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Paper 40
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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FACEBOOK, INC., WHATSAPP INC., and LG ELECTRONICS, INC.,
Petitioner,

v.
UNILOC 2017 LLC,
Patent Owner.

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Case IPR2017-01427 (Patent 8,995,433 B2)

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FACEBOOK, INC., WHATSAPP INC., LG ELECTRONICS, INC., and HUAWEI DEVICE CO., LTD.,
Petitioner,

v.

UNILOC 2017 LLC,
Patent Owner.

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Case IPR2017-01428 (Patent 8,995,433 B2)

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Before JENNIFER S. BISK, MIRIAM L. QUINN, and CHARLES J. BOUDREAU, *Administrative Patent Judges.*

QUINN, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
*35 U.S.C. § 318*

## I. INTRODUCTION

We instituted *inter partes* review pursuant to 35 U.S.C. § 314 to review claims 1–12, 14–17, 25, and 26 of U.S. Patent No. 8,995,433 B2 ("the '433 patent"), owned by Uniloc 2017 LLC. We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, Petitioners have shown by a preponderance of the evidence that claims 1–12, 14–17, 25, and 26 of the '433 patent are unpatentable.

## II. CONSOLIDATION OF PROCEEDINGS

The two captioned proceedings (IPR2017-01427 and IPR2017-01428) involve the '433 patent. Although each proceeding challenges the patentability of a different set of claims, there are disputed claim terms across the challenged claims and the primary prior art is identical. For instance, all the claims recite the term "instant voice message," which we construe below, and the "Zydney" reference (identified with particularity below) is asserted as prior art in both proceedings. Consolidation is appropriate where, as here, the Board can more efficiently handle the common issues and evidence and also remain consistent across proceedings. Under 35 U.S.C. § 315(d) the Director may determine the manner in which these pending proceedings may proceed, including "providing for stay, transfer, consolidation, or termination of any such matter or proceeding." *See also* 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director."). There is no specific Board Rule that governs consolidation of cases. But 37 C.F.R. § 42.5(a) allows the Board to determine a proper

course of conduct in a proceeding for any situation not specifically covered by the rules and to enter non-final orders to administer the proceeding. Therefore, on behalf of the Director under § 315(d), and for a more efficient administration of these proceedings, we consolidate IPR2017-01427 and IPR2017-01428 for purposes of rendering this Final Written Decision in which we construe the term "instant voice message" and determine whether the asserted prior art teaches the properly construed "instant voice message."

## III. PROCEDURAL BACKGROUND

Facebook, Inc., and WhatsApp Inc. filed the Petitions in the captioned proceedings on the same day, May 11, 2017. IPR2017-01427, Paper 2 ("1427 Petition" or "1427 Pet."); IPR201701428, Paper 2 ("1428 Petition" or "1428 Pet."). Each proceeding challenges a different set of claims, as follows:

| Proceeding | Claim Set of the '433 Patent |
|---|---|
| IPR2017-01427 | 1–8 |
| IPR2017-01428 | 9–12, 14–17, 25, and 26 |

*See* 1427 Pet. 5; 1428 Pet. 5. After considering Patent Owner's Preliminary Responses, the Board instituted trial in each of these proceedings. IPR2017-01427, Paper 8, Decision on Institution ("1427 Dec. on Inst."); IPR2017-01428, Paper 8, Decision on Institution ("1428 Dec. on Inst."). The Decision on Institution in IPR2017-01428 noted, in particular, that Patent Owner's arguments raised an issue of claim construction of the term "instant

voice message" that was underdeveloped at that stage of the proceeding. 1428 Dec. on Inst. 11–12.

During the pendency of the proceedings, LG Electronics, Inc., filed a Petition and Motion for Joinder requesting to join IPR2017-01427, which we granted. IPR2017-01427, Paper 9. Similarly, LG Electronics, Inc. and Huawei Device Oc., Ltd., filed a Petition and Motion for Joinder requesting to join IPR2017-01428, which we also granted. IPR2017-01428, Paper 9.

In each proceeding, Patent Owner filed a Response. IPR2017-01427, Paper 23 ("1427 PO Resp."); IPR2017-01428, Paper 21 ("1428 PO Resp."). And Petitioner filed a Reply. IPR2017-01427, Paper 33 ("1427 Reply"); IPR2017-01428, Paper 29 ("1428 Reply"). We held Oral Arguments in both proceedings on August 30, 2018, the transcripts of which are in the record. IPR2017-01427, Paper 40 ("1427 Tr."); IPR2017-01428, Paper 34 ("1428 Tr.").

At the hearing, we alerted the parties to continuing concerns about the construction for the term "instant voice message." 1428 Tr. 9:12–12:13. Subsequent to the Oral Arguments we issued an order authorizing additional briefing on claim construction of the term "instant voice message" and its applicability to the asserted prior art. IPR2017-01427, Paper 41 ("1427 Order on Claim Constr."); *see* IPR2017-01428, Paper 35 (identical order). The parties simultaneously filed initial claim construction briefs and responsive claim construction briefs, in accordance with that order.

### *A. Related Matters*

The parties indicate that the '433 patent is involved in *Uniloc USA, Inc. v. Facebook, Inc.* and *Uniloc USA, Inc. v. WhatsApp Inc.*, Case Nos.

2-16-cv-00728-JRG (E.D. Tex.) and 2:16-cv-00645-JRG (E.D. Tex.), respectively. Pet. 1–2. The '433 patent was also the subject of Case IPR2017-00225 (filed by Apple Inc.), in which we issued a Final Written Decision finding claims 1–6 and 8 not unpatentable. IPR2017-00225, slip op. at 2 (PTAB May 23, 2018) (Paper 29) (noting that Facebook, Inc. and WhatsApp, Inc. joined that proceeding).[1]

## IV. THE '433 PATENT AND PRESENTED CHALLENGES

### *A. The '433 Patent, Exhibit 1001*[2]

The '433 patent relates to Internet telephony, and more particularly, to instant voice over IP ("VoIP") messaging over an IP network, such as the Internet. Ex. 1001, 1:19–23. The '433 patent acknowledges that "instant text messaging is [] known" in the VoIP and public switched telephone network ("PSTN") environments, with its server presenting the user a "list of persons who are currently 'online' and ready to receive text messages on their own client terminals." *Id.* at 2:35–42. In one embodiment, such as

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[1] The parties in IPR2017-01427 briefed the issue of estoppel under 35 U.S.C. § 315(e)(1) based on Facebook and WhatsApp obtaining a Final Written Decision of claims 1–6 and 8 of the '433 patent in IPR2017-00225. *See* IPR2017-01427, Papers 11, 12. We issued an order dismissing Facebook and WhatsApp with regard to those claims. IPR2017-01427, Paper 30. We reiterate here that, although Facebook and WhatsApp are listed in the caption of IPR2017-01427, they are estopped under 35 U.S.C. § 315(e)(1) as to claims 1–6, and 8, but not as to claim 7. *Id.*

[2] Reference to the '433 patent is always to the exhibit number in IPR2017-01427.

depicted in Figure 2 (reproduced below), the system of the '433 patent involves an instant voice message ("IVM") server and IVM clients. *Id.* at 7:21–22.

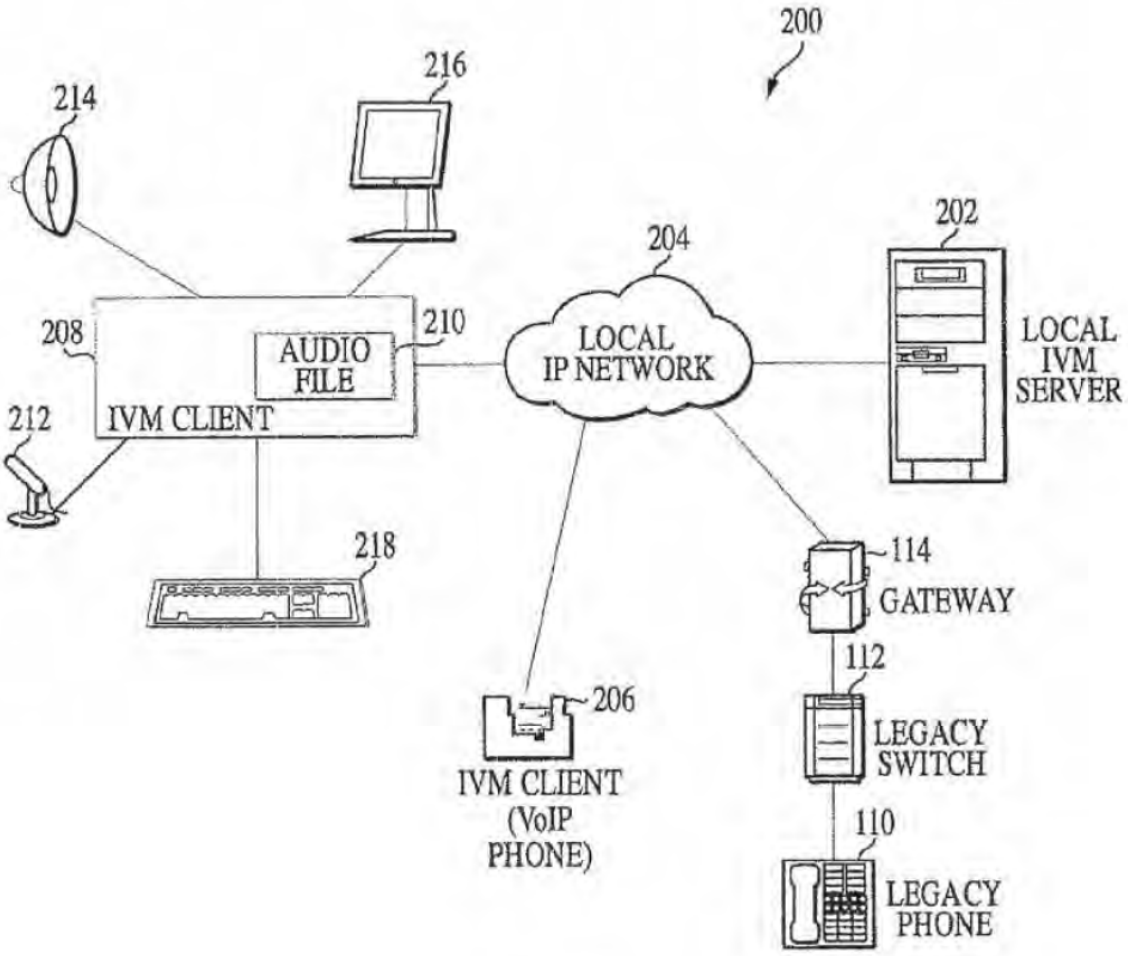


FIG. 2

Figure 2 illustrates IVM client 206 interconnected via network 204 to local IVM server 202, where IVM client 206 is a VoIP telephone, and where legacy telephone 110 is connected to legacy switch 112 and further to media gateway 114. *Id.* at 7:27–49. The media gateway converts the PSTN audio signal to packets for transmission over a packet-switched IP network, such

as local network 204. *Id.* at 7:49–53. In one embodiment, when in "record mode," the user of an IVM client selects one or more IVM recipients from a list. *Id.* at 8:2–5. The IVM client listens to the input audio device and records the user's speech into a digitized audio file at the IVM client. *Id.* at 8:12–15. "Once the recording of the user's speech is finalized, IVM client 208 generates a send signal indicating that the digitized audio file 210 (instant voice message) is ready to be sent to the selected recipients." *Id.* at 8:19–22. The IVM client transmits the digitized audio file to the local IVM server, which, thereafter, delivers that transmitted instant voice message to the selected recipients via the local IP network. *Id.* at 8:25–26. Only the available IVM recipients, currently connected to the IVM server, will receive the instant voice message. *Id.* at 8:36–38. If a recipient "is not currently connected to the local IVM server 202," the IVM server temporarily saves the instant voice message and delivers it to the IVM client when the IVM client connects to the local IVM server (i.e., is available). *Id.* at 8:38–43.

The '433 patent also describes an "intercom mode" of voice messaging. *Id.* at 11:34–37. The specification states that the "intercom mode" represents real-time instant voice messaging. *Id.* at 11:37–38. In this mode, instead of creating an audio file, one or more buffers of a predetermined size are generated in the IVM clients or local IVM servers. *Id.* at 11:38–41. Successive portions of the instant voice message are written to the one or more buffers, which, as they fill, automatically transmit their content to the IVM server for transmission to the one or more IVM

recipients. *Id.* at 11:41–46. Buffering is repeated until the entire instant voice message has been transmitted to the IVM server. *Id.* at 11:46–59.

### *B. Independent Claims*

Of the challenged claims, claim 1, 6, and 9 are independent and are reproduced below. Each of claims 2–5, 7, 8, 19–12, 14–17, 25, and 26 depends directly or indirectly from claims 1 or 9.

1. A system comprising:

an instant voice messaging application including a client platform system for generating an instant voice message and a messaging system for transmitting the instant voice message over a packet-switched network via a network interface;

wherein the instant voice messaging application displays a list of one or more potential recipients for the instant voice message;

wherein the instant voice messaging application includes a message database storing the instant voice message, wherein the instant voice message is represented by a database record including a unique identifier; and

wherein the instant voice messaging application includes a file manager system performing at least one of storing, deleting and retrieving the instant voice messages from the message database in response to a user request.

6. A system comprising:

an instant voice messaging application including a client platform system for generating an instant voice message and a messaging system for transmitting the instant voice message over a packet-switched network via a network interface;

wherein the instant voice messaging application displays a list of one or more potential recipients for the instant voice message;

wherein the instant voice messaging application includes a file manager system performing at least one of storing, deleting and retrieving the instant voice messages from a message database in response to a user request; and

wherein the instant voice messaging application includes a compression/decompression system for compressing the instant voice messages to be transmitted over the packet-switched network and decompressing the instant voice messages received over the packet-switched network.

9. A system comprising:

an instant voice messaging application comprising:

a client platform system for generating an instant voice message;

a messaging system for transmitting the instant voice message over a packet-switched network; and

wherein the instant voice messaging application attaches one or more files to the instant voice message.

Ex. 1001, 23:65–24:15, 24:33–51, 24:60–67.

*C. Asserted Prior Art and Instituted Grounds of Unpatentability*

These proceedings rely on the following prior art references:

a) *Zydney*: PCT App. Pub. No. WO 01/11824 A2, published Feb. 15, 2001, filed in the IPR2017-01427 record as Exhibit 1003 (with line numbers added by Petitioner);

b) *Appelman*: U.S. Patent No. US 6,750,881 B1, issued June 15, 2004, filed in the IPR2017-01427 record as Exhibit 1004;

c) *Clark*: U.S. Patent No. US 6,725,228 B1, issued Apr. 20, 2004,

filed in the IPR2017-01427 record as Exhibit 1008;

d) *Greenlaw*: RAYMOND GREENLAW & ELLEN HEPP, INTRODUCTION TO THE INTERNET FOR ENGINEERS 1–25 (1999), filed in the IPR2017-01428 record as Exhibit 1110; and

e) *Newton*: HARRY NEWTON, NEWTON'S TELECOM DICTIONARY (18th ed. 2002), filed in the IPR2017-01428 record as Exhibit 1106.

The following grounds of unpatentability are at issue:

| Challenged Claim(s) | Basis | Reference(s) |
|---|---|---|
| 1–6, 8 | § 103(a) | Zydney and Clark |
| 7 | § 103(a) | Zydney, Clark, and Appelman |
| 9, 12, 14, 17, 25, and 26 | § 103(a) | Zydney |
| 11, 15, and 16 | § 103(a) | Zydney and Greenlaw |
| 10 | § 103(a) | Zydney and Newton |

Each Petition also cites declaration testimony as follows: Declaration of Tal Lavian, Ph.D., filed as Exhibit 1002 in IPR2017-01427 ("1427 Lavian Decl."); and Declaration of Tal Lavian, Ph.D., filed as Exhibit 1102 in IPR2017-01428 ("1428 Lavian Decl.").

Patent Owner cites declaration testimony in support of its arguments of patentability as follows: Declaration of Val DiEuliis, Ph.D., Exhibit 2001 in IPR2017-01427 ("1427 DiEuliis Decl."); and Declaration of Val DiEuliis, Ph.D., Exhibit 2001 in IPR2017-01428 ("1428 DiEuliis Decl.").

# V. ANALYSIS

## *A. Claim Construction*

In this *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2012); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard as the claim interpretation standard to be applied in *inter partes* reviews). Under the broadest reasonable interpretation standard, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). We note that only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

In both Petitions, the terms "instant voice message application" and "client platform system" were identified for claim construction. 1427 Pet. 9–15; 1428 Pet. 9–15. We did not construe these terms in our Decisions on Institution. 1427 Dec. on Inst. 8; 1428 Dec. on Inst. 7. We did construe the term "receiving the instant voice message and an indication of one or more intended recipients" (claim 17) in the Decision on Institution in the 1428 case, because Patent Owner raised the issue in the Preliminary Response in that case. 1428 Dec. on Inst. 7–10. Furthermore, as stated above, we

authorized the parties to file additional briefing regarding the claim construction of "instant voice message." IPR2017-01427, Paper 41; IPR2017-01428, Paper 35. We turn to determining the construction of that claim term.

1. Instant Voice Message

All the independent challenged claims recite the term "instant voice message." In particular, claims 1 and 6 recite a client platform system for "generating an instant voice message and a messaging system for transmitting the instant voice message." Claims 1 and 6 further require storing the "instant voice message" and, depending on the claim, performing certain actions, such as retrieving, deleting, compressing, and decompressing the "instant voice message." Claim 9 also recites generating and transmitting the "instant voice message," but adds that "the instant voice message application attaches one or more files to the instant voice message."

The Decision on Institution in the 1428 case noted Patent Owner's arguments regarding the "instant voice message" centered on the scope of the term. 1428 Dec. on Inst. 11. Patent Owner had argued an implied construction in which "instant voice message" encompasses only the voice message. *Id.* The parties were invited to brief the claim construction during trial. *Id.* at 11–12. Because the arguments were particularly directed to whether the prior art attaches a file to the "instant voice message," a requirement of claim 9, the parties presented their claim construction arguments in the trial briefs in the IPR2017-01428 case. For completeness, we summarize below the arguments presented in the Patent Owner Response and Petitioner's Reply filed in the 1428 case.

In its Response, Patent Owner proposed that an "instant voice message" is "an audio file recording voice data." 1428 PO Resp. 6–7. In particular, Patent Owner relied on the Specification's use of "i.e." to indicate lexicography in equating the "instant voice message" to audio file 210. *Id.* at 7 (citing various portions of the Specification that state "the digitized audio file 210 (i.e., instant voice message)").

