framing The Visual Image" Was An Obvious Design Choice

98. Claim 7 requires the "the display window for viewing the alphanumeric signals" be "within the display window for framing the visual image." My prior declaration argued the common-sense conclusion that there are only two options for where to place both display windows – either within one another or outside one another. This "represents one of only two predictable options for such placement: 1) either display window for viewing the

alphanumeric signals is within the display window for framing the visual image (as claimed), or 2) display window for viewing the alphanumeric signals is outside the display window for framing the visual image.” Ex. 1008, Sasson Decl., at ¶ 102; *see id.* at ¶¶ 102-107.

99. I reiterate that the choice between these two placement options was merely a design choice—“one of only two predictable options ... easily implemented by a [person of ordinary skill in the art]” with “a reasonable expectation of success” with both options providing “user friendly functionality.” *See* Pet. at 48; Ex. 1008 at ¶¶ 102-107. Thus, it would have been obvious to a person of skill in the art to implement the display as claimed in claim 7 given that it is a design choice.

100. Patent Owner argues that my analysis “completely marginalized” this limitation. But Patent Owner does not substantively critique my analysis. Patent Owner does not, for example, argue that a person of ordinary skill in the art would not have understood and easily been able to implement either choice, or that either choice would not provide user friendly functionality, or that either choice would have a reasonable chance of success. Indeed, by identifying the limitation of claim 7 as a “superior option,” Patent Owner simply reinforces that claim 7 chooses one

of two options, both of which would have been obvious to a person of ordinary skill in the art. Resp. at 31.

101. But even if this were not obvious, McNelley and Umezawa both disclose this functionality. All claim 7 requires is that two sources of information—a visual image and alphanumeric signals—be displayed within the same display window. While Patent Owner takes this to mean “simultaneous” display, no support is given for this interpretation by Patent Owner or Dr. Melendez and such a limitation is not found in the claim language. To the contrary, Dr. Melendez admits that a “window” may “comprise the entirety of area of the display.” Ex. 1013 at 76:15-24.

102. Moreover, McNelley discloses displaying two sources of information simultaneously using “screen splitting and picture-in-picture” and calls them “commonly employed” technologies. Ex. 1006 at 11:28-30. McNelley goes on to describe how this can be used to allow the user to “see and hear many distant conferees at the same time.” *Id.* at 11:36-39.

103. I understand that various videoconferencing technologies existed at the time of the filing of the '871 patent including, for example, “CU-SeeMe” and Microsoft’s “NetMeeting.” These and other technologies available at the time commonly would have included alphanumeric descriptions of the conferees by, for

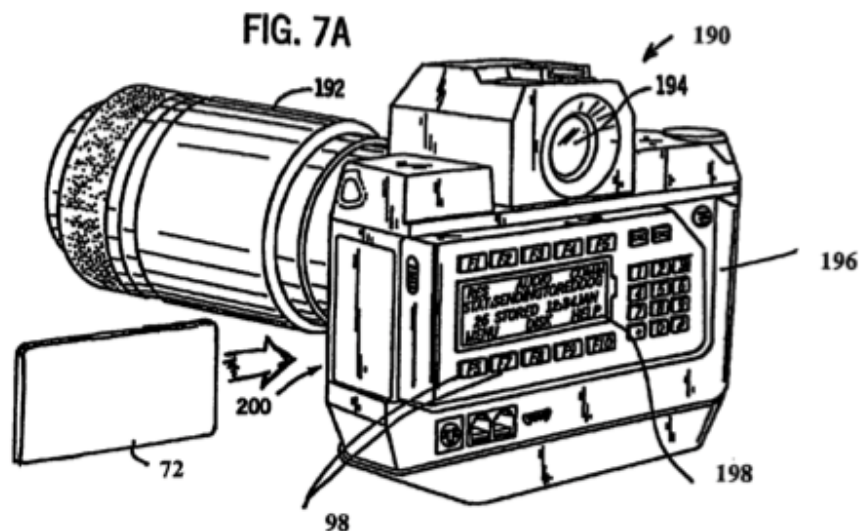
example, identifying them by name and/or location as would have been known by a skilled artisan at the time. McNelley also describes display of the conferee and “various computer programs” simultaneously on the screen, and displaying “visual control prompts on the display.” *Id.* at 4:42-46, 20:45-46.

104. Umezawa also describes how input from the keypad can show up within the same display used to display the image. Ex. 1007 at 10:16-20 (from the keypad (control panel 14) shows up within the same display that displays the image).

