

Petition for *Inter Partes* Review of U.S. Patent No. 7,324,802

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA SOLUTIONS, INC.,

Petitioner,

v.

STA GROUP LLC,

Patent Owner.

IPR2023-01292

U.S. Patent No.: 7,324,802 B2

**PETITION FOR *INTER PARTES* REVIEW OF CLAIMS 1-21 OF U.S.
PATENT NO. 7,324,802 B2**

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United States Patent and Trademark Office
Submitted Electronically

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PETITIONER’S EXHIBIT LIST

Ex[No.]¹	Description of Documents
1001	U.S. Patent No. 7,324,802 (“’802 Patent”)
1002	Declaration of David H. Williams dated Aug. 21, 2023
1003	File History of the ’802 Patent
1004	U.S. Patent Publication No. 2004/0117859 A1 to Hagai Ohel, entitled “Multiple Channel Data Recorder and Method for Recording Data on Multiple Channels” (filed Dec. 16, 2002, and published June 17, 2004) (“ Ohel ”)
1005	Federal Communications Commission, Report and Order and Further Notice of Proposed Rule Making, FCC 94-288 (December 9, 1994) (“ FCC ”)
1006	U.S. Patent Publication No. 2003/0228863 A1 to Raymond Vander Veen et al., entitled “Voicemail User Interface Methods and Apparatus for Reliable Mobile Communication Devices” (filed June 6, 2003, and issued Dec. 11, 2003) (“ Vander Veen ”)
1007	U.S. Patent No. 4,914,705 to Seiitsu Nigawara, entitled “Voice Message Announcing Method and System for Plant” (filed Sep. 3, 1987, and issued Apr. 3, 1990) (“ Nigawara ”)

¹ Citations to issued patents (Exhibits 1001, 1007, 1016, 1017, 1019, and 1021) are made by column and line number. Citations to patent application publications (Exhibits 1004, 1006, 1008, 1009, 1012, 1014, and 1020) and Exhibits 1002, and 1005 are made by paragraph number. Citations to Exhibit 1006, 1015, 1018, and 1023-1026 are to the original page numbering in the exhibit. Citations to Exhibits 1003, 1005, 1010-1011, 1013, and 1022 are to the page number added by the exhibit label.

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Ex[No.] ¹	Description of Documents
1008	U.S. Patent Publication No. 2006/0176169 A1 to David M. Doolin, et al., entitled “System for Sensing Environmental Conditions” (filed Dec. 16, 2005, with priority to a provisional application filed Dec. 17, 2004, and published Aug. 10, 2006) (“ Doolin ”)
1009	U.S. Provisional Patent Appl. No. 60/637,279 to Doolin et al. (“ Doolin Provisional ”)
1010	File History of U.S. Patent Application Publication No. 2006/0176169 A1 to Doolin et al.
1011	Letter from James Shimota, Partner, K&L Gates to Natalie Gonzales, Partner, Baker Botts L.L.P., RE: Plaintiff’s Infringement Contentions (Mar. 30, 2023)
1012	U.S. Patent Publication No. 2005/0215229 A1 to Steven D. Cheng, entitled “Call Processing System” (filed Mar. 26, 2004, and published Sep. 29, 2005) (“ Cheng ”)
1013	New York Radio Frequencies (June 6, 2002), (https://web.archive.org/web/20020606155134/https://thushara.com/new-york-radio-frequencies.htm)
1014	U.S. Patent Publication No. 2003/0063714 A1 to Peggy M. Stumer et al., entitled “Internet Protocol (IP) Emergency Connections (ITEC) Telephony” (filed Sep. 26, 2001, and published Apr. 3, 2003) (“ Stumer ”)
1015	Ericsson, <i>Maintenance Manual, EDACS® C3 Maestro™ Console System with Enhanced Audio Enclosure</i> (March 1995) (“ C3 Manual ”)
1016	U.S. Patent No. 3,133,995 to Alfred Zarouni, entitled “Call Awaiting Signal Telephone Circuits” (filed Sep. 18, 1961, and issued May 19, 1964) (“ Zarouni ”)
1017	U.S. Patent No. 5,134,652 to Allan G. Brown et al., entitled “Communication Console Station with Priority Queuing” (filed Aug. 23, 1991, and issued Jul. 28, 1992) (“ Brown ”)

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Ex[No.] ¹	Description of Documents
1018	Motorola Inc., <i>CENTRACOM Gold Series Classic CRT User's Guide</i> (1998) (“ CENTRACOM ”)
1019	U.S. Patent No. 4,959,648 to Robert L. Breeden, et al., entitled “Dual Dynamic Priority Control in a Selective Call System” (filed Feb. 10, 1989, and issued Sep. 25, 1990) (“ Breeden ”)
1020	U.S. Patent Publication No. 2002/0080928 A1 to Cary Lee Bates et al., entitled “Telephone Message System with Flexible Presentation Capability” (filed Dec. 22, 2000, and published Jun. 27, 2002) (“ Bates ”)
1021	U.S. Patent No. 2,800,530 to Harry R. Van Deventer et al., entitled “Telephone Answering and Recording Devices” (filed Dec. 17, 1949, and issued July 23, 1957) (“ Van Deventer ”)
1022	Plaintiff's First Amended Disclosure of Asserted Claims and Infringement Contentions and Document Production Accompanying Disclosure Pursuant to P.R. 3-1 & 3-2, No. 2:22-CV-0381-JRG-RSP (E.D. Tex. June 15, 2023).
1023	Katherine K. Vidal, <i>Memorandum: Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation</i> (June 21, 2022)
1024	Docket Control Order, <i>STA Group LLC v. Motorola Solutions, Inc.</i> , No. 2:22-CV-0381-JRG-RSP, Dkt. 35 (E.D. Tex. Feb. 3, 2023)
1025	Telex Communications, Inc. and Vega Signaling Products, Price List (effective Apr. 1, 2003), (https://web.archive.org/web/20030401105942/http://vega-signaling.com/) (“ C-Soft Price List ”)
1026	<i>Motorola Annual Report 1975</i> (1975) (“ 1975 Report ”)
1027	Parties' Local P.R. 4-2 Disclosure of Preliminary Proposed Constructions of Claim Terms and Preliminary Identification of Extrinsic Evidence

I. MANDATORY NOTICES UNDER 37 C.F.R. 42.8(a)(1)

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

The real party-in-interest is Motorola Solutions, Inc. No other parties exercised or could have exercised control over this Petition; no other parties funded or directed this Petition.

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

As of the filing date of this Petition, and to the best knowledge of Petitioner, the '802 Patent is involved in *STA Grp. LLC v. Motorola Solutions, Inc.*, Case No. 2:22-cv-00381 (E.D. Tex. filed Sept. 30, 2022) ("EDTX Litigation"). Petitioner moved to dismiss the complaint on December 12, 2022. That motion was denied in a report and recommendation by the Magistrate Judge on July 7, 2023, and the Court adopted the report and recommendation and denied Motorola Solutions, Inc.'s motion on August 11, 2023.

The '802 Patent was also asserted against Petitioner in an identical Complaint in *STA Group LLC v. Motorola Solutions, Inc.*, Case No. 4-22-cv-00840 (E.D. Tex. filed Sept. 30, 2022), which was filed in error on September 30, 2022 and administratively closed October 6, 2022 without any proceedings.

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

Petitioner provides the following designation of counsel:

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D. Service Information under 37 C.F.R. 42.8(b)(4)

A copy of this entire Petition, including all Exhibits and a power of attorney, is being served by FEDERAL EXPRESS, costs prepaid, to the correspondence address of record for the '802 Patent at the USPTO: Cisco Systems, Inc. – Patent Team (PatCapGroup Customer Number), SJC 10/5, 170 W. Tasman Drive, San Jose,

CA 95134-1706; and by email to the attorney or agent of record for Patent Owner in the EDTX Litigation: James A. Shimota, K&L Gates, Jim.Shimota@klgates.com.

Please address all correspondence to lead and back-up counsel. Petitioner consents to service at lead counsel's address provided above. Petitioner consents to electronic service, provided it is made to all of the following e-mail address:

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A Power of Attorney is filed concurrently herewith under 37 C.F.R. §42.10(b).

II. CLAIM LISTING

A. Claim 1

1[Pre]	A method of managing communication in a communication system, the communication system receiving messages from a plurality of channels, the method comprising:
1[a]	receiving a first message on a first dedicated channel from amongst the plurality of channels at the communication system, the plurality of channels being dedicated to different entities, the first dedicated channel being dedicated to receiving messages from a first entity;
1[b]	receiving a second message on a second dedicated channel being dedicated to receiving messages from a second entity from amongst the plurality of channels at the communication system, the second message overlapping with the first message in time;
1[c]	determining one or more priorities for the first message received on the first dedicated channel from the first entity and the second message received on the second dedicated channel from the second entity based on at least one pre-defined parameter;
1[d]	determining which message out of the first message and the second message should be stored and subsequently played based on the second message overlapping with the first message in time and one or more priorities assigned to the first and the second message;
1[e]	playing the message having a higher priority between the first and the second message;
1[f]	storing at least one message having a lower priority between the first and the second message based on the determination; and

1[g]	playing the stored message subsequent to completing playing of the message having higher priority.
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B. Claim 2

2[pre]	The method of claim 1, wherein determining which message out of the first message and the second message should be stored and subsequently played comprises:
2[a]	calculating the priorities of the received messages; and
2[b]	comparing the priorities of the received messages.

C. Claim 3

3	The method of claim 1, wherein the predefined parameter comprises a bandwidth requirement of the received messages.
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D. Claim 4

4	The method of claim 1, wherein the predefined parameter comprises a type of the received messages.
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E. Claim 5

5	The method of claim 4, wherein the type of received messages being one of a group comprising audio, video, text, and image.
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F. Claim 6

6	The method of claim 1, wherein determining the priority comprises assigning priorities to the first message and the second message based on inputs from a user.
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G. Claim 7

7	The method of claim 1, further comprising informing an operator the time of receipt of a message while playing the first message and the second message.
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H. Claim 8

8	The method of claim 1, wherein a message includes voice over internet protocol communications.
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I. Claim 9

9	The method of claim 1, wherein a message includes mobile phone communications.
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J. Claim 10

10	The method of claim 1, wherein a message includes radio communications.
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K. Claim 11

11[Pre]	A method of managing communication in a communication system, the communication system receiving messages from a plurality of channels, the method comprising:
11[a]	receiving a first message on a first dedicated channel from amongst the plurality of channels at the communication system, the plurality of channels being dedicated to different entities, the first dedicated channel being dedicated to receiving messages from a first entity;
11[b]	receiving a second message on a second dedicated channel being dedicated to receiving messages from a second entity from amongst the plurality of channels at the communication system, the second message overlapping with the first message in time;
11[c]	prioritizing the first and second messages based on at least one predefined parameter;
11[d]	determining which message out of the first message and the second message should be stored and subsequently played based on the second message overlapping with the first message in time and one or more priorities assigned to the first and the second message;
11[e]	playing the message having the highest priority;
11[f]	storing the message having lower priority in a queue on the basis of the determination and the prioritization;
11[g]	checking periodically the status of the message being played; and
11[h]	playing the stored message having the highest priority.

L. Claim 12

12	The method of claim 11 further comprising informing a user the time of receipt of a message while plying the message.
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M. Claim 13

13[Pre]	A communication system for managing communication, the communication system receiving messages from a plurality of channels, the communication system comprising:
13[a]	means for receiving a plurality of messages on the plurality of channels, the plurality of messages received including a first message received from a first dedicated channel dedicated to receiving messages from a first entity and a second message received from a second dedicated channel dedicated to receiving messages from a second entity;
13[b]	means for playing a received messages having the highest priority, the plurality of received messages being prioritized based on at least one predefined parameter;
13[c]	a central conferencing system comprising:
13[d]	means for prioritizing the received plurality of messages including the first message from the first dedicated channel and the second message from the second dedicated channel based on the predefined parameter;
13[e]	means for determining which messages out of the received messages should be stored and subsequently played based on messages overlapping in time and one or more priorities assigned to the first and the second message;
13[f]	means for sending the messages for playing based on the associate priority; and
13[g]	means for storing the messages other than the one sent for playing in a queue based upon the associated priority.

N. Claim 14

14[Pre]	A communication system for managing communication, the communication system receiving messages from a plurality of channels, the communication system comprising:
14[a]	a receiver module configured to receive a plurality of messages on the plurality of channels, the plurality of messages received including a first message received from a first dedicated channel dedicated to receiving messages from a first entity and a second message received from a

	second dedicated channel dedicated to receiving messages from a second entity;
14[b]	a player module for playing a received message having the highest priority, the plurality of received messages being prioritized based on at least one predefined parameter;
14[c]	a central conferencing system comprising:
14[d]	a prioritizing module configured to prioritize of messages including the first message received on the first dedicated channel and the second message received on the second dedicated channel based on the predefined parameter;
14[e]	a determiner configured to determine which messages out of the received messages should be stored and subsequently played based on the second message overlapping with the first message in time and one or more priorities assigned to the first and the second message;
14[f]	a sender module to send a message for playing based on the associated priority; and
14[g]	a storage medium configured to store the messages in a queue based upon the associated priority and the determination.

O. Claim 15

15[a]	The communication system of claim 14, wherein the prioritizing module comprises:
15[b]	a priority calculator for calculating the priority of the received messages; and
15[c]	a comparison module for comparing the priorities of the plurality of received messages.

P. Claim 16

16	The communication system of claim 14, wherein the central conferencing system further comprises an alert module for informing an operator the time of receipt of a message while playing the message.
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Q. Claim 17

17[Pre]	A central conferencing system for managing a plurality of messages received by a communication system, the central conferencing system comprising:
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17[a]	a receiver module configured to receive a plurality of messages on the plurality of channels, the plurality of messages received including a first message received from a first dedicated channel dedicated to receiving messages from a first entity and a second message received from a second dedicated channel dedicated to receiving message from a second entity;
17[b]	a prioritizing module for prioritizing the received messages based on at least one predefined parameter, the prioritizing module comprises:
17[c]	a priority calculator for calculating the priority of the received messages including the first message received on the first dedicated channel and the second message received on the second dedicated channel; and
17[d]	a comparison module for comparing the priorities of the plurality of received messages;
17[e]	a sender module for sending the messages with the highest priority to the player module for playing:
17[f]	a determiner configured to determine which messages out of the received messages should be stored and subsequently played based on the second message overlapping with the first message in time and one or more priorities assigned to the first and the second message;
17[g]	a storage module for storing the messages from amongst the plurality of messages that are not being played; and
17[h]	an alert module for informing a user the time of receipt of a message while playing the message.

R. Claim 18

18[Pre]	An apparatus for managing communication in a communication system, the communication system receiving messages on a plurality of channels, the apparatus comprising:
18[a]	a processing system including a processor coupled to a display and user input device; and
18[b]	a machine-readable medium including instructions executable by the processor comprising:
18[c]	one or more instructions for receiving a plurality of messages on the plurality of channels, the plurality of messages received including a first message received from a first dedicated channel to receiving messages from a first entity and a second message received from a second dedicated channel dedicated to receiving messages from a second entity;
18[d]	one or more instructions for playing the message having the highest priority, the priority of the received messages including the first message

	and the second message being determined based on at least one predefined parameter;
18[e]	one or more instructions for determining which messages out of the received m messages should be stored and subsequently played based on messages overlapping in time and one or more priorities assigned to the first and the second message;
18[f]	one or more instructions for playing the stored messages subsequent to completing playing of the message having higher priority.

S. Claim 19

19[Pre]	A machine-readable medium including instructions executable by the processor comprising:
19[a]	one or more instructions for receiving a plurality of messages on the plurality of channels, the plurality of messages received including a first message received from a first dedicated channel dedicated to receiving messages from a first entity and a second message received from a second dedicated channel dedicated to receiving messages from a second entity;
19[b]	one or more instructions for playing the message having the highest priority, the priority of the received messages being including the first message and the second message being determined based on at least one pre-defined parameter;
19[c]	one or more instructions for determining which messages out of the received messages should be stored and subsequently played based on message overlapping in time and one or more priorities assigned to the first and the second message;
19[d]	one or more instructions for storing at least one message having a lower priority; and
19[e]	one or more instructions for playing the stored messages subsequent to completing playing of the message having higher priority.

T. Claim 20

20	The method of claim 1, wherein playing the message comprises playing the message having a higher priority between the first and second message without storing the message having the higher priority if no other message is being played.
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U. Claim 21

21	The method of claim 1, wherein determining the priority comprises determining the priority based on the dedicated channel the first message and/or the second message is received on.
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III. INTRODUCTION

Motorola Solutions, Inc. (“Petitioner” or “Motorola”) petitions for *inter partes* review of Claims 1-21 (the “Challenged Claims”) of U.S. Patent No. 7,324,802 (the “’802 Patent”).

IV. REQUIREMENTS UNDER 37 C.F.R. 42.104

A. Grounds for Standing

Petitioner certifies that the ’802 Patent is available for IPR, and that Petitioner is not barred or otherwise estopped.

B. Identification of Challenge and Statement of Precise Relief Requested

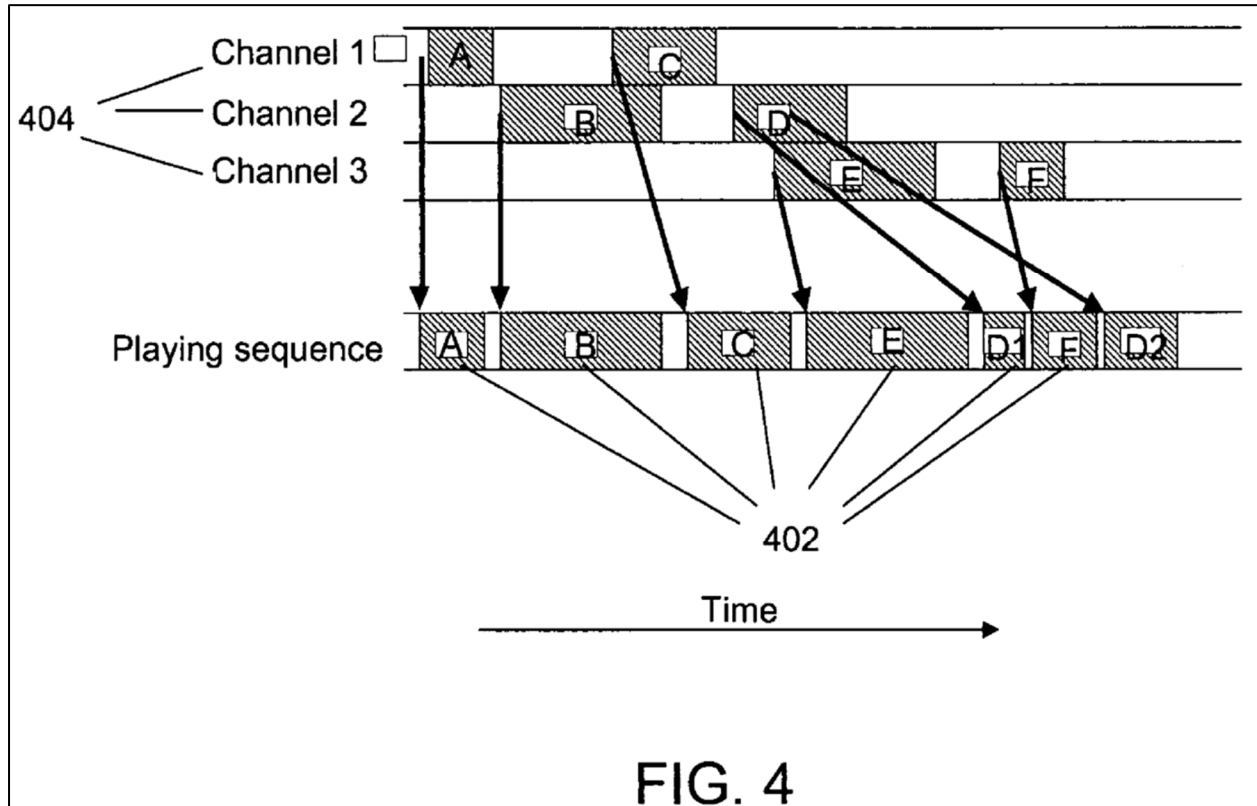
Petitioner challenges Claims 1-21 of the ’802 Patent as follows:

Ground	’802 Patent Claims	Basis for Challenge
1	1-21	Obvious over Ohel
2	1-7, and 11-21	Obvious over Nigawara
3	3, and 8-10	Obvious over Nigawara in view of Doolin

V. THE ’802 PATENT

The purported improvement of the ’802 Patent is the simple idea that when two messages arrive at the same time on two different channels, the higher priority message should be listened to first, while the other message should be stored and played later. Ex[1002], ¶¶45-48. In this way, the patent allegedly “prevents the loss of radio messages.” Ex[1001], 6:53-56.

As shown in FIG.4 below, the patent discloses that overlapped received radio messages can be re-sequenced based on “an associated priority assigned to [each message] on the basis of at least one of the pre-defined parameters.” Ex[1001], 5:28-30. In this example, “[w]hile radio message B is being played, radio message C is received”. *Id.*, 5:37-38. Because “it is found that the priority of radio message B is higher,” “radio message C is stored in the queue” and “[a]s soon as radio message B is completed, radio message C is played.” *Id.*, 5:38-44.



Ex[1001], FIG.4.

The '802 Patent was originally filed on January 20, 2005 with 20 claims. Following obviousness rejections in view of numerous references, the Challenged Claims were ultimately allowed after applicant amended the independent claims to

specify, among other things, that the first and second overlapping messages are received on first and second channels dedicated to receiving messages from first and second entities. Ex[1003], pp.18-20, 35-46.

But such a multiple-channel system, exemplified by telephone operator switch boards, had existed long before 2005. Ex[1002], ¶¶64-96. And each and every limitation of the Challenged Claims are invalid for multiple reasons, as described herein.

VI. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSITA”) as of January 20, 2005, would have had at least a bachelor’s degree in computer science, electrical engineering, or a similar field, and would have had approximately two years industry experience in networking or communication systems. Ex[1002], ¶¶55-58. A person with less or different education but more relevant practical experience, or vice versa, may also meet this standard. *Id.*

VII. CLAIM CONSTRUCTION

In district court, Patent Owner and Petitioner have proposed constructions for several terms. *See* Ex[1027]; Ex[1002], ¶¶59-63. The Petition accounts for both parties’ proposals, and, as described, the claims are invalid under any proposal or any reasonable construction. Ex[1002], ¶¶59-63. Accordingly, except as set forth below, the Board need not construe any term to find the Challenged Claims invalid. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868

F.3d 1013, 1017 (Fed. Cir. 2017).

The Challenged Claims include certain elements that recite “means” for performing various functions. Claim 13 recites a “means for receiving a plurality of messages;” a “means for playing a received messages;” a “means for prioritizing the received plurality of messages;” a “means for determining;” a “means for sending the messages for playing;” and a “means for storing the messages.” Ex[1001], 10:60-11:22. Using “the word ‘means’ creates a presumption that §112, ¶6 applies.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Claims 14-17 are similar but use the term “module configured to,” or similar nonce terms, instead of “means for”—for example, “a comparison module;” “a priority calculator;” and “an alert module;” Ex[1001], 11:23-14:28. Ex[1001], 11:23-14:28; *Williamson*, 792 F.3d at 1350 (“‘Module’...can operate as a substitute for ‘means’ in the context of § 112, para. 6.”).

Without conceding that these claim elements satisfy 35 U.S.C. §112, Petitioner applies the proposed constructions set forth below for each of these elements.²

Claim 13	Claims 14-17	Structure and Function
13[a]: “means for	14/17[a]: “a receiver	<u>Function</u> : receiving a plurality of messages on the plurality of channels

² To the extent Patent Owner subsequently argues that any of these claim elements should not be interpreted under 35 U.S.C. §112, ¶6, the claims are still rendered invalid by the functionality disclosed in the prior art, as discussed herein.

receiving...”	module...”	each of which are dedicated to respective entities <u>Structure</u> : “receiver module 502 is a radio receiver.” Ex[1001], 6:4-6.
13[b]: “means for playing...”	14[b]: “a player module...”	<u>Function</u> : playing received messages in priority order <u>Structure</u> : “an audio player or an audio-video player.” <i>Id.</i> , 6:47-50.
13[d]: “means for prioritizing...”	14[d]/17[b]: “a prioritizing module...”	<u>Function</u> : prioritizing the received plurality of messages <u>Structure</u> : “a software module, hardware modules, or the combination thereof.” <i>Id.</i> , 6:37-42, FIGs.2-3. ³
	15[b]/17[c]: “a priority calculator...”	<u>Function</u> : calculating the priority of the received messages <u>Structure</u> : “as a software module, hardware modules, or the combination thereof.” <i>Id.</i> , 6:37-42, FIGs.2-4.
	15[c]/17[d]: “a comparison module...”	<u>Function</u> : comparing the priorities of the plurality of received messages <u>Structure</u> : “comparison module 518 can be a software module” or “a hardware module such as a comparator circuit.” <i>Id.</i> , 6:22-26, 6:37-42.
13[e]: “means for determining...”	14[e]/17[f]: “a determiner...”	<u>Function</u> : determining which messages should be stored and subsequently played based on messages overlapping in time and one or more priorities assigned to the first and the second message <u>Structure</u> : “a programmed general-

³ For each term, citations to the figures are included because they are the only evidence of a corresponding algorithm, without conceding that these claim elements satisfy 35 U.S.C. §112.

		purpose digital computer.” <i>Id.</i> , 8:56-61, FIGs.2-3.
13[f]: “means for sending...”	14[f]/17[e]: “a sender module...”	<u>Function</u> : sending the message for playing <u>Structure</u> : “a software module, hardware modules, or the combination thereof.” <i>Id.</i> , 6:37-42.
13[g]: “means for storing...”	14/17[g]: “a storage medium...”	<u>Function</u> : storing in a queue the messages that are not being played <u>Structure</u> : “storage module 510 can be a memory device such as a random access memory, read only memory, hard disk, and optical storage device.” <i>Id.</i> , 6:28-31, 6:37-42. <i>See also id.</i> , “computer readable medium” 8:25-38.
	16/17[h]: “an alert module...”	<u>Function</u> : informing an operator the time of receipt of a message <u>Structure</u> : “alerts can be in the form of audio, video, or as text display.” <i>Id.</i> , 6:31-34, 6:37-42.

Regardless of whether the Board disagrees with Petitioner’s proposed constructions, as will be evident from the invalidity analysis herein, Ohel and Nigawara include virtually identical disclosure as the ’802 Patent specification with respect to the limitations of Claims 13-17.

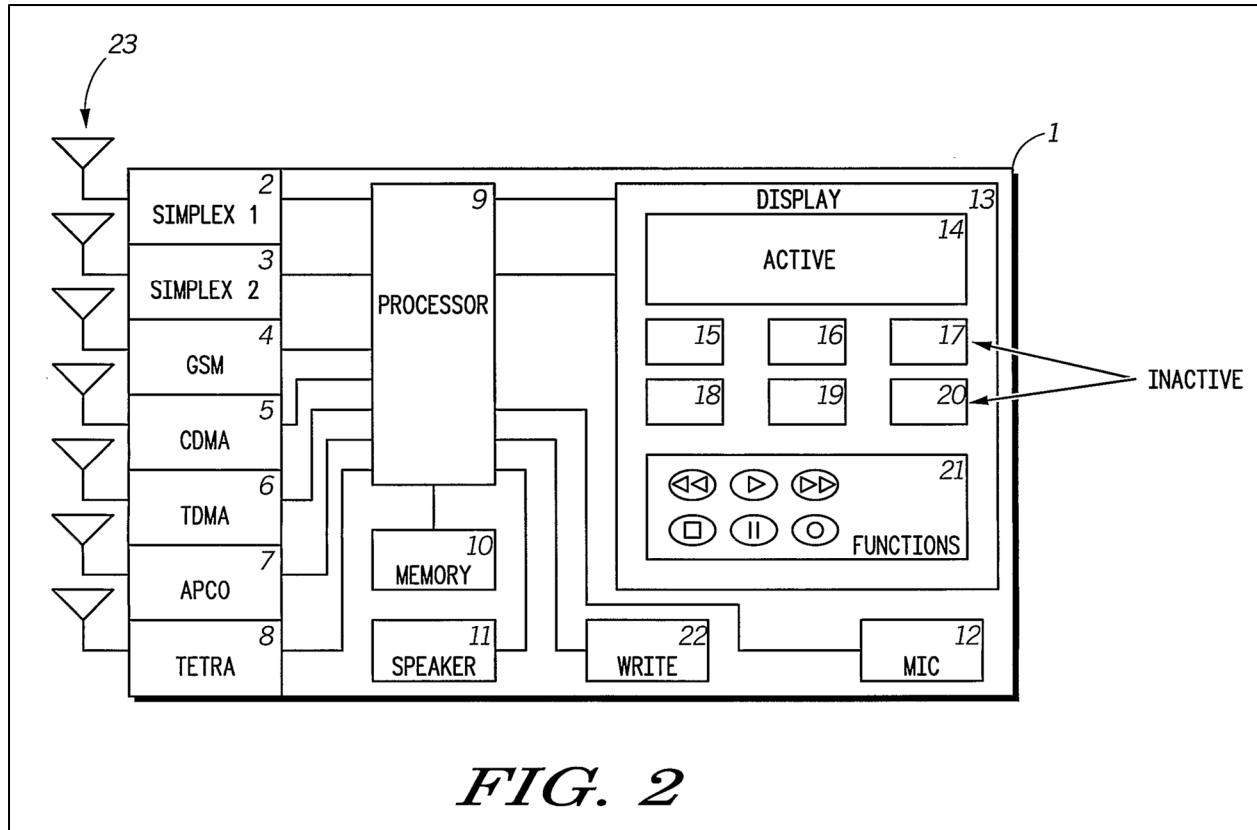
VIII. SUMMARY OF PRIOR ART

Petitioner assumes without conceding that the Challenged Claims are entitled to a January 20, 2005, priority date.