Petitioner, on the other hand, argued in Reply that the "instant voice message" is not synonymous with an audio file recording voice data because a related patent (having the same Specification as the '433 patent) has a claim that recites "recording the instant voice message in an audio file." 1428 Reply 3 (citing U.S. Patent No. 8,199,747, claim 1). According to Petitioner, if an "instant voice message" is an "audio file" then the language of that claim requiring the recording of the instant voice message in an audio file would be superfluous. *Id.* More importantly, Petitioner also argued that the "audio file" is one of two disclosed embodiments of the "instant voice message." *Id.* at 4–5. Specifically, the '433 patent describes that instead of taking the form of an audio file, the instant voice message is generated in real time by buffering successive portions of the instant voice message. Ex. 1001, 11:35–60. If we were to adopt Patent Owner's proposed construction of an audio file, according to Petitioner, we would exclude a preferred embodiment where the instant voice message is described as buffered successive portions. 1428 Reply 5 (citing *Epos Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1347 (Fed. Cir. 2014)). After persuasively arguing against Patent Owner's proposed construction, Petitioner proposed no alternative construction, arguing instead that "instant

voice message" "can be left to its plain and ordinary meaning, encompassing the instant voice messages disclosed by Zydney." 1428 Reply 5.

At oral argument, we renewed the concern for the appropriate scope of the term "instant voice message" in light of the record developed to that point. *See* Order on CC Briefing. We entered in the record a dictionary definition of "instant messaging." *See id.* (explaining Exhibit 3001). And we subsequently ordered the parties to brief their respective positions. *Id.*

After reviewing the parties' briefs, we construe "instant voice message" to mean "data content including a representation of an audio message." This accords with Patent Owner's position that the '433 patent Specification consistently refers to the "instant voice message" as content. IPR2017-01428, Paper 36, 2–4 ("PO Supplemental Br."). In particular, we are persuaded that the Specification describes the "instant voice message" as content in three different embodiments. First, in the "record mode" embodiment, by describing the "instant voice message" as an audio file (Ex 1001, 433 patent, 8:11–15, 8:21, 10:1, 10:42–43, 10:50, 12:42–43, 16:24, 17:25–26, 18:8–9, 18:60, 18:66–67, 19:49, 19:54), the '433 patent Specification focuses on the digitized audio file itself being the "instant voice message." *See* PO Supplemental Br. 3. The digitized audio file is the user's speech that the client records. *See* Ex. 1001, 8:12–15. Second, in the "intercom mode," the Specification describes buffering "successive portions of the instant voice message," referring thusly to portions of the user's speech that are written to a buffer. *Id.* at 11:37–46. Again, the "instant voice message" includes the digitized audio. In a third embodiment, the Specification describes a "message object" with an object field in this

manner: "The content of the object field is a block of data being carried by the message object, which may be, for example, a digitized instant voice message." *Id.* at 14:39–42. These embodiments, thus, paint a picture of the "instant voice message" as first and foremost being the content of the message, or the user's speech, in some digitized form. Although the manner in which the data content is partitioned, stored, and delivered may vary from embodiment to embodiment (such as from audio file to digitized audio in a buffer), what is important is that the "instant voice message" always refers to the digitized audio message.

Patent Owner argues that lexicography mandates the equivalence of content with "instant voice message." In particular, Patent Owner argues that in describing the "record mode" the Specification uses the abbreviation "i.e." to consistently *define* the "instant voice message" as voice data content. *See* PO Supplemental Br. 3. The use of "i.e." has been held to signal an intent of the inventor to define the word to which it refers. *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009). The use of "i.e.," alone, however, is not conclusive of an intent to define the term. The Specification must use the term "instant voice message" consistently as an audio file for the use of "i.e." to be accorded such definitional status. *See SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1202 (Fed. Cir. 2013) (explaining that "i.e." is definitional when it "comports with the inventors' other uses . . . in the specification and with each and every other reference").

Although we agree that there is repeated use of "i.e." in the Specification to signal an equivalency of "instant voice message" with an

audio file, the Specification uses "instant voice message" inconsistently by describing non-audio-file uses of "instant voice message." For instance, the Specification describes the "intercom mode" of instant voice messaging distinctly from the "record mode" (audio file embodiment). Ex. 1001, 7:61–65. "In the 'intercom mode,' *instead of creating an audio file 210*, one or more buffers (not shown) of a predetermined size are generated in the IVM client 26, 208 or local IVM server 202." *Id.* at 11:38–41 (emphasis added). This alternative to creating an audio file is further described as buffering successive portions of the instant voice message. *Id.* at 11:41–43. Thus, the use of "i.e." is not definitional since the "instant voice message" may take the form of successive portions of the digitized speech that are buffered, *instead of an audio file*. Therefore, although the Specification consistently relates "instant voice message" to content, is does not limit that content to any particular form or structure (audio file or portions of digitized speech).

From the description of the three embodiments identified above, we conclude that the "instant voice message" is data content, and more specifically, is data content that includes a representation of an audio message. In all embodiments, the "instant voice message" refers, at a minimum, to the digitized speech, regardless of whether it is contained in an audio file, successive portions stored in a buffer, or a block of data in an object field. For this reason, we do not agree with Petitioner's position, advanced in its Supplemental Brief, that the construction of "instant voice message" should be "a data *structure* including a representation of an audible message." IPR2017-01428, Paper 37, 1 ("Pet. Supplemental Br.")

(emphasis added); *see also* 1428 Tr. 62:17–5 (Patent Owner further arguing that the phrase "audio message" tracks more closely the intrinsic evidence than the phrase "audible message"). Although we agree that the audio file and buffered portions form a data structure (Pet. Supplemental Br. at 1–2), we are not persuaded that referring to the "instant voice message" as a data structure captures *what it is*; but rather, such construction would place undue focus on the instant voice message's *form*. The Specification describes three different data structures that may constitute the "instant voice message," signifying that its structure is not what defines the "instant voice message."

In contrast, the word "content" is more closely associated with how the Specification describes the "instant voice message." For instance, as noted above with regard to the third embodiment (data carried by a message object), the "instant voice message" is "a block of data" that is also the *content* of the object field. Ex. 1001, 14:39–42. Likewise, the Specification describes the "intercom mode" buffers as having "content" corresponding to successive portions of the "instant voice message," which content is transmitted to an IVM server as the buffers are filled. *See, e.g.*, *id.* at 11:43–51; 12:2–5 (describing writing audio of a predetermined size as the "content of the first buffer" and processing of the "audio contents of the buffers" before transmission); *see also* 1428 Tr. 55:21–56:14 (Patent Owner explaining that the content is binary information contained within the file or within the buffered data of the intercom mode, where the binary information may include structural information such as headers). None of the data structures identified in the Specification (e.g., audio file, successive portions of buffered data, or a block of data in an object field) clarify the essence of

the "instant voice message," but they merely highlight that the digitized audio could be stored and manipulated in a variety of ways for processing and transmission.

Accordingly, we construe "instant voice message" as data content including a representation of an audio message. This determination, however, does not resolve all the disputes surrounding the term because Patent Owner also argues that attaching files to an "instant voice message" must be limited to attachments to the *data content itself*. PO Supplemental Br. 4–5 ("This reaffirms that the limitations at issue require an attachment to the data content, as opposed, for example, to a distinct and separately-generated data structure (like Zydney's 'voice container') that is used only to transport the data content and that is subsequently discarded."). Therefore, we analyze and construe below the claim's requirement of "attaching" files to the "instant voice message."

2. Attaching One or More Files to the Instant Voice Message

Claim 9 of the '433 patent recites that the "instant voice message application attaches one or more files to the instant voice message." Ex. 1001, 24:66–67.[3] Also relevant to our analysis is the language of claim 14 of the '433 patent, which depends from claim 9 and recites "wherein the instant voice messaging application invokes a document handler to create a link between the instant voice message and the one or more files." *Id.* at 25:14–17. Although these claims of the '433 patent require attaching one or

[3] *See also* U.S. Patent No. 7,535,890, claim 9 (similarly reciting "the client is enabled to attach one or more files to the instant voice message").

more files to the "instant voice message," we note that related patents recite attaching one or more files to an "audio file" instead. For instance, claim 2 of U.S. Patent No. 8,243,723, which shares the same disclosure with the '433 patent, recites that "the instant voice message includes one or more files attached to an audio file." Similarly, in claim 1 of related U.S. Patent No. 8,199,747, generating an "instant voice message" includes "attaching one or more files to the audio file." We include the above claim language in our discussion to highlight the challenge we face—whether to construe "attaching" or "attached" to *both* an "instant voice message" and an "audio file" to require attachment to the *data content*, notwithstanding the difference in claim terms.

We start with the claim language. As noted above, the claims of the '433 patent require attachment of one or more files *to the instant voice message*. From claim 14, we understand that the "attachment" may be performed by creating a link between the instant voice message and the one or more files. The Specification also describes "attachment" by linking:

> The attachment of one or more files is enabled conventionally via a methodology such as "drag-and-drop" and the like, which invokes the document handler 306 to make the appropriate linkages to the one or more files and flags the messaging system 320 that the instant voice message also has the attached one or more files.

Ex. 1001, 13:35–40. This passage also describes that, in addition to making linkages, flags alert the messaging system in the client device that the instant voice message has an attachment. Thus, "attaching" creates *an association* between the one or more files and the instant voice message so that the system, once alerted, may transmit the instant voice message with the

associated one or more files. This passage describes the attachment of files to an instant voice message in the "record mode," i.e., when the "instant voice message" is recorded in an audio file. *Id.* at 13–35 (describing how the audio file is recorded and processed before transmission, including giving the user options to attach documents). The Specification provides no other detailed description of how to attach a file to an "instant voice message" in either the "record mode" or "intercom mode." It seems reasonable, therefore, that, in reciting attachment to an "instant voice message," when dealing with the audio file form of the message, the Specification supports that attachment to an "audio file" is synonymous with attachment to an "instant voice message," because those claims would be referring to the "record mode." In claim 9 of the '433 patent, however, because the claim recites attaching to an "instant voice message," we are not concerned with what form or structure the "instant voice message" would have, as the claim does not require an audio file.

The discussion above brings us to the issue Patent Owner raises of whether attachment must be to the data content itself. PO Supplemental Br. 5. Patent Owner seeks to construe the "attachment to" phrase (and its variants) very narrowly, as in the sense of a physical appendage or the joining together of items. For instance, Patent Owner argues that attaching to the data content is different than attaching to a structure that is used to transport the data content. *Id.* Because the Specification describes "attaching" broadly, however, as making linkages and flagging, we are not persuaded that the "attachment" language recited in certain claims of the '433 patent is confined to attachment *to the data content (audio file) itself* as

Patent Owner argues. *See id.* at 4. Even though we have construed "instant voice message" as data content, an attachment to the "instant voice message" cannot be more limiting than the Specification supports. The Specification's linkage and flagging cause the system to handle the one or more files *as attachments* of the "instant voice message." The tangible difference between an "instant voice message" with an attachment and one without seems to be in whether the document handler has sufficiently linked the attachment and whether the flags inform the client system to associate the attachment for effective transmission to the server. Thus, as long as the client has sufficient information that the "instant voice message" has an attachment, the recited "attachment" is performed. Whether links or flags, or other like information is used, is not relevant to the particulars of the independent claims, as such details are not recited expressly.

Based on our review of the claim language, the Specification, and the parties' arguments on claim construction, we determine that Patent Owner has not shown that the Specification supports its narrow position that the recited attachment to an "instant voice message" involves a direct attachment to only the data content. Giving the term its plain and ordinary meaning in the context of the Specification, as explained above, we construe "attaches . . . to the instant voice message" (and its variants in related patents) to mean indicating that another file (or files) is associated with the "instant voice message."

3. Instant Voice Messaging Application and Client Platform System

Petitioner proposes constructions for the terms "instant voice messaging application" and "client platform system." 1427 Pet. 9–15

(arguing for each element that the construction should be "hardware and/or software"); *see also* 1428 Pet. 9–25 (providing same argument). Patent Owner argues that Petitioner's proposed constructions are deficient because these terms are directed to only software. 1427 PO Resp. 16–20; 1428 PO Resp. 8–12. Petitioner replies that excluding hardware from the construction is inconsequential because the Petition maps each term (the "instant voice messaging application" and the "client platform system") to software. 1427 Reply 6–7; 1428 Reply 10–11. We agree with Petitioner. Though we doubt the merits of Patent Owner's arguments excluding hardware, we need not expressly construe the term as urged, because excluding hardware from the scope of these terms is immaterial to the parties' dispute regarding unpatentability. That is, we find no argument by Patent Owner meaningfully distinguishing the prior art based on the construction of these terms, and Petitioner has mapped these elements to Zydney's software agent.[4]

Based on our review of the record, we determine that "instant voice messaging application" and "client platform system" do not require an express construction to exclude hardware, as argued by Patent Owner.

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[4] *See* 1427 PO Resp. 30 (Patent Owner arguing that Petitioner requires both terms to encompass both software and hardware, but failing to identify any specific reason for why the Zydney disclosure of the software agent does not teach the software-only meaning of the terms).

4. Receiving the Instant Voice Message and an Indication of One or More Intended Recipients

Claim 17 recites that the system of claim 9 further comprises "an instant voice messaging server receiving the instant voice message and an indication of one or more intended recipients of the instant voice message." Ex. 1001, 25:25–28. Patent Owner argues that the '433 patent Specification provides the context necessary for construing this limitation of claim 17. Particularly, Patent Owner relies on the '433 patent description of how the user selects the intended recipients: "The user operates the IVM client 208 by using the input device 218 to indicate a selection of one or more IVM recipients from the list [and] the user selection is transmitted to the IVM server 202." Ex. 1001, 8:5–8. After the user's speech is recorded, the IVM client generates a send signal and "transmits the digitized audio file 210 and the send signal to the local IVM server 202." *Id.* at 8:19–27. According to Patent Owner, the '433 patent Specification consistently describes the selection of one or more intended recipients to be transmitted first, *separately* from the transmission of the instant voice message. 1428 PO Resp. 13–14.

Patent Owner also argues that some dependent claims address the transmission of the instant voice message without mention of the list of selected recipients. *Id.* at 14–15 (indicating that claims 18–21 recite buffering that does not mention the indication of one or more intended recipients). Patent Owner reasons that the omission from the dependent claims of the transmission of selected recipients indicates that the claims contemplate that the intended recipient's selection *has already been communicated to the server*. *Id.* at 15–16.

"[A] claim construction analysis must begin and remain centered on the claim language itself . . . ." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). The language of claim 17 recites that the server receives two things: the instant voice message and the indication of one or more intended recipients. The claim's focus, thus, is on *what* the server receives, not *when* the server receives them. The claim language itself does not contain the separateness requirement featured in Patent Owner's proposed construction. Rather, Patent Owner's proposed construction repeats the claim language and adds the language "separately receiving." Notably, the patentee could have included this language and, thus, a separateness requirement in claim 17—but did not.

We cannot limit further the scope of the claim merely because embodiments in the Specification provide additional detail on the timing of the transmissions to the server. *See SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) ("Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment." (citing *Electro Med. Sys. S.A. v. Cooper Life Sci., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994))). The language of claim 17 is broader than the embodiments Patent Owner proffers as support for its proposed construction. Moreover, Patent Owner points to nothing in the Specification that limits the claim language to the timing of the

transmissions to the server in these embodiments. Accordingly, for purposes of this Decision, we do not adopt Patent Owner's proposed construction of claim 17 to require that the instant voice message and the indication of one or more intended recipients are received at the server *separately*.

### *B. Overview of Asserted Prior Art*

We discuss more fully certain disclosures in the asserted references in our analysis below. A discussion of those references follows.

1. Zydney

Zydney relates to packet communication systems that provide for voice exchange and voice distribution between users of computer networks. Ex. 1003, [54], [57], 1:4–5. While acknowledging that e-mail and instant messaging systems were well-known text-based communication systems utilized by users of online services, and that it was possible to attach files for the transfer of non-text formats via those systems, Zydney states that the latter technique "lack[ed] a method for convenient recording, storing, exchanging, responding and listening to voices between one or more parties, independent of whether or not they are logged in to their network." *Id.* at 1:7–17. Zydney thus describes a method in which "voice containers"—i.e., "container object[s] that . . . contain[] voice data or voice data and voice data properties"—can be "stored, transcoded and routed to the appropriate recipients instantaneously or stored for later delivery." *Id.* at 1:19–22; 12:6–8. Figure 1 of Zydney is reproduced below.

FIG. 1

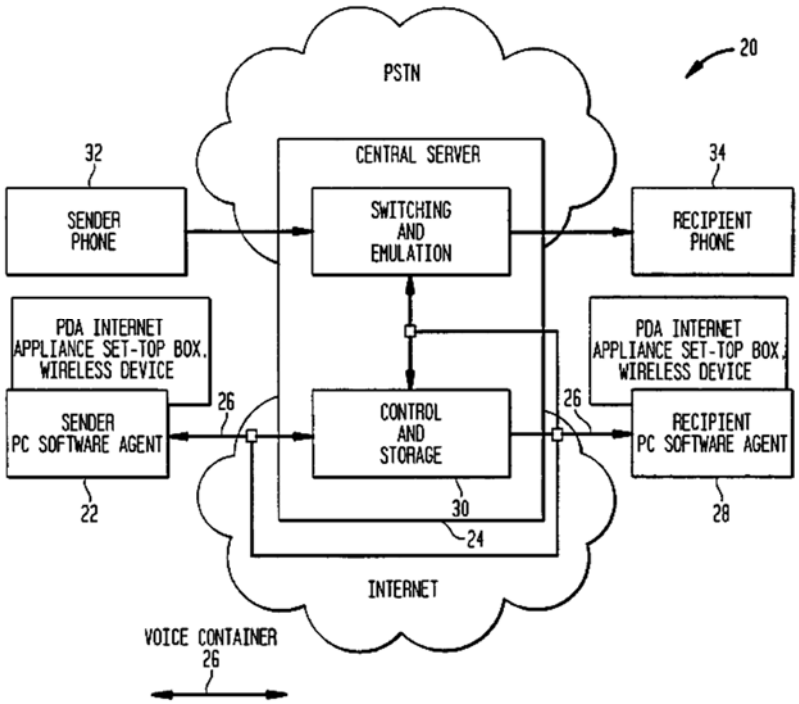


Figure 1, above, illustrates a high level functional block diagram of Zydney's system for voice exchange and voice distribution. *Id.* at 10:19–20. Referring to Figure 1, system 20 allows software agent 22, with a user interface, in conjunction with central server 24, to send messages using voice containers illustrated by transmission line 26 to another software agent 28, as well as to receive and store such messages, in a "pack and send" mode of operation. *Id.* at 10:20–11:1. Zydney explains that a pack and send mode of operation "is one in which the message is first acquired, compressed and then stored in a voice container 26 which is then sent to its destination(s)." *Id.* at 11:1–3. The system has the ability to store messages both locally and centrally at server 24 whenever the recipient is not available for a prescribed period of time. *Id.* at 11:3–6.