105. A person of ordinary skill in the art at the time would know that the screen-splitting and picture-in-picture technologies disclosed in McNelley and Umezawa would allow displaying of images with text simultaneously, such as Umezawa’s input or McNelley’s control prompts with the picture in McNelley. This would be useful for, by way of example, identifying the “many distant conferees” discussed in McNelley by name and/or location, which could easily be done using the tagging feature disclosed elsewhere in the patent. Ex. 1006 at 11:37-39; *see id.* at 6:7-15.

106. While not argued by Patent Owner, Dr. Melendez states, without any explanation or support, that the display window is part of the “user interface,” and not the “physical ‘display.’” Ex. 2003 at ¶¶ 76-77. But “a display window” first

appears in claim 6 as one of three physical components of the “cellular telephone”: a transmitter/receiver, a keypad, and a display window. ’871 patent at cl. 6. Fig. 7A illustrates that same “display window” as “back window 198” (’871 Patent at Fig. 7A, 11:10-11), which even Patent Owner’s expert admits is a physical component, Ex. 1013 at 160:1-4.



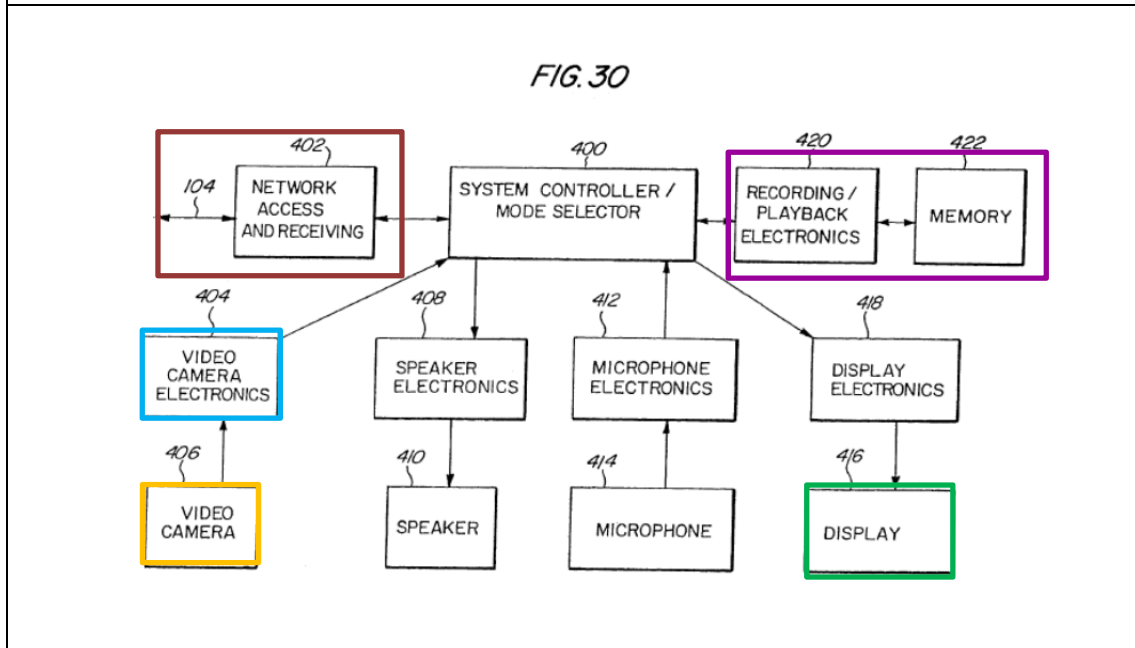
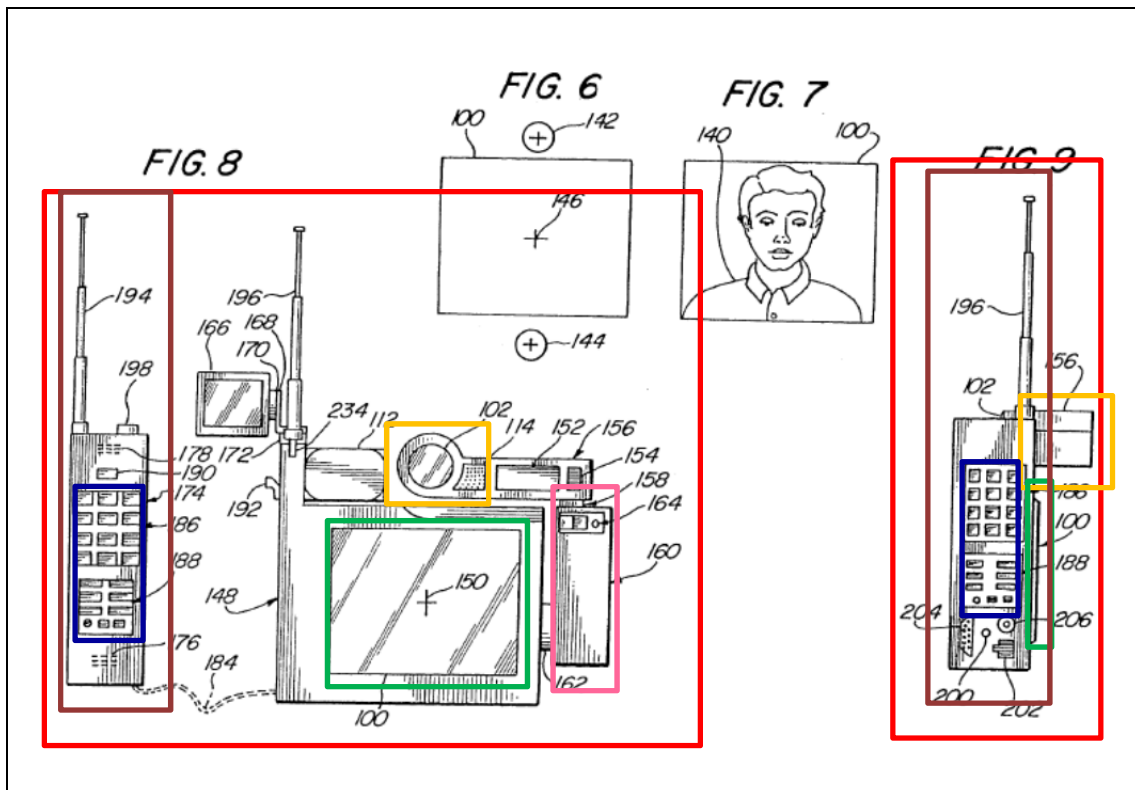
107. Patent Owner’s expert adds that claim 7 was technically infeasible due to the “intermixing of signal types” and “limited processing capabilities” at the time. Ex. 2003 at ¶ 77. No support is provided for this statement and that argument also does not appear in the Response. Nor does the ’871 patent address how to overcome this alleged technical hurdle. Ex. 1013 at 165:4-18. Moreover, this conclusion is belied by the common practice, described in McNelley and