A. Ohel (Ex[1004])

U.S. Patent Publication No. 2004/0117859 A1 (“Ohel”) is entitled “Multiple Channel Data Recorder and Method for Recording Data on Multiple Channels.” Ohel was filed December 16, 2002, and published June 17, 2004, and thus is prior art at least under 35 U.S.C. §§102(a), (b) and (e).

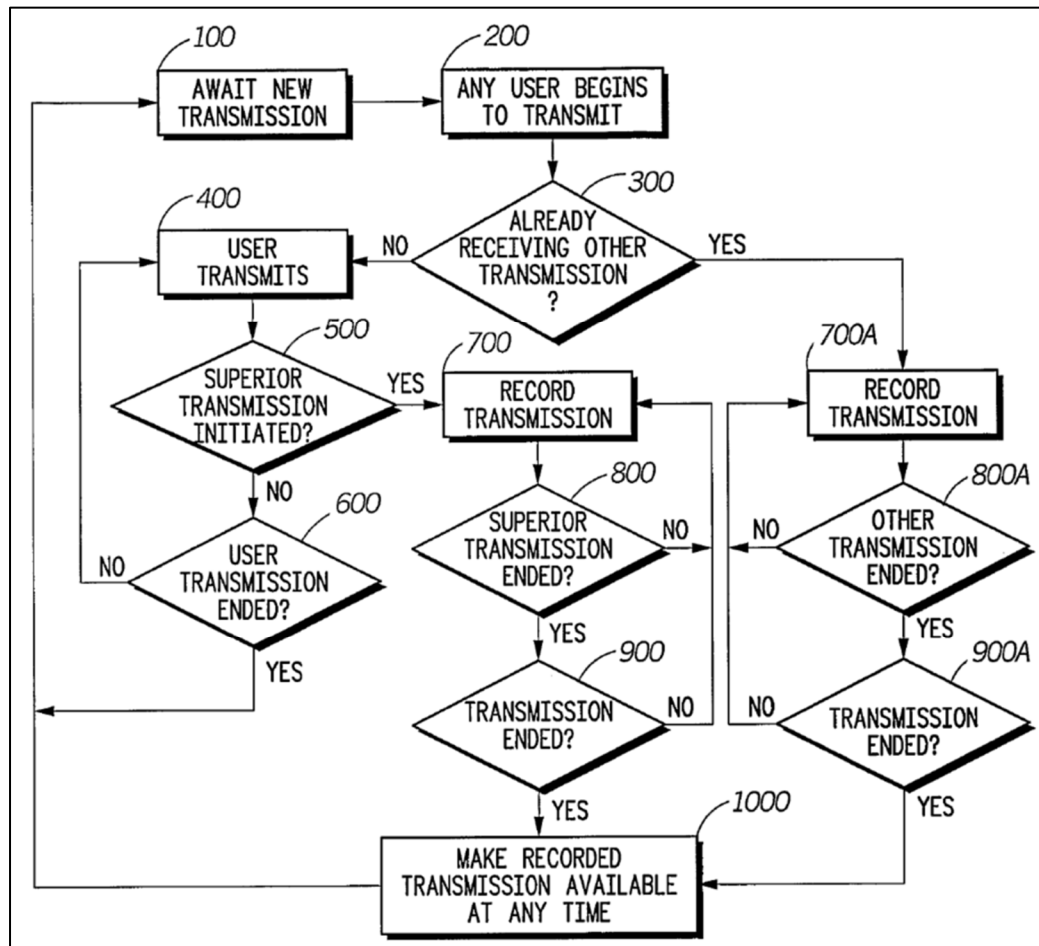
Ohel provides “a multiple channel data recorder and method for recording data on multiple channels” designed to “prevent loss of communications during overtalk”—*i.e.*, the communication lost when a police officer’s transmission is interrupted and cut off by a police dispatcher’s transmission. Ex[1004], [0002], [0005], [0009]. This recorder (shown below) contains, among other things, “a plurality of wireless communications transceivers” 2-8, at least one of which (the simplex transceiver) “can be also set to transmit/receive on different channels selected by a user” and “preferably, on a channel different from the given channel[s]” of the other transceivers. *Id.*, [0035], [0060].



Ex[1004], FIG.2.

Ohel's device includes logic to prevent overtalk. Specifically, when a transceiver receives data, such as an audio signal or video stream, the device implements the procedure shown in FIG.1 (below). Applying this procedure, Ohel determines (e.g., in steps 500 and 700) which transmissions should be recorded based on priority status. *Id.*, [0050]. This priority status, termed "superior user status" may be pre-defined in various ways such as by the specific transceiver type, or channel dedicated to dispatch communications, or by an "emergency indication" within the transmission. *Id.*, [0070]. The recording will then "be made available to the user at a later time, whether immediately after the user stops transmitting or

upon the user's manual command.” *Id.*, [0050]. Further, Ohel provides that “[p]layback can begin from a starting point of a recorded transmission and/or from a user-selected point of time within a recorded transmission.” *Id.*, [0017].



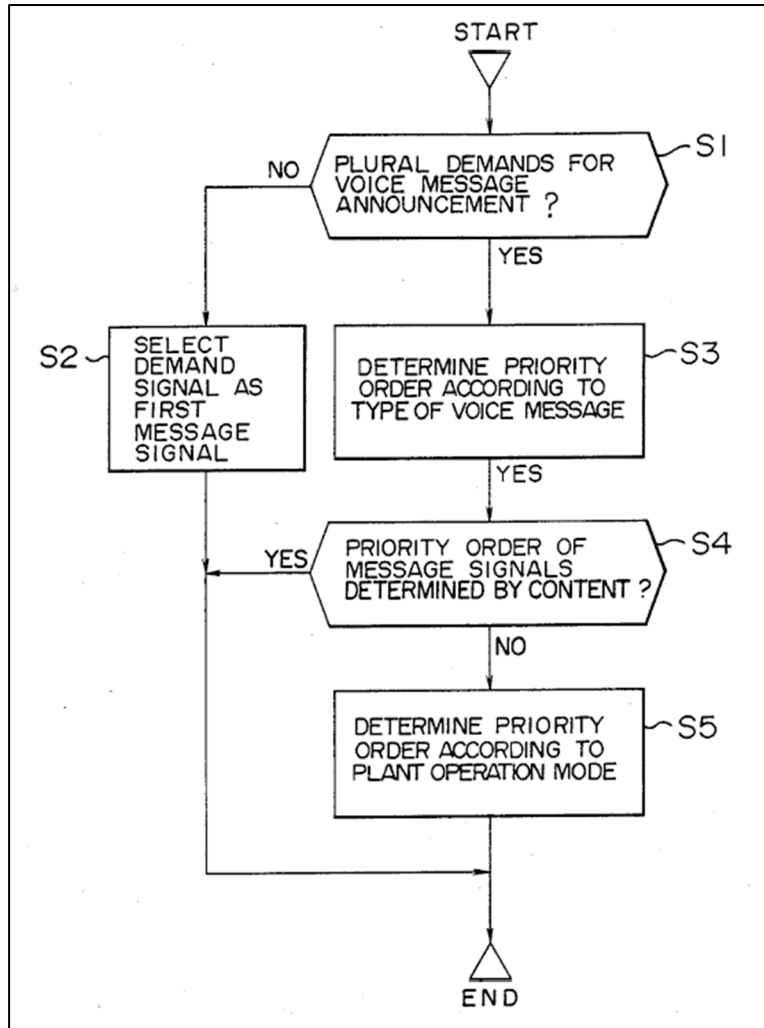
Ex[1004], FIG.1.

Thus, Ohel enables “the user's transmission to be interrupted, for example, by a superior user, such as a dispatcher, who has the ability to suppress any existing transmission between users and, therefore, to transmit over or instead of the currently transmitting user(s)” without losing the interrupted communication. *Id.*, [0047].

B. Nigawara (Ex[1007])

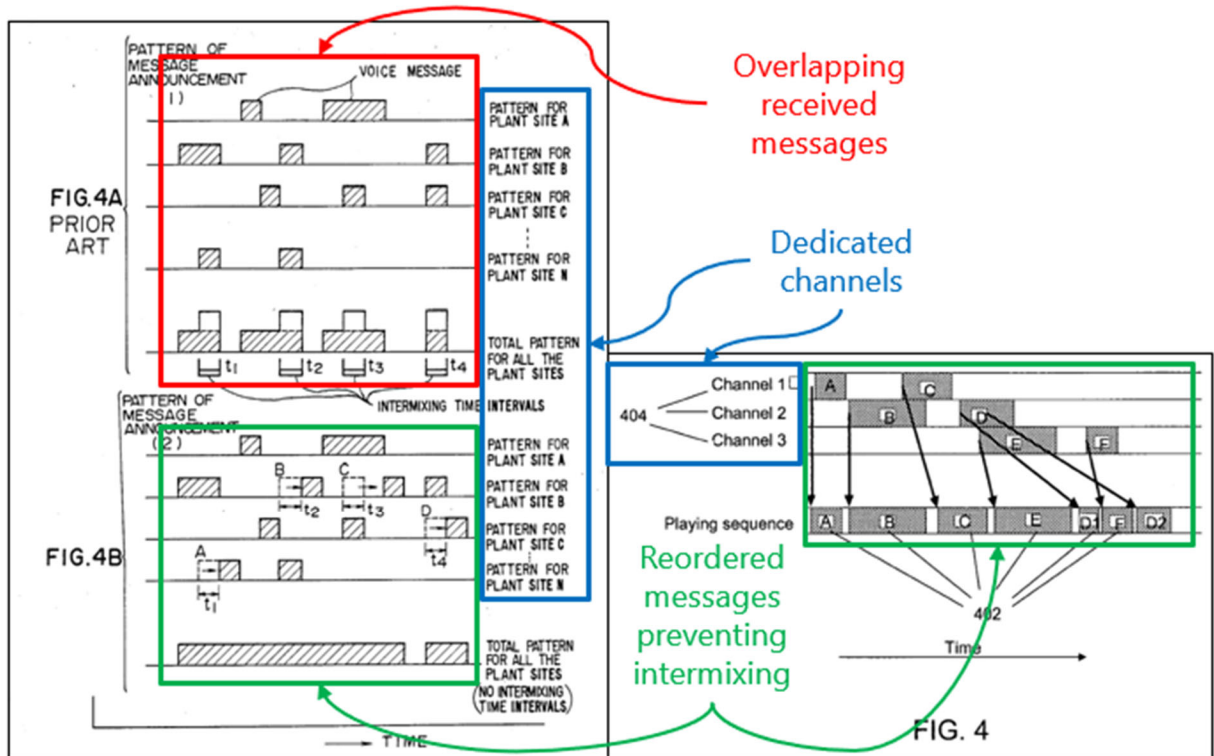
U.S. Patent No. 4,914,705 (“Nigawara”) is entitled “Voice Message Announcing Method and System for Plant.” Nigawara was filed September 3, 1987 and issued April 3, 1990, and thus is prior art at least under 35 U.S.C. §§102(a), (b) and (e).

Nigawara discloses a system for monitoring equipment. Ex[1007], 1:6-7. The system receives “[i]nformation signals 5 indicative of operating conditions,” and makes an “announcement by a voice message of any one operating condition message[s].” *Id.*, 2:31-61. “When a plurality of demands for announcement of voice messages exist simultaneously,” the system “order[s]” “announcement of the voice messages according to the contents of the messages and the relative importance of various pieces of information.” *Id.*, 3:33-41. FIG.3 discloses the procedure to determine message priority. *Id.*, 6:16-7:9. The process considers message type, content, and plant operation mode, as well as whether there is already another overlapping message announcement demand. *Id.*, 6:24-50.



Ex[1007], FIG.3.

FIGs.4A and 4B illustrate the similarities between Nigawara's disclosures and the '802 Patent. As shown in FIG.4A, the prior art allows for overlapping messages that result in intermixed, and confusing, audio announcements. *Id.*, 7:10-19. Nigawara's invention in FIG.4B, in contrast, "solve[s] the problem of intermixture of announced messages" using priority—in the same way as depicted in FIG.4 of the '802 Patent. *Id.*, 7:20-28.



Ex[1007], FIGs.4A-4B; Ex[1001], FIG.4 (annotated).

C. Doolin (Ex[1008])

U.S. Patent Publication No. 2006/0176169 A1 (“Doolin”) is entitled “System for Sensing Environmental Conditions.” Doolin was filed December 16, 2005, with priority to a provisional application filed December 17, 2004, and published August 10, 2006, and thus is prior art at least under 35 U.S.C. §102(e).

1. Doolin’s Priority Date

Doolin is entitled to the earlier filing date of the Doolin Provisional (Ex[1009]) because Doolin claims priority to its provisional, and a POSITA would have understood that the Doolin Provisional provides support under 35 U.S.C. §112(a) for claim 1 of Doolin, as well as the subject matter relied on in this Petition,

Petition for *Inter Partes* Review of U.S. Patent No. 7,324,802

as shown in the tables below. Ex[1008], code (60); Ex[1010], p.54-89; Ex[1002], ¶111.

Doolin's Claim 1	Doolin Provisional (Ex[1009])
1[pre]	A system for monitoring a fire, the system comprising: Ex[1009], p.8 (cl.7); <i>see also</i> [11]; Ex[1002], ¶111.
1[a]	Ex[1009], p.8 (cl.7), p.10 (Abstract); <i>see also</i> [11]-[14]; Ex[1002], ¶111.
1[b]	Ex[1009], p.8 (cl.7); <i>see also</i> [14]; Ex[1002], ¶111.
1[c]	Ex[1009], p.8 (cl.7); <i>see also</i> [13]-[14]; Ex[1002], ¶111.
1[d]	Ex[1009], p.8 (cl.7); <i>see also</i> [14]-[15]; Ex[1002], ¶111.

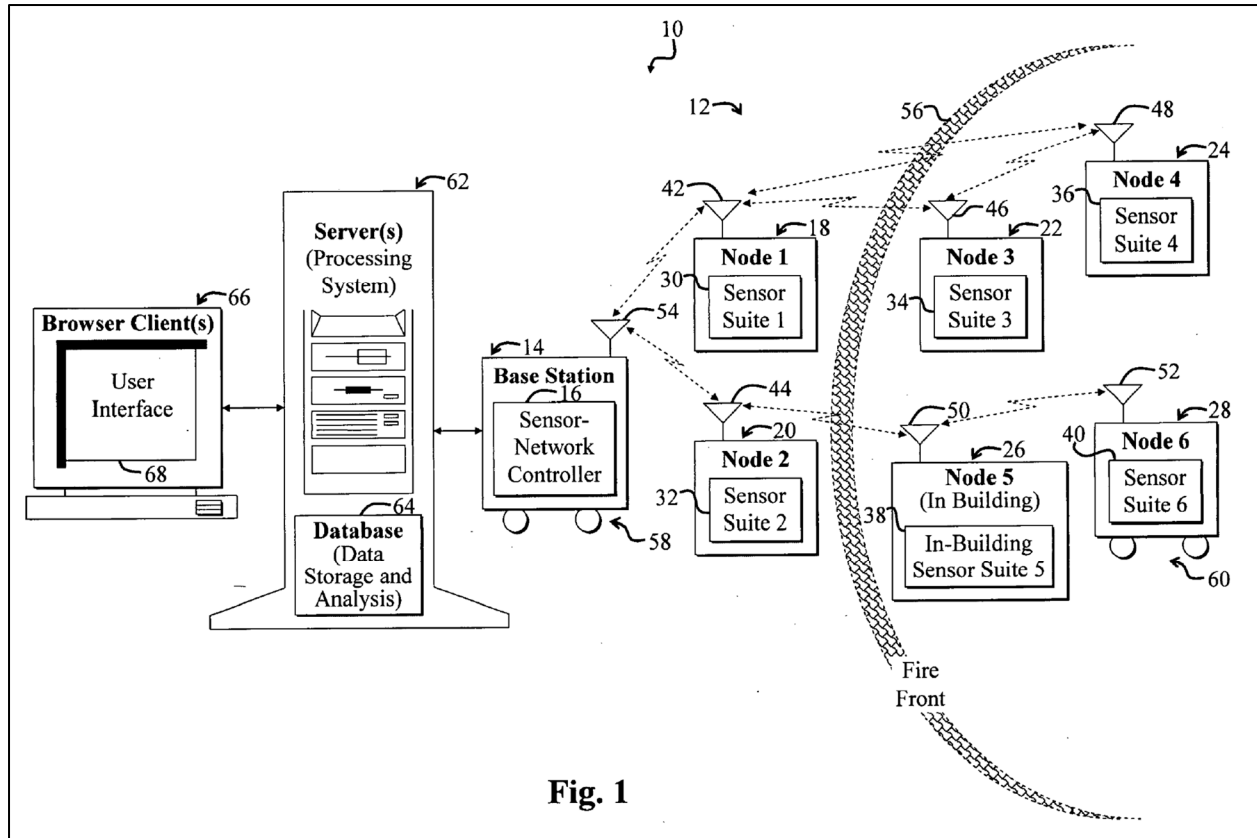
Further, the Doolin Provisional provides support under 35 U.S.C. §112(a) for the subject matter of Doolin that is relied on to show that the Challenged Claims of the '802 Patent would have been obvious. Ex[1002], ¶112. The following table shows representative support in the Doolin Provisional for the features of Doolin relied on in the obviousness analysis herein:

'802 claims in which concept appears	Concept/portion relied on from Doolin (Ex[1008])	Doolin Provisional (Ex[1009])
1[a]	[0017], [0026], [0042], FIG.1	[10], [14], [18], FIG.1 Ex[1002], ¶112.
1[b]	[0017], [0026], [0042]	[10], [14], [18] Ex[1002], ¶112.
3	[0009], [0041]	[15], cl.6 Ex[1002], ¶112.
8	[0042]	[10] Ex[1002], ¶112.
9	[0026], [0039]	[10], [18], cls.14, 17

		Ex[1002], ¶112.
10	[0017], [0026], [0040], FIG.1	[10], [14], [18], FIG.1 Ex[1002], ¶112.

2. Doolin's Relevant Disclosure

Doolin discloses a remote monitoring system, shown in FIG.1 below, in which “a processing system 14, 62, 66 receives data from the sensors 104-110, one or more of which are assigned one or more priority values via the browser client 66.” Ex[1008], [0060]. These priority values may be “based on bandwidth, sensor communication capabilities, or other factors associated with the sensors.” *Id.*, [0009]. Therefore, sensor data “can be prioritized so that if there is a lack of resources (e.g., limited bandwidth), the sensor readings with higher priority can be communicated first.” *Id.*, [0041]. “Data of sensor types with lower priority can be buffered and transmitted when there is free bandwidth at a later time or discarded and not sent at all.” *Id.*, [0041]; Ex[1002], ¶¶113-115.



Ex[1008], FIG.1.

IX. THE ASSERTED GROUNDS OF INVALIDITY

A. Ground 1: Claims 1-21 are obvious over Ohel.

1. Claim 1

a. 1[Pre]

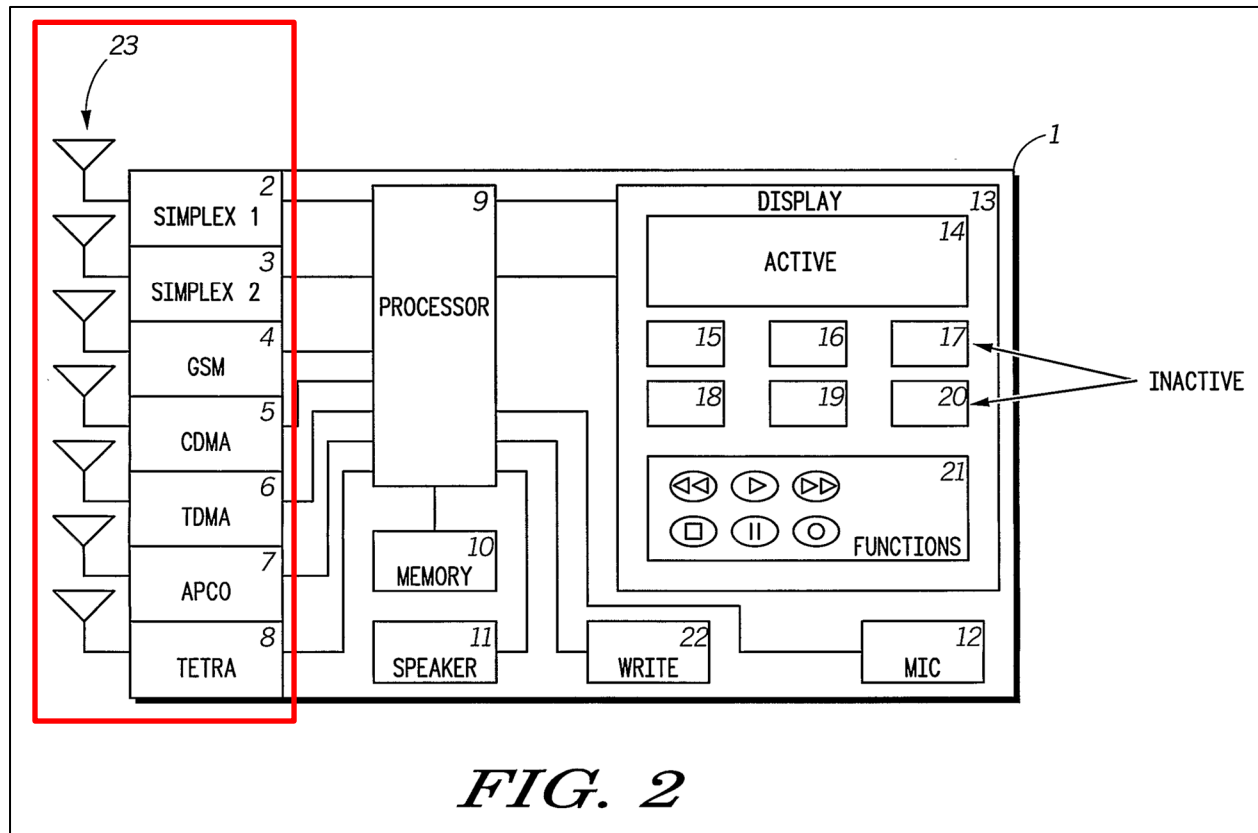
If the preamble is limiting, Ohel discloses “[a] *method of managing communication* [e.g., receiving, transmitting, recording, and playing back data] *in a communication system, the communication system receiving messages from a plurality of channels* [e.g., messages received by transceiver units 2-8].” Ex[1004], Abstract; *see also id.*, [0002], [0009], [0038]-[0042], [0072].

Ohel discloses “a method for recording data on multiple wireless communications channels” (*plurality of channels*) wherein the system can “selectively record the user’s transmission for playback by at least one of the users and another user and if another new transmission starts to be received by the user during the user’s transmission” (*managing communication*). Ex[1004], Abstract; Ex[1002], ¶122-124.

b. 1[a]

Ohel discloses or at least renders obvious “*receiving a first message on a first dedicated channel from amongst the plurality of channels* [e.g., a message received by transceiver units 2-8] *at the communication system, the plurality of channels being dedicated to different entities* [e.g., individual officers and the police dispatcher], *the first dedicated channel being dedicated to receiving messages from*

a first entity [e.g., simplex unit 2 set to a dispatch channel].”



Ex[1004], FIG.2.

As shown above, “Fig. 2 illustrates...a user communications unit 1,” also disclosed as “officer’s unit 1,” containing, among other things, “a multiple channel data recorder, including a plurality of wireless communications transceivers including at least one of a simplex transceiver, a CDMA transceiver, a TDMA transceiver, an AMPS transceiver, a GSM transceiver, an APCO transceiver, and a TETRA transceiver,” (*plurality of channels*). Ex[1004], [0035], [0059], [0060], [0070]; *see also id.*, [0060]-[0064] (describing that “[e]ach of the seven example transceiver units 2 to 8 is shown in FIG. 2 with a separate antenna 23”). Ohel

describes that “[t]he unit 1 can have various combinations of similar or different transceiver units for communication over separate channels and/or networks.” Ex[1004], [0060].

Ohel discloses that “[t]he first of the transceiver units is a first simplex communications unit 2,” which “preferably operates *on a given channel*”⁴ and “[t]he second of the transceiver units is a second simplex communications unit 3,” which operates “on a channel different from” that of the first simplex unit. Ex[1004], [0060]. Each of the channels is associated with different entities, as was well known in the art.⁵ Ex[1002], ¶125-127. “For example, the first simplex unit 2 can be set to *a dispatch channel*,” while “the second simplex unit 3 can be set to a particular channel *of another specific user* for direct, two-way communication” (*plurality of channels dedicated to different entities*). Ex[1004], [0060]. A POSITA would have understood that Ohel’s “dispatch channel” is a channel dedicated to communications with a dispatcher. Ex[1002], ¶127. To the extent Patent Owner argues that Ohel’s channels are not dedicated to different entities, it would have been obvious to a POSITA to do so because, as the ’802 Patent admits, it was known in a system, which “supports a plurality of communication channels,”

⁴ All emphasis added in bold italics unless otherwise noted.

⁵ The ’802 Patent provides examples of “entities” that include “group/locality/unit” such as the fire department as well as “users” and “devices.” Ex[1001], 1:15-21, 7:18-20.

that “each channel may be dedicated to a group/locality/unit.” Ex[1001], 1:15-18; Ex[1002], ¶127; *see* Ex[1013]; *see also Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1337-38 (Fed. Cir. 2020) (A missing claim limitation may be supplied by “the general knowledge of a skilled artisan.”) The additional transceivers operate in a similar fashion. Ex[1004], [0063]-[0066], [0072]; Ex[1002], ¶127.

Ohel discloses receiving a first message on a first dedicated channel. Ex[1002], ¶128. For example, Ohel’s system is able to operate in situations such as where an “officer is presently talking to another individual by cell phone over the CDMA transceiver 5,” (*receiving a first message from amongst a plurality of channels dedicated to different entities*) and “[d]uring the conversation, the police dispatcher begins to transmit one or more messages to the officer over the APCO transceiver 7.” Ex[1004], [0069]; *see also id.*, Abstract, [0035]-[0036], [0042], [0046], [0060], and [0070]-[0072]. In such situations, “no information being **received** over the CDMA transceiver 5 would be lost because at least the officer’s unit 1 would immediately start recording **all information received** by the CDMA transceiver 5 from the point in time when the APCO transceiver 7 took over.” *Id.*, [0070].