In the use of Zydney's system and method, the message originator selects one or more intended recipients from a list of names that have been previously entered into the software agent. *Id.* at 14:17–19. The agent permits distinct modes of communication based on the status of the recipient, including the "core states" of whether the recipient is online or offline and "related status information" such as whether the recipient does not want to be disturbed. *Id.* at 14:19–15:1. Considering the core states, the software agent offers the originator alternative ways to communicate with the recipient, the choice of which can be either dictated by the originator or automatically selected by the software agent, according to stored rules. *Id.* at 15:3–6. If the recipient is online, the originator can either begin a real-time "intercom" call, which simulates a telephone call, or a voice instant messaging session, which allows for an interruptible conversation. *Id.* at 15:8–10. If the recipient is offline, the originator can either begin a voice mail conversation that will be delivered the next time the recipient logs in or can be delivered to the recipient's e-mail as a digitally encoded Multipurpose Internet Mail Extension ("MIME") attachment. *Id.* at 15:15–17. Zydney explains that the choice of the online modes "depends on the activities of both parties, the intended length of conversation and the quality of the communication path between the two individuals, which is generally not controlled by either party," and that the choice of the offline delivery options "is based on the interests of both parties and whether the recipient is sufficiently mobile that access to the registered computer is not always available." *Id.* at 15:10–14, 15:17–19.

Once the delivery mode has been selected, the originator digitally records messages for one or more recipients using a microphone-equipped device and the software agent. *Id.* at 16:1–3. The software agent compresses the voice and stores the file temporarily on the PC if the voice will be delivered as an entire message. *Id.* at 16:3–4. If the real-time "intercom" mode has been invoked, a small portion of the digitized voice is stored to account for the requirements of the Internet protocols for retransmission and then transmitted before the entire conversation has been completed. *Id.* at 16:4–7. Based on status information received from the central server, the agent then decides on whether to transport the voice containers to a central file system and/or sends it directly to another software agent using the IP address previously stored in the software agent. *Id.* at 16:7–10. If the intended recipient has a compatible active software agent on line after log on, the central server downloads the voice recording almost immediately to the recipient. *Id.* at 16:10–12. The voice is uncompressed and the recipient can hear the recording through the speakers or headset attached to its computer. *Id.* at 16:12–14. The recipient can reply in a complementary way, allowing for near real-time communications. *Id.* at 16:14–15. If the recipient's software agent is not on line, the voice recording is stored in the central server until the recipient's software agent is active. *Id.* at 16:15–17. In both cases, the user is automatically notified of available messages once the voice recordings have been downloaded to storage on their computer. *Id.* at 16:17–19. The central server coordinates with software agents on all computers continuously, updating addresses,

uploading and downloading files, and selectively retaining voice recordings in central storage. *Id.* at 16:19–21.

Zydney discloses that the voice container also has the ability to have other data types attached to it. *Id.* at 19:6–7. Formatting the container using MIME format, for example, "allows non-textual messages and multipart message bodies attachments [sic] to be specified in the message headers." *Id.* at 19:7–10.

Figure 3 of Zydney is reproduced below.

FIG. 3

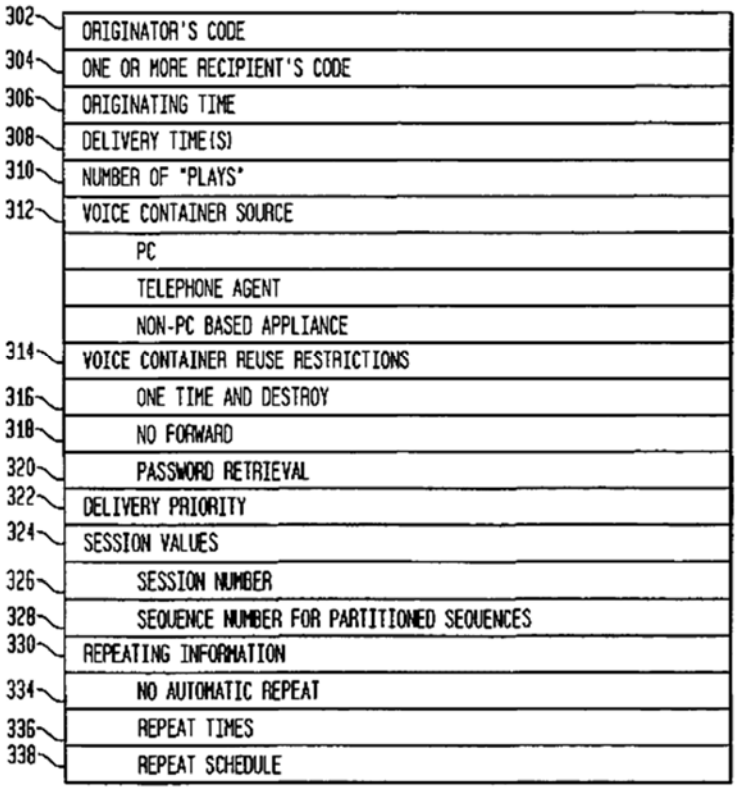


Figure 3, above, illustrates an exemplary embodiment of Zydney's voice container structure, including voice data and voice data properties components. *Id.* at 2:19, 23:1–2. Referring to Figure 3, voice container components include:

> [O]riginator's code 302 (which is a unique identifier), one or more recipient's code 304, originating time 306, delivery time(s) 308, number of "plays" 310, voice container source 312 which may be a PC, telephone agent, non-PC based appliance, or other, voice container reuse restrictions 314 which may include one time and destroy 316, no forward 318, password retrieval 320, delivery priority 322, session values 324, session number 326, sequence number for partitioned sequences[] 328, repeating information 330, no automatic repeat 332, repeat times 334, and a repeat schedule 336.

*Id.* at 23:2–10.

2. Appelman

Appelman describes a real-time notification system that enables a user to define "buddy lists" to track co-users of an online or network system. Ex. 1004, [54], [57]. The system tracks for the user the log-on status of the co-users and displays that information in real time to the tracking user in a graphical interface. *Id.* at [57]. When the user logs on to a system, the user's set of buddy lists is presented to a buddy list system, which attempts to match co-users currently logged into the system with the entries on the user's buddy list, and any matches are displayed to the user. *Id.* As co-users log on and log off, the user's buddy list is updated to reflect the changes. *Id.*

Figure 2a of Appelman is reproduced below.

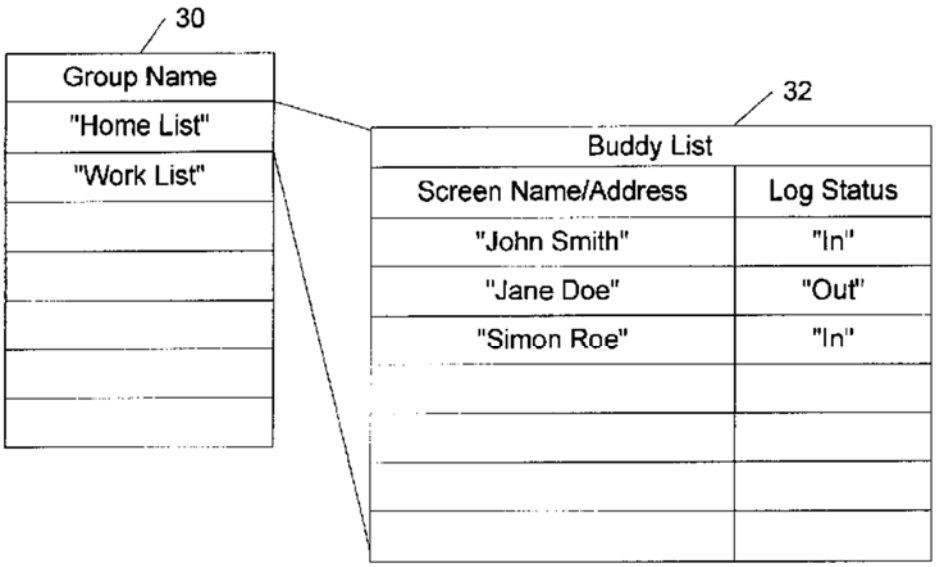


**FIG. 2a**

Figure 2a, above, illustrates "a set of symbolic data records showing the basic types of data used by one embodiment of [Appelman's] invention for a buddy list[] and the conceptual relationship of data elements." *Id.* at 2:15–18. With reference to Figure 2a, Group Name table 30 stores user-defined group names for buddy lists. *Id.* at 3:36–37. Each user may define multiple buddy lists by group names. *Id.* at 3:38. Two buddy lists, "Home List" and "Work List," are shown in Group Name table 30. *Id.* at 3:39. Each group name in Group Name table 30 has an associated Buddy List table 32, comprising multiple records that each correspond to a co-user (or "buddy") that the user wishes to track. *Id.* at 3:39–43. Each record may include data elements for the screen name (or address, such as an Internet address) of a particular co-user to be tracked, and the logon status of that user (e.g., codes for "In" or "Out"). *Id.* at 3:43–47.

Figure 11 of Appelman is reproduced below.

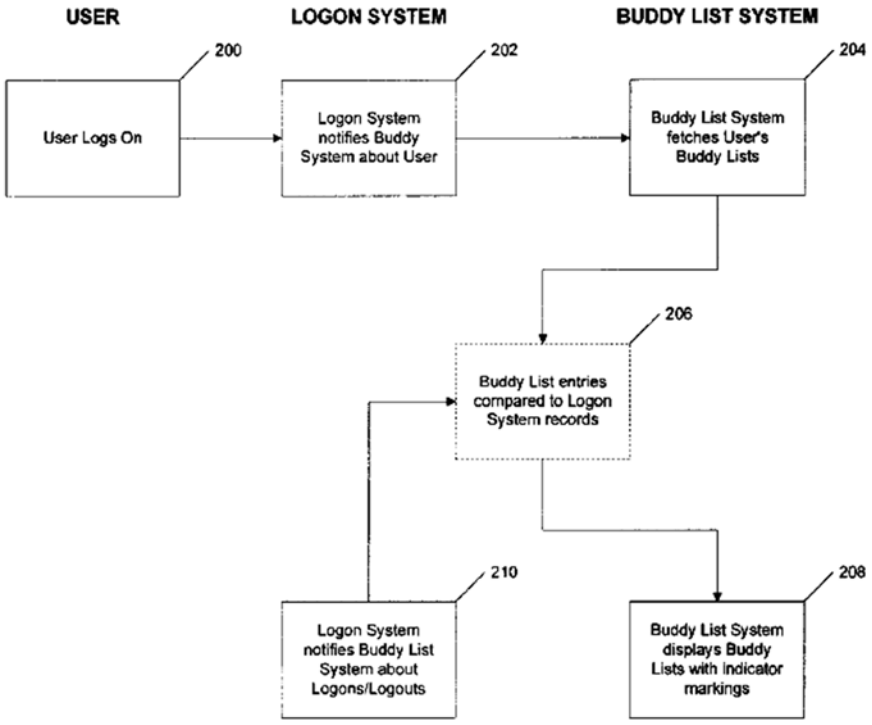


FIG. 11

Figure 11, above, is a flowchart showing an implementation of Appelman's invention. *Id.* at 2:41–42. In the illustrated implementation, a user logs into a Logon System (Step 200), which notifies the Buddy List System about the User (i.e., passes the User's ID, address, or screen name to the Buddy List System) (Step 202). *Id.* at 6:53–58. The Buddy List System accesses the user's buddy lists from a database, which may be, for example, on the user's own station (Step 204). *Id.* at 6:58–60. The entries in the user's buddy lists then are compared to the records of the Logon System (Step 206). *Id.* at 6:60–62. Appelman explains that this step is shown in dotted outline to indicate that the comparison can be done by passing records from the Logon System to the Buddy List System, or vice versa, or could be done by a

separate system. *Id.* at 6:62–65. The Buddy List System then displays a buddy list window showing the status (i.e., logged in or not) of the co-users on the user's buddy lists with any of various indicator markings (Step 208). *Id.* at 6:66–7:2. Thereafter, while the user's buddy list window is open, the Logon System notifies the Buddy List System about new logons/logoffs of co-users (Step 210), causing a new compare of the user's buddy list entries to the Logon System records (Step 206). *Id.* at 7:3–7. Appelman explains that the Logon System may, for example, maintain a copy of a user's buddy lists and notify the Buddy List System only upon a logon status change for a co-user on the user's buddy lists. *Id.* at 7:8–11. The Buddy List System then updates the indicated status of the displayed co-users (Step 208). *Id.* at 7:11–12.

3. Clark

Clark, titled "System for Managing and Organizing Stored Electronic Messages," is directed to systems for managing and organizing electronic messages. Ex. 1008, [54], 1:8–9. According to Clark,

> A computer-based system catalogs and retrieves electronic messages saved in a message store. The system automatically organizes each saved message into multiple folders based on the contents and attributes of the message, and implements improved methods for manually organizing messages.

*Id.* at [57]. A particularly relevant embodiment in Clark is shown in Figure 4A, reproduced below.

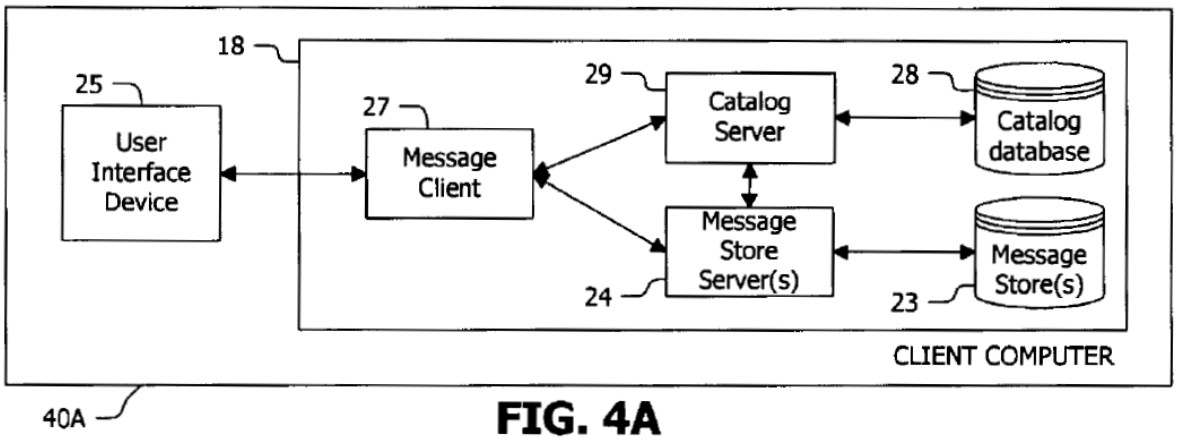


**FIG. 4A**

Figure 4A illustrates system 40A with client computer 18 implementing catalog server 29 and catalog database 28, and also including message client 27, message store 23, and message store server 24. *Id.* at 10:29–33. Each message store 23 comprises a memory, file, or database structure that provides temporary or permanent storage for the contained messages. *Id.* at 9:13–16. Clark describes the invention as providing catalog database 28 (and preferably catalog server 29) to organize the contents of one or more message stores 23. *Id.* at 9:54–57. Catalog database 28 and message store 23 may be separate from one another or may be integrated in a single integrated message store. *Id.* at 11:1–3. In the embodiment where they are separate from each other, illustrated in Figure 5A (reproduced below), catalog database 28 may be linked to a separate external message store 23. *Id.* at 11:3–7.

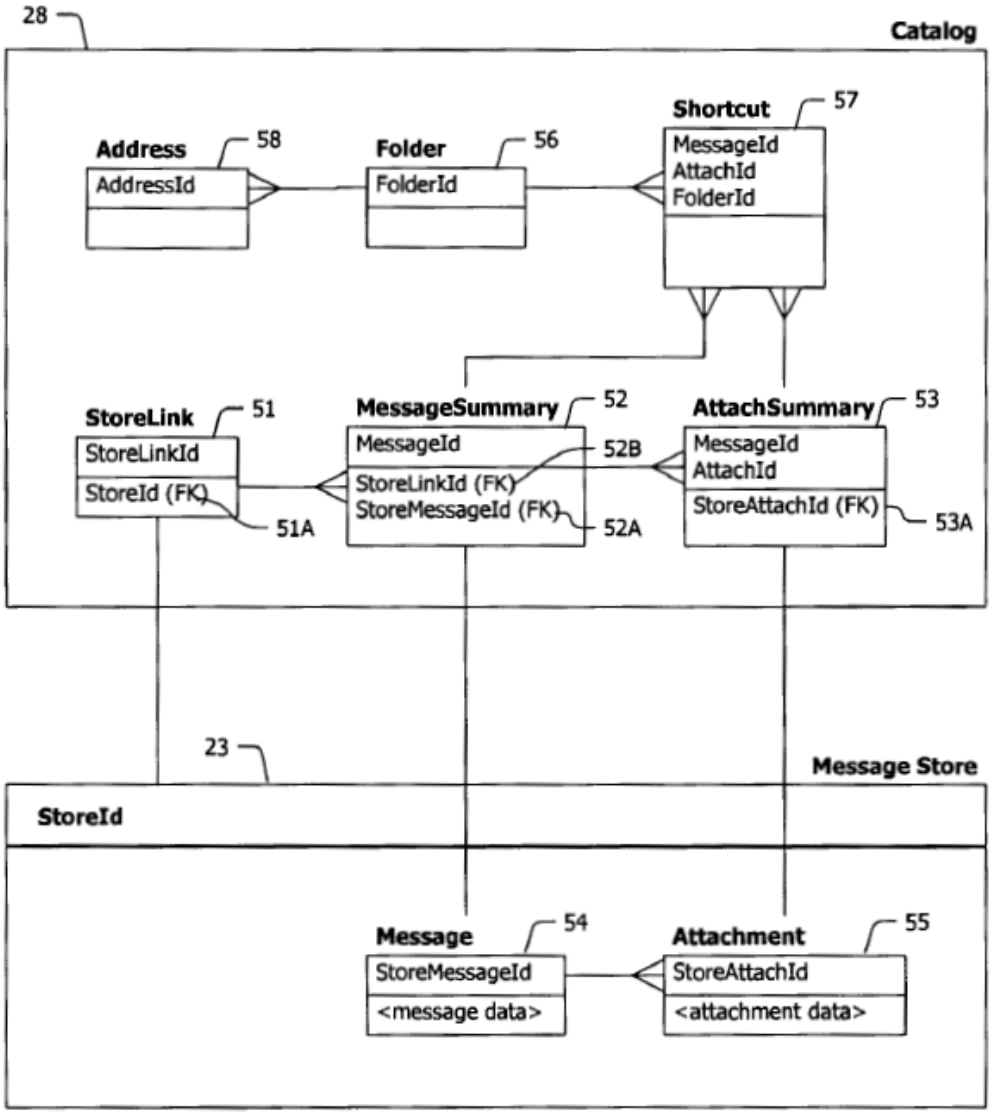


**FIG. 5A**

Figure 5A depicts the linking between catalog database 28 and external message store 23, where StoreLink table 51 contains rows, each with a StoreID pointing to a linked message store 23, and catalog database 28 includes MessageSummary table 52, which contains StoreMessageId 52A of messages in message store 23. *Id.* at 11:25–33. The Figure 5A

embodiment also shows that messages 22 are stored in Message table 54 in message store 23 and that attachments are stored in Attachment table 55 in message store 23. *Id.* at 35–37.