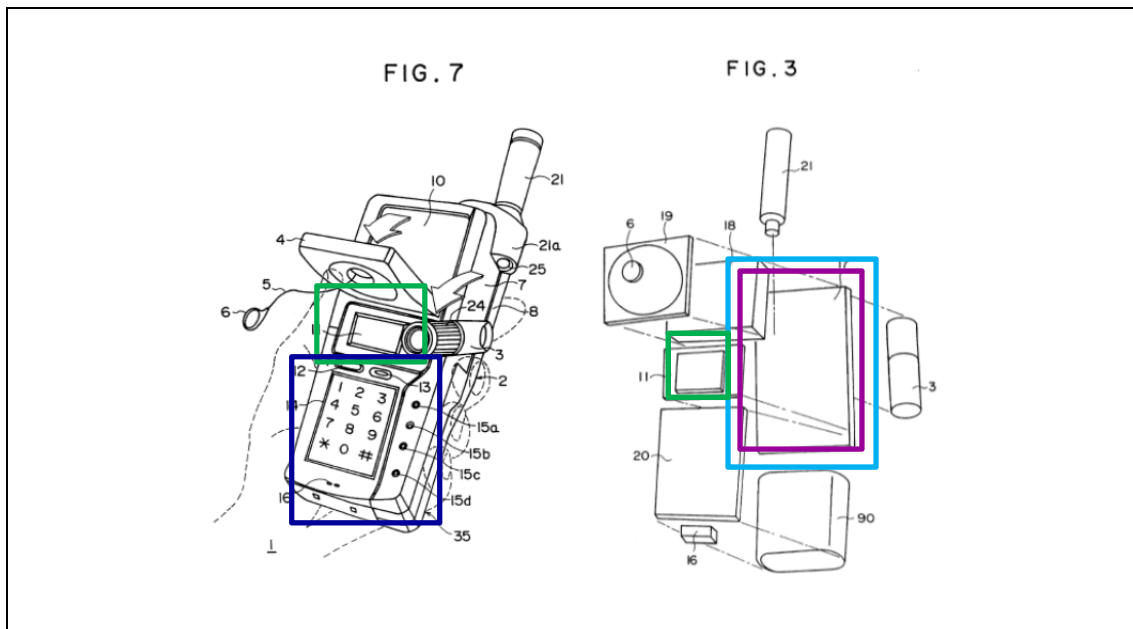
Umezawa of displaying two sources of information at the exact same time on a single display.