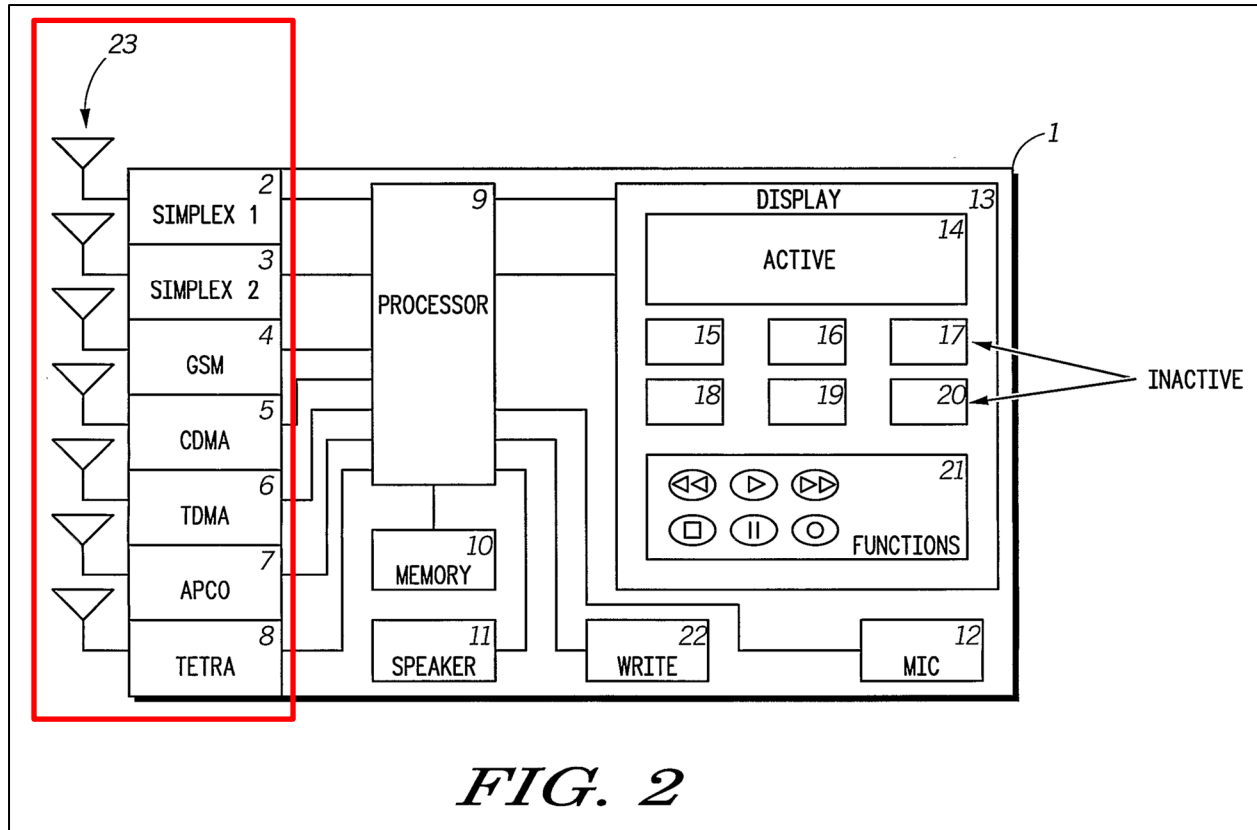
Further, Ohel explains that “[t]hese examples are only two possible scenarios in a variety of many different scenarios possible with the transceiver units 2 to 8 and the display configuration 13 to 21. In each possible example, the unit 1 according to the invention provides the user with the ability to record any number of

simultaneous transmissions to the user [i.e., *received messages*] without loss of information from any of the potential sources.” *Id.*, [0072]; Ex[1002], ¶129.

Thus, a POSITA would have understood that each of Ohel’s transceivers 2 to 8 would operate in a similar fashion in this respect. Ex[1004], [0063]-[0066], [0072]; Ex[1002], ¶130. In other words, a POSITA would have understood Ohel to teach that its system is able to operate similarly when an officer is, for example, presently talking to “another specific user” on the “particular channel” to which second simplex unit 3 is set (*receiving a first message on a first dedicated channel from amongst the plurality of channels*) and during the conversation, the police dispatcher begins to transmit one or more messages to the officer over the dispatch channel to which first simplex unit 2 is set. Ex[1002], ¶¶130-131.

c. 1[b]

Ohel discloses or at least renders obvious “*receiving a second message on a second dedicated channel being dedicated to receiving messages from a second entity [e.g., simplex unit 3 set to another specific user] from amongst the plurality of channels [e.g., transceiver units 2-8] at the communication system, the second message overlapping with the first message in time [e.g., second message begins to transmit while the first message is still in progress].*”



Ex[1004], FIG.2.

As discussed above, Ohel discloses receiving messages on a plurality of channels and “wireless communications transceivers,” (*plurality of channels*). Ex[1004], [0035]; Ex[1002], ¶¶132-133. Ohel further discloses that the simplex units “operate[] on a given channel, but can be also set to transmit/receive on different channels selected by a user” (*plurality of channels dedicated to different entities*). Ex[1004], [0060]; Ex[1002], ¶133; *see also* Ex[1001], 1:15-18.

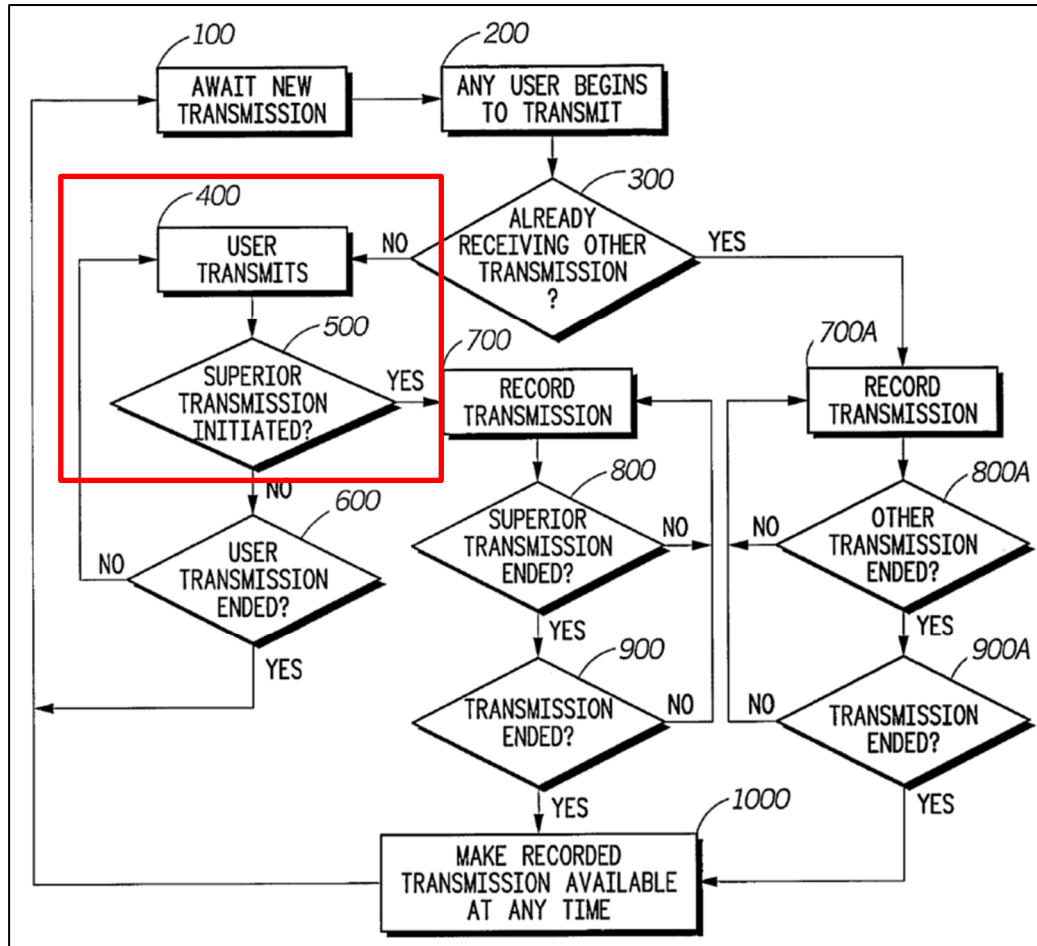
As discussed, Ohel discloses a scenario in which an officer using the CDMA transceiver 5 overlaps with a transmission to the officer by the police dispatcher over the APCO transceiver 7 (*receiving a second, overlapping, message from amongst a*

plurality of channels dedicated to different entities). *Supra* §IX.A.1.b; *see also* Ex[1004], [0069]. In this example, the “dispatcher, who has the ability to suppress any existing transmission between users” is “a superior user.” Ex[1004], [0047]; Ex[1002], ¶134.

A POSITA would have understood that each transceiver 2 to 8 would operate in a similar fashion (*supra* §IX.A.1.b) and thus, Ohel to teach that its system is able to operate similarly when an officer is, for example, presently talking to the “another specific user” on the “particular channel” to which second simplex unit 3 is set and during the conversation, the police dispatcher begins to transmit one or more messages to the officer over the dispatch channel to which first simplex unit 2 is set (*receiving a second message on a second dedicated channel being dedicated to receiving messages from a second entity...the second message overlapping with the first message in time*). Ex[1002], ¶¶ 135-136.

d. 1[c]

Ohel discloses “*determining one or more priorities for the first message received on the first dedicated channel from the first entity [e.g., user transmits/receivers] and the second message received on the second dedicated channel from the second entity [e.g., superior user transmission received] based on at least one pre-defined parameter [e.g., superior user status].*”



Ex[1004], FIG.1.

Ohel provides that transmissions, “by a superior user, such as a dispatcher,” have “the ability to suppress any existing transmission between users.” Ex[1004], [0047]. This “superior user” priority status may be pre-defined based on the transceiver type or channel dedicated to dispatch communications, or by an “emergency indication” within the transmission. *Id.*, [0070].

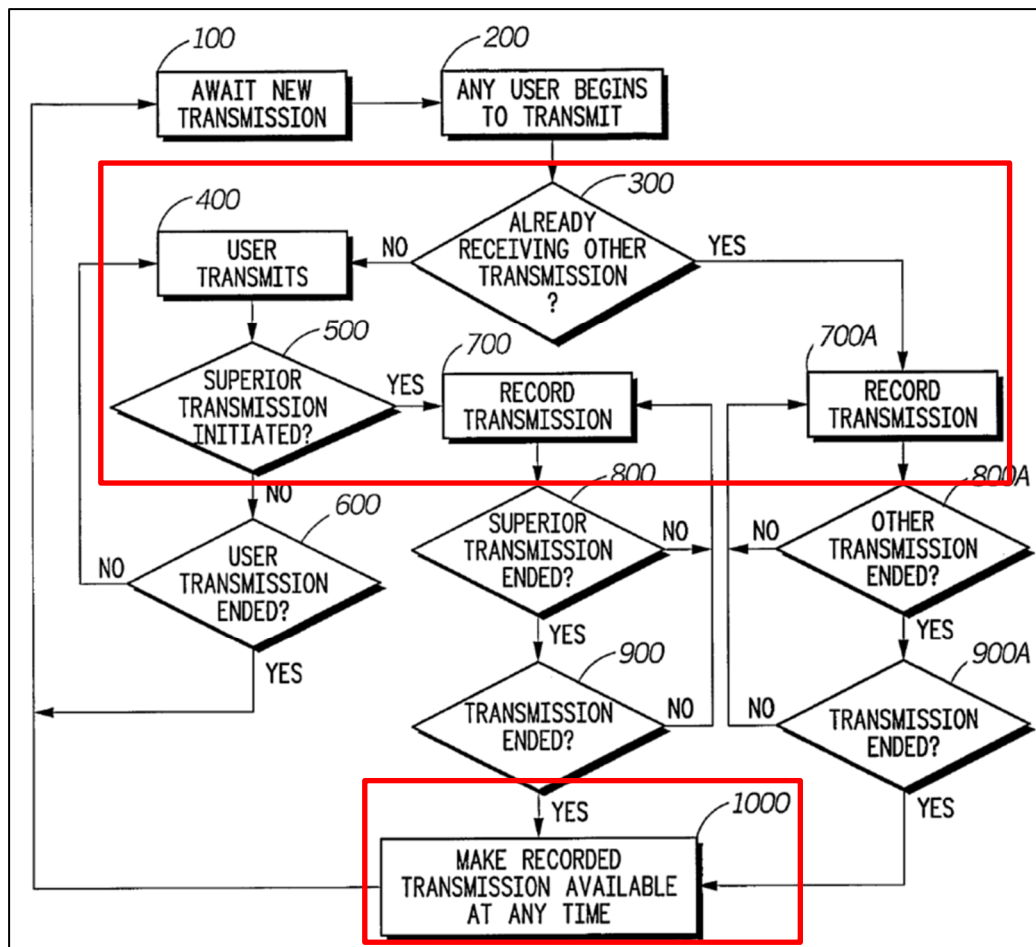
FIG.1 above shows Ohel’s series of inquiries used to determine if an ongoing transmission is to be interrupted. *Id.*, [0043]-[0052]; Ex[1002], ¶¶137-140. First, there is an inquiry to determine the order of the transmissions then a determination

is “made *to see if the interrupting user is a superior user who would preempt the user's continued transmission*” (*predefined parameter*). Ex[1004], [0050]. If yes, “then the user's transmission will be recorded” but if not, then the second transmission “would be recorded for playback by the user or another.” *Id.*; *see also id.*, [0047], [0070]-[0072].

Ohel specifies that “the unit can *record upon receipt of any communication*, upon start of a new transmission, or any combination thereof,” and that “the unit 1 according to the invention provides the user with the ability to record *any number of simultaneous transmissions to the user* without loss of information from any of the potential sources.” *Id.*, [0045], [0072]; Ex[1002], ¶141. For example, when interrupted by a dispatcher transmitting over the APCO transceiver, an “officer’s unit 1 would immediately start recording all information received by the CDMA transceiver 5 from the point in time when the APCO transceiver 7 took over.” Ex[1004], [0070]; *see also id.*, [0072] (explaining that APCO/CDMA transceiver examples is “one of many possible examples” and can be applied to “any of the potential sources”). Therefore, a POSITA would have understood that the disclosed method applies to all messages sent or received by the unit. Ex[1002], ¶¶141-142. Additionally, a POSITA would have understood that each of the individual units are parts of an overall “communication system.” Ex[1002], ¶¶141-142.

e. 1[d]

Ohel discloses or at least renders obvious “*determining which message out of the first message and the second message should be stored [e.g., record transmission] and subsequently played [e.g., recording made available] based on the second message overlapping with the first message in time and one or more priorities assigned to the first and the second message [e.g., overlapping superior user transmission initiated].*”



Ex[1004], FIG.1.

If one of the overlapping messages is assigned superior user priority status,

the other transmission is “interrupted,” and “recorded as set forth above.” *Id.*, [0047], [0050]. These recordings are then made available at a later time, as illustrated in FIG.1 above. Ex[1002], ¶¶143-145; *see also* Ex[1004], Abstract, [0035]-[0036], [0048], [0050], [0055], and [0070]-[0072].

Thus, Ohel discloses or at least renders obvious *determining* which of the *overlapping messages* should be recorded (*stored*) and made available later (*subsequently played*) based on the superior user status (*assigned priorities*).

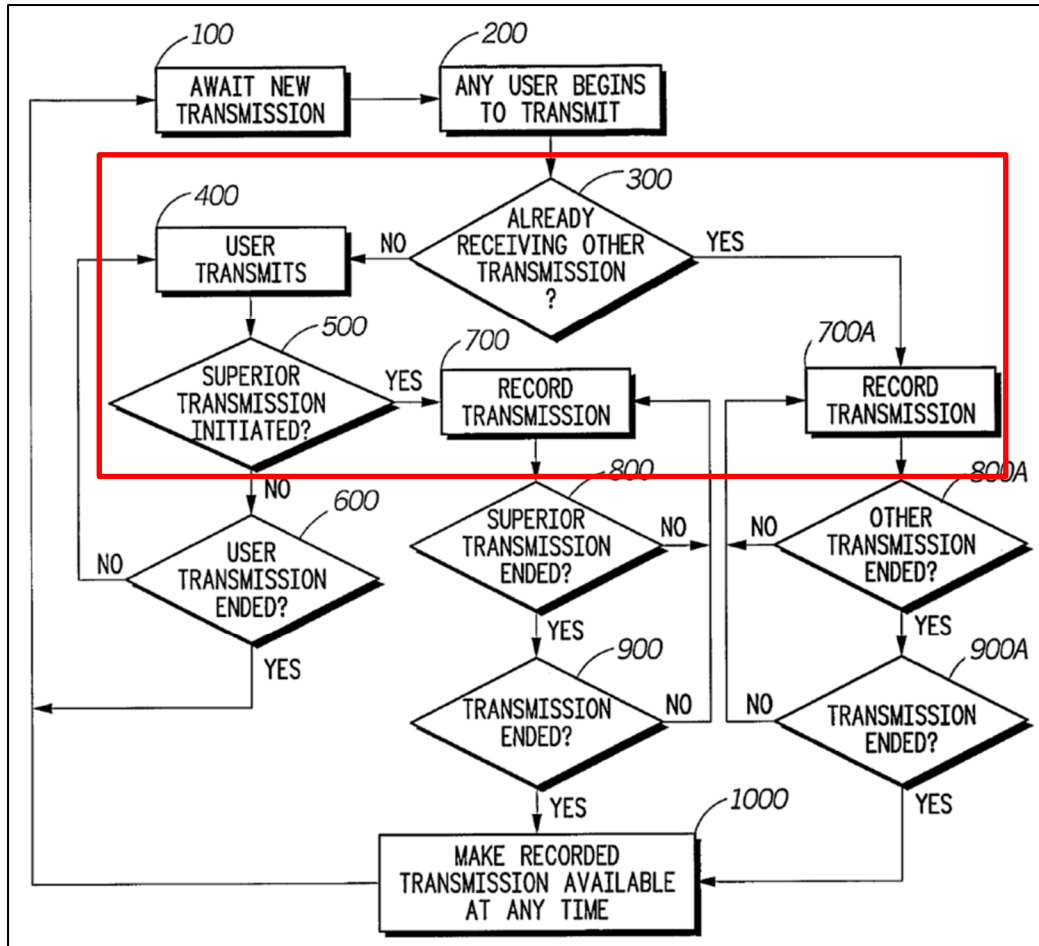
f. 1[e]

Ohel discloses “*playing the message having a higher priority between the first and the second message.*”

When a lower priority transmission is “interrupted, for example, by a superior user, such as a dispatcher,” this priority transmission is transmitted (*played*) “over or instead of the currently transmitting user(s).” Ex[1004], [0047]. Alternatively, “if the interrupting user is not a superior user (*higher priority*), then the interrupting user's message would be recorded” while the first message is played. *Id.*, [0050]; Ex[1002], ¶¶146-148; *see also* Ex[1004], [0047], [0050], and [0070]-[0072].

g. 1[f]

Ohel discloses “*storing at least one message* [e.g., recording transmissions] *having a lower priority between the first and the second message based on the determination* [e.g., superior user determination].”

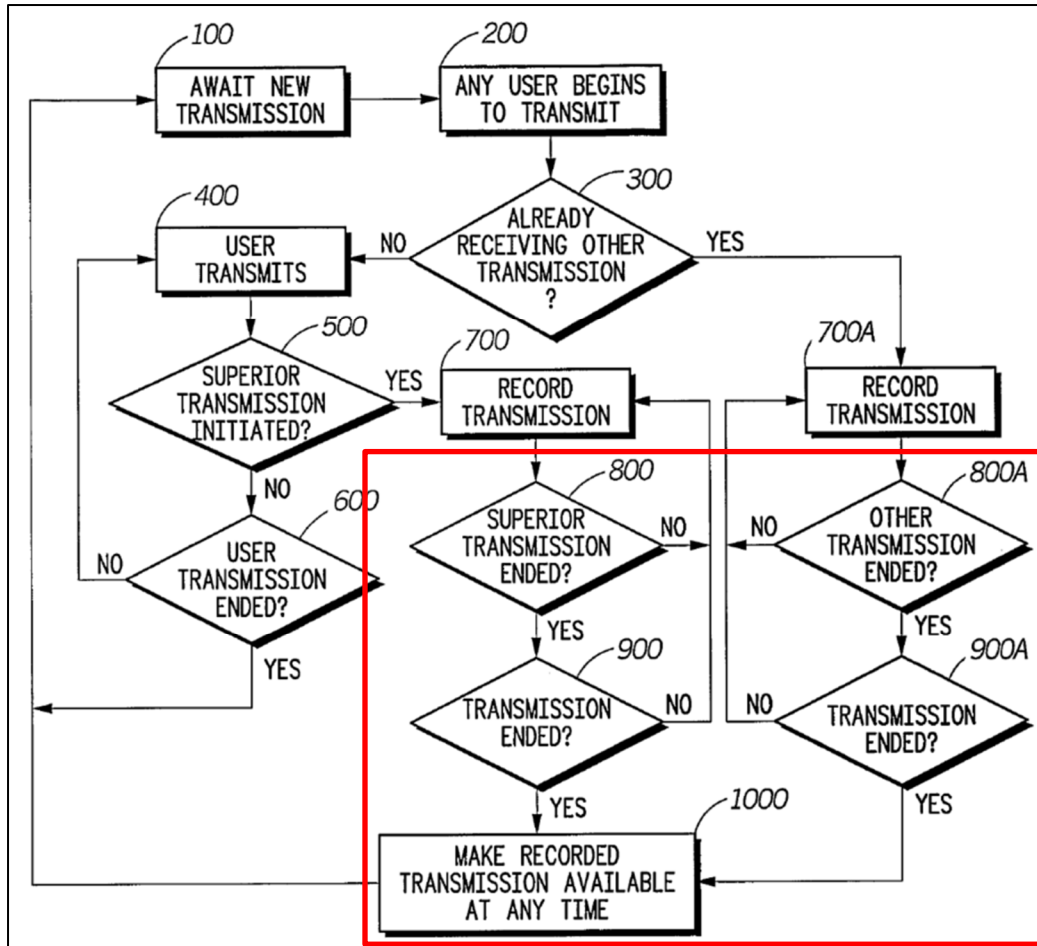


Ex[1004], FIG.1.

As shown in FIG.1 above, Ohel provides that “[i]f the interrupting user is a superior user [*message having a higher priority*], then the user's transmission [*message having a lower priority*] will be recorded” (*stored*). *Id.*, [0050]; Ex[1002], ¶¶149-151; *see also* Ex[1004], [0036], [0047], [0049], [0055], and [0070]-[0072].

h. 1[g]

Ohel discloses “*playing the stored message* [e.g., playing recorded transmission] *subsequent to completing playing of the message having higher priority* [e.g., superior user transmission ended].”



Ex[1004], FIG.1.

As shown in FIG.1 above, Ohel provides that “at least one of the recorded transmissions is *played back after* [subsequent to] *the new wireless transmission and/or after the user's transmission has ended*. Playback can begin from a starting point of a recorded transmission and/or from a user-selected point of time within a recorded transmission.” *Id.*, [0017]; Ex[1002], ¶¶152-154; *see also* Ex[1004], Abstract, [0018], [0035]-[0036], [0047], [0049]-[0050], and [0070]-[0072].

2. Claim 2

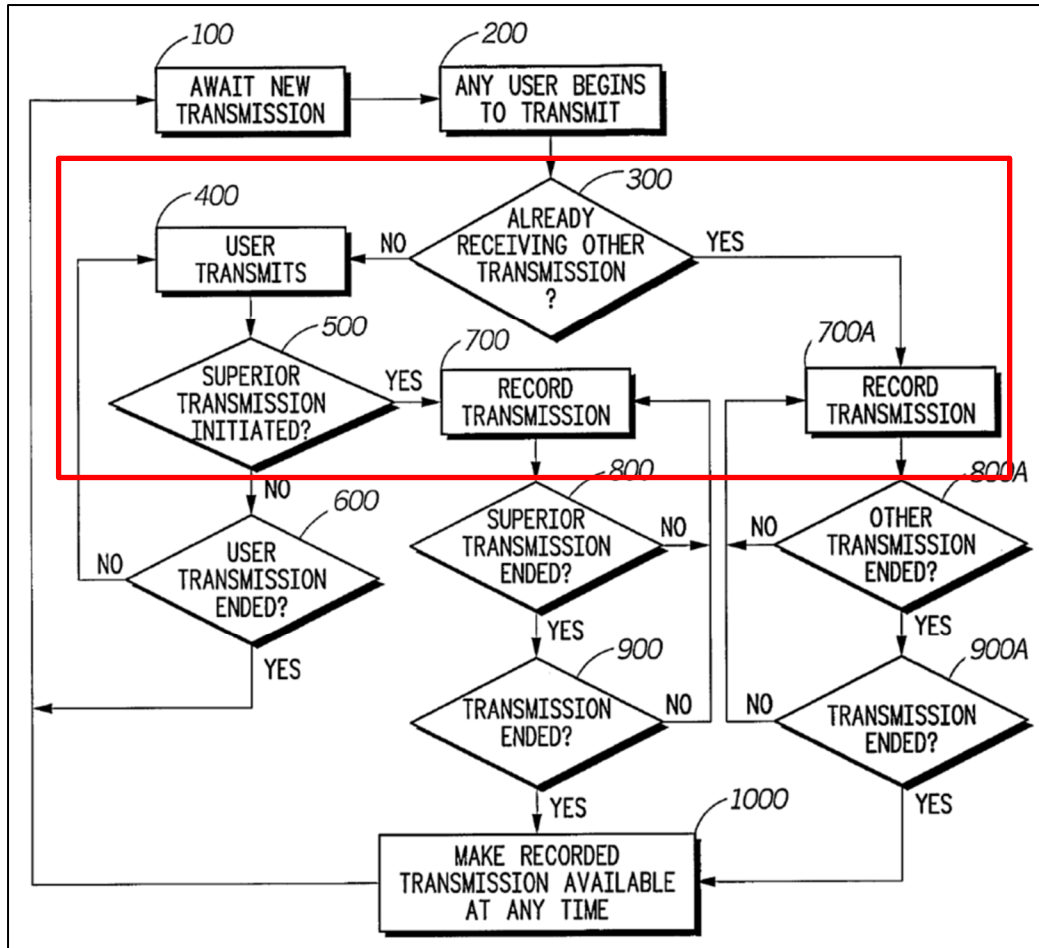
a. 2[pre]

Ohel discloses 2[pre]. *Supra* §IX.A.1.e; Ex[1002], ¶156.

b. 2[a]

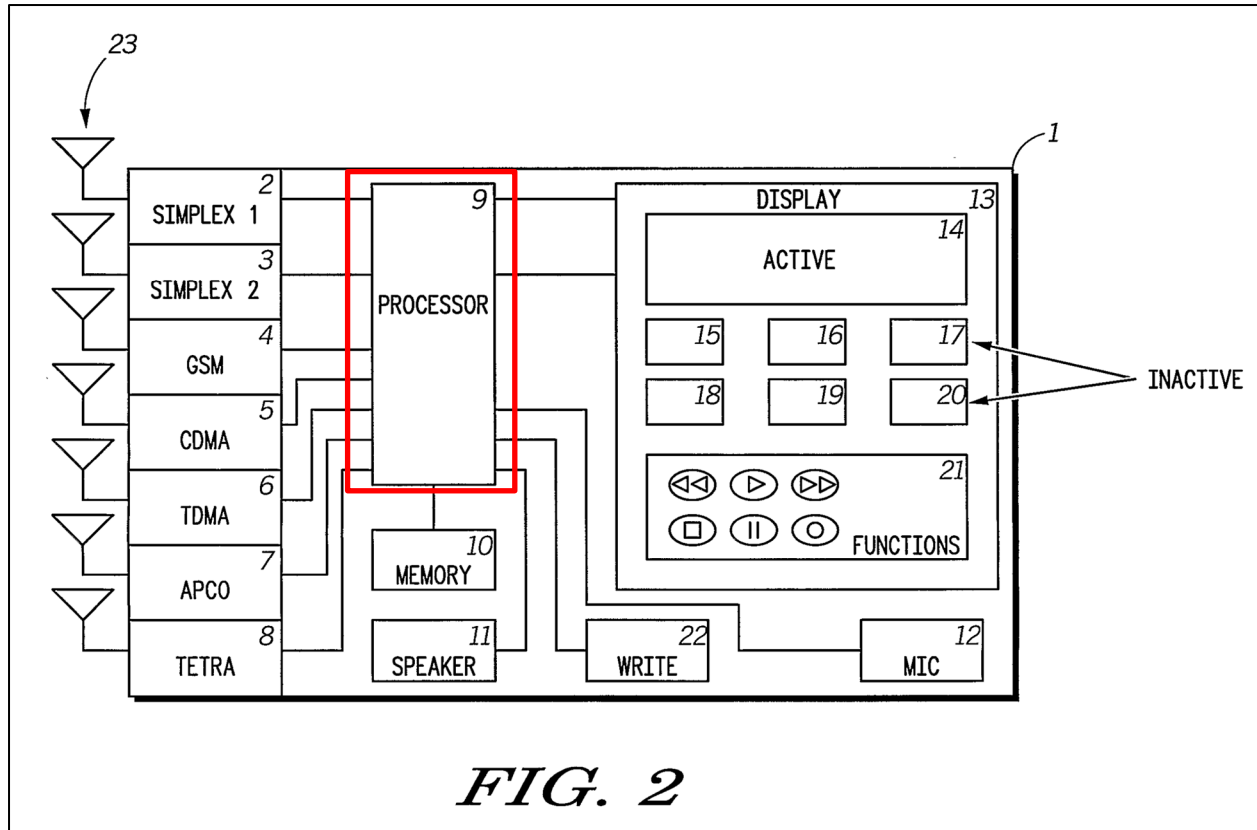
Ohel discloses or at least renders obvious “*calculating the priorities of the received messages.*”

Ohel makes a series of inquiries (*calculation*) in order to determine the priority of overlapping transmission, as shown in FIG.1 below. *Supra* §IX.A.1.d; Ex[1002], ¶¶157-158. First inquiring “if any intermediate transmission was initiated after the user’s transmission [*first and second messages*] began [*chronological priority*]” and then inquiring “if the interrupting user [*second message*] is a superior user” (*status priority*). Ex[1004], [0050]; Ex[1002], ¶158.