4. Greenlaw

Greenlaw refers to the book entitled "Introduction to the Internet for Engineers," filed in IPR2017-01428 as Exhibit 1110. Greenlaw describes various aspects of electronic mail ("email") including advantages, disadvantages, and recommendations for using email, including the recommendation that "for important correspondence or correspondence you would like to keep a record of, it is a good idea to *Cc* yourself on the message." *Id.* at 20.

5. Newton

The 18th edition of "Newton's Telecom Dictionary," filed in IPR2017-01428 as Exhibit 1106, provides definitions for various "802 Standards," which are standards for Local Area Network and Metropolitan Area Network data communications. Ex. 1106, 6 (*802 Standards*). Two of the most important standards are the 802.11a and 802.11b. *Id.* Petitioner relies on Newton's definition of the 802.11b standard, which states in part that "802.11b is now the most common wireless local area network." *Id.* at 7. More particularly, Newton states that "802.11b (also called WiFi) is now commonly installed in offices, airports, coffee shops, etc." *Id.*

*C. Analysis of Claims 1–8 (1427 Case)*

We first discuss the differences between the independent claim limitations and the asserted prior art. Petitioner identified in Zydney all the claim 1 limitations, except for the limitations directed to a message database and file manager system, for which Petitioner relies on Clark. 1427 Pet. 28–55. Claim 6 is similar in scope to claim 1 but, unlike claim 1, does not recite that the "instant voice message is represented by a database record including a unique identifier." Claim 6 also adds an additional limitation requiring compression and decompression. *Id.* at 61–63. Petitioner relies on claim 1's mapping for claim 6. *Id.* at 60–63. Thus, we address first whether Petitioner has demonstrated by a preponderance of the evidence that claim 1 would have been obvious over the combination of Zydney and Clark.

1. Discussion of Independent Claim 1

-a-

Petitioner alleges that Zydney teaches an "instant voice messaging application including a client platform system for generating an instant voice message." 1427 Pet. 28. In particular, Petitioner identifies Zydney's software agent as the software that generates an instant voice message. *Id.* We agree with Petitioner's showing. Figure 7, reproduced below, explains how Zydney operates from the originator (sender) viewpoint.

*FIG. 7*

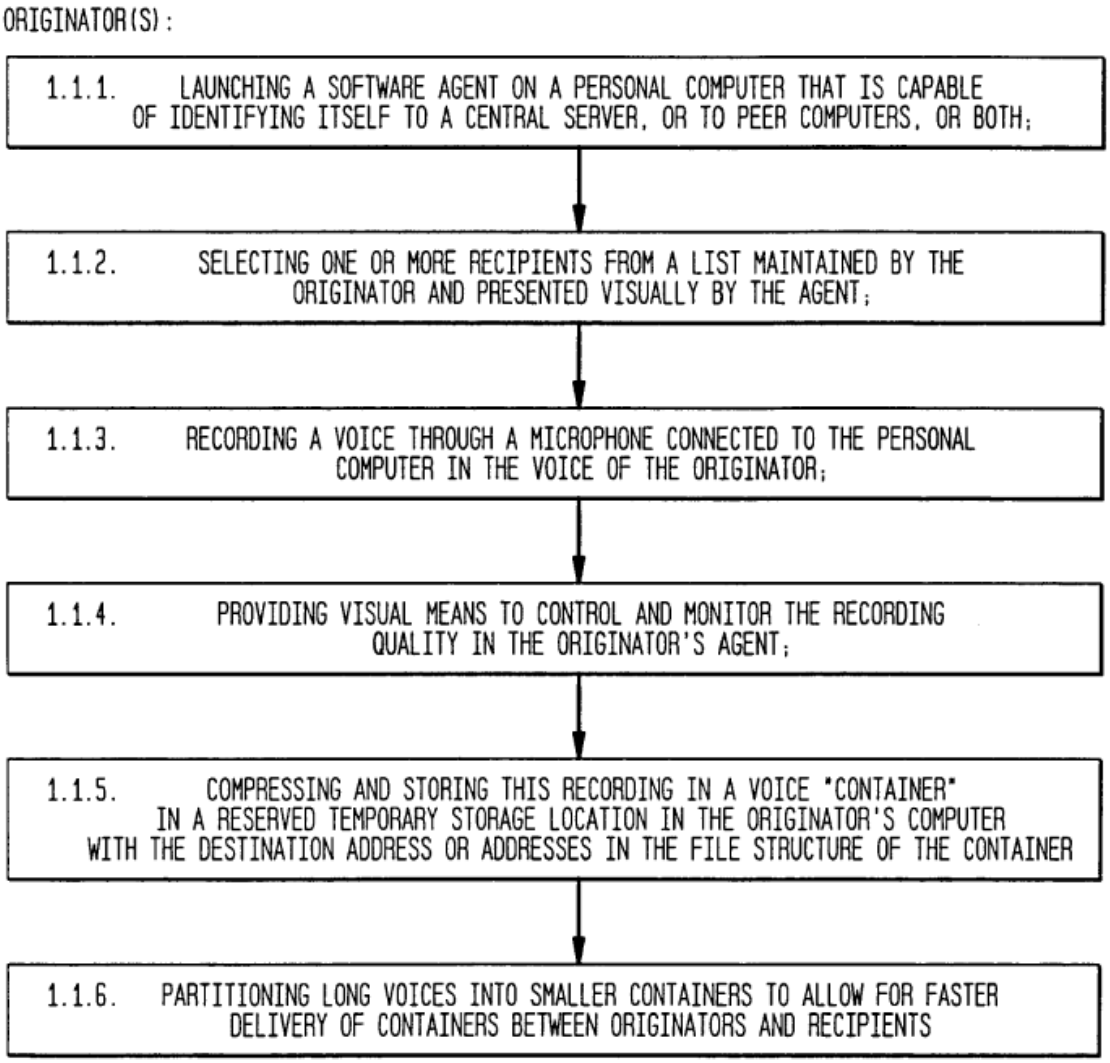


Figure 7 illustrates a flow chart of an embodiment of the method and system from the perspective of the recipient. Ex. 1003, 3:5–6. The first step of the method illustrated in Figure 7, above, describes the launching of a *software agent* on a personal computer that is capable of identifying itself to a central server, to peer computers, or to both. That software agent constitutes "an instant voice messaging application" that includes a "client platform system for generating an instant voice message" because Zydney

describes that its originator's software agent generates and transmits instant voice messages in the form of voice containers. 1427 Pet. 30–31 (citing Ex. 1003, 2:1–3, 10:20–11:3, 12:6–8, 14:2–5).

Generating the "instant voice message" by a "client platform system" is performed by the portion of the software agent that records the voice of the sender and packages it into a file. *Id.* at 31 (citing Ex. 1003, 16:1–4). Thus, Petitioner explains, and we agree, that Zydney's voice container is the instant voice message generated by the "client platform system."

Zydney's voice container is an "instant voice message" as we have construed the term: data content that includes a representation of the audio message. As Zydney explains, the software agent in the originator (sender) device, equipped with a microphone, "digitally records messages for one or more recipients" and stores the file in the PC. *Id.* Zydney then describes "creat[ing] a message" by stating that it "address[es], pack[s] and send[s] the message in a voice container." *Id.* at 31 (citing Ex. 1003, 14:2–5); *see also* Paper 42, 7–8 (Petitioner arguing that Zydney's voice container is both data content and a data structure).[5] In this manner, Zydney's voice container

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[5] Patent Owner argues that we should give no weight to any of Petitioner's arguments on claim construction in the 1427 case because in that proceeding the scope of "instant voice message" was not disputed. Paper 45, 1. Although we agree that in the 1427 case Patent Owner did not raise arguments necessitating claim construction of "instant voice message," for consistency across proceedings, we have considered the parties' briefs as they pertain to the 1427 case and mention the argument to illustrate that the definition of "voice container" in Zydney was raised in the Petition and in Petitioner's brief on claim construction and does not constitute new argument as Patent Owner may suggest. *See id.* at 5 (Patent Owner arguing

contains "voice data" and "may also contain properties of the voice data." *Id.* (citing Ex. 1003, 12:6–8). Indeed, Petitioner points out that Zydney defines the voice container as either "voice data" or "voice data and voice data properties." Paper 42, 8. That is, the voice container, when defined by Zydney as "voice data," is the digital recording of the user's voice message or audio file, which constitutes data content. And we find that when the voice container is defined as "voice data and voice data properties," the digital recording of the user's voice or audio file (data content) is packaged together with additional data. In either situation, the voice container constitutes data content that includes the representation of the audio message. The format of the data content or how it is packaged (i.e., structure) is not relevant, as we focus on whether the voice container is data content notwithstanding additional data and structure that ensures adequate transport or delivery of the data content. Patent Owner does not challenge Petitioner's argument and evidence that Zydney's voice container teaches the recited "instant voice message," as recited in claim 1.[6] Based on the findings and analysis above, we determine that Zydney teaches "an instant voice messaging application including a client platform system for generating an instant voice message."

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that any suggestion of the voice container constituting the audio file is new and unsupported argument).

[6] Patent Owner's arguments that Zydney's voice container is not the recited "instant voice message" are directed to the claim-9 requirement of attaching one or more files to the "instant voice message." 1428 PO Resp. 16–21. These arguments are discussed below in our discussion of claim 9.

-b-

Claim 1 further recites that the "instant voice messaging application" includes "a messaging system for transmitting the instant voice message over a packet-switched network via a network interface" and also "displays a list of one or more potential recipients for the instant voice message." Zydney teaches both of these features of the "instant voice messaging application." First, as to the "messaging system," Zydney explains that the same generated voice container or voice containers (if the software has partitioned long voice messages into smaller containers) are then transmitted by the *transport processes* of Zydney's software agent. *Id.* at 34 (citing Ex. 1003, 13:1–6, Fig. 2, Fig. 7 (explaining at step 1.1.6 that long voice messages may be partitioned for faster delivery). Zydney delivers the voice containers over a packet-switched network because it discloses that the software agent at the originator (sender) communicates voice containers to other software agents over the Internet. *Id.* at 34–35 (citing Ex. 1003, Fig. 1A, 1:2–3, 2:6–10, 5:3–4, 23:11–12). Petitioner also provides evidence, via testimony of its expert, which we credit, that in describing communication using packets over the Internet, a person of ordinary skill in the art would have understood that Zydney discloses communication over a packet-switched network. *Id.* (citing 1427 Lavian Decl. ¶¶ 100–102). To deliver the voice containers over the packet-switched network, Zydney teaches the use of a network interface, such as an Ethernet card. *Id.* at 37 (citing Ex. 1003 12:13–16; 1427 Lavian Decl. ¶¶ 189–192).

As to the limitation of displaying a list of one or more potential recipients, Zydney describes its software agent as providing a visual

presentation of a list of potential recipients that may be selected. *Id.* at 39 (citing Ex. 1003, 14:18–19, Fig. 7 (step 1.1.2)). Therefore, Zydney teaches that its software agent (instant voice messaging application) displays a list of one or more potential recipients for the instant voice message.

Based on the foregoing explanation of Zydney and the arguments provided in the Petition at pages 28–39, including the evidence provided in support, we agree with Petitioner that Zydney teaches an "instant voice messaging application" that includes "a messaging system for transmitting the instant voice message over a packet-switched network via a network interface" and that "displays a list of one or more potential recipients for the instant voice message."

-c-

Claim 1 recites that "the instant voice messaging application includes a message database storing the instant voice message." Petitioner states that the limitation is disclosed by Zydney in view of Clark, for two separate reasons. 1427 Pet. 39–48.

First, Petitioner contends, "Zydney does not use the term *message database* to describe storage of instant voice messages on the client system, but the storage in Zydney meets the claim under its broadest reasonable construction." *Id.* at 42. We do not agree with Petitioner's contention that Zydney teaches the recited "message database." Zydney, as Petitioner points out, describes "saving" the received voice containers. *Id.* (citing Ex. 1003, 10:6–7, Fig. 9). And although Petitioner correctly posits that a person of ordinary skill in the art would understand Zydney's downloading of voice containers at the software agent as involving *storing* the messages

on the user's device, Petitioner does not show that "storing" necessarily involves a "message database" as the claim requires. *See id.* (citing 1427 Lavian Decl. ¶ 199). We find, therefore, that Petitioner has not shown persuasively that Zydney teaches the "message database."

Second, Petitioner contends that Clark discloses the missing limitation: the message database. In particular, Petitioner relies on Clark's message store 23, which comprises a database structure for temporary or permanent storage of messages. *Id.* at 43 (citing Ex. 1008, 9:11–15). Petitioner argues, and we agree, that Clark specifically describes the message store as a database and that the database would be located in the client system. *Id.* (citing Ex. 1008, 8:31–44, 10:27–33, 11:1–5, Fig. 4A). Clark, for example, describes an embodiment in Figure 4A, reproduced below, in which the user's computer contains the message client and the message store. *Id.*; Ex. 1008, Fig. 4A.

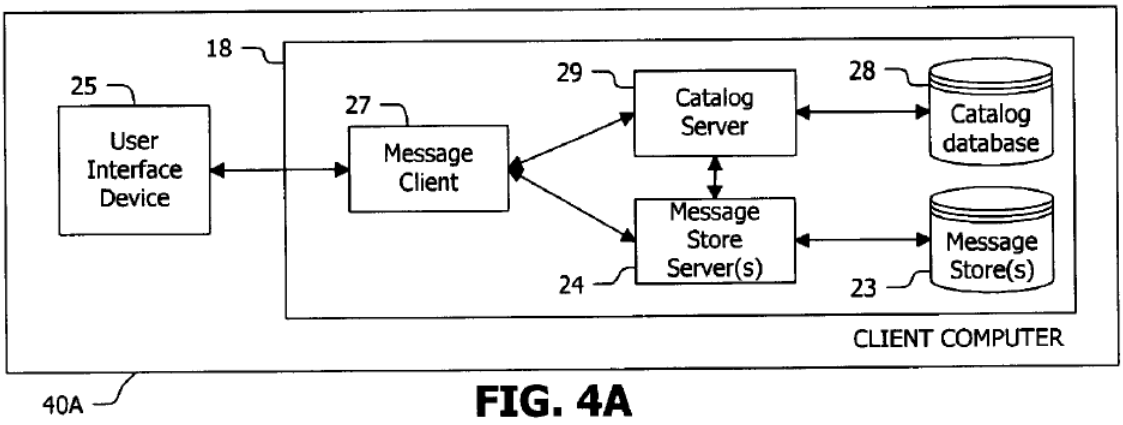


**FIG. 4A**

Figure 4A depicts an embodiment of a physical configuration of the client computer 18 on which electronic messages are received and stored. Ex. 1008, 5:1–3, 4:25–27. The electronic messages of Clark are not limited to e-mails, as it describes that it is known for electronic messages to include

instant messaging and that the electronic message may have attachments. *Id.* at 1:37–39, 8:36–44. Clark organizes the stored electronic messages in the database of message store 23 using a catalog database 28, which organizes the messages into different folders. *Id.* at 9:54–60; *see also* 10:11–19 (describing the various elements of an electronic message shown in Figure 3 and that the elements can be the basis for associating the message with one or more folders). Notwithstanding Clark's use of the catalog database for further organizing the messages into folders, Clark describes a message store 23 as a database for storing the messages, which teaches the required "message database."

Petitioner further points out that Clark discloses storing sent and received messages in its message store. 1427 Pet. 44. On this point we agree that Clark describes information about the messages stored in the database as including the dates and times for received and sent messages. Ex. 1008, 17:9–22.

The Petition states various reasons for combining Zydney's and Clark's teachings. We discuss the most persuasive. Petitioner argues, and we agree, that Clark provides a compelling reason for why a person of ordinary skill in the art would use a message database in messaging client software, such as the software agent of Zydney. 1427 Pet. 45. On this point Clark recognizes a need for systems and method of automatically organizing stored electronic messages, including instant messages. Ex. 1008, 4:9–12. And Clark's invention provides not only the message store or database, but also the cataloging of messages that accomplishes the desired organization. *Id.* at 4:25–32. Particularly relevant to our analysis is Clark's description of

its invention as "advantageously [] integrated with messaging client software . . . to facilitate the organization of electronic messages." *Id.* at 4:36–39. Thus, Clark informs us that it would have been advantageous to include a message database in messaging client software to organize further electronic messages, including instant messages. Petitioner's expert testifies, and we credit this testimony, that Clark's teachings would have encouraged a person of ordinary skill in the art to integrate Clark's client message database with Zydney's system to store and organize sent and received instant voice messages, including attachments. 1427 Lavian Decl. ¶ 210. Using the message database of Clark would have been an improvement of Zydney's client system. *Id.*

Thus, Petitioner has shown that it would have been obvious to combine Zydney and Clark for the reasons articulated by Clark. We find that given Clark's teachings, a person of ordinary skill in the art looking to improve Zydney's software agent capabilities of storing messages would have looked to Clark's method and system for organizing electronic messages using a message store. *See KSR v. Teleflex*, 550 U.S. 398, 417 (2007) ("[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill."). We are persuaded that application of Clark's teachings to Zydney's system would not have been beyond the skill of a person of ordinary skill in the art. *See* 1427 Lavian Decl. ¶ 215.

Patent Owner argues that Clark's message store does not store "instant voice messages." 1427 PO Resp. 21–22. As we understand Patent Owner's

argument, Clark allegedly focuses on storing voicemail messages, which the '433 patent distinguishes from an instant voice message. *Id.* While we recognize that there is a difference between a voicemail message and an instant voice message, the combination of teachings described above relies on Clark's use of the message store to store Zydney's voice containers. This argument does not address the combined teachings of the references (which relies on Zydney's voice containers, not Clark's voicemail messages). And nothing in Clark has been shown to limit the message store to only storing voicemail messages. Indeed, we read Clark's description of the message store broadly and not limited to a particular type of message, such as voicemail messages as Patent Owner argues. *See* 1427 Reply 8 (citing Ex. 1008, 8:31–44). Clark describes, on this point, that "[t]he invention can also be applied to any other present or future types of electronic messages" and states that the organization methods it describes are applicable to "any sort of electronic messages which are to be temporarily or permanently stored." Ex. 1008, 8:33–41.

Patent Owner also argues that neither Clark nor Zydney teaches the message store as part of the client side "instant voice messaging application." 1427 PO Resp. 21–22. We are not persuaded by this argument. As stated above, Clark expressly teaches incorporating the message store in the client computer as part of the client messaging software. *See* 1427 Reply 7–8 (citing Ex. 1008, 10:27–33, Fig. 4A). This teaches the message store would be in software such as Zydney's software agent, which is the client-side "instant voice messaging application" as discussed above.