F. McNelley and Umezawa Disclose All The Elements of Claims 1-8 and 12-14 of the '871 Patent

108. As explained more fully in my prior declaration (Ex. 1008), it is my opinion that McNelley and Umezawa together disclose all the elements of the instituted claims 1-8 and 12-14 of the '871 patent. *See id.* ¶¶ 31-133. Dr. Melendez asserted that claim 15 is also subject to *inter partes* review in this proceeding, but I understand that not to be the case. Ex. 1013 at 22:15-18; *see* Paper 12, Institution of *Inter Partes* Review, at 18.

109. While no substantive argument was offered in opposition to the Petition's analysis for claims 2-5, 8, 13, and 14, Patent Owner and Dr. Melendez have argued that a number of the limitations from claims 1, 6, 7, and 12 are not found in McNelley and Umezawa. The following is an illustration reflecting my analysis and to aid the Board of how McNelley and Umezawa teach all of the limitations of claims 1, 6, 7, and 12:





Ex. 1006 at Figs. 6-9; Ex. 1007 at Fig. 7.

110. Specifically, McNelley and Umezawa disclose all of the limitations of claims 1, 6, 7, and 12 in the following color-coded manner:

Limitation	Claim 1	Color
1(a)	A handheld self-contained cellular telephone and integrated image processing;	Red
1(b)	for both sending and receiving telephonic audio signals;	Red
1(c)	system and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:	Red
1(d)	a manually portable housing;	Red
1(e)	an integral image capture device comprising an electronic camera contained within the portable housing;	Orange
1(f)	a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;	Green, Pink

1(g)	a processor in the housing for generating an image data signal representing the image framed by the camera;	Light Blue
1(h)	a memory associated with the processor for receiving and storing the digitized framed image;	Purple
1(i)	accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;	Purple
1(j)	a user interface for enabling a user to select the image data signal for viewing and transmission;	Dark Blue
1(k)	a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;	Brown
1(l)	alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;	Dark Blue
1(m)	a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and	Brown
1(n)	a power supply for powering the system.	Black
	Claim 6	Color
6(a)	A handheld cellular telephone having an integrated electronic camera;	Red
6(b)	for both sending and receiving telephonic audio signals;	Red
6(c)	and for capturing a visual image;	Red
6(d)	converting the visual image to a digitized image data signal;	Red
6(e)	and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising:	Red
6(f)	a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing;	Red, Pink
6(g)	a cellular telephone in the housing, the cellular	Brown

	telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network;	
6(h)	a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network;	Dark Blue
6(i)	and a display window for viewing the manually input alphanumeric signals;	Green
6(j)	an integral electronic camera in the housing, the camera for visually framing a visual image to be captured;	Orange
6(k)	a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone;	Light Blue
6(l)	a memory associated with the processor for receiving and storing the digitized framed image;	Purple
6(m)	accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image;	Purple
6(n)	a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and	Dark Blue
6(o)	an integrated power supply for powering both the cellular telephone and the camera.	Black
	Claim 7	Color
7	The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image.	Green
	Claim 12	Color
12(a)	A combination of handheld wireless telephone and digital camera comprising:	Red
12(b)	a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with	Red, Pink

	the housing;	
12(c)	a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;	Green
12(d)	a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;	Light Blue
12(e)	a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;	Purple
12(f)	the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;	Brown and Dark Blue
12(g)	a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;	Dark Blue
12(h)	a power supply supported by the housing;	Black
12(i)	the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and	Brown
12(j)	at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.	Light Blue and Dark Blue

V. CONCLUSION

111. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration and could testify competently to them if asked to do so.

In signing this Declaration, I recognize 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 also recognize that I may be subject to cross-examination in the 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.

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

///

Dated: October 15, 2015

Respectfully submitted,



Steven J. Sasson