Ex[1004], FIG.1.

A POSITA would have understood that the chronological priority inquiry would involve calculating the difference in start time for each message and that the status priority inquiry to involve determining superior user status based on a specific transceiver, or “an emergency indication within the transmission” and then performing a calculation to determine their relation to the “pre-determined protocol” governing priority status. Ex[1004], [0070]; Ex[1002], ¶¶159-160.

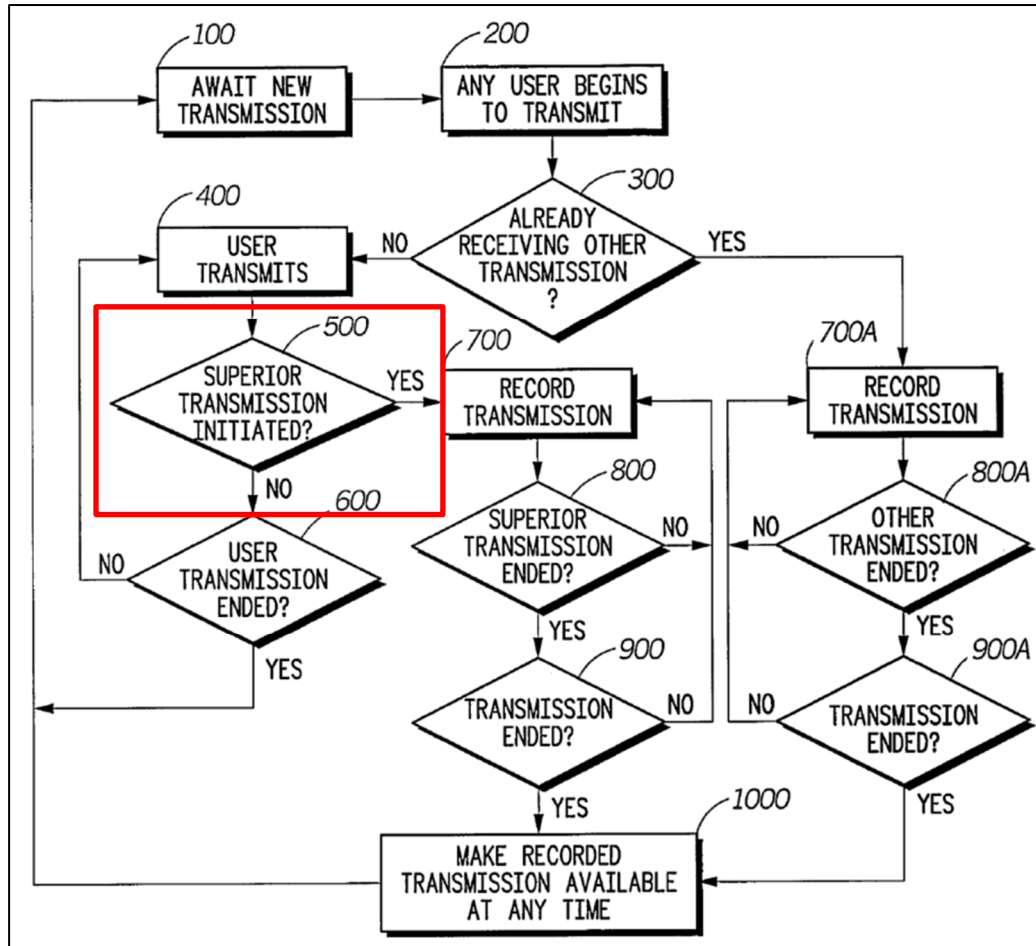


Ex[1004], FIG.2.

The '802 Patent only discloses “*calculating*” by stating “[p]riority calculator 516 calculates the priority of each of the received radio messages.” Ex[1001], 6:15-17. Thus, Ohel discloses or at least renders obvious *calculating the priorities of the received messages*.

c. 2[b]

Ohel discloses or at least renders obvious “*comparing the priorities of the received messages* [e.g., determining superior user status].”



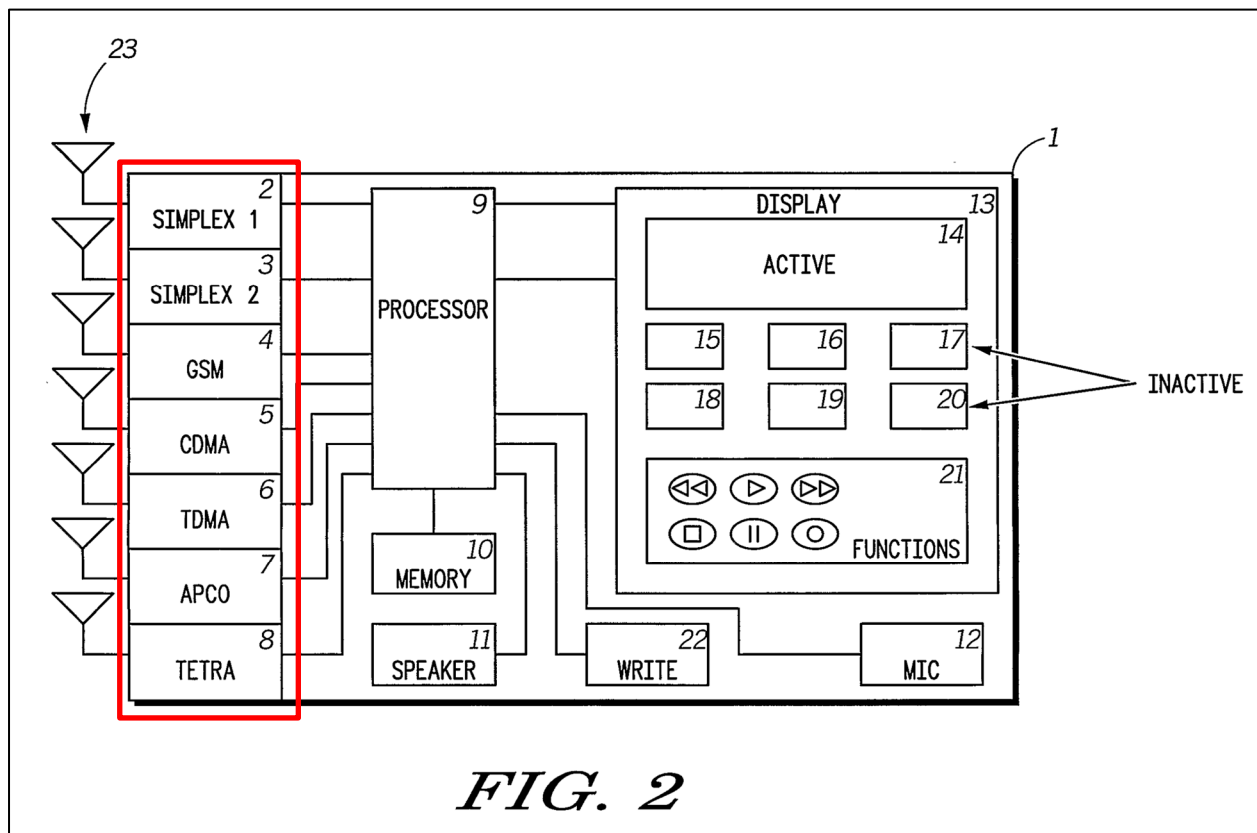
Ex[1004], FIG.1.

Once the priority of each message is calculated via the inquiries discussed above, the decision point at step 500 in FIG.1 above shows the *priority* of each message, such as superior user or not, are *compared* to determine which messages should be *stored and subsequently played*. Ex[1004], [0050]; Ex[1002], ¶¶161-163.

3. Claim 3

Ohel discloses “*the predefined parameter comprises a bandwidth requirement of the received messages.*”

As previously discussed, Ohel uses, at least, the type of transceiver the message is received on to determine priority. For example, APCO transmissions, which are based on “the Association of Public Safety Communications Officials standard,” for “public safety entities [to] communicate through radio,” (Ex[1004], [0007]) may be prioritized over (*id.*, [0070]) CDMA transmissions, which are a form of “cellular communications.” *Id.*, [0008]. A POSITA would have understood that these two standards, as well as the standards for the other four transceivers shown in FIG.2 above, all have different bandwidth requirements, and therefore Ohel’s prioritization parameter comprises a bandwidth requirement (the requirement associated with the prioritized channel). Ex[1002], ¶¶164-165.



Ex[1004], FIG.2.

Additionally, Ohel provides that the “wireless transmission can be digital data, including, but not limited to code, an audio signal, an image, and a video stream.” Ex[1004], [0016]. Similarly, a POSITA would have understood that these different types of digital data all have different bandwidth requirements and therefore Ohel’s prioritization parameter comprises a bandwidth requirement (the requirement associated with the types of digital data). Ex[1002], ¶¶166-167.

The only disclosure of “*a bandwidth requirement*” in the ’802 Patent is its inclusion, without definition in a list of possible pre-defined parameters. Thus, Ohel discloses or at least renders obvious *the predefined parameter comprises a bandwidth requirement of the received messages*.

4. Claim 4

Ohel discloses or at least renders obvious “*the predefined parameter comprises a type of the received messages*”.

Ohel discloses using, at least, the type of the received message to determine priority, such as prioritizing “APCO transceiver” messages over CDMA. Ex[1004], [0070]. Additionally, message types may be indicated by a user, such as a superior user (e.g., dispatcher) transmission being prioritized over those of other users. *Id.*, [0005], [0047], [0070]. Furthermore, Ohel discloses that message type may be indicated via “an emergency indication within the transmission,” thus allowing emergency transmissions to be prioritized over other messages. *Id.*,

[0070]; Ex[1002], ¶¶168-169.

A POSITA would have understood that APCO, dispatcher, and emergency transmissions all represent various message “*types*” that are used to determine the superior user status (*priority*) of a received message. Ex[1002], ¶¶170-171.

5. Claim 5

Ohel discloses or at least renders obvious “*the type of received messages being one of a group comprising audio, video, text, and image*”.

Ohel discloses, at least, prioritizing “APCO transceiver” messages over CDMA. Ex[1004], [0070]. APCO is a public safety radio standard. *Id.*, [0007]. A POSITA would have understood APCO to be an audio-based standard. Ex[1002], ¶¶172-173. Thus, a POSITA would have understood prioritization of messages based on use of the APCO transceiver to be prioritizing received messages based on being audio-type messages. Ex[1002], ¶¶173-174.

6. Claim 6

Ohel discloses or at least renders obvious “*determining the priority comprises assigning priorities to the first message and the second message based on inputs from a user*” in at least two ways.

First, Ohel discloses that “the dispatcher can have an emergency indication within the transmission that forces the officer to listen.” Ex[1004], [0070]. This “emergency indication” is one of the priority parameters used by Ohel. Thus, based on Ohel’s disclosure that “the dispatcher *can have* an emergency indication

within the transmission,” a POSITA would have understood that the determination of priority based on the presence or absence of an “emergency indication” is “based on inputs from a user” (e.g., the dispatcher). Ex[1002], ¶¶175-176.

Second, Ohel discloses the use of a “predefined protocol” to determine (*assign*) priorities of the first message and the second message. Ex[1002], ¶177. For example, “the predefined protocol” could be “defined to force the officer to immediately listen to the dispatcher.” Ex[1004], [0070]. A POSITA would have understood that, in the context of Ohel’s computer-implemented system, the predefined protocol used to assign priorities would be “*based on inputs from a user.*” Ex[1002], ¶¶177-178.

7. Claim 7

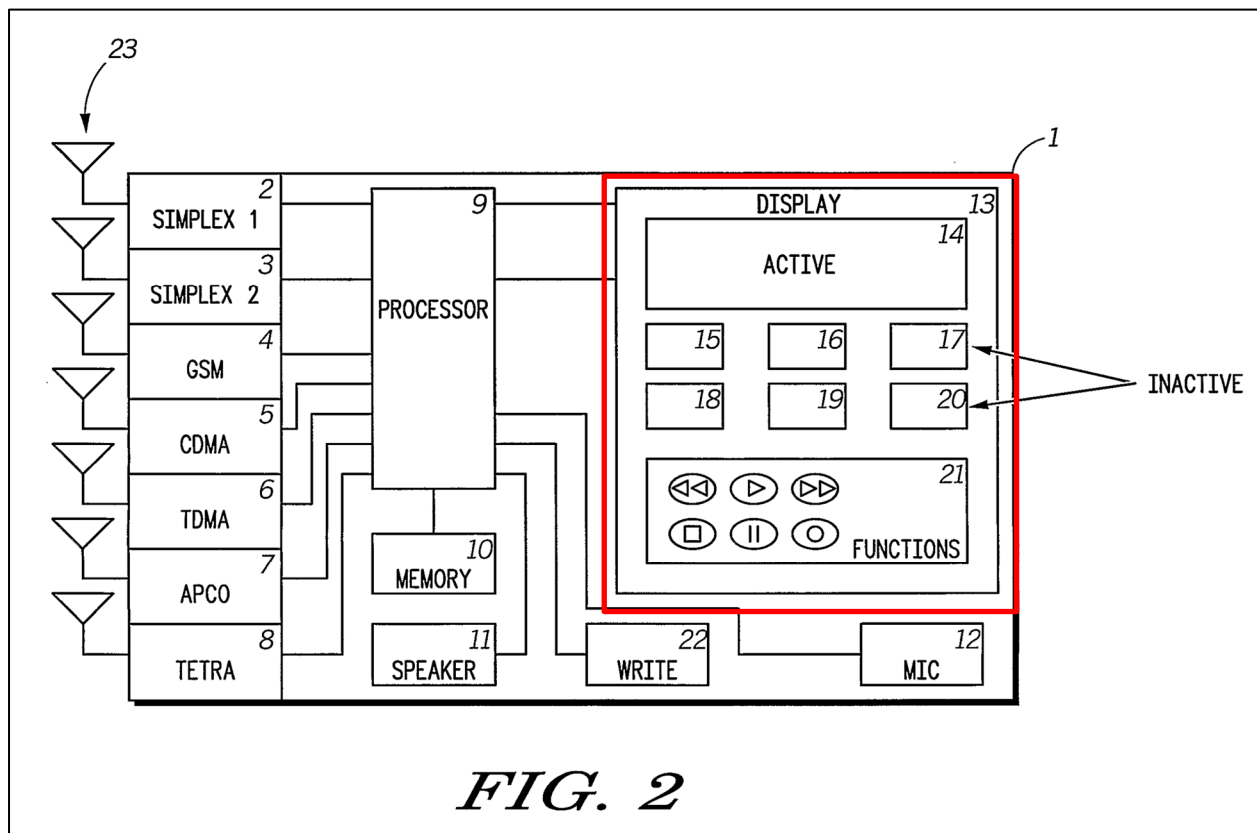
Ohel discloses “*informing an operator the time of receipt [e.g., time stamp of a message while playing the first message and the second message [e.g., via display 13].*”

Ohel teaches that “[t]he communications unit applying the method according to the invention can be programmed to start recording at any time *or to record a time stamp at any time.*” Ex[1004], [0045]. This “time stamp” is “a flag at the point in time when a superior user’s transmission is detected,” which indicates the “point of time during the user’s transmission” when the interruption began. *Id.*, [0048]. Thus, Ohel discloses “the unit would record...from the time at which the user switched” between calls, and that “[i]f recording were continuous for all calls, then

recording would be flagged at the time at which the user switched” between them.

Id., [0055]; Ex[1002], ¶¶179-180.

Additionally, Ohel provides, as shown in FIG.2 below, “display 13” which is “configured to display information according to a given user's preferences.” Ex[1004], [0065]. This may include “a functional display section 21, which contains areas for performing various functions related to stored information regarding the various transceiver units 2 to 8.” *Id.*, [0066]. “For example, if audio information is being played with regard to the active display 14, then the following functions would be useful: play, stop, rewind, fast forward, pause, record, and *go to a specified time stamp.*” *Id.*; Ex[1002], ¶181.



Ex[1004], FIG.2.

Therefore, it would be obvious to a POSITA in view of Ohel's disclosure to *inform an operator the time of receipt of a message (e.g., time stamp) while playing the first and the second message (e.g., on Ohel's display).* Ex[1002], ¶¶182-183.

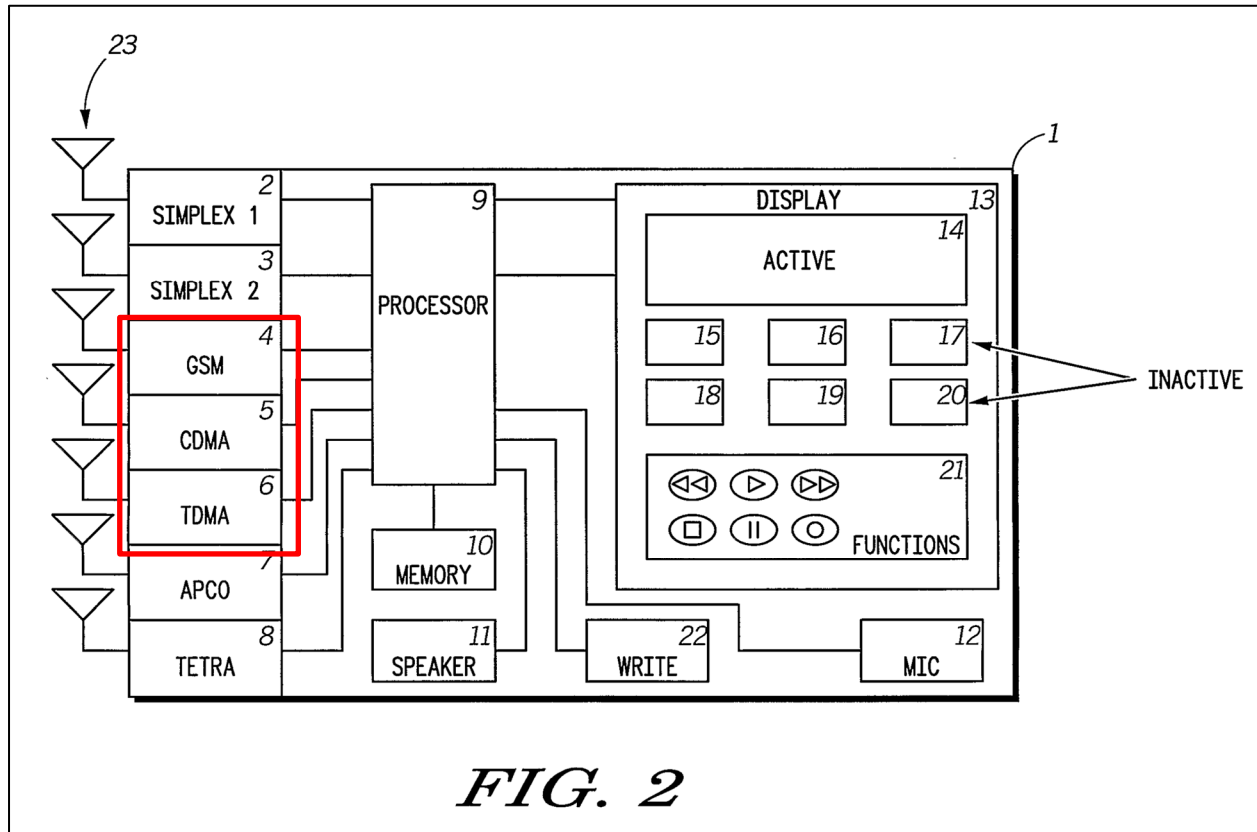
8. Claim 8

Ohel discloses “*a message includes voice over internet protocol communications.*”

Ohel discloses that “wireless transmission[s],” conveying “data, including, but not limited to, **voice**, code, pictures, and video,” can be used to “communicate with other individuals or entities via cell phone using any of the three cell phone transceivers 4, 5, or 6.” Ex[1004], [0016], [0042], [0068]. Further, it had long been known in the art to implement “a mobile/wireless phone” via voice over IP as an “individual network entit[y]” in “[a]n IP Telephony Emergency Connections (ITEC) system,” as evidenced by prior art such as Stumer. Ex[1014], [0013], [0036]; Ex[1002], ¶¶184-185. Thus, a POSITA would be motivated to send *messages* at least via one of Ohel's cell phone transceivers that *include voice over internet protocol communications* and would expect success in modifying Ohel's system to use voice over IP in implementing the cell phone connections to the system, as was typical in other prior art IPTEC systems, similar to Ohel's. Ex[1002], ¶¶185-186.

9. Claim 9

Ohel discloses “a message includes mobile phone communications [e.g., transceivers 4-6].”



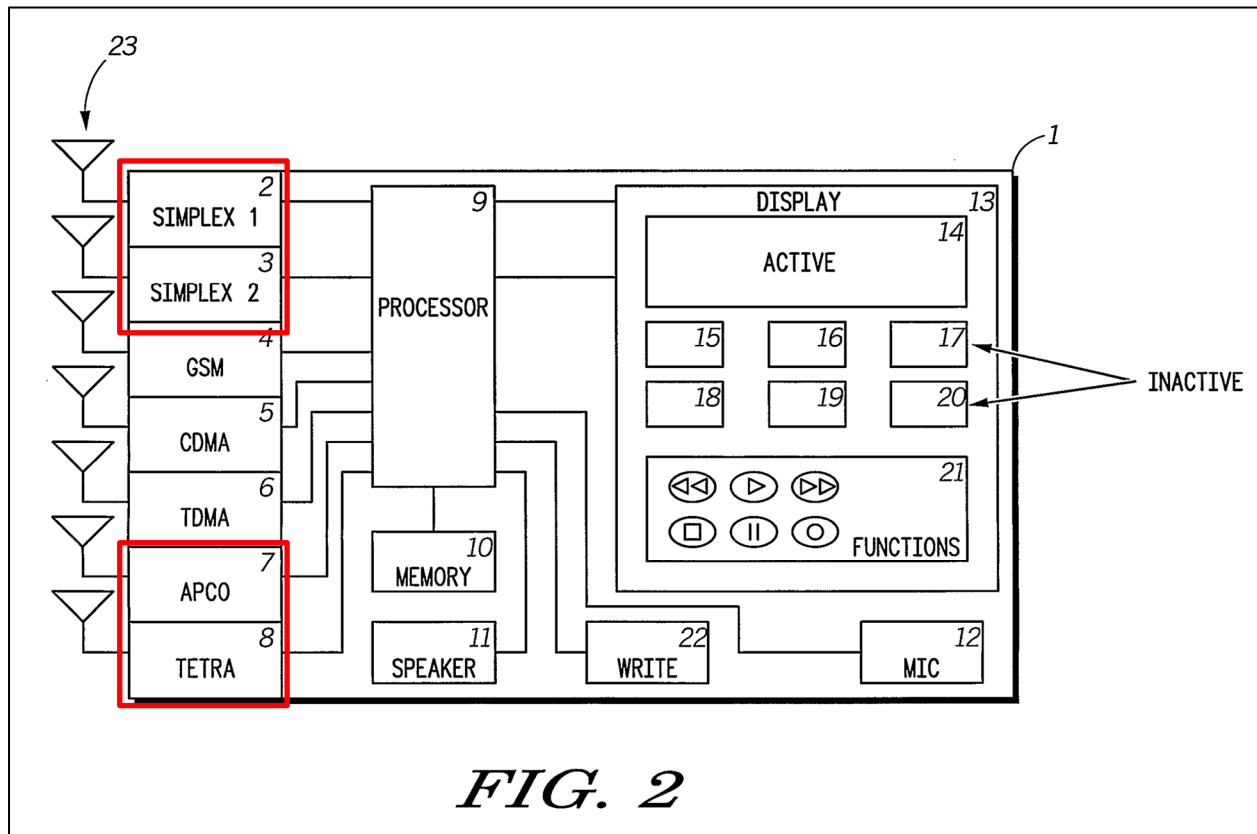
Ex[1004], FIG.2.

As shown in FIG.2, Ohel enables a user to “communicate with other individuals or entities via cell phone using any of the three cell phone transceivers 4, 5, or 6” which correspond to cellular communication standards such as the “Code Division Multiple Access (CDMA), the Advanced Mobile Phone System (AMPS), and the Global System for Mobile Communication (GSM).” Ex[1004], [0008], [0068]; Ex[1002], ¶¶187-189. Ohel discusses an example where an “officer is presently talking to another individual by cell phone over the CDMA transceiver 5.”

Ex[1004], [0069].

10. Claim 10

Ohel discloses “a message includes radio communications [e.g., transceivers 2-3, and 7-8].”



Ex[1004], FIG.2.

As shown in FIG.2, Ohel discloses using two simplex transceivers as well as APCO and TETRA transceivers. APCO is based on “the Association of Public Safety Communications Officials standard,” for “public safety entities [to] communicate through radio,” while TETRA stands for “the Terrestrial Trunked Radio Standard.” Ex[1004], [0007]; Ex[1002], ¶¶190-191. Thus, each of these transceivers is designed for radio “[c]ommunication with the police

dispatcher...over one of the public safety transceivers 7, 8 or by radio through one of the simplex transceiver units 2, 3.” Ex[1004], [0068]; Ex[1002], ¶¶191-192.

11. Claim 11

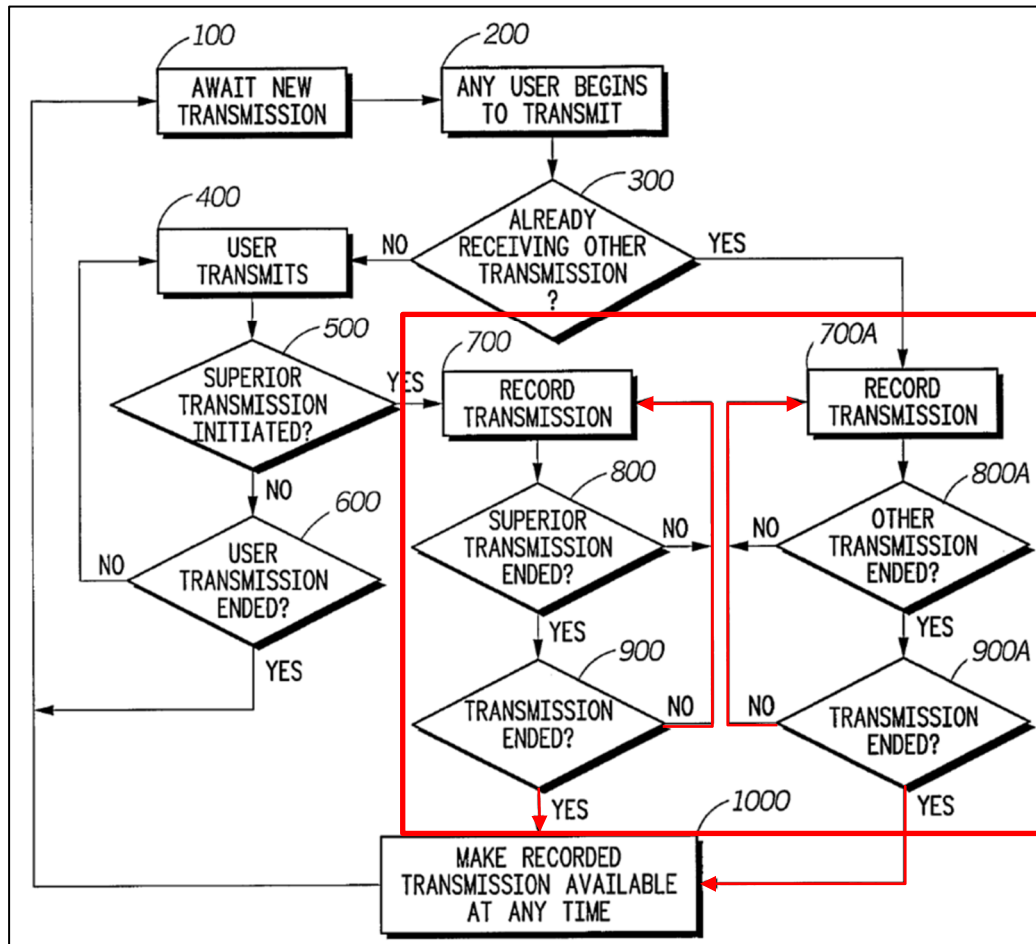
Claim 11 is nearly identical to claim 1, with only a few minor differences. First, claim 11 recites “*prioritizing the first and second messages based on at least one predefined parameter,*” instead of “*determining one or more priorities for the first message received on the first dedicated channel from the first entity and the second message received on the second dedicated channel from the second entity based on at least one pre-defined parameter.*” Second, claim 11 recites “*storing the message having lower priority **in a queue.***” Third, claim 11 recites “*checking periodically the status of the message being played.*” Ex[1001], cls.1, 11; *Bancorp Serco., LLC, v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1277 (Fed. Cir. 2012)(asserted system and medium claims treated as no different from the asserted method claims). Ohel discloses these additional features of claim 11.