Based on the foregoing, we conclude that Petitioner has shown that the combination of Zydney and Clark teaches the limitation of "the instant messaging application includes a message database storing the instant voice message."

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Claim 1 recites "wherein the instant voice message is represented by a database record including a unique identifier." For this limitation, Petitioner relies on Clark's disclosure of assigning a unique StoreMessageId to the message when the message is added to the message store. 1427 Pet. at 48 (citing Ex. 1008, 11:50–54). Petitioner also points out that "StoreMessageId . . . may comprise number[s], or other identifiers, assigned to the messages and attachments respectively by message store server 24." *Id.* at 48–49 (citing Ex. 1008, 11:21–24). Petitioner argues that the "unique identifier" of Clark, i.e. StoreMessageId, is stored in a database record because Clark states that "Message Summary table 52 [] contains the StoreMessageId 52A of messages in message store 23." *Id.* at 49 (citing Ex. 1008, 11:31–32). As to the location of the Message Summary table, Clark describes that it is located in catalog database 28, which may be integrated with message store 23 in a single integrated message store. *Id.* (citing Ex. 1008, 11:1–5, 11:31–32). We note here that in describing Figure 5A, Clark states that the StoreMessageId is stored in two places: (1) in Message Summary table 52 as foreign key (FK) in the catalog database as described above, and (2) in Message table 54 of Message store 23. Ex. 1008, Fig. 5A, 11:38–40, 16:50–63. According to another embodiment of Clark, depicted in Figure 5B, the catalog database and

message store are preferably a single database comprising related tables. Ex. 1008, 11:1–5, 55–64, Fig. 5B. According to Petitioner, and we agree, the stored message is uniquely identified by StoreMessageId, and, therefore, by the record containing StoreMessageId, and can be retrieved using that unique identifier. *Id.* (citing Ex. 1008, 11:8–12). From the discussion above, and that of Section "-c-" above, we agree that, in Petitioner's asserted combination, Zydney's voice containers are stored in the message store of Clark, and each voice container is identified by a StorageMessageId that is a unique identifier. We also find that Clark's MessageSummary table 52 includes a record that contains the StorageMessageId unique identifier, and, thus, that record with the StorageMessageId represents the stored voice container. Therefore, we are persuaded that Clark teaches that the "instant voice message is represented by a database record including a unique identifier."

Patent Owner raises several arguments in an attempt to show that Clark does not teach the "database record" limitation. First, Patent Owner argues that the claim requires the "database record" to be a record of the "message database." 1427 PO Resp. 22. Relying primarily on the claim language itself, Patent Owner contends that by reciting the word "database" as part of both terms ("message database" and "database record"), the terms are interrelated so that a person of ordinary skill in the art would have concluded that the claims require storing the instant voice message *and* the unique identifier in the *same* message database. *Id.* at 22–23 (citing cross-examination of Dr. Lavian in support); *see also* 1427 Tr. 28:1–22. More importantly for Patent Owner's second argument, the Specification describes

the *database record* as comprising *both* a message identifier and the instant voice message. *Id.* at 23 (citing Ex. 1001, 12:34–40). Patent Owner points to the Specification's statement that the instant voice messages are "represented" as database records, such that the Specification implies a meaning of "represented" to refer to the content of the database record. *Id.* In sum, Patent Owner contends that the claims require a *single* database record, in a *single* message database, where the record includes both the instant voice message and the unique identifier. Because the arguments from Patent Owner attempt to distinguish Clark based on the single-database-record argument, our analysis below focuses on that issue.

Based on the single-database-record characterization, Patent Owner argues that Clark's message is stored in one database record and the StoreMessageId is stored in a different database record. *Id.* at 23–26. Specifically, Patent Owner highlights that the unique identifier is stored in MessageSummary table 52 (in the catalog database), purposely separate from message store 23, which stores the message. *Id.* at 24–25 (citing Ex. 1008, Figs. 5A, tables 52 and 54, 16:64–17:23; Ex. 2001 ¶ 80; Ex. 2003, 42–43, 44:20–45:6).

We begin by ascertaining whether Patent Owner's characterization of the claim scope as requiring a single database record is proper. Claim 1 recites "the instant voice message is represented by a database record including a unique identifier." Two things are evident from this plain language: (1) the instant voice message is *represented* by a database record; and (2) the same database record includes a unique identifier. Neither of these two features requires *storing* the instant voice message in the same

database record that includes the unique identifier. Instead, by using the word "represented," the claim language seems to reject a requirement of *storing* the instant voice message in a database record. We conclude that this is the correct claim scope because, among other things, the claim uses the word *storing* elsewhere to expressly require *storing the instant voice message in the message database*. If it were a requirement to store the instant voice message in the database record of the message database, the applicant could have specifically claimed *storing* rather than requiring a "representative" relationship between the instant voice message and the database record. In a way, Patent Owner asks us to read the claim as if it stated "a message database storing the instant voice message in a database record including a unique identifier." *But see K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999) ("Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee."); *Texas Instruments, Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993) ("[C]ourts can neither broaden nor narrow claims to give the patentee something different than what he has set forth.") (internal quotes omitted). We also view Patent Owner's request as urging that we read limitations into the claim from an embodiment of a database record comprising the instant voice message. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004) ("We have cautioned against reading limitations into a claim from the preferred embodiment described in the specification, even if it is the only embodiment described, absent clear disclaimer in the specification.").

Finally on the issue of claim scope, we note that the Specification uses the word "represented" in connection with another embodiment of a database record that does not support Patent Owner's argument. That embodiment states that "the users are *represented in the database as records*, each record comprising a user name, a password, and a contact list . . . and other data relating to the user." Ex. 1001, 13:65–14:1 (emphasis added). This embodiment also describes a *representative* relationship that does not require storing the "users" in the database record—such a requirement would be nonsensical. Only information pertaining to the user is stored in the record. The same *representative* relationship is encompassed by the claim language at issue. We are, therefore, not persuaded that the claims are as narrow as Patent Owner argues, and that Clark's "separate-table" disclosure is fatal to Petitioner's position.

Here, Petitioner has identified StoreMessageId, which is stored in a MessageSummary table of the catalog database, as having the required representative relationship to the stored message. 1427 Pet. 49. We agree that the representative relationship is satisfied, as the StoreMessageId pertains uniquely to the stored message. *Id.* (citing Ex. 1008, 11:38–40, 11:8–12) (arguing that the unique identifier represents the underlying stored message and can be used to retrieve it). For the reasons discussed above regarding the proper scope of the claim, it is not relevant that the StoreMessageId, in some embodiments of Clark, may be in a record (row of the MessageSummary table (*see* Ex. 1008, 16:58–60)) separate from the record that stores the message in message store.

But even under Patent Owner's narrow reading of the claim, we note that Petitioner persuasively *rebuts* Patent Owner's single-record distinctions because the unique identifier of Clark's StoreMessageId is not limited to being stored in a record that is separate from the record that contains the message in the message store. 1427 Reply 12 (arguing that the record that contains the message (Message table 54) includes both the message and the unique identifier (StoreMessageId in Fig. 5A and MessageId in Figure 5B).[7] As discussed above, in either Figure 5A or Figure 5B, Clark depicts the unique identifier (StoreMessageId or MessageId, respectively) stored in the Message table, together with the message. Ex. 1008, Figs. 5A, 5B; 11:1–5, 11:38–40, 11:55–64, 16:50–63. Petitioner correctly argues, with evidentiary support, that when integrated in the same database, the label of StoreMessageId in Figure 5A becomes MessageId in Figure 5B (as no separate store is needed), resulting in the message and unique identifier both being stored in the same *record* of Message table 54'. 1427 Reply 11–14 (citing Ex. 1008, Figs. 5A, 5B, 11:50–54; Ex. 1002 ¶ 216); 1427 Tr. 11:12–12:25; *see also* Ex. 1008:17:1–3 (describing MessageId as a "non-zero value that uniquely identifies a row in MessageSummary table 52"). As explained by Petitioner and supported by Clark, it is evident that a *single*

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[7] We disagree with Patent Owner's contention, stated during oral argument, that the argument concerning the MessageId is new argument that is outside the scope of a proper reply. 1427 Tr. 33:20–35:19. We have concluded that it is proper rebuttal testimony necessitated by Patent Owner's arguments regarding the single-record distinctions. Further, Patent Owner substantively responded to Petitioner's rebuttal by arguing a distinction between tables and records, which we address below. *Id.*

*record* of the Message table includes both the message and the unique identifier.

Further, focused on the role of the unique identifier in the Message Summary table, we are persuaded that Petitioner has shown that Clark teaches a single database record containing both the message and the unique identifier. Clark uses the Message Summary table to collect information about the message, including the MessageId (as shown in Figure 5B). Ex. 1008, Fig. 5B (illustrating Message Summary table 52' including the MessageId). The MessageId in the Message Summary table, however, is used as a key to access the particular record that contains the message stored in the Message table, because the Message table also contains the MessageId. *See* 1427 Reply 12 (explaining Clark's use of a primary key to access the message from the Message Summary table 52). The Message Summary table and the Message tables are therefore related, which is explained in Clark by stating that the database has related tables in a relational database where the fields of these tables are mapped. Ex. 1008, 11:3–5, 11:61–12:6. Thus, we find that by sharing the MessageId as a key in the two tables (Message Summary table and Message table) and describing using a relational database to map the fields of these related tables, Clark teaches that records of information span multiple tables. That is, a particular message with its unique identifier has related information stored in in a related record. In relational databases, as Petitioner points out, records of related tables are not distinct from each other. 1427 Reply 10. We agree. The interrelatedness of the keys and the information that Clark links between rows of the disclosed tables leads us to conclude that the

ordinarily skilled artisan would have understood that a "record" for a particular message in Clark would indeed span multiple tables, with the body of the message stored in a row of one table and the information about the message stored in a row of another table, but these rows being inexorably linked so Clark has access with one key to all of the relevant rows of information across tables. Petitioner supports this assertion with evidence of the knowledge in the art that database records were known to span multiple tables in relational databases. 1427 Reply 10 n.4 (citing U.S. Patent No. 6,882,993, Ex. 1018, 1:34–2:55, Figs. 1 and 2, which describes multiple base tables from which a summary table is derived, where the rows from the summary table are derived from the relevant rows of the base tables). Thus, we conclude that, even under Patent Owner's characterization of the claim as requiring a single-database record, in light of the information stored in the rows of Clark's Message Summary and Message tables, Petitioner has demonstrated that a person of ordinary skill in the art would understand Clark's relational database to teach or suggest that a *single record* spanning the Message Summary and Message tables would contain the message and the unique identifier.

Patent Owner argues a further distinction of Clark storing information in multiple tables (not records) in Figures 5A and 5B, and asserts that a table is not a record. 1427 Tr. 29:6–15 (stating that Dr. Lavian agreed to the distinction that a table is not a record, but that a table instead contains records). We have reviewed the cross-examination of Dr. Lavian on this issue. Ex. 2003, 39–43. The argument is not persuasive. Clark refers to rows of a table as records and explains that reading rows of the Message

Summary table 52 is much faster than reading rows of the Message Table 54. Ex. 1008, 16:50–67. The explanation clarifies that rows are records and that the Message Summary table will have in each row a MessageId that identifies the message. The disclosures of rows within tables does not change the fact that for each message there is also a *record* in the *Message table* that includes both the message and the MessageId, notwithstanding that Figures 5A and 5B depict tables.

Accordingly, based on the evidence provided by Petitioner, we find unpersuasive Patent Owner's arguments that Clark does not teach "wherein the instant voice message is represented by a database record including a unique identifier," even under Patent Owner's claim scope arguments, which we have rejected as improper.

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Patent Owner challenges the rationale to combine Clark and Zydney that we discussed in Section "-c-" above. First, Patent Owner argues that Clark teaches away from including the message data in the same table as Message Summary table 52. 1427 PO Resp. 27. This argument is not persuasive. Petitioner's asserted combination does not rely on modifying Clark's Message Summary table to include the message data. As we explained above, we do not view the claim scope as requiring that a single database record include both the instant voice message and the unique identifier. Therefore, an argument that Clark precludes a single-database-record modification is not commensurate with the claim scope. We have discussed above, nevertheless, that Clark teaches a single record that includes both the message and the unique identifier: a record in the Message

table. We also discussed that because of Clark's relational database use and explanation, a Clark record spans multiple tables, rendering moot Patent Owner's arguments that Clark would discourage the use of a single record.

Second, Patent Owner argues that the combination of Zydney and Clark would result in messages being deleted once they are sent to the server. 1427 PO Resp. 27–28. In particular, Patent Owner contends the combination would result in erasing the voice container from the sender device, thereby defeating the stated rationale, running counter to Clark's stated goal of cataloging electronic messages, and rendering the combination inoperable for its intended purpose. *Id.* None of these challenges to Petitioner's rationale to combine are persuasive. Although Zydney deletes the sent message from the sender's device temporary storage, Patent Owner does not show any disclosure in Zydney that would *teach away* from a person of ordinary skill in the art seeking and achieving the use and purpose of Clark's message store. The disclosure in Zydney of a "reserved temporary storage" does not discourage or discredit the use of other, more permanent types of storage altogether or from the purposes disclosed in Clark for storing and cataloging messages on a more persistent basis. Indeed, we find that the opposite is the case, because Clark describes its usefulness not only for permanent storage, but for temporary storage as well. *See* Ex. 1008, 9:13–15 ("Each message store 23 comprises a memory, file or database structure that provides temporary or permanent storage for the contained messages 22."). This teaching of Clark contradicts Patent Owner's bare assertion that Clark would not work simply because of the use and release of temporary storage. 1427 Reply 15. We find, therefore, that

Clark is entirely compatible with temporary storage and that Clark says nothing about discouraging the use of the disclosed organization of electronic messages in temporary storage.

Furthermore, the arguments by Patent Owner are not persuasive because they imply that Zydney precludes permanent storage of the sent and received voice containers. The fact that Zydney uses temporary storage does not preclude the use of permanent storage. And Patent Owner does not argue any teaching in Zydney that would be contrary to the applicability of organized permanent storage in Zydney's system, in addition to the use of temporary storage. Accordingly, we are not persuaded by Patent Owner's arguments that a person of ordinary skill in the art would not combine the teachings of Zydney and Clark as asserted by Petitioner.

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We now discuss the last limitation of claim 1: "wherein the instant voice messaging application includes a file manager system performing at least one of storing, deleting and retrieving the instant voice messages from the message database in response to a user request." Petitioner again points to Zydney's software agent as the instant voice messaging application and explains that the Zydney user, through the software agent, is given an option to retrieve the instant voice message for playback of the recording. 1427 Pet. 51 (citing Ex. 1003 Figs. 7, 9; 1427 Lavian Decl. ¶ 223). Petitioner also asserts that Zydney teaches storing and deleting of voice containers. 1427 Pet. 50–54. Here we recall that, in the asserted combination with Clark's teachings, the Clark message database, as stated earlier, stores both sent and received messages. 1427 Pet. 44 (citing Ex. 1008, 17:9–22), 52 (referring to

the message database limitation and Clark's disclosures). Petitioner also points to Clark as teaching adding and deleting messages to or from the message store, and allowing a user to retrieve messages stored in the message database. 1427 Pet. 52–52 (citing Ex. 1008, 4:25–27, 8:65–9:1, 9:17–19, 18:25–29, Fig. 6; 1427 Lavian Decl. ¶ 227). Petitioner argues that Clark, therefore, also teaches the recited file manager system, as Clark responds to system requests regarding files. 1427 Pet. 53–54. Finally, for the reasons described above in Section "-c-" Petitioner argues that a person of ordinary skill in the art would have had reason to combine the teachings of Clark regarding storing, deleting and retrieving files from the message store as requested by a user. 1427 Pet. 54–55 (citing 1427 Lavian Decl. ¶¶ 233–234). We agree with and adopt the reasoning and evidentiary support Petitioner provides for why either Zydney or Clark teaches this limitation of claim 1.

Patent Owner argues that none of Zydney's teachings meet the claim limitation because the claim requires that the "storing, deleting and retrieving" are all performed on the sending device, to store, delete and retrieve the instant voice messages that are generated and transmitted by the device. 1427 PO Resp. 30–34. This argument again raises issues of claim scope that are not supported by either the claim language or the Specification. In particular, we note that the claim refers to "storing, deleting and retrieving" the instant voice messages "from the message database." Thus, the claim is not limited to only the sent messages from a device. Although the message database in the claim stores the sent messages, it also stores received instant voice messages. *See* Ex. 1001,

12:36–38 (stating that the file manager accesses the message database, in which "both the received and recorded instant voice messages are represented as database records"). The more natural reading of the claim is that the message database, having stored therein sent and received instant voice messages, can be accessed via a file manager to store, delete, and retrieve any stored instant voice messages, regardless of whether it is a sent or received instant voice message. Arguments to the contrary read the claim too narrowly and limit both the message database and the file manager system to sent instant voice messages only. Neither the plain language of the claim nor the Specification supports such a proposition.

Patent Owner further argues that "retrieving" in Zydney would not involve retrieving from the message database because Zydney's visual display for controlling the recording quality occurs before storing the voice container. 1427 PO Resp. 32–33. We are not persuaded by this argument, which focuses on Zydney alone. The combined teachings of the references result in the use of Clark's message store storing sent and received messages. Clark, as argued by Petitioner, teaches adding, deleting, and retrieving messages from the message store at the request of a user. 1427 Pet. 52–54 (citing Ex. 1008, 4:25–27, 8:65–9:1, 9:17–19, 18:25–29, Fig. 6; 1427 Lavian Decl. ¶ 227). In particular, we note that Figure 6 of Clark, reproduced below, shows a user interface that allows a user to retrieve messages stored in the message store.