The multiple channel data recorder, disclosed by Ohel, “provides the user with the ability to record *any number of simultaneous transmissions* to the user without loss of information from any of the potential sources.” Ex[1004], [0072].

Ohel accomplishes this via “a dynamic memory device permitting substantially simultaneous recording and playback.” *Id.*, [0049]. Transmissions are then “made available to users for playback (*see* step 1000) any time after recording begins.” *Id.*, [0052]. A POSITA would have understood that a queue

is one well-known, practical way to store multiple messages in a single memory device such as the dynamic memory device. Ex[1002], ¶¶193-195.

Finally, as shown in FIG.1 below at 700-900 and 700A-900A, Ohel discloses routinely “*checking periodically the status of the message being played.*”



Ex[1004], FIG.1.

Thus, for these and all of the same reasons described for claim 1, incorporated here, Ohel also renders claim 11 obvious. §IX.A.1; Ex[1002], ¶¶196-197.

12. Claim 12

Claim 12 is nearly identical to claim 7. The only difference is that claim 12

depends on claim 11. Ex[1001], cls.7, 12. Thus, for all of the same reasons described for claims 7 and 11, incorporated here, Ohel also invalidates claim 12. §§IX.A.7, IX.A.11; Ex[1002], ¶198.

13. Claim 13

Claim 13 is nearly identical to claim 1. The only differences are that claim 13 recites “*A communication system for managing communication, the communication system receiving messages from a plurality of channels, the communication system comprising;*” “*a central conferencing system comprising;*” and “*storing the messages other than the one sent for playing **in a queue;***” Ex[1001], cls.1, 13; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims). Additionally, as discussed above, this claim is governed by 35 U.S.C. §112, ¶6, and the functions and corresponding structure discussion is incorporated herein. *Supra* **§Error! Reference source not found.;** Ex[1002], ¶199.

Ohel discloses the function of limitation 13[a] for the reasons discussed above for element 1[a]-1[b]. *Supra* §§IX.A.1.b-IX.A.1.c. Ohel discloses the corresponding structure in transceiver units 2 to 8, each of which “operates on a given channel.” Ex[1004], [0060]; Ex[1002], ¶200.

Ohel discloses the function of limitation 13[b] for the reasons discussed above for elements 1[e], and 1[g]. *Supra* §§IX.A.1.f, IX.A.1.h. Ohel discloses the corresponding structure of “a speaker or multiple speaker system 11.” Ex[1004],

[0035], [0064]; Ex[1002], ¶201.

Ohel discloses the function of limitations 13[d] and 13[e] for the reasons discussed above for element 1[c]-1[d]. *Supra* §§IX.A.1.d-IX.A.1.e. Ohel discloses the corresponding structure of a “processor” that determines “to record the user's transmission for playback” based on if the “unit detects a superior user’s transmission during the transmission of the user's message.” Ex[1004], [0025], [0048]; Ex[1002], ¶202.

Ohel discloses the function of limitation 13[f] for the reasons discussed above for element 1[e]. *Supra* §IX.A.1.f. Ohel also discloses the corresponding “processor” structure “can be programmed to play back recorded transmission data stored in the memory.” Ex[1004], [0030]; Ex[1002], ¶203.

Ohel discloses the function of limitation 13[g] for the reasons discussed above for element 1[f]. *Supra* §IX.A.1.g. Ohel discloses the corresponding structure “memory 10” that may be “an external writing media, which can include, for example, a hardware memory device or an external storage media.” Ex[1004], [0015], [0064]; Ex[1002], ¶204.

Additionally, Ohel’s system “provides the user with the ability to record any number of simultaneous transmissions to the user without loss of information from any of the potential sources” via “a dynamic memory device permitting substantially simultaneous recording and playback.” Ex[1004], [0072], [0049]. These transmissions are then “made available to users for playback (*see* step 1000) any

time after recording begins.” *Id.*, [0052]. A POSITA would have understood that a queue is a well-known, practical way to store multiple messages in a single memory device like the dynamic memory device. Ex[1002], ¶205.

Further, one of the intended uses of Ohel is in a system with a “multi-party channel.” Ex[1004], [0005]. For example, “such communication exists with public safety communications such as police and fire/rescue” using a shared channel to communicate with dispatchers and other officers. *Id.* Thus, in an overall “communication system” composed of individual units with this shared channel as one of the transceivers 2-8, a POSITA would have understood such a communication system to be analogous to “a central conferencing system.” Ex[1002], ¶206. Therefore, for these and all of the same reasons described for claim 1, incorporated here, Ohel also renders claim 13 obvious. *Supra* §IX.A.1; Ex[1002], ¶207.

14. Claim 14

Claim 14 is nearly identical to claim 13 and, as discussed above, this claim is governed by 35 U.S.C. § 112, ¶6; *supra* §**Error! Reference source not found.**; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims). The only difference is that claim 14 uses the nonce term “*module*” in place of “*means for*” used in claim 13. Therefore, as discussed for claims 1 and 13, Ohel discloses the claimed modules and functions. *Supra* §§IX.A.1, IX.A.13. Thus, for all of the same reasons described for claim 1 and claim 13, incorporated here, Ohel also invalidates claim 14. *Supra* §§IX.A.1,

IX.A.13; Ex[1002], ¶208.

15. Claims 15-16

Claims 15-16 are nearly identical to claims 2, and 7. The only difference is that claims 15-16 depend on claim 14 and include additional module terms for which the functions and corresponding structure previous discussion is incorporated herein. *Supra* §**Error! Reference source not found.**; Ex[1001], cls.2, 7, 15-16; Ex[1002], ¶209.

Ohel discloses the function of limitation 15[b] for the reasons discussed above for elements 1[c]-1[d], and 13. *Supra* §§IX.A.1.d-IX.A.1.e, IX.A.13. Ohel discloses the corresponding structure of a “processor” which determined “to record the user's transmission” based on if “the user's communications unit detects” (*calculates*) an overlapping superior user's transmission. Ex[1004], [0025], [0048]; Ex[1002], ¶210.

Ohel discloses the function of limitation 15[c] for the reasons discussed above for elements 1[c], and 13. *Supra* §§IX.A.1.d, IX.A.13. Ohel discloses the corresponding structure of a “processor” which compares the overlapping transmissions to detect if one of the transmissions is “a superior user's transmission.” Ex[1004], [0025], [0048]; Ex[1002], ¶211.

Ohel discloses the function of limitation 16 for the reasons discussed above for element 7. *Supra* §IX.A.7. Ohel discloses the corresponding structure “display 13” and, as discussed previously, a POSITA would understand this to

structure and function to disclose displaying the time of receipt of a message. Ex[1004], [0066]; Ex[1002], ¶212; *supra* §IX.A.7.

Thus, for all of the same reasons described for claims 2, 7, and 14, incorporated here, Ohel also invalidates claims 15-16. *Supra* §§IX.A.2, IX.A.7, IX.A.14; Ex[1002], ¶213.

16. Claim 17

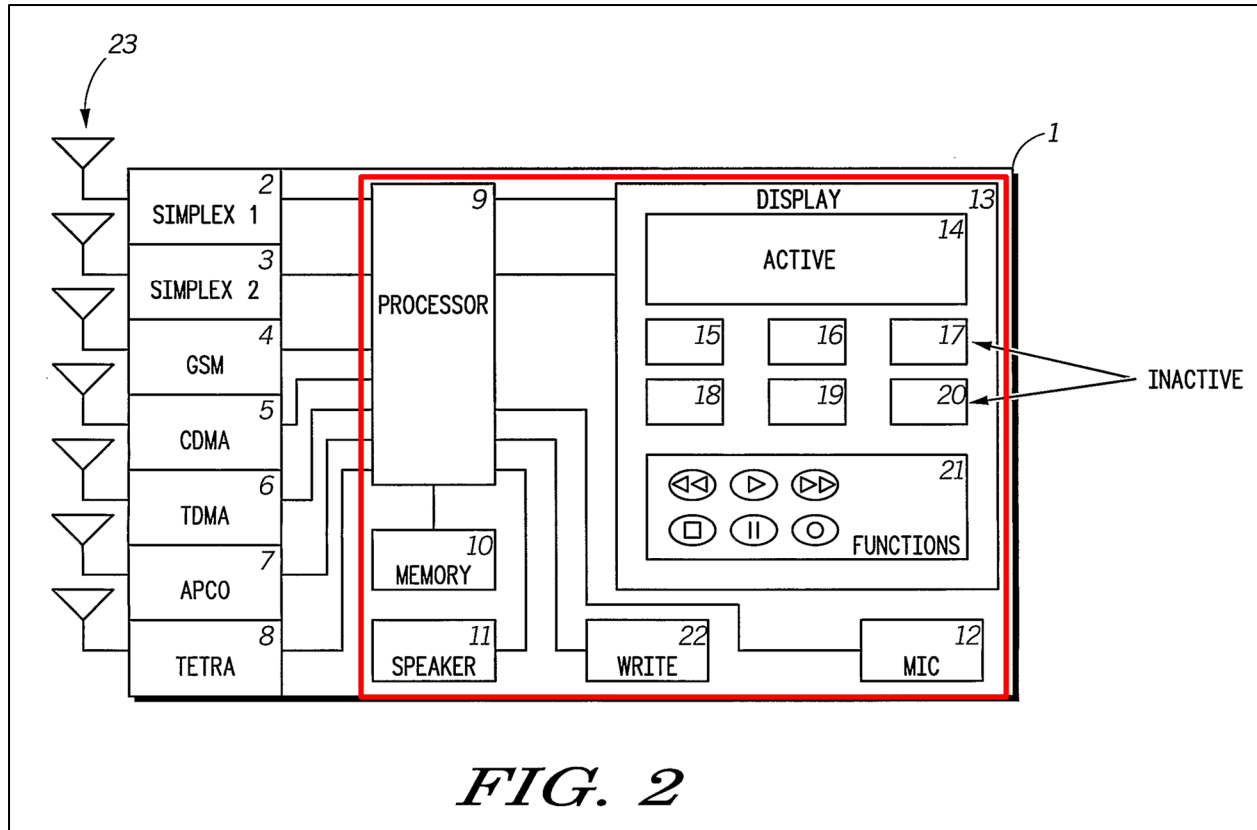
Claim 17 is nearly identical to claims 14-16. Ex[1001], cls.14-17; Ex[1002], ¶214. Therefore, for these and all of the same reasons described for claims 14-16, incorporated here, Ohel also invalidates claim 17. *Supra* §§IX.A.14-IX.A.15; Ex[1002], ¶215.

17. Claim 18

Claim 18 is nearly identical to claim 1. The primary differences are that claim 18 recites “[a]n *apparatus for managing communication in a communication system, the communication system receiving messages on a plurality of channels, the apparatus comprising: a processing system including a processor coupled to a display and user input device; and a machine-readable medium including instructions executable by the processor.*” Ex[1001], cls.1, 18; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims).

Ohel’s multiple channel data recorder (*apparatus for managing communication in a communication system*) discloses the claimed apparatus because

it “provides the user with the ability to record any number of simultaneous transmissions...without loss of information from any of the potential sources.” Ex[1004], [0072]. “Each of the seven example transceiver units 2 to 8 [*plurality of channels*] in the example embodiment is connected to a central processing unit 9” (*processor*), which is further connected to, among other things, “a microphone or multiple microphone system 12, which can include an external microphone connection” (*user input device*), and “a **display** 13” which is “a touch-screen having various display sections” (*user input device*). Ex[1004], [0064]-[0065]. Thus, in view of the above, and for all of the same reasons described for claim 1, incorporated here, Ohel also renders claim 18 obvious. *Supra* §IX.A.1; Ex[1002], ¶¶216-217.



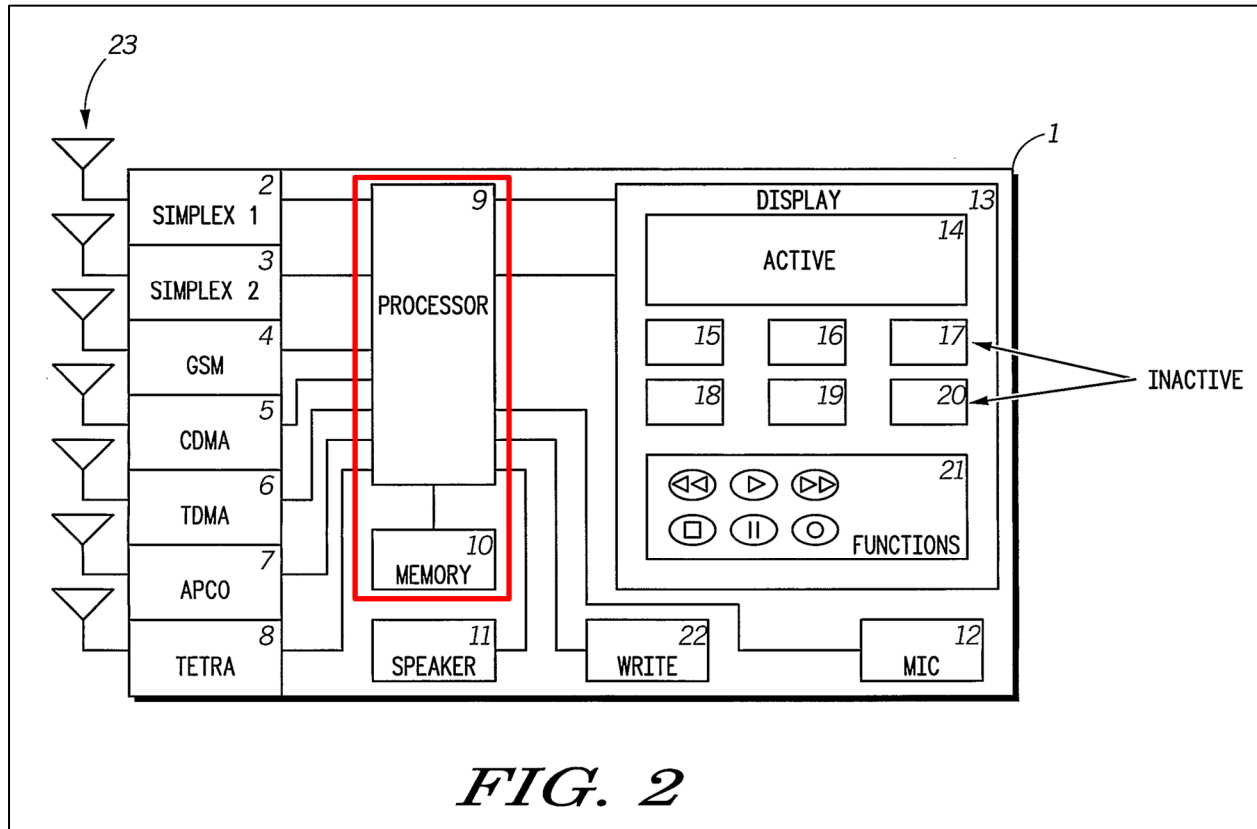
Ex[1004], FIG.2.

18. Claim 19

Claim 19 is nearly identical to claim 1. The primary difference is that claim 19 recites “*A machine-readable medium including instructions executable by the processor.*” Ex[1001], cls.1, 19; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims). As discussed for claim 18, Ohel’s multiple channel data recorder contains “a central processing unit 9”. *Supra* §IX.A.17. This is further “connected to a memory 10.” Ex[1004], [0064].

It would be obvious to a POSITA that ‘memory 10’ is a *machine-readable medium including instructions executable by the processor.* Ex[1002], ¶¶218-219.

Thus, in view of the above, and for all of the same reasons described for claim 1, incorporated here, Ohel also renders claim 19 obvious. *Supra* §IX.A.1; Ex[1002], ¶220.



Ex[1004], FIG.2.

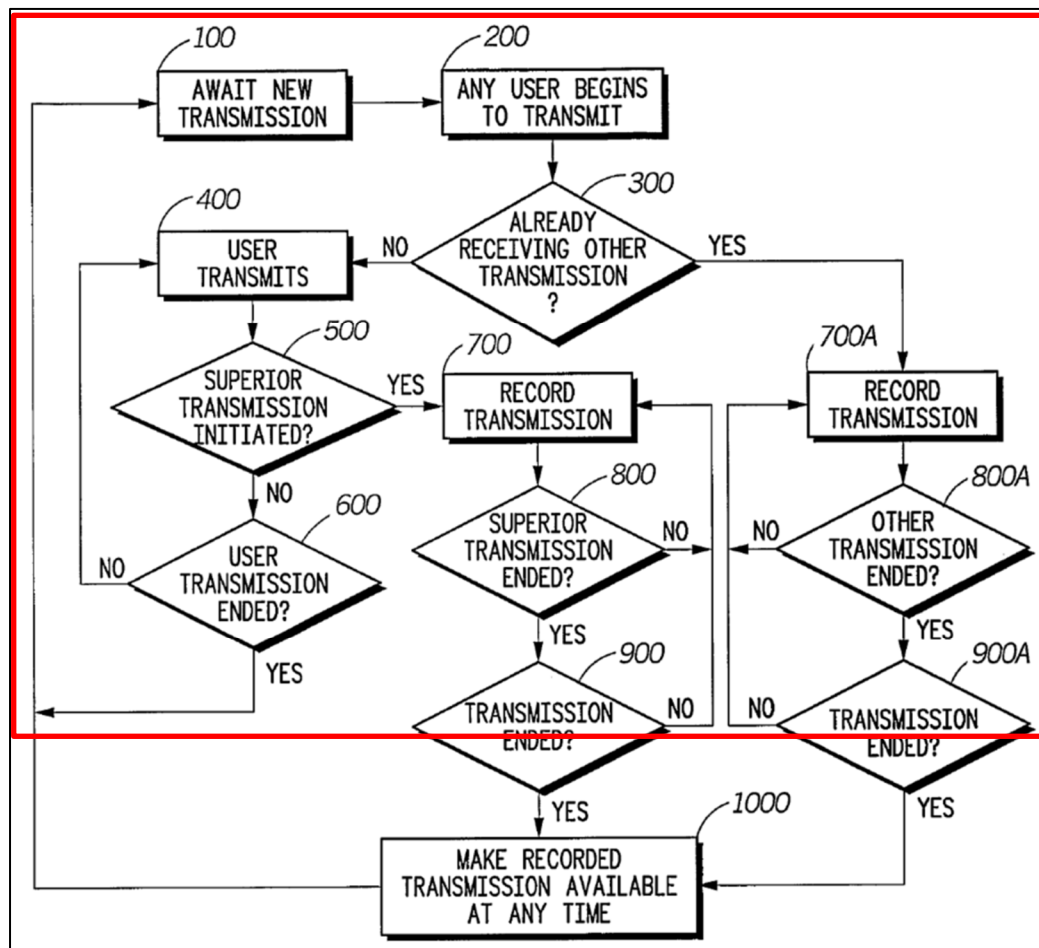
19. Claim 20

Ohel discloses “*playing the message having a higher priority between the first and second message without storing the message having the higher priority if no other message is being played.*”

As shown in FIG.1, when an interrupting higher-priority communication is received the lower-priority communication is recorded and played later, or when a second communication of equal priority is received, it is recorded for playback after

the first message is finished. Ex[1004], [0050]; Ex[1002], ¶¶221-222; *see also* Ex[1004], Abstract, [0035]-[0036], [0048], [0055], and [0070]-[0072].

As depicted in steps 100-600, if no higher priority transmission interrupts the first message, the transmission is played but not recorded. In the approach described by Ohel and discussed above, only messages interrupted by higher priority transmissions, or messages that begin second are recorded. Ex[1002], ¶¶223-224. Further supporting this, Ohel discloses that only “[i]n an alternative embodiment, the method would always be recording the user's message.” Ex[1004], [0051].



Ex[1004], FIG.1.

20. Claim 21

Ohel discloses “*determining the priority comprises determining the priority based on the dedicated channel the first message and/or the second message is received on.*”

Ohel determines priority, at least, based on the specific transceiver the message is received on, such as “the user's APCO transceiver.” Ex[1004], [0070]. Thus, incoming communication on the APCO transceiver (*dedicated channel the second message is received on*) would be given priority over ongoing communications on the CDMA transceiver (*dedicated channel the first message is received on*). *Id.*; Ex[1002], ¶¶225-227.

B. Ground 2: Claims 1-7, and 11-21 are obvious over Nigawara.

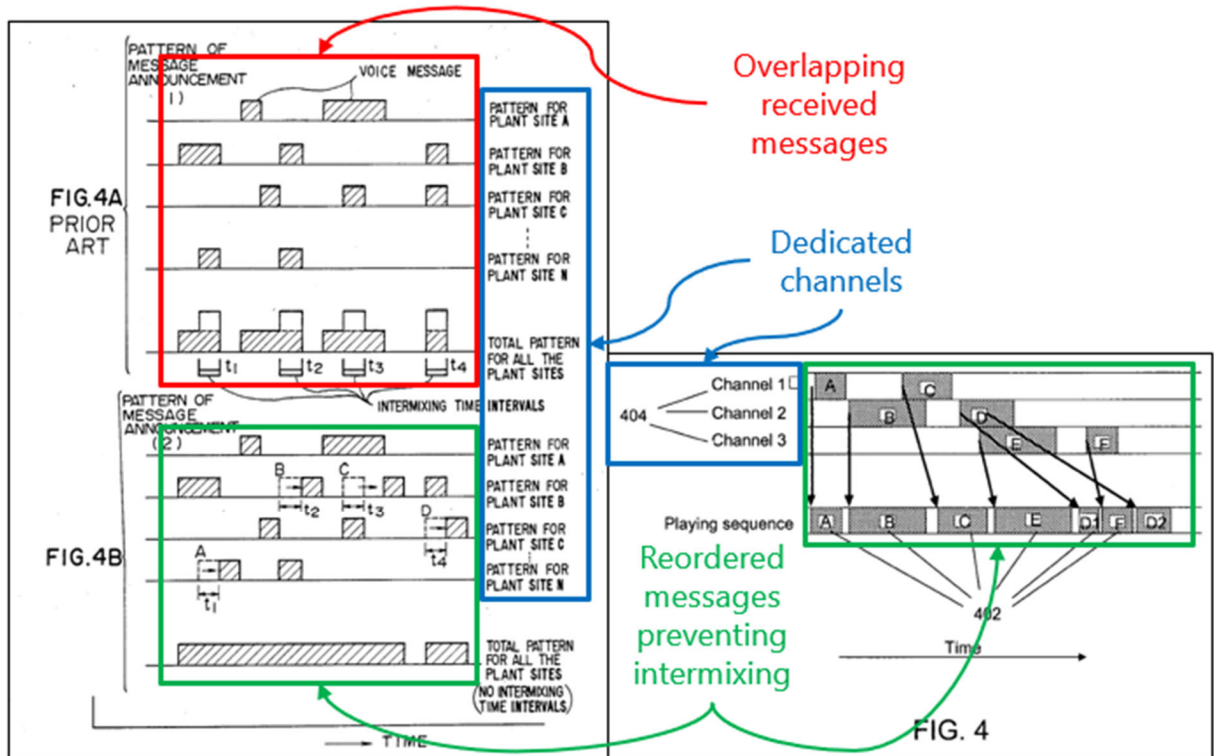
1. Nigawara is Analogous Art to the '802 Patent

Nigawara is analogous art to the '802 Patent. Ex[1002], ¶¶228-233. A prior art reference is analogous to a patent if it (1) “is from the same field of endeavor, regardless of the problem addressed,” or (2) “the reference ... is reasonably pertinent to the particular problem with which the inventor is involved.” *Donner Tech., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353, 1359 (Fed. Cir. 2020) (quoting *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)). Additionally, the Federal Circuit has recently reaffirmed that relevant art should not be “limited to a narrow subset of what the claims of a patent cover—a conclusion that would risk curtailing prior-art analysis of a claim to less than its exclusive-rights-protecting

scope,” or because “the specification notes a ‘need’...that may have supplied the inventor's starting point.” *Axonics, Inc. v. Medtronic, Inc.*, 73 F.4th 950, 958-59 (Fed. Cir. 2023).

Nigawara is analogous art to the '802 Patent at least because it is “reasonably pertinent to the particular problem with which the inventor is involved.” *Donner Tech.*, 979 F.3d at 1359. “A reference is reasonably pertinent if ... it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.” *Scientific Plastic Products, Inc. v. Biotage AB*, 766 F.3d 1355, 1359 (Fed. Cir. 2014).

Nigawara is reasonably pertinent to the problem the inventor was trying to solve in the '802 Patent because it relates to an “automatic voice message announcing method and system...without the possibility of intermixing messages even when a plurality of voice message announcing devices are provided,” as shown in FIGs.4A and 4B below. Ex[1007], 1:40-48; Ex[1002] ¶229. The '802 Patent is similarly directed towards addressing the “confusion for an operator who needs to reply/act on each incoming radio message” created by “[t]he receipt of multiple radio messages at one time,” as shown in FIG.4 below. Ex[1001], 1:25-27.



Ex[1007], FIGs.4A-4B; Ex[1001], FIG.4 (annotated).

Both Nigawara and the '802 Patent are concerned with solving the problem of intermixed or overlapping audio messages creating confusion for users. Ex[1001], 1:25-27; Ex[1007], 1:40-48; Ex[1002], ¶230; *see also Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1001 (Fed. Cir. 2016) (“If a reference disclosure and the claimed invention have the same purpose, the reference relates to the same problem, which supports an obviousness rejection.”).

Thus, Nigawara “logically would have commended itself to an inventor’s attention in considering” the problem of prioritizing and playing overlapping messages so as to prevent confusion caused by overlapping or intermixing the messages. *Scientific Plastic Products*, 766 F.3d at 1359; Ex[1002], ¶231.

Nigawara also falls within the same field of endeavor as the '802 Patent. Ex[1002], ¶232. The '802 Patent is directed towards “methods and systems for managing communication in an emergency communication system.” Ex[1001], 1:10-11. Similarly, Nigawara relates to “a method and system for announcing, by voice messages” alerts received from monitored equipment. Ex[1007], 1:6-7. Additionally, Nigawara discloses that when “an emergency voice message signal having a higher priority is received...the announcement of the former signal may be interrupted, and the latter signal or emergency signal may be announced.” Ex[1007], 4:32-39; Ex[1002], ¶232.

Thus, Nigawara is analogous art to the '802 Patent. Ex[1002], ¶233.

2. Claim 1

a. 1[Pre]

If the preamble is limiting, Nigawara discloses “[a] *method of managing communication* [e.g., receiving, prioritizing, storing, and announcing message data] *in a communication system, the communication system receiving messages from a plurality of channels* [e.g., dedicated communication links from plant sites A-N].” Ex[1007], 1:40-62, 7:35-47.

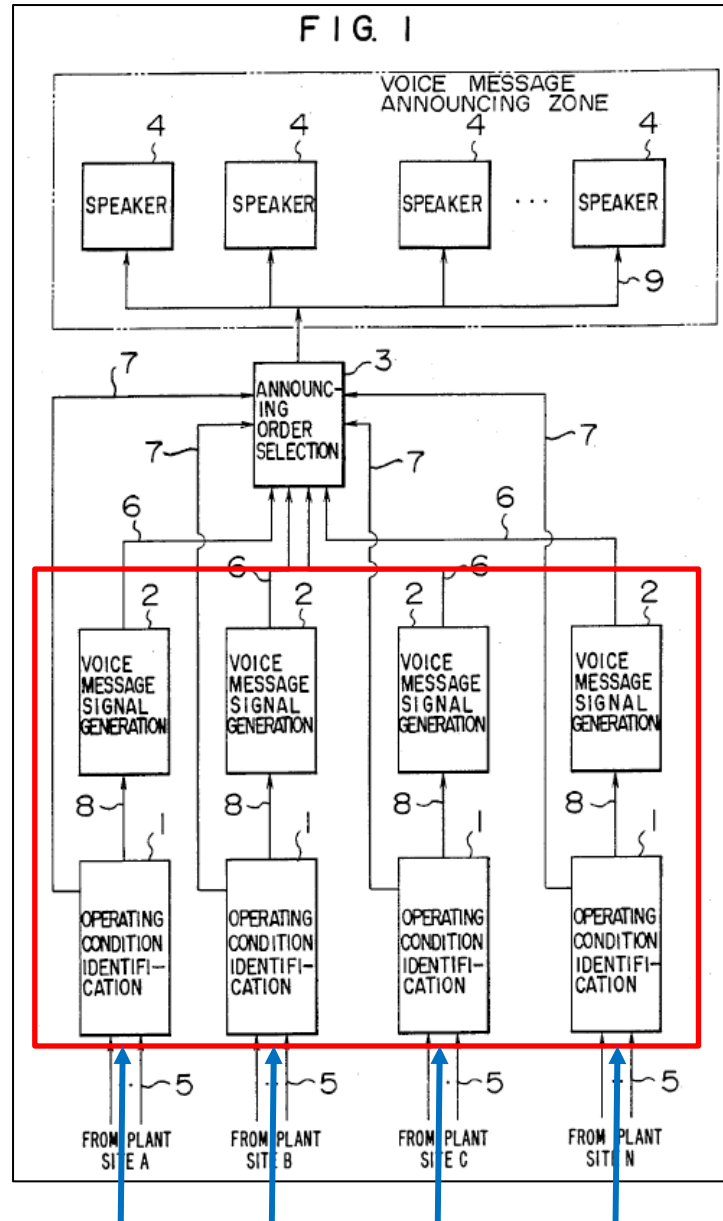
Nigawara discloses “[a] voice message announcing *method* for a plurality of plant sites,” where information signals are received “from a plurality of independent voice message announcing devices” dedicated to individual plant sites. Ex[1007], 1:49-55, 7:35-36 (cl.1). “[T]he priority order of announcement” is then determined in order to remove “the possibility of intermixing messages even when a plurality of voice message[s]” are provided at the same time. Ex[1007], 1:40-62, 7:35-47; Ex[1002], ¶¶235-236.

b. 1[a]

Nigawara discloses, or at least renders obvious, “*receiving a first message* [e.g., information signals 5] *on a first dedicated channel* [e.g., communication link to units 1 and 2 provided for plant site A] *from amongst the plurality of channels at the communication system* [e.g., all units 1 and 2], *the plurality of channels being dedicated to different entities* [e.g., units 1 and 2 provided for plant sites B, C, ... , N], *the first dedicated channel being dedicated to receiving messages from a first*

entity [e.g., plant site A].”

As shown in FIG.1 below, Nigawara’s monitoring system for plant sites A-N receives “[i]nformation signals 5 indicative of operating conditions of [each] plant site” (shown in blue below) and announces these conditions by voice message. Ex[1007], 2:27-32. These information signals are sent, in parallel, through “the plural independent voice message announcing devices,” [*plurality of channels*] formed by units 1 and 2 (shown in red below). *Id.*, 1:56-62. “The units 1 and 2” are “provided for each of the [] plant sites” (*dedicated to different entities*). *Id.*, 3:28-29; Ex[1002], ¶¶237-238.

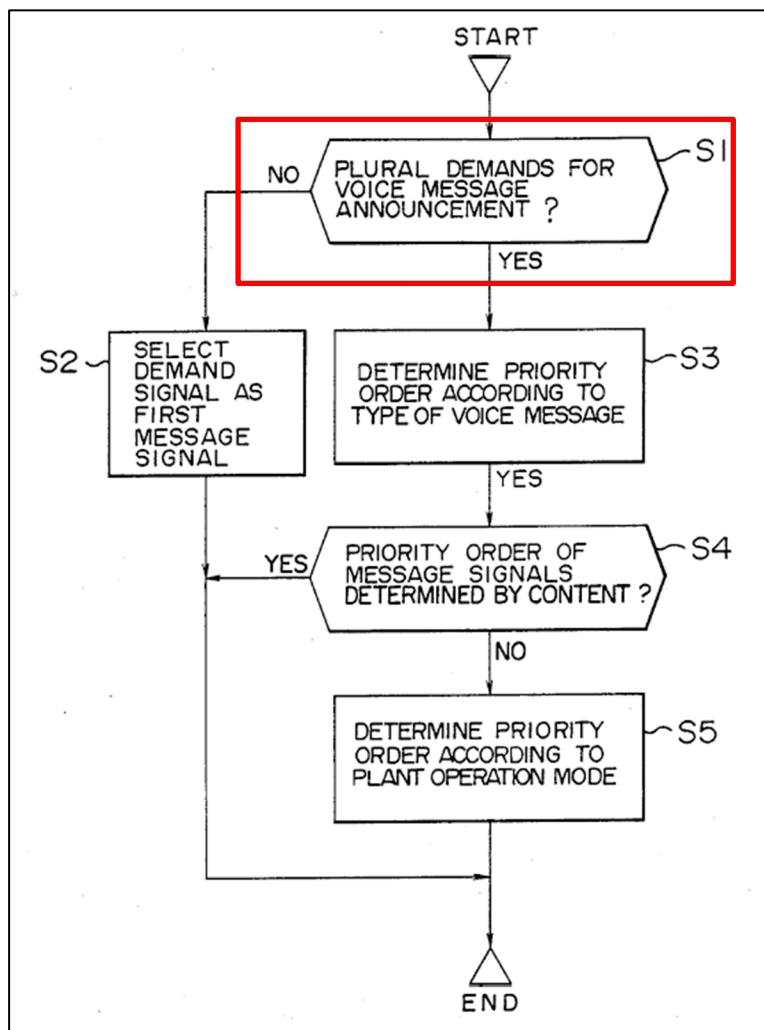


Ex[1007], FIG.1.

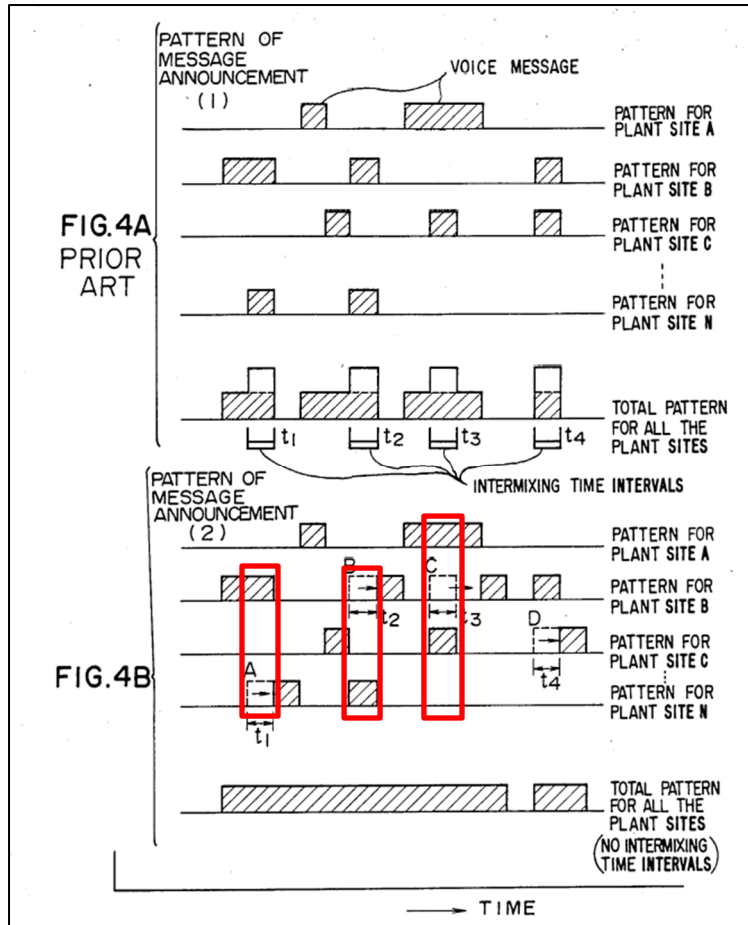
A POSITA would have understood that the first of these signals would be a *first message* received on one of a *plurality of channels* (communication links to voice message announcing devices) *dedicated* to each plant site A-N (*plurality of entities*). Ex[1002], ¶¶239-240; *see also* Ex[1007], 1:40-48, 1:56-65, 2:27-3:41, 3:53-60, 4:30-37, and 5:29-31.

c. 1[b]

Nigawara discloses “receiving a second message [e.g., information signals 5] on a second dedicated channel being dedicated to receiving messages from a second entity from amongst the plurality of channels at the communication system, the second message overlapping [e.g., plural demands for voice message announcement] with the first message in time [e.g., plant site B].”

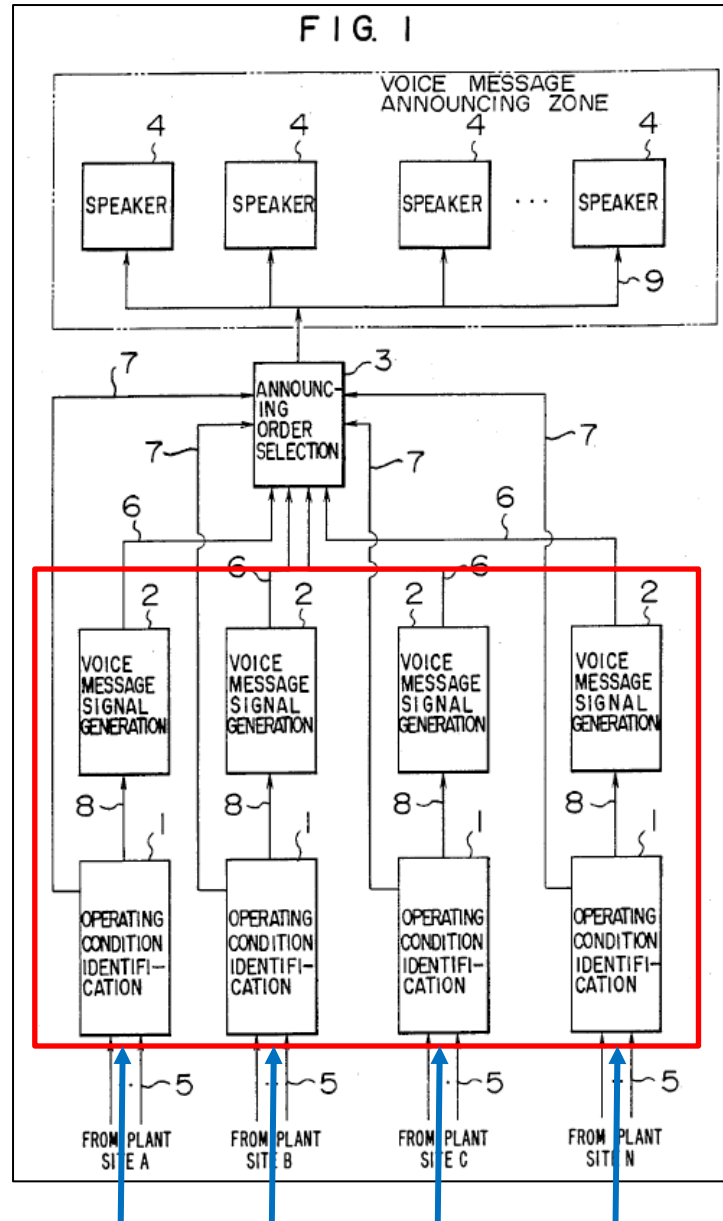


Ex[1007], FIG.3;



Ex[1007], FIGs.4A-4B, 7:10-29.

As shown in FIG.1 below, Nigawara receives “[i]nformation signals 5 indicative of operating conditions of [a plurality of] plant site[s]” (*dedicated channels*). Ex[1007], 2:27-32.



Ex[1007], FIG.1.

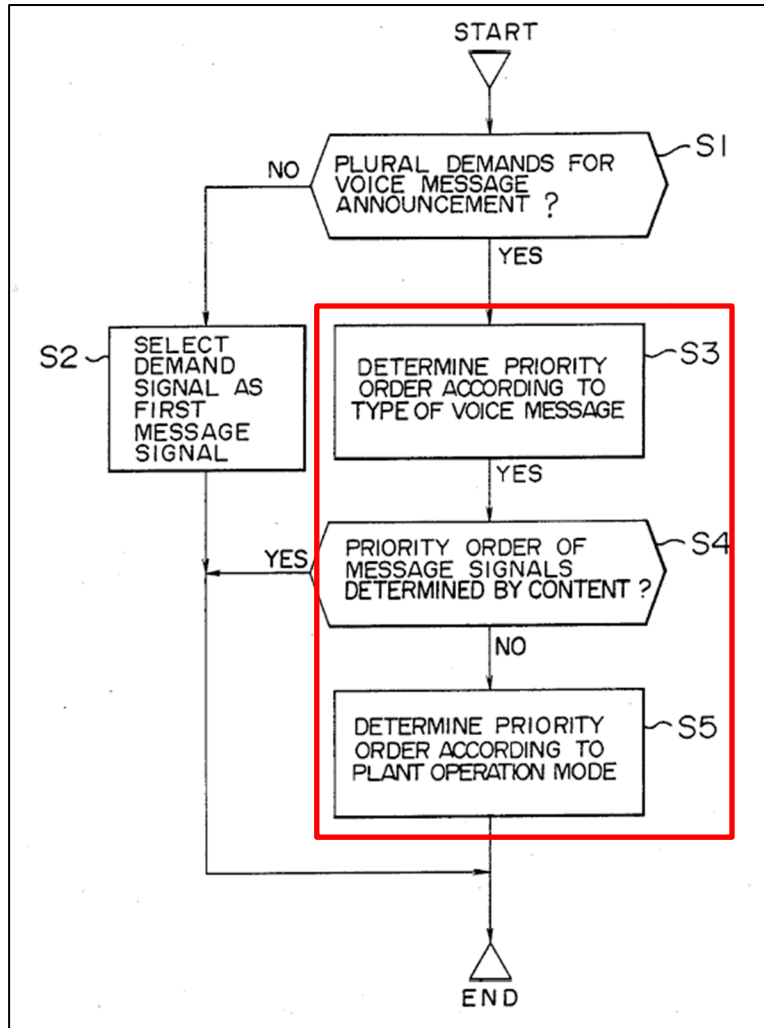
Nigawara receives a second message that is overlapping in time with a first message such as when “a plurality of demands literally occur at the same time” or “two or more demands for announcement of voice messages occur while another voice message is being announced” (*the second message overlapping with the first message in time*). *Id.*, 3:56-60; Ex[1002], ¶¶241-244.

d. 1[c]

Nigawara discloses “*determining one or more priorities [e.g., determining priority according to type, content, or plant operation] for the first message received on the first dedicated channel from the first entity and the second message received on the second dedicated channel from the second entity based on at least one pre-defined parameter [e.g., type of voice message, content, or plant operation mode].*”

Nigawara discloses that “[w]hen a plurality of demands for announcement of voice messages exist simultaneously [*the first and second messages*], the message announcing order selection unit 3 ***determines the priority*** order of announcement of the voice messages” based on the type of message output signals and plant operation mode signals (*pre-defined parameters*). Ex[1007], 3:33-39, Tables 1-2; Ex[1002], ¶¶245-246.

“[W]hen plural, for example, two, voice message signals 6 are simultaneously applied, the priority order and the type of voice message signals 6” and “the plant operation mode information signals 7” are used “to classify them into a first message signal and a second message signal ***according to the predetermined priority order.***” Ex[1007], 6:36-42; Ex[1002], ¶¶247-249.



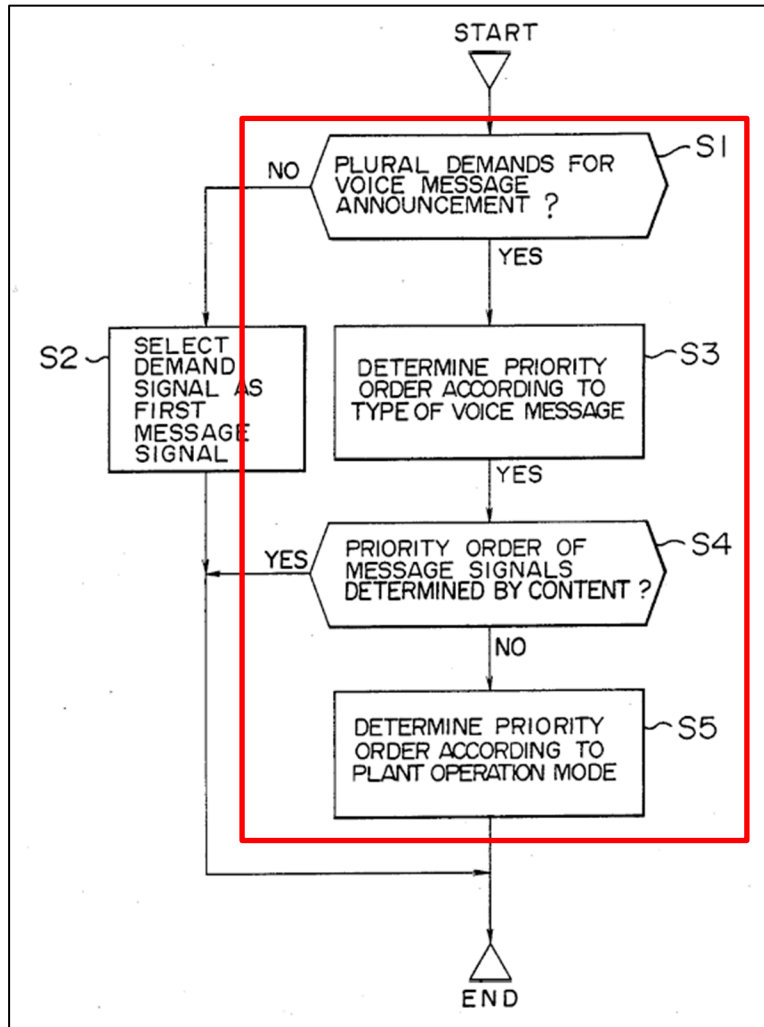
Ex[1007], FIG.3.

Therefore, Nigawara discloses *determining the priority of messages based on at least one predefined parameter* such as content, importance of information, and plant operation conditions. See also *id.*, 1:56-62, 3:33-47, 4:6-15, 4:39-58, 5:24-68, 6:35-7:2, and 7:20-28.

e. 1[d]

Nigawara discloses “*determining which message out of the first message and the second message should be stored and subsequently played* [e.g., via message

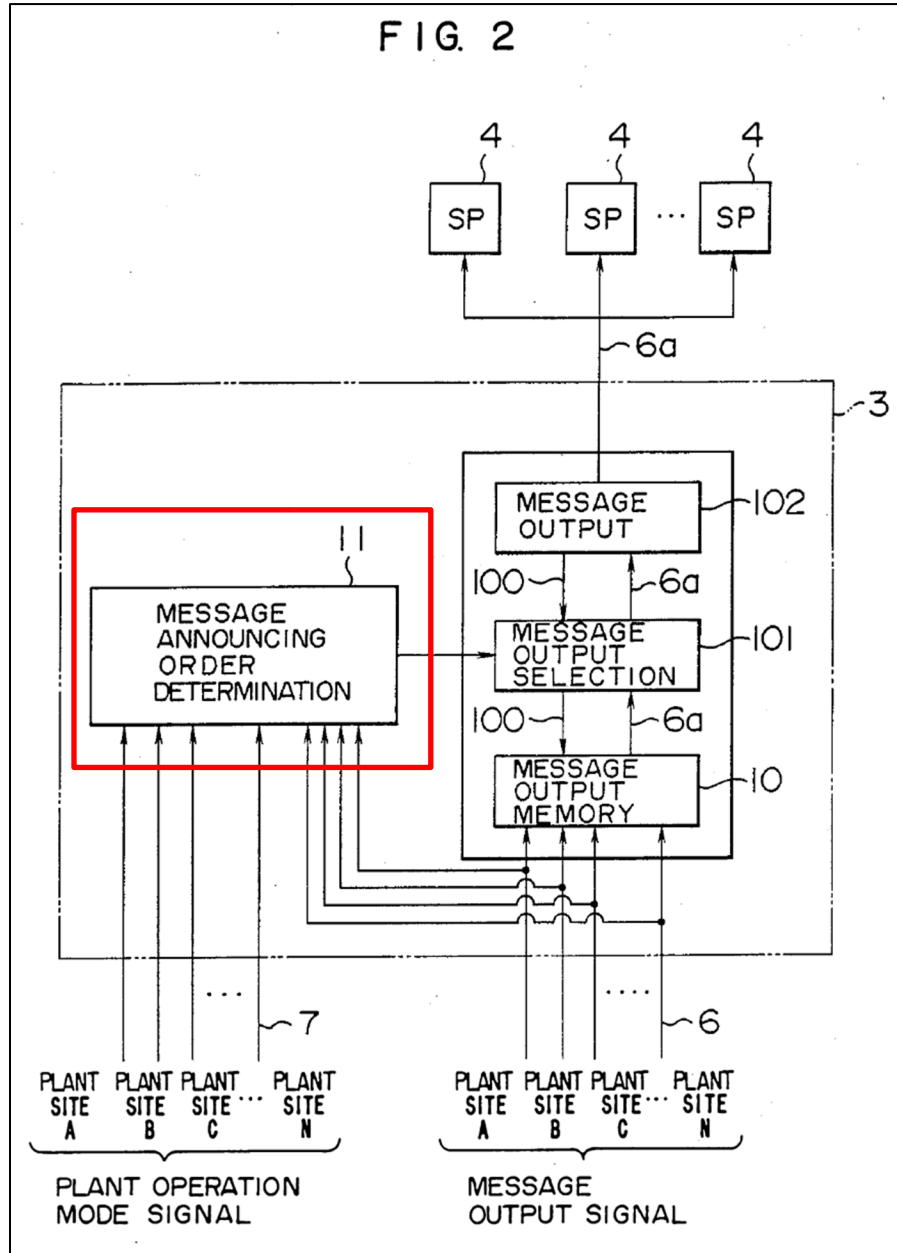
announcing order determination 11] *based on the second message overlapping with the first message in time and one or more priorities assigned to the first and the second message.*”



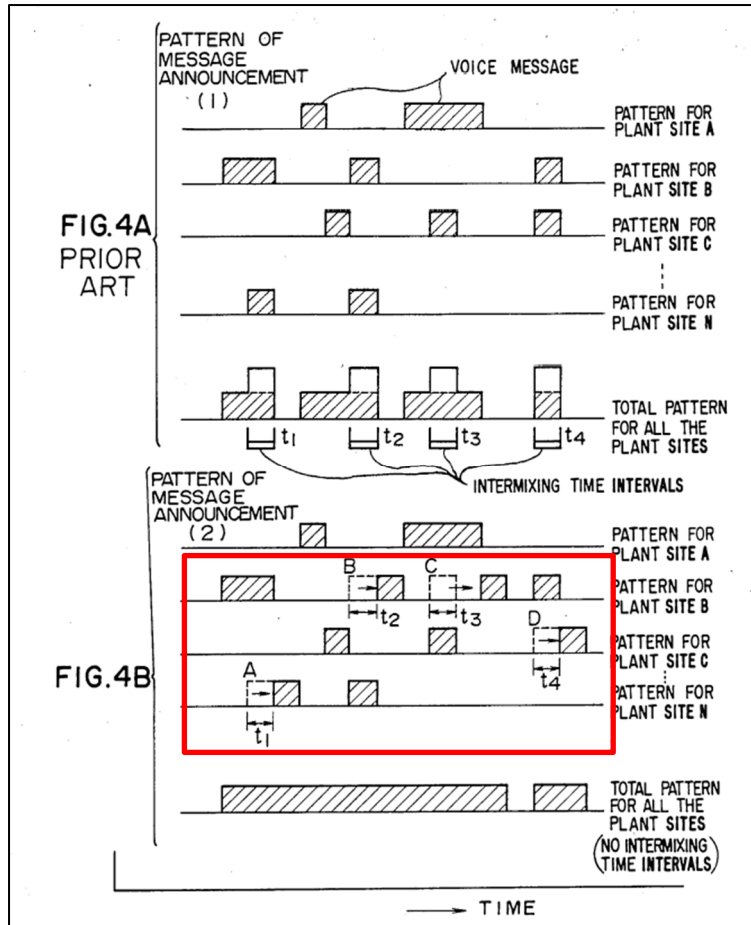
Ex[1007], FIG.3.

As shown in FIG.2 below, when Nigawara’s system encounters plural demands for voice message announcement, “[v]oice message output signals 6 from...the individual plants *are stored in a voice message signal memory 10*” and sent to the “message announcing order determination unit 11,” which determines the

priorities of each message. Ex[1007], 3:68-4:5. Once those priorities have been determined, “those voice message signals having priority lower...are announced with a suitable delay according to the priority order.” *Id.*, 7:23-28. An example of these delays is shown in FIGs.4A and 4B below. A POSITA would have understood from announcements with a suitable delay (i.e., *lower priority* messages) would be *stored* in voice signal memory 10 for the duration of that delay and *subsequently* announced. Ex[1002], ¶¶250-253.



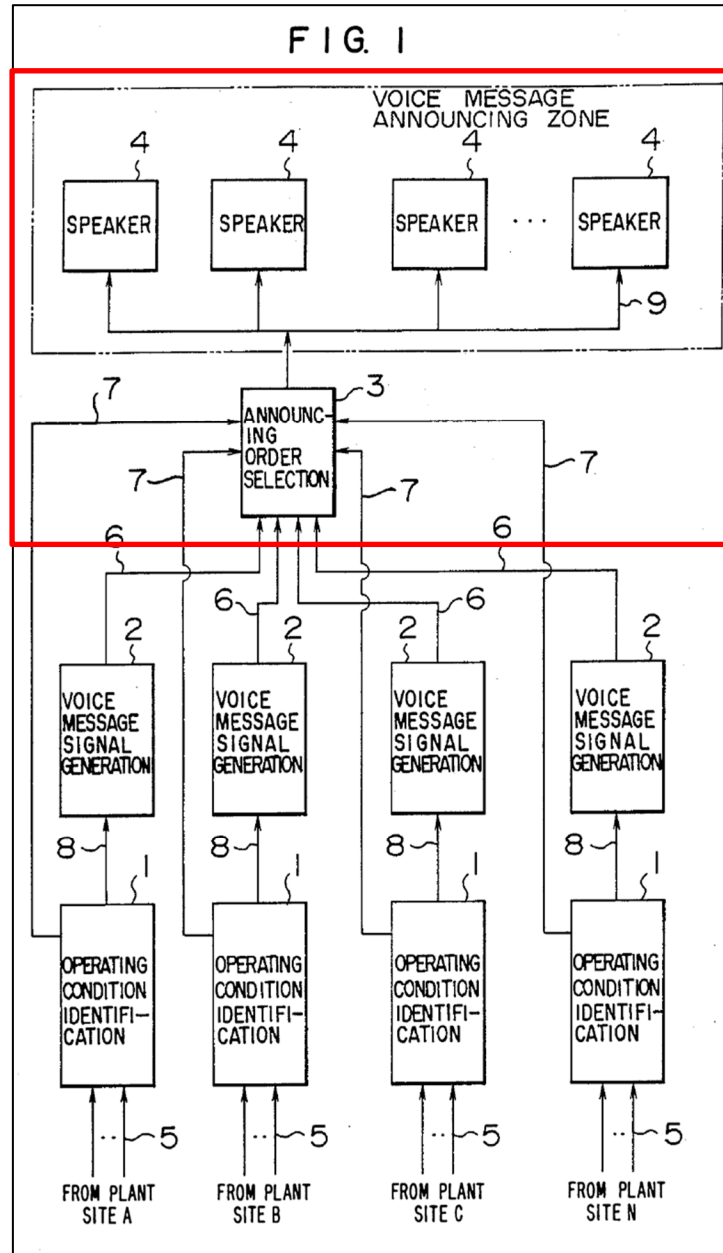
Ex[1007], FIG.2.