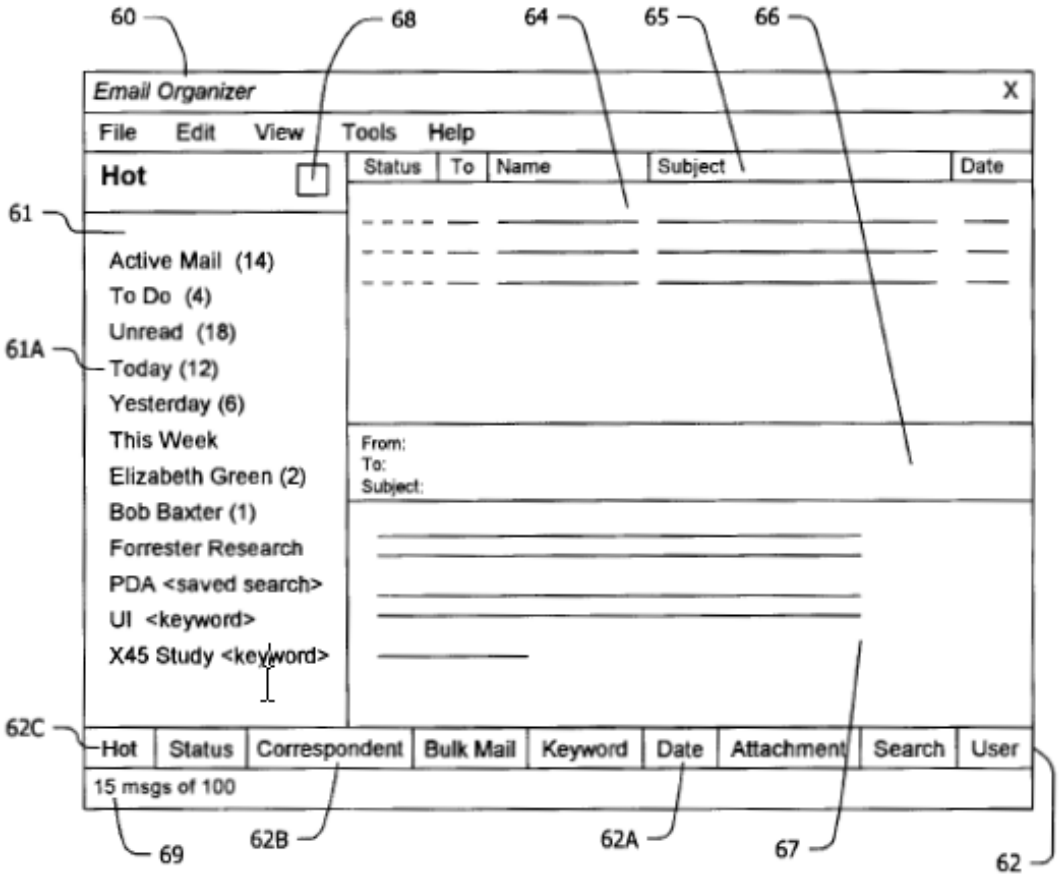


**FIG. 6**

Figure 6 illustrates a screen display for a user interface that shows folders and messages in multiple views. Ex. 1008, 5:10–11. Petitioner particularly relied on Clark for the disclosure of giving the user the ability to select a folder and to view messages and on Figure 6's disclosure of viewing individual messages. 1427 Pet. 53.

Patent Owner challenges Petitioner's reliance on Clark because the requests of Clark described in the Petition are not received by the message store and are not user requests as the claim requires. 1427 PO Resp. 34–35. We do not agree with Patent Owner. The Petition states that Clark discloses

a "message database system for storing and organizing both sent and received messages, which can be instant voice messages." 1427 Pet. at 52. Petitioner cites Clark: "Message client 27 will typically generate requests in response to user input such as requests to message store sever 24 to add, change or delete a message." *Id.* (citing Ex. 1008, 18:25–29). This citation pertains to the embodiment shown in Figure 2 of Clark, reproduced below.

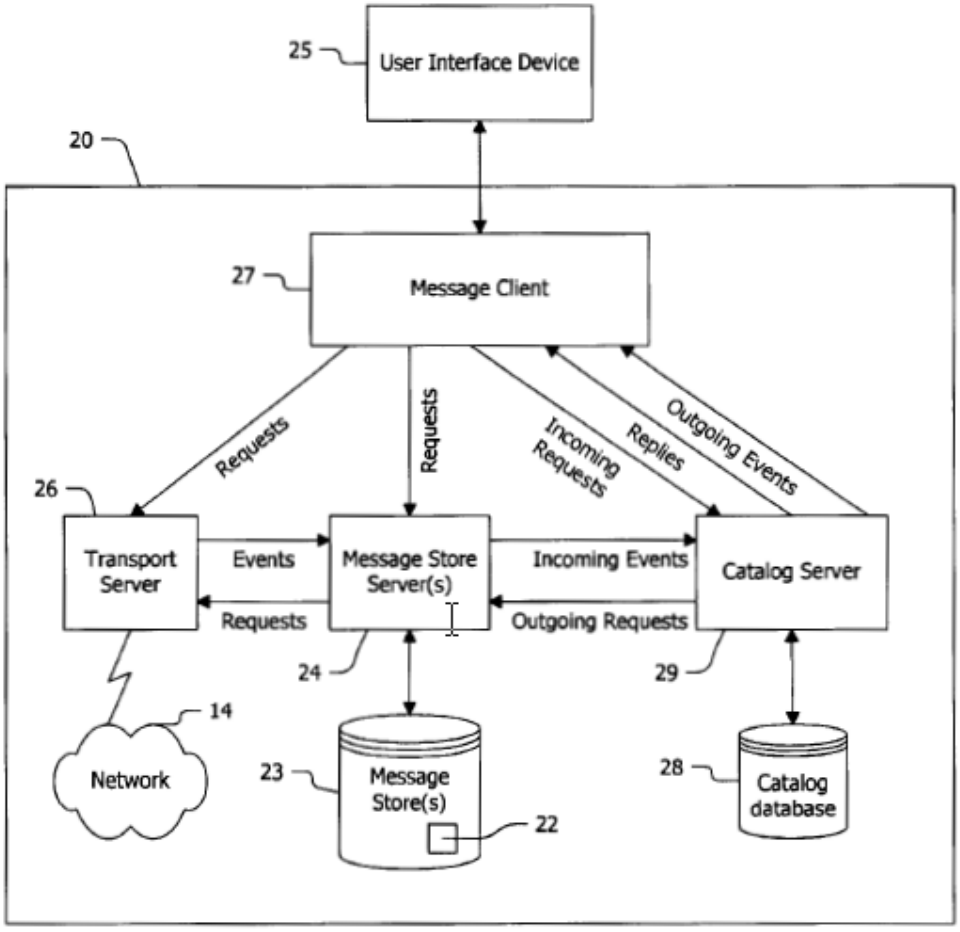


**FIG. 2**

Figure 2 of Clark depicts system 20 comprising several software components that operate in a computer system. Ex. 1008, 9:7–10. Clark states that "[e]ach message store 23 comprises a memory, file or database structure that provides temporary or permanent storage for the contained messages 22." *Id.* at 9:13–15. Further, "[a] message store server 24 manages the messages 22 in message store 23." *Id.* at 9:15–16. Concerning the implementation of the database, Clark states it uses shortcuts and folders to handle the stored messages. *Id.* at 8:57–9:5 (cited substantially in the 1427 Petition at pages 52–53). Dr. Lavian testifies, and we credit this testimony, that a person of ordinary skill in the art would have understood that when a user selects and views a message stored in the database, the system is retrieving the message *from message store 23*. *See* Pet. 53 (citing Ex. 1002 ¶ 227). Also as discussed above, Petitioner persuasively relies on Clark's user interface showing that a user can view messages retrieved from the message store. Thus, we find that Clark's requests to retrieve messages from the message store server to message store 23 are requests that the message store receives and that are caused by a user requesting to view a message. Patent Owner's arguments do not persuade us that Clark's disclosure and supporting testimony pertain to requests being passed only from component to component of the system, not to the message store, and are not attributed at all to a user request.

Therefore, we find that Zydney and Clark both teach the limitation. Zydney teaches the limitation because its software agent executes programming (file manager system) that gives the user a message playback option, which requires *retrieving* the message from the storage. Petitioner

also shows that Zydney teaches the claimed "storing" and "deleting," but having found that Zydney discloses "retrieving," we do not address any of the additional arguments Petitioner provides for how Zydney discloses the claim limitation. As for Clark, we find that Clark teaches the limitation in its disclosure of a user interface that allows a user to retrieve, for viewing, messages from the message store.

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In conclusion, we have reviewed the arguments and evidence in the record and determine that Petitioner has demonstrated by a preponderance of the evidence that claim 1 of the '433 patent is unpatentable as obvious over Zydney in view of Clark.

2. Discussion of Independent Claim 6

Petitioner relies on the same arguments and evidence discussed above with regard to claim 1, except for claim 6's additional limitations. 1427 Pet. 60–63. Claim 6 recites "wherein the instant voice messaging application includes a compression/decompression system for compressing the instant voice messages to be transmitted over the packet-switched network and decompressing the instant voice messages received over the packet-switched network." Petitioner relies on Zydney's disclosure of a voice/compression software detector that is part of the software agent as disclosed in Figure 1A and described in Zydney. *Id.* at 61–63 (citing Ex. 1003, 11:1–3, 11:14–22, 16:3–4, 16:10–14, Figs. 1A, 7 (step 1.1.5), Fig. 9 (step 1.3.4)). For example, Zydney describes that in pack-and-send mode, when the software agent records the message, the software agent compresses the audio and stores it in a voice container for sending it to its destination. *Id.* at 62 (citing Ex. 1003,

11:1–3, 16:3–4, Fig. 7 (step 1.1.5)). Zydney further describes that when the software agent receives a voice container, it decompresses the message so the recipient can hear the recording through the speakers or headset attached to the computer. *Id.* at 62–63 (citing Ex. 1003, 16:10–14, Fig. 9 (step 1.3.4)). Patent Owner does not offer any arguments particular to this limitation. We further note that, unlike claim 1, claim 6 does not recite the limitation of "the instant voice message represented by a database record including a unique identifier."

We are persuaded that, based on the teachings of Zydney discussed above, in addition to the showings made for claim 1 discussed above, Petitioner has shown by a preponderance of the evidence that claim 6 is unpatentable as obvious over Zydney and Clark.

3. Discussion of Dependent Claims 2–5

Claim 2 depends from claim 1 and recites "wherein the message database includes a plurality of instant voice messages received over the packet-switched network." Petitioner relies on Zydney's disclosure of transmitting messages over the Internet and that Figure 9 of Zydney describes receiving voice containers and saving them in reserved temporary storage in the recipient's personal computer. 1427 Pet. 55 (citing Ex. 1003, 30:6–7, Fig. 9). Petitioner also argues that Clark confirms that message store 23 stores multiple messages, and, therefore, the combination of Clark's message store teachings with Zydney predictably results in a plurality of instant voice messages received over the packet-switched network. *Id.* at 56 (citing Ex. 1008, 9:12–14; 1427 Lavian Decl. ¶ 240). Patent Owner does not argue dependent claim 2 separately from claim 1. Based on the

foregoing disclosures of Zydney and Clark, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that the combination of Zydney and Clark renders obvious claim 2.

Claim 3 depends from claim 1 and recites "wherein the instant voice messaging application displays at least one of the plurality of instant voice messages stored in the message database." Petitioner relies on Figure 9 of Zydney that states "presenting the list of voice containers" to the recipient. 1427 Pet. 56 (citing Ex. 1003, Fig. 9). Petitioner also relies on Clark's disclosure of the user interface with display 60, as shown in Figure 6 discussed previously with respect to claim 1. *Id.* at 57 (citing Ex. 1008, 12:8–10, 12:63–13:2, Fig. 6; 1427 Lavian Decl. ¶¶ 245–249). Patent Owner does not argue dependent claim 3 separately from claim 1. Based on the foregoing disclosures of Zydney and Clark, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that the combination of Zydney and Clark renders obvious claim 3.

Claim 4 depends from claim 1 and recites "wherein the instant voice messaging application includes an audio file creation system creating an audio file for the instant voice message based on input received via an audio input device." Petitioner relies on Zydney's disclosure of the originator digitally recording messages for one or more recipients using a microphone-equipped device and the software agent. 1427 Pet. 57–58 (citing Ex. 1003, 1–4, 21:14–16, 20:11–14). For instance, Zydney states that the software agent stores the compressed voice file temporarily on the personal computer and that voice files may be generated in various formats including MP3 format. *Id.* (citing Ex. 1003, 12:1–13; 25:10–13, claims 17, 19). Patent

Owner does not argue dependent claim 4 separately from claim 1. Based on the foregoing disclosures of Zydney, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that the combination of Zydney and Clark renders obvious claim 4.

Claim 5 depends from claim 1 and recites "wherein the instant voice messaging application includes an encryption/decryption system for encrypting the instant voice messages to be transmitted over the packet-switched network and decrypting the instant voice messages received over the packet-switched network." Petitioner points out that Zydney, at Figure 2, discloses the software agent as including "compression data encryption/protocols" to encrypt the instant voice message. 1427 Pet. 59. Petitioner further argues that Zydney discloses a "standard codec" used in transmitting and receiving voice containers and that this "standard codec" discloses encrypting the voice containers when it is transmitted and decrypting the voice container when it is received. *Id.* at 59–60 (citing Ex. 1003, 27:1–6; 1427 Lavian Decl. ¶¶ 114, 260). Patent Owner does not argue dependent claim 5 separately from claim 1. Based on the foregoing disclosures of Zydney, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that the combination of Zydney and Clark renders obvious claim 5.

4. Discussion of Dependent Claim 7

Claim 7 depends from claim 1 and recites "wherein the instant voice messaging application displays an indicia for each of the one or more potential recipients indicating whether the potential recipient is currently available to receive an instant voice message." Petitioner relies the

combination of Zydney, Clark, and Appelman for this claim. 1427 Pet. 64–70. In particular, Petitioner relies on Zydney's disclosure of displaying to the user a list of potential recipients for a voice container and that Zydney uses a status to track whether a recipient is online and offline, in addition to whether the recipient does not want to be disturbed. *Id.* at 64–65 (citing Ex. 1003, 14:17–15:1, 32:18–33:2). Petitioner argues, and we agree, that the software agent receives from the server the maintained status of each recipient and provides a mode of communicating with the recipients depending on the status. *Id.* at 64 (citing Ex. 1003, 14:17–23, 15:3–4). Petitioner acknowledges that Zydney, however, does not teach displaying an "indicia" for each recipient indicating whether the potential recipient is currently available. *Id.* at 65. For this indicia limitation, Petitioner relies on Appelman's disclosure of buddy lists that identify particular users and the status for each user. *Id.* (citing Ex. 1004, 3:44–46, 4:4–7, Fig. 3). Figure 3 of Appelman is reproduced below.

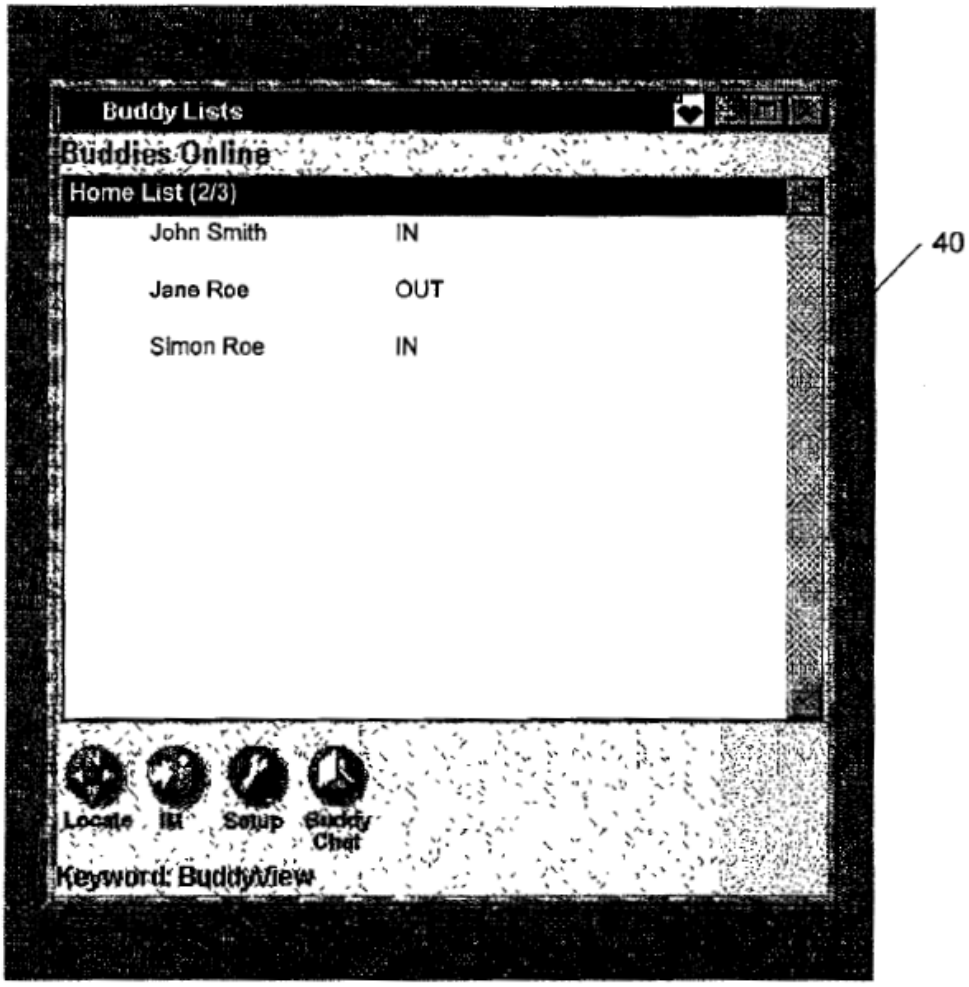


FIG. 3

Figure 3 depicts an implementation of a buddy list window. Ex. 1004, 2:23–24. As shown in Figure 3, the buddy list window displays co-users that the user wishes to track ("buddies") with the particular logon status for that user (i.e. IN or OUT). *See* Ex. 1004, 3:41–47, 4:2–12. We agree with Petitioner that Appelman discloses the claimed indicia, in the form of the displayed status "IN" or "OUT" for each of the potential recipients ("buddies" in the Buddy List). We also agree with Petitioner that it would

have been obvious to combine the teachings of the Appelman indicia as illustrated in the Buddy List window with the teachings of Zydney's software agent functionality of tracking status for the potential recipients and determining modes of communicating with those recipients according to the status. 1427 Pet. 67–70. In particular, we are persuaded that a person of ordinary skill in the art would have appreciated the convenient and straightforward interface of Appelman for use with Zydney's software agent, to quickly view the online/offline status of the users in the Buddy List. *Id.* at 69 (citing Ex. 1004, 4:33–36, Fig. 3; 1427 Lavian Decl. ¶ 289). We also credit Dr. Lavian's testimony explaining that the Appelman Buddy List display originated with America Online ("AOL") and that it was well known and ubiquitous in instant messaging systems prior to 2003, such that market considerations would have compelled an ordinarily skilled artisan to consider using a buddy list for instant messaging. 1427 Lavian Decl. ¶ 290. As *KSR* explains, "[w]hen a work is available in one field of endeavor, design incentive, and other market forces can prompt variations of it, either in the same field or a different one." 550 U.S. at 417. And "[i]f a person of ordinary skill can implement a predictable variation, § 103 likely bars its unpatentability." *Id.* In short, this is a situation where the Buddy List window and the display of status of information were well-known at the time of the invention, and given the desirability of the feature for quick access to potential recipients of instant voice messages, a person of ordinary skill in the art would have been motivated to use the Buddy List window concept and apply it to Zydney's already robust instant voice messaging client software and infrastructure. Indeed, Appelman stresses the

importance of this feature by stating that knowledge of users of the system and tracking the relationship is an important aspect of online communication systems. 1427 Pet. 67–68 (citing Ex. 1004, 1:12–16, 1:37–39). We are further persuaded that Zydney, by also disclosing the use of the "buddy list," explicitly provides evidence of a design incentive to look to Appelman's Buddy List Window with the displayed indicia. *See KSR*, 550 U.S. at 421 ("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp."); *see also* 1427 Lavian Decl. ¶ 288 (opining that both Zydney and Appelman have common goals and seek to address the same problem such that it would have been natural for a person of ordinary skill in the art to apply the Buddy List of Appelman to Zydney to provide the claimed indicia).