Ex[1007], FIGs.4A-4B.

f. 1[e]

Nigawara discloses “*playing [via speakers 4] the message having a higher priority between the first and the second message [e.g., as determined by announcing order selection 3].*”

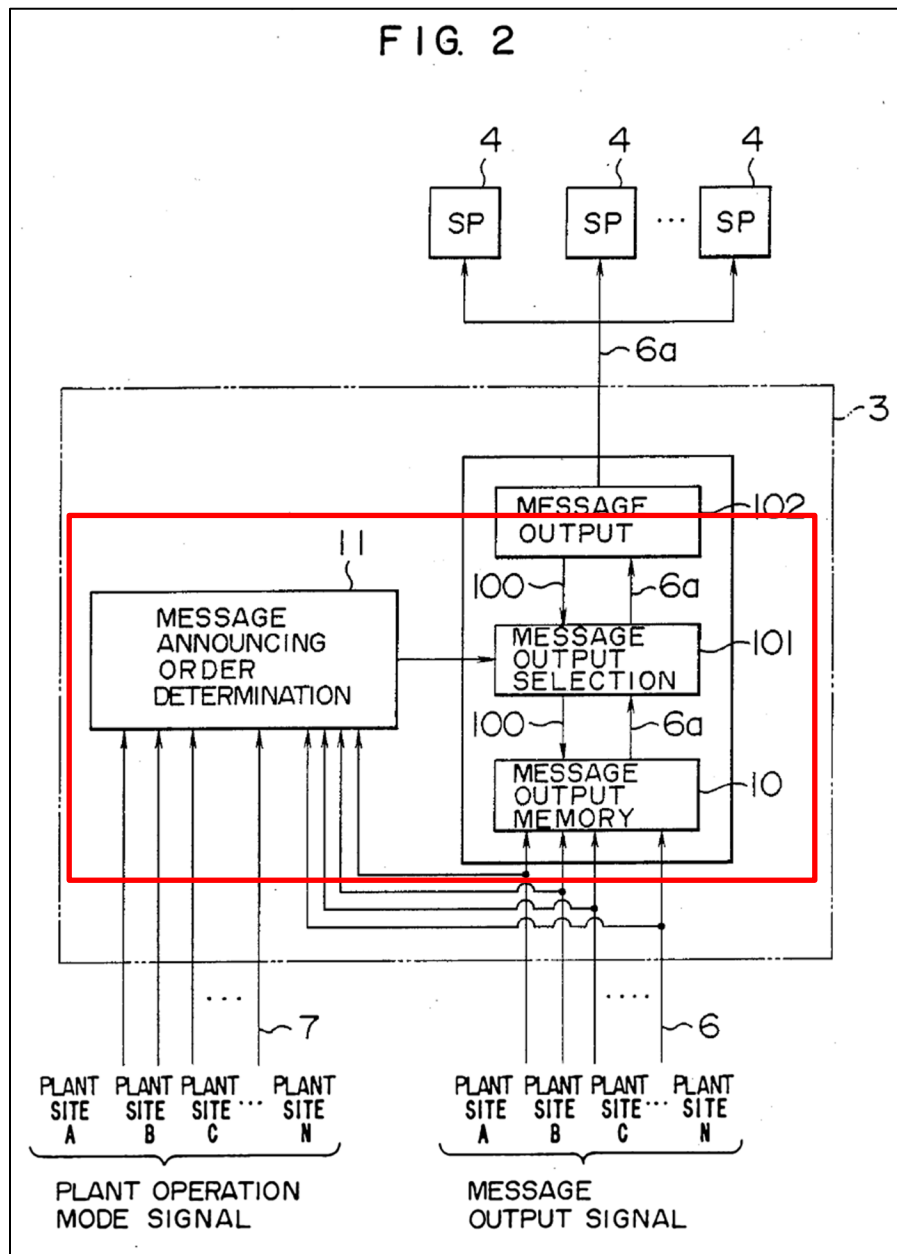


Ex[1007], FIG.1.

Nigawara teaches that after “the message announcing order selection unit 3 determines the *priority* order of announcement of the voice messages...[they] are announced [*played*] from speakers 4 according to the priority 40 order.” Ex[1007], 3:33-41; Ex[1002], 254-256; *see also* Ex[1007], Abstract, 2:59-3:2, 3:30-65, 4:16-30, 4:39-58, 6:35-7:2, and 7:20-28.

g. 1[f]

Nigawara discloses “storing [e.g., in voice message signal memory 10] at least one message having a lower priority between the first and the second message based on the determination.”



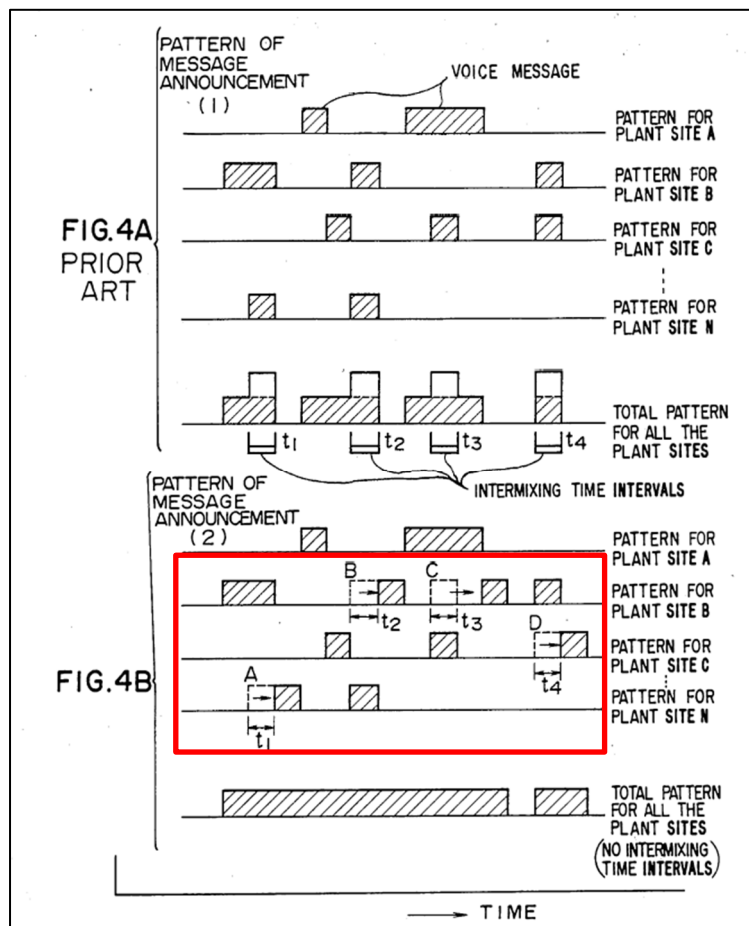
Ex[1007], FIG.2.

FIG.2, shown above, depicts “voice message signal memory 10” where

overlapping “[v]oice message output signals 6 from...the individual plants are stored” before they “are announced with a suitable delay”. Ex[1007], 3:68-4:5, 7:23-28. A POSITA would have understood that delayed *lower priority* messages would be *stored* in voice signal memory 10 for the duration of that delay. Ex[1002], ¶¶257-259; *see also* Ex[1007], Abstract, 1:40-2:3, 2:59-3:2, 3:66-4:58, 6:35-7:2, 7:10-28.

h. 1[g]

Nigawara discloses “*playing the stored message subsequent to completing playing of the message having higher priority.*”



Ex[1007], FIGs.4A-4B.

As discussed, “those voice message signals having priority lower than the others” (Ex[1007], 7:24-25) are “stored in a voice message signal memory 10” (*id.*, 4:2) before being “announced with a suitable delay according to the priority order.” *Id.*, 7:25-28. For example, FIGs.4A and 4B show “that in time intervals t_1 , t_2 , t_3 and t_4 , where announced messages over-lap each other, those voice message signals having [lower] priority” are *stored* and announced *subsequent to completing playing of the message having higher priority*. *Id.*, 7:22-26; Ex[1002], ¶¶260-262; *see also* Ex[1007], Abstract, 1:40-2:3, 2:59-3:2, 3:66-4:58, 6:35-7:2, 7:10-28.

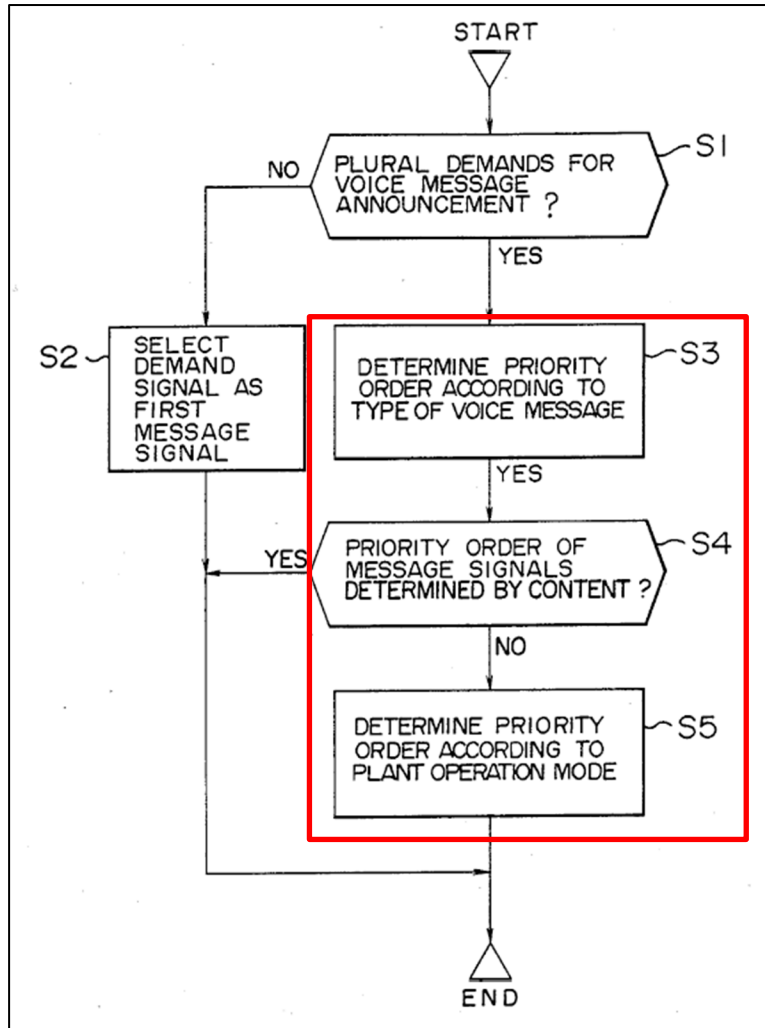
3. Claim 2

a. 2[pre]

As described in §IX.B.2.e, Nigawara discloses “*determining which message out of the first message and the second message should be stored and subsequently played.*” Ex[1002], ¶264.

b. 2[a]

Nigawara discloses “*calculating the priorities of the received messages [determining priority according to type, content, or plant operation].*”



Ex[1007], FIG.3.

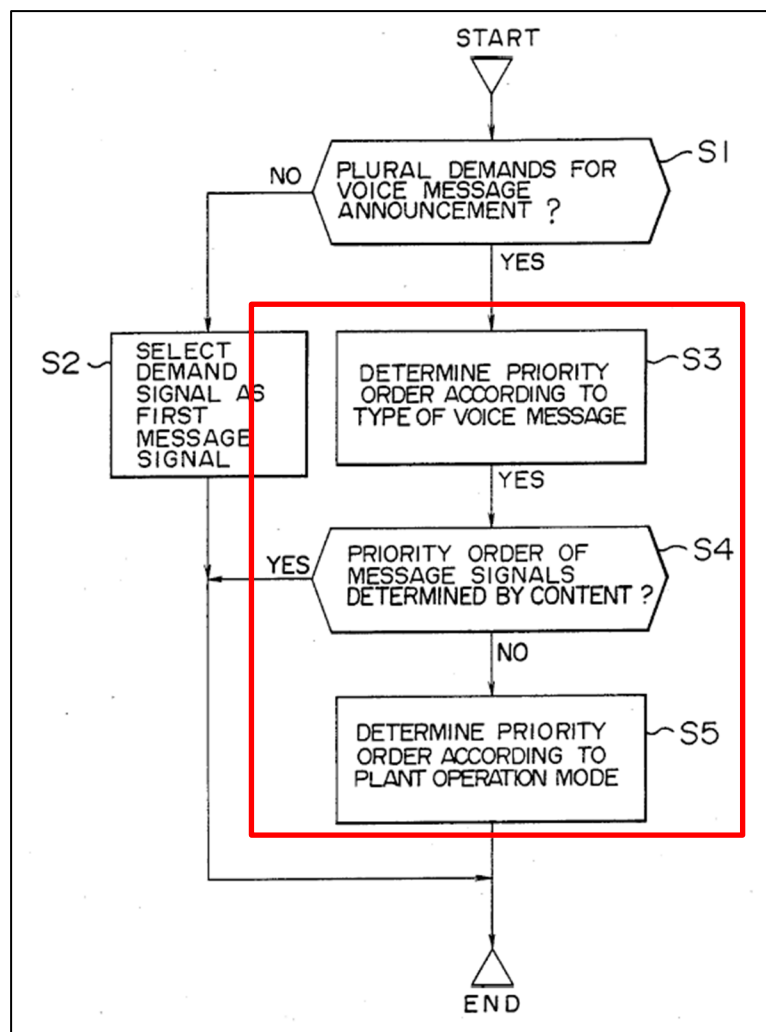
Nigawara’s “message announcing order selection unit 3 determines the priority order of announcement” of the messages based on multiple factors. Ex[1007], 3:35-41; *see also id.*, 3:45-47; *supra* §IX.B.2.d.

Based on the consideration of multiple factors, a POSITA would have understood that message announcing order selection unit 3’s process involves *calculating the priorities of the received messages* in order to determine the priority order of message announcements.

The '802 Patent only discloses “*calculating*” by stating “[p]riority calculator 516 calculates the priority of each of the received radio messages.” Ex[1001], 6:15-17. Thus, Nigawara discloses or at least renders obvious *calculating the priorities of the received messages*. Ex[1002], ¶¶265-268.

c. 2[b]

Nigawara discloses “*comparing the priorities of the received messages [e.g., determine priority order based on type, content, or plant operation].*”



Ex[1007], FIG.3.

Nigawara discloses that when two “voice message signals 6 are simultaneously applied,” the priority order is determined and the type of voice message signals 6” are classified “into a first message signal and a second message signal” to be “announced from speakers 4 according to the priority 40 order.” Ex[1007], 6:37-42, 3:33-41.

Based on Nigawara’s disclosure of classifying messages into a first message signal and a second message signal and announcing according to predetermined priority order, a POSITA would have understood that Nigawara requires *comparing the priorities of the received messages*. Ex[1007], 3:33-41; Ex[1002], ¶¶269-272.

4. Claim 3

Nigawara discloses or at least renders obvious “*the predefined parameter comprises a bandwidth requirement of the received messages*.”

The only disclosure of “*a bandwidth requirement*” in the ’802 Patent is its inclusion, without definition in a list of possible pre-defined parameters.⁶

Nigawara “*determines the priority* order of announcement of the voice messages” to eliminate “the possibility of operators’ mishearing because of intermixture of announced messages.” Ex[1007], 3:33-39, 7:7-9. The issue of intermixture exists because there are a limited number of speakers for announcing

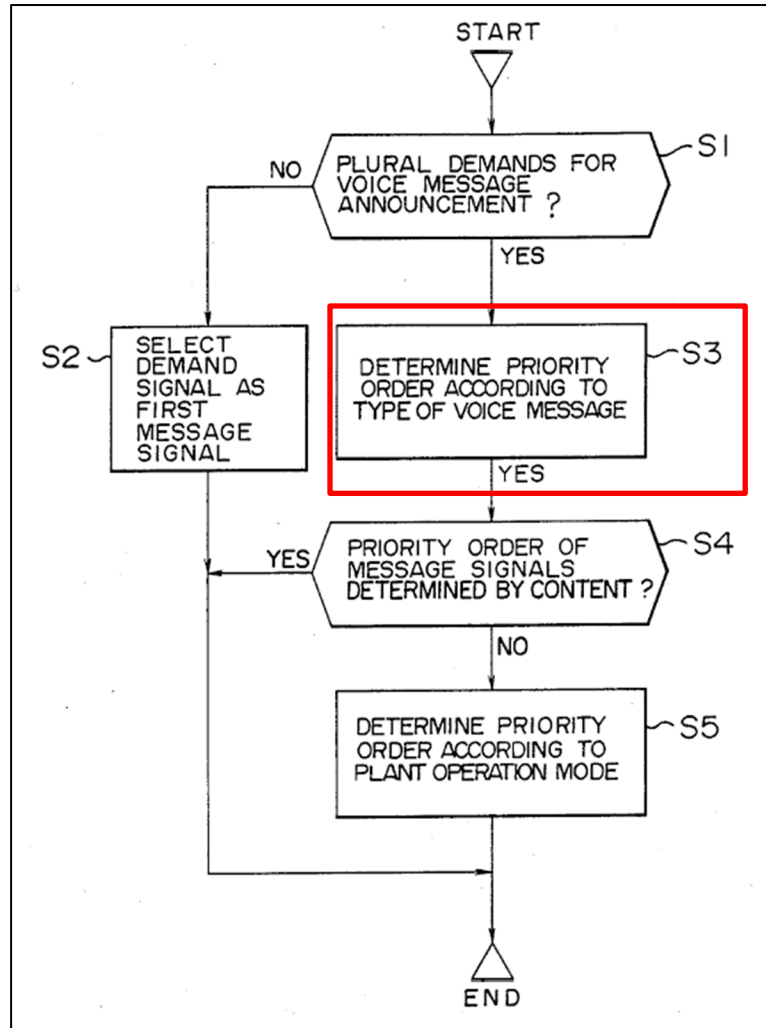
⁶ Patent Owner appears to construe this term to mean a parameter used “to calculate resource requirements and optimize the system resources.” Ex[1011], p.10.

messages, but there can be “a plurality of demands for announcement of voice messages exist[ing] simultaneously.” *Id.*, 3:33-39. A POSITA would understand Nigawara’s need for prioritization to be describing a bandwidth constraint—*e.g.*, the number of messages that can be simultaneously announced and comprehended. Ex[1002], ¶¶273-276.

Thus, Nigawara discloses or at least renders obvious *the predefined parameter comprises a bandwidth requirement of the received messages*.

5. Claim 4

Nigawara discloses “*the predefined parameter comprises a type of the received messages* [e.g., determining priority according to type,].”



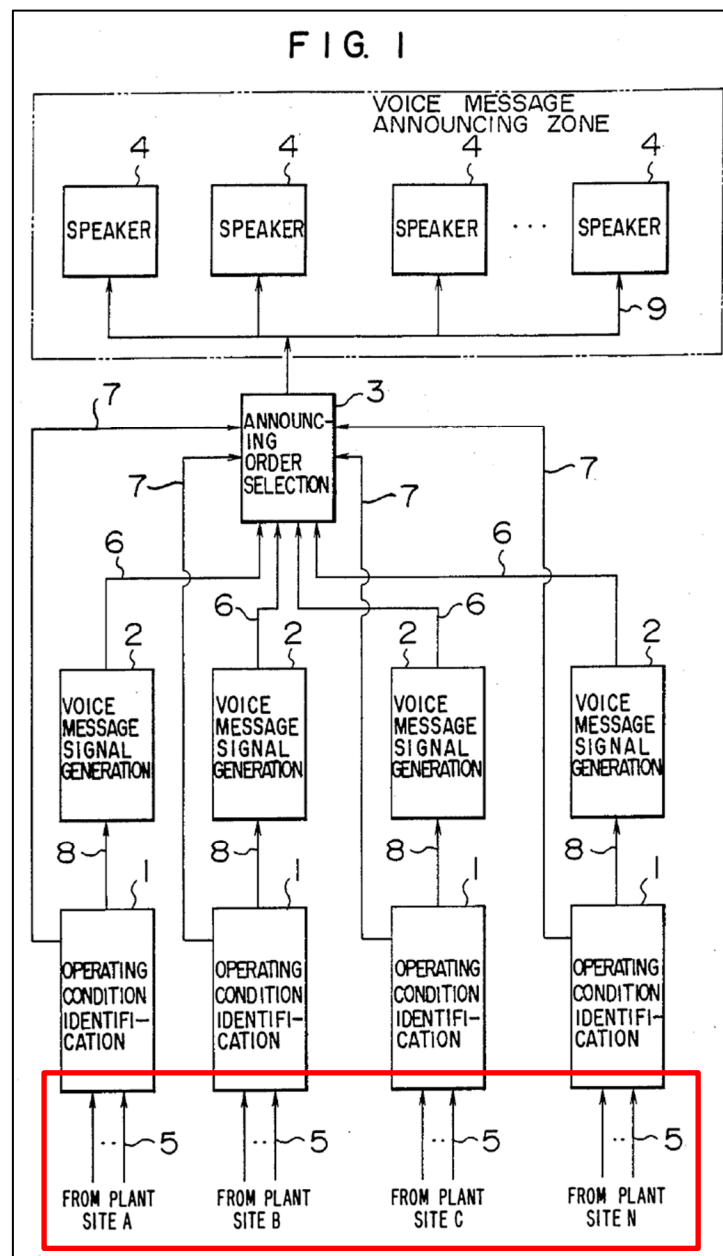
Ex[1007], FIG.3.

Nigawara expressly discloses determining one or more priorities for the first and second messages based on a type of the received messages. Ex[1002], ¶¶277-278. As shown in FIG.3 above, step S3 involves “DETERMINE PRIORITY ORDER ACCORDING TO TYPE OF VOICE MESSAGE.” Ex[1007], FIG.3 (S3). Nigawara explains that “when plural...voice message signals 6 are simultaneously applied, the priority order and *the type of voice message*...are referenced in step S3 to classify them into a first message signal and a second

message signal according to the predetermined priority order.” Ex[1007], 6:36-42, Table 1; *see also id.*, 4:39-58, and 6:23-7:2; Ex[1002], ¶¶278-279.

6. Claim 5

Nigawara discloses “the type of received messages being one of a group comprising audio, video, text, and image [e.g., information signals 5].”



Ex[1007], FIG.1.

Claim 5 only specifies that *the type of received messages* be one of *audio, video, text, and image*. Nigawara teaches that the received “information signals 5,” shown in FIG.1 above, “a voice message [**audio**] signal...and a **video signal** representing the state of combustion in the furnace.” Ex[1007], 2:31-41; Ex[1002], ¶¶280-283.

Thus, Nigawara discloses *receiving*, at least, *audio* and *video* information signals (*messages*).

7. Claim 6

Nigawara discloses “*determining the priority comprises assigning priorities to the first message and the second message based on inputs from a user.*”

Nigawara “*determines the priority order of announcement of the voice messages*” based on multiple factors, one of which includes “a voice message signal...announced by the operator,” which a POSITA would have understood to be *user input*. Ex[1007], 3:36-39, 2:36-38; Ex[1002], ¶¶284-286.

8. Claim 7

Nigawara discloses “*informing an operator the time of receipt of a message while playing the first message and the second message.*”

Nigawara’s voice announcement system is designed to announce messages of varying priorities that are related to various timings resulting in some messages being “announced with a suitable delay.” Ex[1007], 7:25-28, Tables 1-2; Ex[1002], ¶¶287-288. Based on these considerations, it would have been obvious

to a POSITA to include time of receipt information, a well-known technique before the priority date of the '802 Patent such as in voicemail systems, with each voice announcement to ensure that operators are alerted to how long a lower priority announcement may have been delayed. Ex[1002], ¶288; *see* Ex[1006], FIG.11. For example, if a lower priority alert such as “water data is normal” was delayed and announced with a time stamp, other operators would be able to assess how relevant that information is and decide if they would need to check the “water data” again. Ex[1007], 2:34-38; Ex[1002], ¶¶288-289.

Thus, Nigawara renders obvious *informing an operator the time of receipt of a message* announcement.

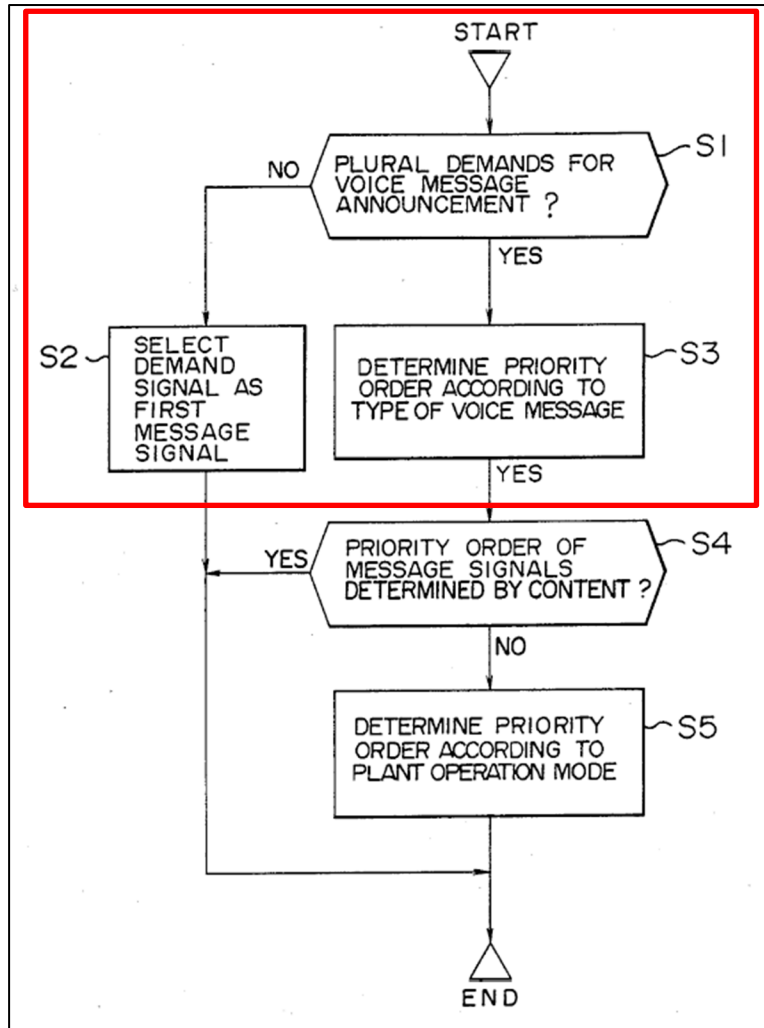
9. Claim 11

Claim 11 is nearly identical to claim 1. The only differences are that claim 11 recites “*prioritizing the first and second messages based on at least one predefined parameter,*” instead of “*determining one or more priorities for the first message received on the first dedicated channel from the first entity and the second message received on the second dedicated channel from the second entity based on at least one pre-defined parameter;*” “*storing the message having lower priority **in a queue;***” and “*checking periodically the status of the message being played.*” Ex[1001], cls.1, 11; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims).

Nigawara discloses prioritizing the first and second messages based on at least

one predefined parameter and storing lower priority messages in voice message signal memory 10 for a suitable delay as discussed for elements 1[c] and 1[f]. *Supra* §§IX.B.2.d, IX.B.2.g. Storing messages for playback in priority order discloses or at least renders obvious *storing the message having lower priority in a queue*. Ex[1002], ¶¶290-292.

Nigawara discloses that “the priority order is determined again according to the flow shown in FIG. 3,” (*periodically checking the status of the message being played*) after the highest priority message is announced because “the message announcing order determination unit 11 may have received one or more voice message signals 6” during the announcement. Ex[1007], 6:55-57.



Ex[1007], FIG.3.

Thus, for all these reasons as well as the same reasons described for claim 1, incorporated here, Nigawara also renders claim 11 obvious. *Supra* §IX.B.2.e; Ex[1002], ¶¶292-293.

10. Claim 12

Claim 12 is nearly identical to claim 7. The only difference is that claim 12 depends on claim 11. Ex[1001], cls.7, 12. Thus, for all of the same reasons described for claims 7 and 11, incorporated here, Nigawara also renders claim 12

obvious. Ex[1002], ¶294.

11. Claim 13

Claim 13 is nearly identical to claim 1. *Supra* §IX.A.13. The proposed interpretation discussed in §**Error! Reference source not found.**, and the functions and structure cited in §IX.A.13, are incorporated herein.

Nigawara discloses the function of limitation 13[a] for the reasons discussed above for element 1[a]-1[b]. *Supra* §§IX.B.2.b-IX.B.2.c. Nigawara discloses the corresponding structure “plural independent voice message announcing devices,” “provided for each of the [] plant sites.” Ex[1007], 1:56-62,2:27-32, 3:28-29; Ex[1002], ¶¶295-296.

Nigawara discloses the function of limitation 13[b] for the reasons discussed above for elements 1[e], and 1[g]. *Supra* §§IX.B.2.f, IX.B.2.h. Nigawara discloses the corresponding structure “speakers 4” from which “the voice messages are announced.” Ex[1007], 3:33-41; Ex[1002], ¶297.

Nigawara discloses the function of limitations 13[d] and 13[e] for the reasons discussed above for element 1[c]-1[d]. *Supra* §§IX.B.2.d-IX.B.2.e. A POSTIA would have understood this to be implemented in software executed by a processor such as the corresponding structure “message announcing order selection unit 3” disclosed by Nigawara. Ex[1007], 3:33-39; Ex[1002], ¶298.

Nigawara discloses the function of limitation 13[f] for the reasons discussed above for element 1[e]. *Supra* §IX.B.2.f. A POSTIA would have understood this

to be implemented in software executed by a processor such as the corresponding “message output unit 102” structure disclosed by Nigawara. Ex[1007], 4:16-24; Ex[1002], ¶299.

Nigawara discloses the function of limitation 13[g] for the reasons discussed above for element 1[f]. *Supra* §IX.B.2.g. A POSTIA would have understood this to be implemented in software executed by a processor using the corresponding structure “voice message signal memory 10” disclosed by Nigawara. Ex[1007], 3:68-4:21; Ex[1002], ¶300.

Although Nigawara is intended to solve the problem of intermixture of announced messages in an industrial environment, as discussed in §IX.B.1, a POSITA would have understood that the “method and system for announcing, by voice messages” described by Nigawara would be equally applicable to other instances where the intermixture of messages poses a problem. Ex[1007], 1:6-7; Ex[1002], ¶301. For example, it would have been obvious to a POSITA that *a central conferencing system* would have the problem of intermixing messages and thus, implementing Nigawara’s announcing order selection unit 3 would be an obvious way to solve the problem. Ex[1002], ¶301.