Patent Owner argues that claim 7 requires an indication that some of the potential recipients of the instant voice messages are unavailable. 1427 PO Resp. 36. Appelman, according to Patent Owner, although displaying offline buddies in the Buddy List window, does not display buddies that can be selected for instant messaging when they are offline. *Id.* (citing Ex. 1004, 6:2–5; DiEuliis Decl. ¶ 104). There are two problems with Patent Owner's arguments. First, even if we accept Patent Owner's reading of Appelman, all of Patent Owner's arguments are premised on its interpretation of claim 7 as requiring the indication of the possibility that some of the intended recipients would be unavailable. Claim 7, however, recites that the indicia indicates "whether the potential recipient is *currently available* to receive an

instant voice message." From the plain reading of this claim, a showing that the Buddy List displays recipients available to receive an instant voice message meets the claim limitation. *See* 1427 Reply 18. Second, Patent Owner's arguments do not respond to the challenge of unpatentability. Petitioner has relied on Appelman's Buddy List window embodiment solely for the indicia that is displayed indicating the status of each potential recipient. *Id.* at 18–19 (citing 1427 Pet. 65–67). The inclusion of the status displayed as "IN" or "OUT" does not change the reliance by Petitioner on Zydney's functionality to track the status of users and to permit a number of distinct modes of communication based on the status of the recipient. 1427 Pet. 64. This would include selecting an offline potential recipient (indicated in Appelman with the status "OUT"). Accordingly, Patent Owner's arguments are not persuasive to overcome Petitioner's evidence and arguments.

Patent Owner's further arguments of a failed rationale to combine are similarly unpersuasive for the same reasons. 1427 PO Resp. 40–41. Those arguments are based on the premise that Appelman would be unable to send a message to an offline recipient, which, again, does not address that Petitioner's combination of teachings relies on Appelman solely for the indicia, not for the modes of communication and transmission with the selected potential recipients.

Based on the foregoing, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claim 7 is unpatentable as obvious over Zydney, Clark, and Appelman.

5. Discussion of Dependent Claim 8

Claim 8 depends from claim 1 and recites "wherein the instant voice message application generates an audible or visual effect indicating receipt of an instant voice message." Petitioner argues that Zydney's software agent, when launched, automatically receives voice containers and presents a list of the voice containers through the software agent. 1427 Pet. 63 (citing Ex. 1003, Fig. 9). Patent Owner argues that Zydney does not meet the recited limitation because a user is not alerted in real time (or near real time) when the instant voice message arrives. 1427 PO Resp. 41–42. According to Patent Owner, the timing of the recited visual effect must be immediate (or near immediate). *Id.* at 42 (citing Ex. 1001, 8:33–36, 10:8–11, 10:53–56, 17:31–34, and 18:19–21). The argument is not commensurate with claim scope, because neither the claim language nor the Specification compels us to read the claim as requiring an "immediate" or "real time" alert. Claim 8 is silent regarding the timing of the audible or visual effect. And none of the portions of the Specification that Patent Owner cites require an immediate or real-time alert. *See* 1427 Reply 20. Accordingly, we are not persuaded by Patent Owner's argument that a visual display of received messages is not a "visual effect" because the display is not an immediate alert.

Based on the foregoing, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claim 8 is unpatentable as obvious over Zydney and Clark.

*D. Analysis of Claims 9–12, 14–17, 25, and 26 (1428 Case)*

Petitioner relies on Zydney as teaching the majority of the limitations recited in the remaining challenged claims. In particular, Petitioner relies on only Zydney as rendering obvious claims 9, 12, 14, 17, 25, and 26, and relies on a combination of Zydney with either Greenlaw or Newton for certain elements of claims 10, 11, 15, and 16. We begin our analysis of Petitioner's contentions that rely solely on Zydney.

1. Discussion of Independent Claim 9

Claim 9 is similar to claim 1, discussed above, in that it recites an instant voice messaging application comprising two further limitations: a client platform system and a messaging system. Identical to claim 1, the language of claim 9 requires that the "client platform system" generates an instant voice message and that the "messaging system" transmits the instant voice message over a packet-switched network. Petitioner provides the same arguments discussed above with respect to claim 1. *See* 1428 Pet. 25–31. By way of summary, Petitioner relies on Zydney's software agent as disclosing the instant voice messaging application. *Id.* at 23–25. Petitioner also relies on portions of Zydney's software agent as the "client platform system" that records the voice container (i.e., the instant voice message). *Id.* at 25–28. And Petitioner relies on Zydney's transport processes 52 (portion of the software agent) as the "messaging system" that transports the voice container over the Internet. *Id.* at 28–31. For the reasons discussed above (Section V.C.1.(-a-)–(-b-)) with respect to the same limitations of claim 1, we find Zydney teaches these limitations.

As for the final limitation, claim 9 recites "wherein the instant voice message application attaches one or more files to the instant voice message." Petitioner relies on Zydney's disclosure of attaching a digitized greeting card or other data types to the voice container to be transported to the recipient. 1428 Pet. 32 (citing Ex. 1003, 19:1–7 (stating that an important part of voice exchange and distribution is "attaching other media to the voice container" and that voice containers may have "digitized greeting cards appended to them").[8] Petitioner also describes "attachment" as "associating" in referring to Zydney's Figure 6, which discloses that the software agent asks the user "what multimedia file *to associate* [to] this voice container." *Id.* at 32–33 (citing Ex. 1003, Fig. 6) (emphasis added). Figure 16 of Zydney, according to Petitioner, also describes, at step 5.1.4 "associating the multimedia file with the originator's voice container, as well as networked voices." *Id.* at 33–34 (citing Ex. 1003, Fig. 16, 35:15–17 and also describing Figure 17). We agree with Petitioner that these disclosures of Zydney teach that the software agent ("instant voice messaging application") attaches one or more files to the voice container ("instant voice message"). We are also persuaded that the software agent is responsible for the attachment of files, because Zydney describes that the software agent is responsible for the generating and transmitting of the voice containers and that the association of the file with the voice container (as shown in Figure 16) occurs at the

[8] Citations to Zydney in the parties' briefs in IPR2017-01428 refer to Exhibit 1103. But for consistency throughout this Decision, and in light of the consolidated record, we cite to Zydney as filed in IPR2018-01427, Exhibit 1003.

"originator" at the request of the user. *Id.* at 34 (citing Ex. 1003, 19:1–7, 22:19–20, Figs. 16–17; 1428 Lavian Decl. ¶ 108).

Patent Owner argues that Zydney does not teach or suggest the "instant voice message," because Zydney discloses attachments to a "voice container," as distinguishable from "attaching . . . to the distinct and separately-generated voice data or message contained within the voice container." PO Supplemental Br. 8. We are not persuaded that Patent Owner's arguments are relevant, given our construction of "instant voice message" and "attaching" as discussed above. Patent Owner's arguments focus on Zydney's "voice container" as including, but not being coextensive with, the audio file or the digitized audio (voice data). *Id.* To simplify Patent Owner's argument, an attachment to a "voice container" is not the same as the recited attachment to an "instant voice message," because the digitized audio in Zydney is inside the container, and any *attachments to* the voice container are not *attachments to* the voice data inside. These arguments are not persuasive. We discussed in Section V.C.1(-a-) that Zydney's voice container, regardless of its structure, is data content that includes a representation of the audio message, and, thus, teaches the "instant voice message" as we have construed the term. Further, as stated above, in our construction of the term "attach," we are not persuaded that the claim requires a restrictive "attachment" or appendage to a particular structure of the "instant voice message." As long as the software agent produces information that allows Zydney's system to associate the voice message with its attachments, it is irrelevant that the "voice container" is not the voice data itself, but rather the "container" or data structure that

packages the voice data for transport. *See* Ex. 1003, 12:6 ("The voice data is transmitted in a voice container."). Accordingly, we are not persuaded by Dr. DeEuliis's explanations of Zydney's voice container as accompanying more than the voice data, and any implication that the inclusion of additional data in the voice container precludes attachment to "the instant voice message" of claim 9. *See* 1428 DiEuliis Decl. ¶¶ 71–72. What matters for purposes of meeting the claim limitation is that the software agent associates the "one or more files" with the voice container ("instant voice message"). We find that Zydney teaches this.

Zydney, as discussed by Petitioner, accomplishes "attachments" in the same manner as the '433 patent, by making an association between the instant voice message and the file attachment. Figure 6 of Zydney explicitly discloses making such an association. Figure 16 of Zydney also explicitly states "associating" the multimedia file with the sender's voice container. We are also persuaded by Dr. Lavian's testimony that a person of ordinary skill in the art would have found it obvious that attaching files to a voice container would have been part of the process of packing the message into a voice container. 1428 Lavian Decl. ¶¶ 108–109.

We are further persuaded by Petitioner's reliance on a specific standard for effecting attachments of multimedia files to voice containers. 1428 Pet. 34–35. In particular, Petitioner points out Zydney's disclosure of formatting voice containers using the Multipurpose Internet Mail Extension ("MIME") format, which allows attachment of files to be specified in a message header. *Id.* at 34 (citing Ex. 1003, 19:6–12). According to this embodiment then, a voice container would be formatted under the MIME

standard, where a header identifies the file or files attached to the MIME-formatted voice container. Ex. 1003, 19:6–12. We find that this MIME-formatted voice container, which includes the voice data or digitized audio, includes the information necessary in the header to link the files that the user has attached to the voice container. The claim requires attaching the one or more files to the instant voice message, and because we have construed the attachment to mean that the files are associated to the instant voice message, the identification of the files in the header performs the necessary association. Again, because the association is performed at the originator (*see* Zydney's Figure 16), we understand Zydney to teach or suggest that the software agent of the originator would also perform the MIME formatting. In this manner, the software agent controls the formatting and linking necessary for the audio message to reach the recipient, together with the user-specified attachments. There is no other software in Zydney to which the "associating" function is attributed, and Zydney does not describe file associations occurring elsewhere in the system. Per Dr. Lavian's testimony, which we credit, the client's software agent performs the attachments, regardless of whether the attachment is performed as a multimedia file attachment using the MIME standard. *See* 1428 Lavian Decl. ¶¶ 104–110.

Patent Owner argues that the MIME disclosures in Zydney "are directed to the voice container itself being a MIME attachment to an email, and not the voice container, let alone the instant voice message[] having a MIME attachment." 1428 PO Resp. 20–21. We do not agree with Patent Owner's characterization of Zydney in this regard. Zydney describes the MIME format as the standard for formatting the voice container to include

the header that identifies the attachments of multimedia files. Ex. 1003, 19:6–12. This disclosure provides additional detail of the technology that Zydney uses to format the voice container to identify attachments of files. We acknowledge that Zydney also teaches the use of MIME for another purpose: to construct an email message with the "voice mail conversation" as a digitally-encoded MIME attachment. Ex. 1003, 15:15–17, 17:2–4. There is no argument, however, in the Petition, that Zydney teaches the required attachment of a file to an instant voice message by using the MIME format to make *the voice container itself* an attachment to an email. Instead, we find that Zydney describes two different uses for the MIME standard. The first, and the one relevant to our discussion, is the use of MIME formatting to include a header for the necessary associations of files to the voice container. The second, not relevant to our discussion, is the use of MIME encoding to attach voice containers to an email message as a way to transport undelivered voice containers via email or to have voice conversations with email recipients. We have discussed above the first use of MIME as being particularly instructive in providing the technical details of how Zydney actually performs the attachment. *See also* 1428 DiEuliis Decl. ¶ 72 (stating that the MIME format may be used to format the voice container so that attachments may be associated with it). Patent Owner's arguments about MIME use for email attachments are unpersuasive, as they address the second use of MIME, on which Petitioner does not rely.

Patent Owner finally argues that Zydney "teaches away" from the attaching limitation because Zydney does not attach any files to "an instant voice message within the voice container," but instead teaches attaching files

to the voice container itself. 1428 PO Resp. 21–22. These argument focus on a distinction between the "content and container." *Id.* at 22. We have rejected this distinction with regard to both the "instant voice message" and the "attaching" limitation constructions. As already stated, the data content that includes a representation of an audio message is paramount to our construction, not the format or packaging of that data content. Further, as we stated above, the attachment of files to the "instant voice message" is effected by associating the files, such as by linking or setting flags. Neither the plain reading of the claim nor our construction leaves room for exalting differences between the format of the voice container and the data content that it carries. What is important is that Zydney's voice container is data content. Whether the data content is packaged in a certain manner, and with other data, for transport is not germane to the claim construction. Zydney's software agent associates the multimedia file with the voice container, which accomplishes the required association of the attachment with the instant voice message. Thus, Patent Owner's arguments that Zydney teaches away or otherwise does not work because of the container/content distinction are unpersuasive.

Finally, we disagree with Patent Owner's characterization of Zydney as disclosing that the voice container also contains the multimedia file. 1428 PO Resp. 22 (citing Ex. 1003, 19:1–7). Patent Owner relies on Dr. DiEuliis's testimony, which does not support that assertion. 1428 DiEuliis Decl. ¶¶ 69–73. Dr. DiEuliis confirms that the multimedia files are "associated" with the voice container, not that the multimedia files are somehow packaged with the data content *inside* the voice container.

*Id.* ¶ 72. Zydney belies Patent Owner's argument as, at best, it describes that the multimedia file is *appended* to the voice container. Ex. 1003, 19:4–5. Thus, the voice container and the multimedia files attached are distinct from each other. There is no evidence that Zydney packages the multimedia files and the data content *together in the voice container* such that it would contradict our finding that Zydney's voice container is data content, as Patent Owner argues. To the contrary, Zydney's software agent "packs and sends" the voice container distinctly from the attached files. *See* 1428 Pet. 34 (arguing that Figure 17 discloses that the central server receives the "voice container and the associated media file").

Based on the foregoing, we determine that Petitioner has demonstrated by a preponderance of the evidence that claim 9 is unpatentable as obvious over Zydney.

2. Discussion of Dependent Claims 12, 14, 17, 25, and 26

Claim 12 depends from claim 9 and recites "wherein the instant voice messaging application encrypts the instant voice message." Petitioner relies on Zydney as teaching this limitation because Zydney discloses in Figure 2 that the software agent uses compression and data encryption protocols for encrypting the voice container. 1428 Pet. 36–37. We agree that Zydney teaches this limitation. Ex. 1003, Fig. 2, 27:1–6. Patent Owner does not argue dependent claim 12 separately from claim 9. Based on the foregoing disclosures of Zydney, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that claim 12 is unpatentable as obvious over Zydney.

Claim 14 depends from claim 9 and recites "wherein the instant voice messaging application invokes a document handler to create a link between the instant voice message and the one or more files." Petitioner relies on Zydney as teaching this limitation because Zydney discloses creating an association between the voice container and the attached files, whereby it creates a link between the instant voice message and the file. 1428 Pet. 38. In particular, Petitioner relies on the Figure 6 embodiment where Zydney's software agent provides the user the option to identify the multimedia file to "associate" with the just created voice container and to enter the name of the file to associate. *Id.* at 38–40 (citing Ex. 1003, Fig. 6, and also Figs. 16–18). The association is evident where Zydney teaches that the voice container and attachments are delivered to the central server and then to the recipient for graphical display. *Id.* We agree that these disclosures of Zydney would have taught a person of ordinary skill in the art that a component of the software agent creates a link between the voice container and the attached multimedia files after a user associates the voice container with the identified file. *Id.* at 41–43 (citing 1428 Lavian Decl. ¶¶ 118–123). We also explained our finding for claim 9 that at page 19, lines 6–12, Zydney discloses using the MIME format header to link the attached file. *See also* 1428 Pet. 38 (citing Ex. 1003, 19:1–12). Patent Owner's arguments to the contrary focus on the distinction between voice container and data content, which we found unpersuasive above with respect to claim 9. 1428 PO Resp. 22–23. Based on the foregoing disclosures of Zydney, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that claim 14 is unpatentable as obvious over Zydney.

Claim 17 depends from claim 9 and recites "further comprising an instant voice messaging server receiving the instant voice message and an indication of one or more intended recipients of the instant voice message." Petitioner points to Zydney's central server, which receives, translates, transmits, and stores voice containers. 1428 Pet. 43–45 (citing Ex. 1003, 13:12–18, 14:6–13, 16:7–12, Fig. 1A). In particular, Zydney discloses that when a recipient is not currently online, the sending software agent sends the voice container to the central server for storage and each voice container includes the recipient information. *Id.* at 45–46 (citing Ex. 1003, 15:19–21, 23:2–10, 34:4–8, Fig. 3 (showing one or more recipient code 304)). We agree with Petitioner that these disclosures of Zydney teach the further limitation of claim 17. Patent Owner's arguments to the contrary are not persuasive because they are premised on a claim construction that we did not adopt. *See supra* Section V.A.4 (rejecting Patent Owner's argument that the claim requires sending to the server *separately* the instant voice message and the intended recipients); *see also* 1428 PO Resp. 23–24 (Patent Owner arguing that Zydney does not teach the limitation because Zydney's voice container, when received, discloses only simultaneously receipt of the recipient information and the voice data). As properly construed, claim 17 does not require receiving the data content separate from the intended recipient information. Based on the foregoing disclosures of Zydney, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that claim 17 is unpatentable as obvious over Zydney.

Claim 25 depends from claim 17 and further recites "wherein the instant voice messaging server determines availability of the one or more intended recipients for receipt of the instant voice message." Petitioner argues, and we agree, that Zydney teaches this limitation because Zydney's server keeps track of the online/offline status of recipients such that when the intended recipients goes online, after logging on, the central server downloads the voice recordings to the recipient. 1428 Pet. 46–47 (citing Ex. 1003, 13:12–14, 14:6–9, 14:17–15:1, 16:1–12, 32:18–33:2). Patent Owner does not argue dependent claim 25 separately from claims 17 and 9. Based on the foregoing disclosures of Zydney, and Petitioner's arguments, we determine that Petitioner has shown by a preponderance of the evidence that claim 25 is unpatentable as obvious over Zydney.

The last dependent claim in this grouping is claim 26, which states as follows (with added numbering for easier reference):

> 26. The system of claim 25, wherein the instant voice messaging server:
>
> (i) delivers the instant voice message to the one or more intended recipients who are determined to be currently available;
>
> (ii) stores the instant voice message for the one or more intended recipients who are not currently available; and
>
> (iii) delivers the instant voice message for the one or more intended recipients who are not currently available when the instant voice messaging server determines that the not currently available one or more intended recipients become available.

Petitioner addresses each of claim 26's three limitations, which we discuss separately below.

For limitation (i), Petitioner points out that Zydney's central server downloads the voice recording almost immediately to the recipient once that recipient logs on and the software agent is online. 1428 Pet. 48 (citing Ex. 1003, 16:7–12, Fig. 17). Zydney also describes that the central server "transcodes" the voice containers before routing to the appropriate recipient. *Id.* (citing Ex. 1003, 1:21–22). Patent Owner argues that Zydney's central server does not perform limitation (i) because the client-generated voice container is not the *identical* voice container that the central server transmits to the recipient. 1428 PO Resp. 24–25. In particular, Patent Owner argues that the claims require the sameness of the instant voice message and that the only time Zydney transmits voice containers to the central server when a recipient is available is when the voice container requires translation. *Id.* at 25–26 (citing 1428 DiEuliis Decl. ¶¶ 78–83, 102–13; Ex. 1003, 12:20–23, 34:8–12). According to Patent Owner, Zydney explains that "[v]oice containers transmitted from a sending agent to a receiving agent hav[ing] different data formats are routed through the server in which a translator 42 converts the voice data in the voice containers from the sender's data format to the receiver's data format." *Id.* at 26 (citing Ex. 1003, 12:20–23). This conversion, Patent Owner argues, "fundamentally alters" the voice data such that "it is no longer the voice data transmitted by the client" because the converted voice data would be unintelligible to the originating software agent. *Id.* at 26–28 (citing Ex. 1003, 12:20–23, 13:7–10, 14:6–13; 1428 DiEuliis Decl. ¶ 109). Petitioner responds that the claims do not require that the *format* of the transmitted instant voice message must be identical to the format of the received instant voice message. 1428 Reply 12. Further,

Petitioner argues that the Specification, as the Board noted in the Decision on Institution, contemplates that the server may compress and encrypt the instant voice message using compression and encryption algorithms before forwarding the instant voice message to the recipient. *Id.* at 12–13 (citing 1428 Dec. on Inst. 16–17; Ex. 1001, 11:2–14, 11:24–33).

We agree with Petitioner that Zydney teaches limitation (i). Zydney describes transcoding the voice container at the server because, even though Zydney uses a default codec when recording, other devices may use different codecs and transcoding would "enable the other device to have the ability to play or record messages to registered user population in formats that they can decode." Ex. 1003, 28:1–5. As Dr. DiEuliis explains, the server translates the message into a different format that is compatible with the recipient and delivers the transformed audio—"such as MP3 instead of WAV"—to the recipient. 1428 DiEuliis Decl. ¶ 109. According to Dr. DiEuliis, however, the server translation results in the server not delivering "the same voice message that was generated and transmitted by the client as recited in the claim limitation." *Id.* We do not credit this testimony for three reasons.

First, as we discussed in our claim construction analysis, the structure or format of the "instant voice message" is not relevant to claim scope. What matters is whether the "instant voice message" is the data *content*. We have found that, regardless of its format or structure, the voice container is data content that includes a representation of the audio message. Thus, to the extent Patent Owner's argument is again directed to distinctions of form over substance, we reject the distinction as not commensurate with claim

scope. Second, Dr. DiEuliis testifies that the same "voice message" is not transmitted. 1428 DiEuliis Decl. ¶ 109. We do not agree. Although the "voice message" (read here "audio message") may be encoded in MP3 format by the sender and transcoded to WAV format for the recipient, the transcoding does not change the voice message. The underlying audio, when played back at the recipient, is the *same* audio that the sender recorded. Third, the Specification contradicts the expert testimony discussed above because the Specification explains that the server may encrypt and compress the received instant voice message before delivery to the recipient. Our Decision on Institution noted that contradiction (Dec. on Inst. 16–17 (citing Ex. 1003, 11:2–5, 11:24–27)) and invited Patent Owner to brief the issue further during trial. Patent Owner again focused on a narrow interpretation of the article "the" to read into the claims the *identical* format requirement, and did not address the Specification's description of the server performing format changes to an audio file as discussed in our Decision on Institution. Accordingly, Patent Owner's arguments and evidence do not overcome Petitioner's persuasive showing that Zydney's central server downloads the voice containers to available recipients as required by limitation (i).

For limitations (ii) and (iii), Petitioner identifies Zydney's disclosure of "storing said message at said central server when said recipient is not available for forwarding when said recipient is available." 1428 Pet. 48–49 (citing Ex. 1003, claim 1, 13:12–15, 14:9–11, 14:14–16, 15:15–21, 16:10–12). The message server of Zydney, which is a component of the central server, stores the messages that cannot be delivered because the

recipient's software agent is not logged onto the system. *Id.* (citing Ex. 1003, 13:7–10, 25:1–4). Petitioner also points out the method shown in Figure 4 of Zydney which describes that after the recipient logs on to the Internet, the server recognizes the recipient and downloads the voice container(s) for that recipient. *Id.* at 49–50 (citing Ex. 1003, Fig. 4). We agree that these disclosures of Zydney teach the limitations recited in limitations (ii) and (iii). Patent Owner has not argued these limitations.

Based on the foregoing discussion of Petitioner's evidence and Patent Owner's argument, as well as the evidence of record, we determine that Petitioner has shown by a preponderance of the evidence that claim 26 is unpatentable as obvious over Zydney.

3. Discussion of Dependent Claims 11, 15, and 16 (Ground Based on Zydney and Greenlaw)

Petitioner's reliance on Greenlaw for this ground is based on a premise that claims 11, 15, and 16 may be read to require that the sender, as opposed to software in the recipient device, performs the recited limitations. 1428 Pet. 53. For example, claim 11, which depends from claim 9, recites that "the instant voice messaging application displays one or more controls for audibly playing the instant voice message." Petitioner identifies functionality in Zydney's recipient software agent that "provid[es] visual means for adjusting the quality and speed of playback of each recording through the software agent." 1428 Pet. 52 (citing Ex. 1003, Fig. 9 (step. 1.3.6)). Petitioner then argues that because claim 11 recites "*the* instant voice message," the "instant voice message" that claim 11 audibly plays refers to the instant voice message of claim 9, which was generated by the

client platform system at the sender device. *Id.* at 53. Likewise, Petitioner relies on various functionalities of the recipient device in Zydney to show the limitations of claims 15 and 16 were obvious.

We first address whether claim 11 would have been obvious over Zydney alone. Petitioner makes the argument that it would have been obvious to a person of ordinary skill in the art that the same controls for listening to a voice container could be made available to the sender, as well as the recipient, of a voice container. 1428 Pet. 53 (citing 1428 Lavian Decl. ¶ 156). We credit the testimony of Dr. Lavian in this regard. He opines, and we agree, that providing controls for listening to a voice container at the sender would have involved nothing more than allowing the sending user to review a voice container that was sent, using exactly the same tools of the software agent available to the recipient. 1428 Lavian Decl. ¶ 156. Indeed, the software for displaying the voice containers and for listening to them is already available for received voice containers, as Petitioner has shown with Zydney's Figures 9 (providing visual means for controlling playback and controls for saving, deleting or resending recorded containers at the recipient) and 19 (unpacking the voice container and presenting the components at the recipient). If the technology is already available for the received voice containers, then the software is already present at the software agent. Under *KSR*, a known technique applied in a known manner is likely obvious when it does no more than yield predictable results. *KSR*, 550 U.S. at 416. Moreover, Patent Owner's expert, Dr. DiEuliis, underscores the importance of this feature, stating that "[a]ny user of such a voice message system would have understood that it is extremely beneficial

(necessary, in fact) that a sender have the ability to review a voice message after recording to ensure that voice, demeanor, and content are acceptable for the purpose of the message." 1428 DiEuliis Decl. ¶ 118. Patent Owner provides no responsive argument or counter evidence to the testimony of Dr. Lavian at paragraph 156, and, therefore, that testimony, which we find persuasive, is unrebutted. *See* 1428 PO Resp. 15–16 (focusing argument instead on the combination with Greenlaw). Consequently, we determine that Petitioner has shown that claim 11 would have been obvious over Zydney alone.

With regard to the combination of Zydney with Greenlaw, Petitioner relies on Greenlaw's exhortation of copying oneself on electronic messages to maintain a record of the message. 1428 Pet. 54 (citing Ex. 1110 at 19). Thus, the functionalities of Zydney's recipient software agent, discussed above with respect to Figures 9 and 19, would be attributable to a sender device because in the process of transmitting the voice container, the sender would self-copy, triggering the received software agent functionality relied upon: displaying attachment, playback of voice message, and providing options to save, delete, or resend the voice container. Petitioner argues that it would have been obvious to combine the Greenlaw self-copy technique with Zydney's software agent functionality because Greenlaw says it is a good idea to self-copy. 1428 Pet. 55. "A person of ordinary skill in the art, and even casual users of messaging systems, would have recognized the importance of being able to keep records of messages." *Id.* (citing 1428 Lavian Decl. ¶ 159). Patent Owner challenges the combination, contending Greenlaw's motivation to self-copy does not address the purported

requirement that the recited functions on "instant voice messages" occur before sending the "instant voice message." 1428 PO Resp. 28–32. In response, Petitioner argues that the claims do not recite timing of when the "instant voice message" is played back, saved/deleted, or when attachments are displayed. 1428 Reply 13–16. We address the merits of each argument in light of the evidence provided for each claim.

*i. Claim 11*

We have already determined that Zydney alone renders obvious claim 11. Nevertheless, Petitioner provides the alternative ground that Zydney in combination with Greenlaw renders the claim obvious. Claim 11 requires displaying controls for audibly playing the instant voice message. Petitioner, as discussed above, relied on the functionality described in Figure 9 of Zydney, which states that the recipient provides visual means for adjusting the quality and speed of playback. 1428 Pet. 51–52. The combination of Zydney's software agent with the self-copy teaching of Greenlaw would result in the sender transmitting the voice container and subsequently receiving a copy of the voice container, which it then unpacks and plays back (*see* Ex. 1003, 13:19–22). *See* 1428 Pet. 53–54. Patent Owner argues that the purpose of claim 11 is to review the message before it is sent "to give the sender the opportunity to re-record her message if the words were garbled, her voice lacked confidence, she hesitated, and so on." 1428 PO Resp. 30 (citing 1428 DiEuliis Decl. ¶¶ 118–120). The problem with Patent Owner's argument with regard to this claim is that there is no restriction in claim 11 as to the timing of this function in the instant voice messaging application. As long as the sending "instant voice messaging

application" displays controls for audibly playing the instant voice message that was sent, the claim is met, without any requirement that the playback feature is triggered before the recorded audio message is transmitted. In fact, the Specification broadly describes the playback control in connection with newly received instant voice messages. Ex. 1001, 13:6–9. Thus, it is entirely reasonable under the natural reading of the claim that the instant voice messaging application displays controls for playing back a newly received instant voice message.

We also find that Petitioner has demonstrated a sufficient reason for combining Zydney with Greenlaw. As stated above, Greenlaw provides motivation for the combination by exhorting self-copy on sent messages in order to keep a copy. Ex. 1110, at 19. Also, testimony of Dr. Lavian explains that a person of ordinary skill in the art would consider the importance of maintaining records of sent messages. 1428 Lavian Decl. ¶ 159. Accordingly, we find that Petitioner has shown, by a preponderance of the evidence, that claim 11 is unpatentable as obvious over the combination of Zydney with Greenlaw.

*ii. Claim 15*

Claim 15 depends from claim 9 and recites that "the instant voice messaging application displays the attachment." Petitioner relies on Zydney's Figure 18, which illustrates a method of the recipient software agent of "unpacking and presenting the graphical and sound components." 1428 Pet. 57 (citing Ex. 1003, Fig. 18 (step 5.3.2)). Supported by Dr. Lavian's testimony, Petitioner also argues that a person of ordinary skill in the art would have understood that presenting the graphical and sound

components includes displaying the attachment. *Id.* (citing 1428 Lavian Decl. ¶ 165). Under the combination with Greenlaw, the self-copied voice container would be received by Zydney's sending software agent, which would perform the Figure 18 function of unpacking the voice container and displaying the attachment to the voice container. *Id.* at 58 (citing 1428 Lavian Decl. ¶ 166). Patent Owner, again, argues that the combination with Greenlaw does not result in displaying the attachment *before* sending the instant voice message. 1428 PO Resp. 31 (citing 1428 DiEuliis Decl. ¶¶ 121–122). According to Patent Owner, it does not make sense to use Greenlaw to copy oneself on an attachment one already has. *Id.* Further, the reason for maintaining records of sent messages, according to Patent Owner, has nothing to do with why one would verify that the document to be attached was the right document, and the correct version, before sending it. *Id.* at 32.

Again, claim 15 does not recite any temporal limitation such that the display of the attachment must occur before the transmission of the instant voice message. As Petitioner argues, and we agree, the claim also does not convey any "purpose" for the display of the attachment, such that we could glean the intent to claim the only the pre-sending review of attachments. *See* 1428 Reply 15. The Specification also does not support Patent Owner's contention, as it describes that the attachment is "stored [and] displayed by the one or more selected IVM recipients." Ex. 1001, 12:35–36. That is, the Specification describes making the attachment before sending the instant voice message, without mentioning the *display* of the attachment also before sending. *Id.* at 13:30–40. Accordingly, we are not persuaded by Patent

Owner's arguments that the claims should be understood to require the display of attachments only *before* sending the instant voice message. Instead, we are persuaded that, with Greenlaw's self-copy, Zydney's sending software agent would display the attachment when it receives the voice container with attachments, as required by the claim.

Based on the discussed teachings of Zydney's Figure 18 and the reasons for the combination of Greenlaw and Zydney already discussed, we determine that Petitioner has shown by a preponderance of the evidence that claim 15 is unpatentable as obvious over Zydney and Greenlaw.

*iii. Claim 16*

Claim 16 depends from claim 9 and recites "wherein the instant voice messaging application displays one or more controls for performing at least one of reviewing, re-recording or deleting the instant voice message." The Petition provides argument for two of the three recited functions: reviewing and deleting.

As for reviewing, Petitioner argues that Zydney teaches the limitation because both senders and recipients can *review* the recorded messages. 1428 Pet. 58 (citing Ex. 1003, Fig. 7). According to Petitioner, Zydney's software agent provides "visual means to control and monitor the recording quality in the originator's agent." *Id.* Petitioner, thus, surmises that recording quality would be monitored based on a review of the content of the voice recording. *Id.* With regard to reviewing at the recipient side, Petitioner relies on Zydney's disclosure of Figure 9, which provides "visual means for adjusting the quality and speed of playback of each recording through the software agent." *Id.* at 58–59 (citing Ex. 1003, Fig. 9). Petitioner argues that the

"visual means" of Zydney's sender and recipient software agents constitute controls. *Id.*

As for deleting, Petitioner argues that Figure 9 also teaches "controls for saving, deleting, or resending recorded containers from the recipient's computer." *Id.* at 59 (citing Ex. 1003, Fig. 9 (step 1.3.7)). In combination with Greenlaw's self-copy, the teachings of Figure 9 would result in the sending software agent receiving the transmitted voice container, which would allow the sending software agent to adjust the playback of the voice container and to delete it. *Id.* (citing 1428 Lavian Decl. ¶ 171).

Patent Owner argues that the purpose of reviewing, re-recording, or deleting the instant voice message is to give the sender the opportunity for correction before sending. 1428 PO Resp. 28–29. Patent Owner argues, and we agree, that the Specification provides express disclosure that the claimed features are available *before* transmission of the instant voice message. *Id.* at 29 (citing Ex. 1001, 13:30–35 ("Before the transmission of the instant voice message (i.e., before the send signal), the user has the option to review the instant voice message, re-record the instant voice message, delete the instant voice message, as well as attach one or more files (i.e., documents)."). Petitioner responds that the claim language is not limited to that embodiment, as the claim does not recite the requirement that the functions be performed "before the message is transmitted" or the like. 1428 Reply 14. Petitioner also adds that Patent Owner did not amend its claims and that the attempt to improperly import the embodiment from the Specification should be rejected. *Id.* Accordingly, Petitioner concludes that

the claim is satisfied by showing a control that allows for reviewing and deleting after the message is sent. *Id.*

We find that Figure 7 of Zydney alone teaches the limitation. 1428 Pet. 58 (citing Ex. 1003, Fig. 7). As Petitioner points out, the originator provides visual means ("controls") for controlling and monitoring the recording quality in the originator's agent. Ex. 1003, Fig. 7 (step. 1.1.4). We agree with Petitioner that in order to monitor the recording quality of the message, the controls provide a way to review the message as it is recorded. This all occurs before the audio message is packaged into a voice container. *Id.* at Fig. 7 (step. 1.1.5). Thus, the ability to monitor the recording quality provides even greater control as it would allow input from the user to correct the data content in real time. This ability to correct the data content quality has been argued by Patent Owner as one of the purposes of the claim, to correct, for instance, a garbled message. 1428 PO Resp. 28. Without determining whether such purpose is imbued in the claim, however, we understand Petitioner's reliance on Figure 7 to accomplish the same purpose that Patent Owner has argued—correction of the message before transmission. Accordingly, we determine that Petitioner has shown by a preponderance of the evidence that claim 16 is obvious over Zydney.

Because we have determined that Zydney alone would have rendered obvious claim 16, we need not determine whether the combination of Zydney with Greenlaw also would have rendered the claim obvious under Petitioner's alternative theory.

4. Discussion of Dependent Claim 10 (Ground Based on Zydney and Newton)

Claim 10 depends from claim 9 and recites "wherein the packet-switched network comprises a WiFi network." Petitioner relies on Newton as disclosing that it would have been widely known that any computer or phone having 802.11 wireless networking capability could be a WiFi device. 1428 Pet. 60. Petitioner argues, with supporting testimony, that the prevalence of WiFi was widespread in consumer electronic devices for connection to the Internet. *Id.* at 60–61 (citing 1428 Lavian Decl. ¶ 178). We credit the testimony, and we agree that WiFi was a widely known name for wireless networking that was especially prevalent in consumer devices and computers. Petitioner proffers Dr. Lavian's testimony as supporting the reasons for combining Zydney's personal computer embodiments with the WiFi teaching of Newton. *Id.* at 61 (citing 1428 Lavian Decl. ¶ 179). For instance, Dr. Lavian testifies, and we credit this testimony, that the combination would have resulted in the personal computer of Zydney running the software agent connected to the Internet using a WiFi network. 1428 Lavian Decl. ¶ 179. Patent Owner does not argue dependent claim 10 separately from claim 9. 1428 PO Resp. 32. Based on the foregoing disclosures of Zydney and Newton, and Petitioner's arguments and evidence in support, we determine that Petitioner has shown by a preponderance of the evidence that claim 10 is unpatentable as obvious over the combination of Zydney and Newton.

## VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–12, 14–17, 25, and 26 of the '433 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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