Thus, for the above and all of the same reasons described for claim 1, incorporated here, Nigawara also renders claim 13 obvious. *Supra* §IX.B.2; Ex[1002], ¶302.

12. Claim 14

Claim 14 is nearly identical to claim 13 and, as discussed above, this claim is governed by 35 U.S.C. § 112, ¶6; *supra* §**Error! Reference source not found.**; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims). The only difference is that claim 14 uses the nonce term “*module*” in place of “*means for*” used in claim 13. Thus, for all of the same reasons described for claim 1 and claim 13, incorporated here, Nigawara also renders claim 14 obvious. *Supra* §§IX.B.2, IX.B.11; Ex[1002], ¶303.

13. Claims 15-16

Claims 15-16 are nearly identical to claims 2, and 7. The only difference is that claims 15-16 depend on claim 14 and include additional module terms discussed below. Ex[1001], cls.2, 7, 15-16. The proposed interpretation discussed in §**Error! Reference source not found.**, and the functions and structure cited in §IX.A.15, are incorporated herein.

Nigawara discloses the function of limitation 15[b]-15[c] for the reasons discussed above for elements 1[c]-1[d], and 13. *Supra* §§IX.B.2.d-IX.B.2.e, IX.B.11. Nigawara discloses the corresponding structure “message announcing order selection unit 3.” Ex[1007], 3:33-39.

Nigawara discloses the function of limitation 16 for the reasons discussed above for element 7. *Supra* §IX.B.8. Nigawara discloses the corresponding

structure “speakers 4.” Ex[1007], 7:25-28. As previously discussed, it would have been obvious to a POSITA to include time of receipt information with each voice announcement. Ex[1002], ¶¶304-306; *supra* §IX.B.8.

Thus, for all of the same reasons described for claims 2, 7, and 14, incorporated here, Nigawara also renders claims 15-16 obvious. *Supra* §§IX.B.3, IX.B.8, IX.B.12; Ex[1002], ¶307.

14. Claim 17

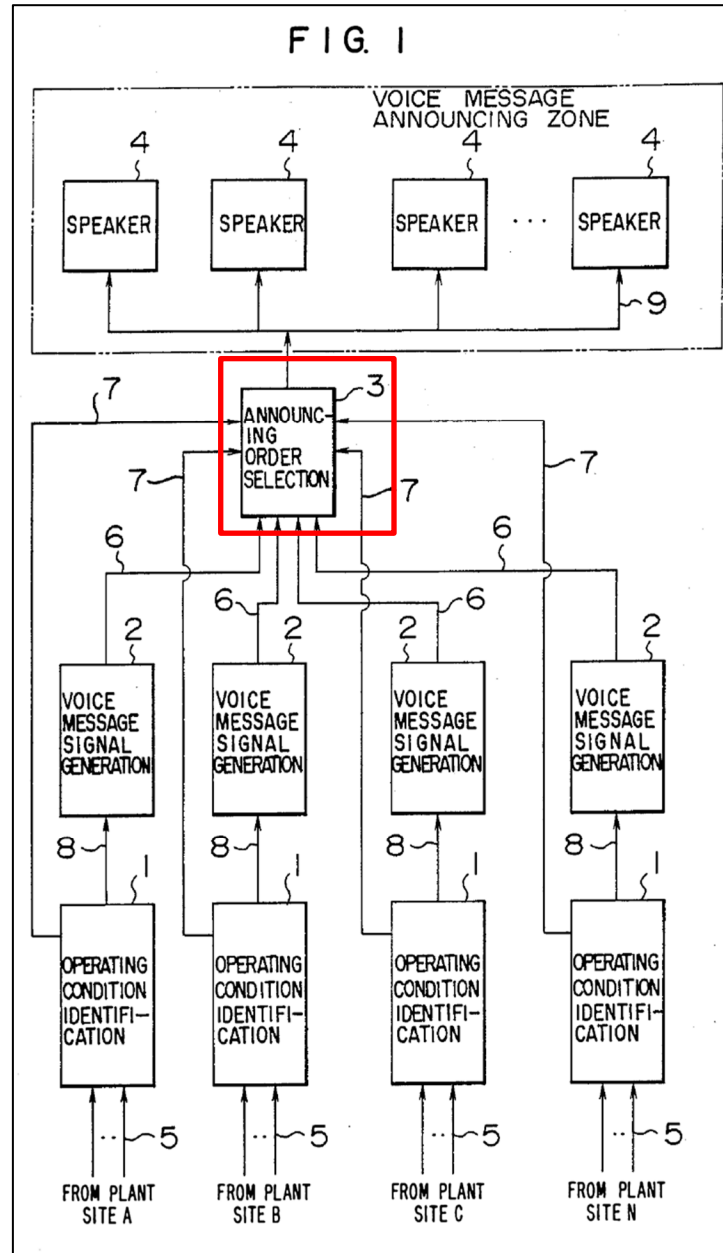
Claim 17 is nearly identical to claims 14-16. Ex[1001], cls.14-17; Ex[1002], ¶308. Therefore, for these and all of the same reasons described for claims 14-16, incorporated here, Ohel also renders claim 17 obvious. *Supra* §§IX.B.12-IX.B.13; Ex[1002], ¶309.

15. Claim 18

Claim 18 is nearly identical to claim 1. The primary difference is that claim 18 recites “[a]n apparatus for managing communication in a communication system, the communication system receiving messages on a plurality of channels, the apparatus comprising: a processing system including a processor coupled to a display and user input device; and a machine-readable medium including instructions executable by the processor.” Ex[1001], cls.1, 18; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims).

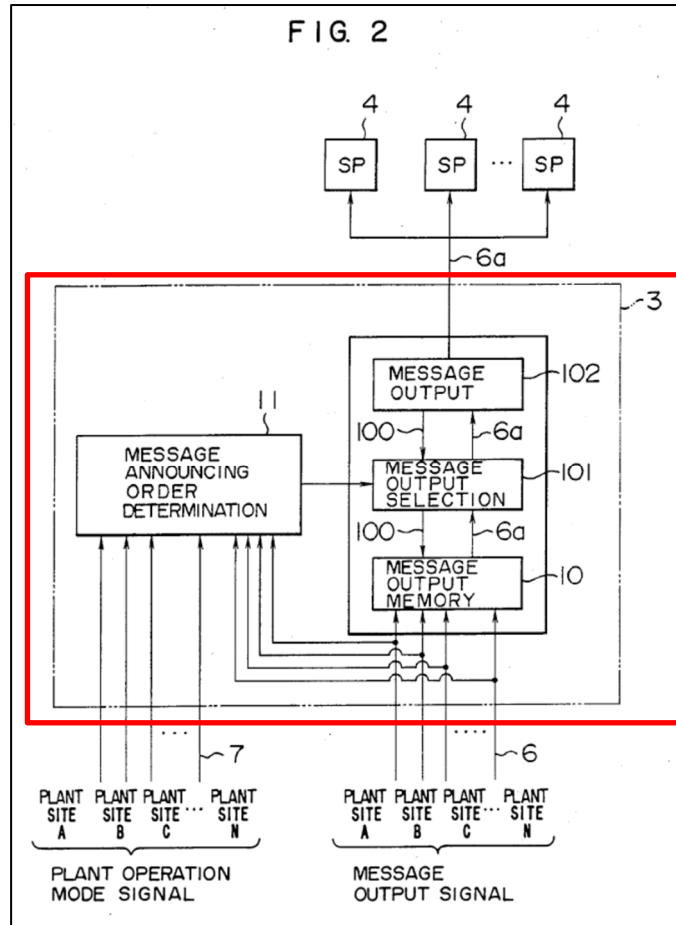
In FIG.1 below, Nigawara depicts “the structure...of the automatic voice

message announcing system of the present invention.” Ex[1007], 2:6-8. A POSITA would have understood that this figure depicts the structure of an apparatus with multiple inputs (*dedicated channels*), an equal number of condition identifiers, and voice signal processors, and an order selection processor with multiple speaker outputs. Ex[1002], ¶¶310-311. Based on Nigawara’s disclosed ability to receive “a video signal representing the state of combustion in the furnace of the boiler of plant site A,” as well as user input from “the operator who is observing the operating conditions of the plant site A,” Nigawara teaches to a POSITA that at minimum, it would have been obvious to include a display and user input device in order to implement this disclosed functionality. Ex[1007], 2:37-41; Ex[1002], ¶311.



Ex[1007], FIG.1.

Additionally, a POSITA would have understood announcing order selection 3 to represent the *processor* and *machine-readable media* that would be required to run the system, shown in greater detail in FIG.2 below. Ex[1002], ¶312.



Ex[1007], FIG.2.

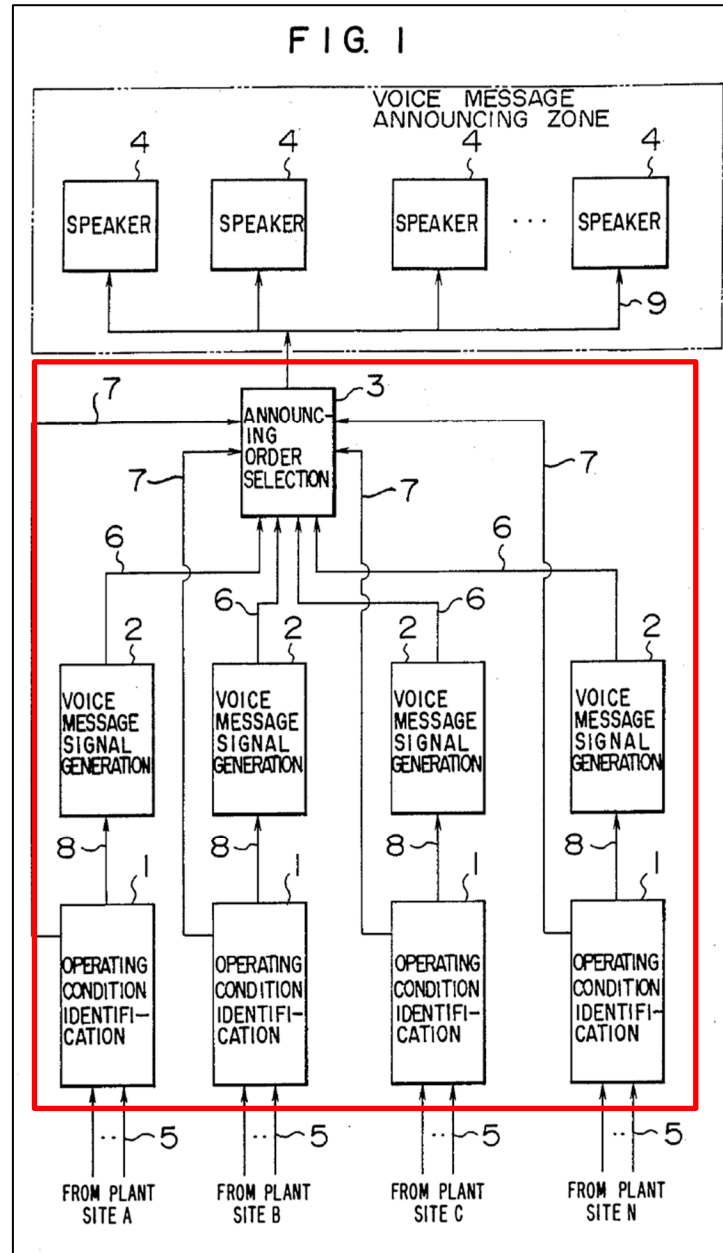
Thus, based on the above, and for all of the same reasons described for claim 1, incorporated here, Nigawara also invalidates claim 18. *Supra* §IX.B.2; Ex[1002], ¶313.

16. Claim 19

Claim 19 is nearly identical to claim 1. The primary difference is that claim 19 recites “[a] machine-readable medium including instructions executable by the processor.” Ex[1001], cls.1, 19; *Bancorp*, 687 F.3d at 1277 (asserted system and medium claims treated as no different from the asserted method claims).

As discussed, FIG.1 below depicts “the structure...of the automatic voice

message announcing system” as an apparatus with multiple inputs (*dedicated channels*), condition identifiers, voice signal processors, an order selection processor, and multiple speaker outputs. Ex[1007], 2:6-8; Ex[1002], ¶¶314-315. A POSITA would have understood this to disclose the structure of It would have been apparent to a POSITA that the voice message signal and announcing order selection *processors* would use *a machine-readable medium including instructions* in order to function as described in Nigawara. Ex[1002], ¶315.



Ex[1007], FIG.1.

Thus, based on the above, and for all of the same reasons described for claim 1, incorporated here, Nigawara also renders claim 19 obvious. *Supra* §IX.B.2; Ex[1002], ¶316.

17. Claim 20

Nigawara discloses “*playing the message comprises playing the message*

having a higher priority between the first and second message without storing the message having the higher priority if no other message is being played.”

Nigawara discloses that when at least two “voice message signals 6 are simultaneously applied,” they are classified “into a first message signal and a second message signal according to the predetermined priority order.” Ex[1007], 6:37-42. “When these two voice message signals 6 do not have same priority...the first and second message signals are announced in” priority order.” *Id.*, 6:42-46. Therefore, when the two overlapping messages do not have the same priority, the higher priority message is announced (*played*) first, without delay (*storage*). Ex[1002], ¶¶317-319; *see also* Ex[1007], 6:23-7:2.

18. Claim 21

Nigawara discloses “*determining the priority comprises determining the priority based on the dedicated channel [e.g., plant site] the first message and/or the second message is received on.*”

Nigawara’s information signals 5 are *messages* received on *channels dedicated* to each plant site A-N (*plurality of entities*). Ex[1007], 2:27-32; *supra* §IX.B.2.b. When overlapping signals “have the same priority” based on message type, “the plant operation mode information signals 7 are utilized to determine the priority order in step S5.” Ex[1007], 6:46-50, Table 2; Ex[1002], ¶¶320-321. Because each channel is dedicated to a plant site, it would have been obvious to a POSITA that *determining priority based on* the operation mode of the plant would

include determining priority based on the plant (*dedicated channel*) itself. Ex[1002], ¶¶321-322.

C. Ground 3: Claims 3, and 8-10 are obvious over Nigawara in view of Doolin.

1. Doolin is Analogous Art to the '802 Patent

Doolin is reasonably pertinent to the problem the inventor was trying to solve in the '802 Patent because it is directed to transmitting “selectively prioritized” communications “based on bandwidth,” or other factors. Ex[1008], [0009]; Ex[1002], ¶323. Those transmissions may be conducted via “Radio Frequency (RF) transceivers, laser transceivers, or other types of wireless communications mechanisms.” Ex[1008], [0017].

Similarly, the '802 Patent discloses that “the message audio portions can be prioritized and played back on the basis of the priority,” (Ex[1001], 1:50-52) determined based on “the type of radio messages, the size of the radio messages, the bandwidth requirement, the channel from which radio messages are received, or any possible combination thereof.” *Id.*, 4:59-62.

Thus, Doolin is analogous art to the '802 Patent. Ex[1002], ¶324.

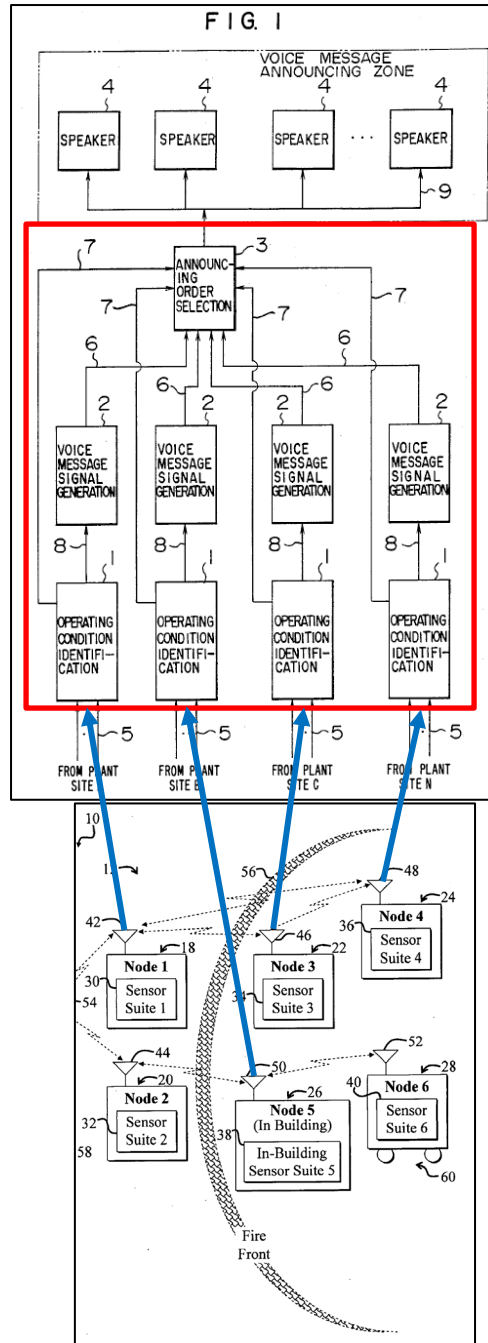
2. A POSITA Would Have Combined Nigawara with Doolin

Nigawara discloses “an automatic voice message announcing method and system...for sequentially announcing voice messages pertaining to different operating conditions without the possibility of intermixing messages even when a plurality of voice message announcing devices are provided in the plant.”

Ex[1007], 1:42-48. To avoid confusion caused by intermixing, the voice messages are “announced in the order determined according to their relative importance.” *Id.*, 7:3-9; Ex[1002], ¶325. Although Nigawara discloses handling of received messages based on, among other things, “process signals representing the pressure, temperature, flow rate, etc. of various fluids (such as water, steam and oil),” it does not go into details as to how those signals are received by the system. Ex[1007], 2:31-41.

Doolin discloses a remote monitoring system, in which “sensor network 10...receives data from the sensors 104-110,” and transmits them via “antennas 42-54 [that] may represent Radio Frequency (RF) transceivers...or other types of wireless communications.” Ex[1008], [0017]; Ex[1002], ¶326.

Because Nigawara does not provide details as to how multiple overlapping data signals from multiple sources are sent to and received by the centralized system, a POSITA would have looked to Doolin for techniques for implementing transmission of remote sensor data of various types to a central server. Ex[1002], ¶327. The combined figure below demonstrates the sensed data being wirelessly transmitted from the sensor suites of Doolin’s FIG.1 to the processing components of Nigawara’s voice message announcement system. Ex[1002], ¶327 (annotated figure showing transmitted data in blue and processing units in red).



Ex[1007], FIG.1; Ex[1008], FIG.1 (excerpted).

A POSITA would have been motivated to implement Doolin's sensor data transmission system into Nigawara's automatic voice announcement system to incorporate wireless signal transmissions in Nigawara's system, thus enabling

additional functionality, flexibility, and efficient installation and would have been a predictable combination of known elements reasonably expected to succeed. Ex[1002], ¶328; *Intel Corp. v. Pact XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (“[I]f there’s a known technique to address a known problem using ‘prior art elements according to their established functions,’ then there is a motivation to combine.”). Wireless sensor data transmission was already being applied in Doolin, which suggests to a POSITA that the same technique could be used in Nigawara’s system, which also deals with sensor data, with a reasonable expectation of success. Ex[1002], ¶328.

Thus, Nigawara and Doolin are analogous art, and a POSITA would have been motivated to combine them with a reasonable expectation of success. Ex[1002], ¶329.

3. Claim 8

Nigawara in view of Doolin discloses “*a message includes voice over internet protocol communications.*”

Nigawara receives multiple types of messages, including “a voice message signal such as an announcement.” Ex[1007], 2:35-36. However, Nigawara does not disclose how those messages are sent and received by the system.

Doolin “can work with any suitable types of network devices and network topology, protocol, communication links, etc.” including “[p]rotocols such as session initiation protocol (SIP), Internet protocol (IP), hypertext transfer protocol

(HTTP), etc.” Ex[1008], [0042].

A POSITA would have understood that it would have been possible to connect Nigawara’s plant sites to the announcing order selection unit with any of the communication links disclosed by Doolin, and to transmit data using the *internet protocol*, or VoIP, considering Nigawara’s use of *voice messages*. Ex[1002], ¶¶330-333.

4. Claim 9

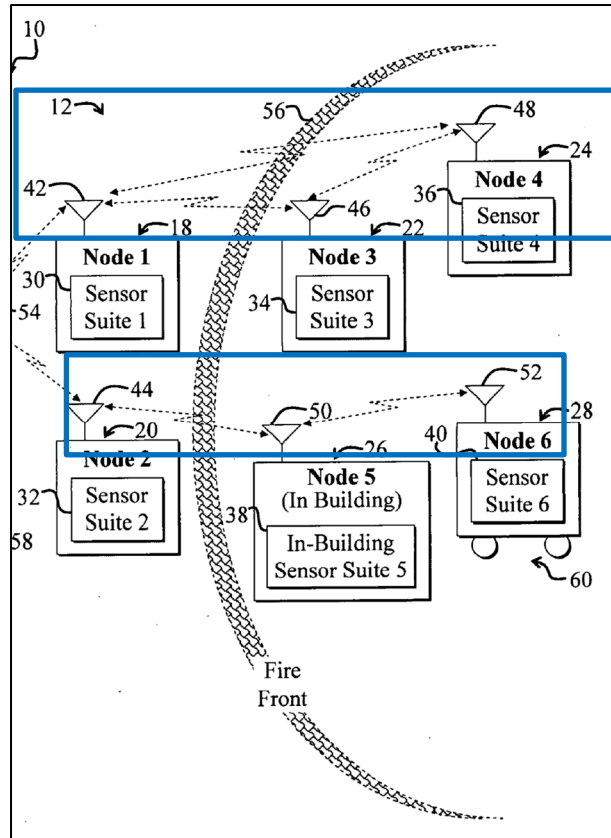
Nigawara in view of Doolin discloses “*a message includes mobile phone communications.*”

Nigawara’s system receives multiple types of messages, however, it does not disclose how those messages are sent and received by the system. Doolin discloses that messages containing sensor data may be transmitted through the system “using long range communication such as radio or *cell phone*” which may be pre-installed for convenience. Ex[1008], [0026], [0039]; Ex[1002], ¶¶334-336.

Thus, Nigawara in view of Doolin discloses or at least renders obvious using *mobile phone messages for communication.*

5. Claim 10

Nigawara in view of Doolin discloses “*wherein a message includes radio communications [e.g., via antennas 42-54].*”



Ex[1008], FIG.1 (excerpted).

As discussed, Nigawara does not disclose how messages are sent and received by the system. Doolin discloses the ability to send and receive messages over a variety of wireless communication mechanisms including “**Radio Frequency (RF)** transceivers”, as shown in FIG.1 above. Ex[1008], [0017]. Thus, data may be transmitted “using long range communication such as **radio**” and “a central **radio-frequency receiver/transmitter**” *Id.*, [0026], [0040]; Ex[1002], 337-339.

Thus, Nigawara in view of Doolin discloses or at least renders obvious using *radio communications* to transmit and receive *messages*.

6. Claim 3

Nigawara in view of Doolin discloses “*the predefined parameter comprises a*

*bandwidth requirement of the received messages.”*⁷

After implementing Doolin’s sensor data transmission system in Nigawara’s system, a POSITA would have also been motivated to implement Doolin’s prioritization of sensed data “***based on bandwidth***” into Nigawara’s prioritization scheme. Ex[1008], [0009]. Doolin’s bandwidth prioritization is done “so that if there is a lack of resources (e.g., limited bandwidth), the sensor readings with higher priority can be communicated first.” *Id.*, [0041]. For example, Doolin’s prioritization at plant site A would transmit a “message announcing serious trouble in main machinery,” the highest priority message content in Nigawara’s system, before “guidance for actuation of automatically controlled machinery,” the lowest priority message content. Ex[1007], 4:66-5:22; Ex[1002], ¶¶340-341. Then, Nigawara’s announcing order selection unit would announce the highest priority “serious trouble” message from plant site A before messages received from any other plant site. Ex[1002], ¶341.

A POSITA would have been motivated to include this prioritization factor in Nigawara’s system because “a lack of resources (e.g., limited bandwidth),” is a problem that frequently plagues data transmissions, particularly in systems that use multiple data types like Nigawara and Doolin. Ex[1008], [0041]; Ex[1002], ¶342.

⁷ *Supra* §IX.B.4 (discussing the ’802 Patent’s disclosure of “*a bandwidth requirement*” and Patent Owner’s apparent construction).

Thus, a POSITA would have understood that this inclusion would make Nigawara's system more robust and would have had a reasonable expectation of success. Ex[1002], ¶343.

Thus, Nigawara in view of Doolin discloses *prioritizing messages based on bandwidth* to ensure higher priority messages are received first.

X. SECONDARY CONSIDERATIONS

Petitioner is aware of no evidence of secondary considerations that would meaningfully rebut a finding of obviousness. Ex[1002], ¶¶344-345. Petitioner reserves the right to rebut any purported objective evidence of non-obviousness raised by Patent Owner.

XI. INSTITUTION SHOULD BE GRANTED

A. Discretion Under 35 U.S.C. §314(a)

The Board should not exercise its discretion under §314(a) to deny this Petition. First, no other petitions have been filed against the '802 Patent. Accordingly, the *General Plastics* factors weigh in favor of institution.

Second, if the Board applies the analysis in *NHK Spring Co. v. Intrix-Plex Techs. Inc.*, IPR2018-00752, Paper 8 at 19-20 (P.T.A.B., Sept. 12, 2018)

(precedential)⁸ or *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential), those factors taken together support institution.

Factor 1: Potential Stay

The Board should “not attempt to predict how the district court in the related district court litigation will proceed.” *Sand Revolution II LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (P.T.A.B. Jun. 16, 2020) (informative). Institution should not be denied based on this factor.

Factor 2: Trial Date

Trial is currently scheduled for June 2024 in the EDTX litigation. Ex[1024], p.1. That is approximately eight months before the projected February 2025 statutory deadline for the Board to enter a final written decision in this proceeding (if instituted). Accordingly, “the decision whether to institute will likely implicate other factors...such as the resources that have been invested in the parallel proceeding.” *Apple*, IPR2020-00019, Paper 11 at 9. As discussed below, if trial were to proceed as scheduled, this factor is outweighed by other factors here.

⁸ Petitioner recognizes the Board must apply its precedential caselaw, but specifically reserves its objection to the Board’s application of the *NHK-Fintiv* caselaw as non-justiciable under the APA.

Factor 3: Investment in the parallel proceeding

The parties have served infringement and invalidity contentions and the claim construction process has just begun. Ex[1024], p.4. The effort and resources expended to date are “typical of the early stages of litigation,” and thus this factor “does not favor exercising discretion to deny institution.” *Apple Inc. v. Smart Mobile Techs, LLC*, IPR2022-00808, Paper 24 at 52 (P.T.A.B. Sept. 29, 2022).

Petitioner worked diligently to file this Petition. As noted above, Petitioner moved to dismiss on December 12, 2022, and filed this petition just over a month after the magistrate judge recommended denial of that motion. To conserve resources of the Board and the parties, it was not unreasonable for Petitioner to wait to file petitions for IPR because the motion to dismiss had the potential to resolve the case. Furthermore, since serving its original infringement contentions on January 5, 2023, Patent Owner has served proposed supplemental infringement contentions on three separate occasions, including a proposal just two months ago to more than double the number asserted claims (including twelve additional claims of the '802 Patent) and added a number of new accused products. Ex[1022], pp.2-4. Given Patent Owner's shifting infringement theories, it was entirely reasonable for Petitioner to wait to file the instant Petition until the scope of the EDTX litigation crystallized. There will certainly be “much work remain[ing] in the district court case as it relates to invalidity” when this proceeding is ready for institution. *Sand Revolution*, Paper 24 at 11. Coupled with Petitioner's diligence in filing this

Petition, this factor weighs against discretionary denial. *Cf. id.* at 10-11; *Google LLC v. Parus Holdings, Inc.*, IPR2020-00846, Paper 9 at 18 (P.T.A.B. Oct. 21, 2020).

Factor 4: Issue Overlap

The Petition challenges each claim asserted in the EDTX Litigation. Ex[1022], p.2. The Petition also challenges independent claim 13 not asserted in the litigation.

Factor 5: Party Overlap

Petitioner and Patent Owner are parties in the EDTX Litigation.

Factor 6: Other Circumstances Favoring Institution

Additional circumstances favor institution. First, Petitioner acted with diligence, as noted above. Petitioner has gained no advantage from the parallel litigation, which favors institution. *See Oticon Med. AB v. Cochlear Ltd.*, IPR2019-00975, Paper 15 at 22-23 (P.T.A.B. Oct. 16, 2019) (precedential).

Moreover, the merits favor institution as the strong multiple grounds in this Petition demonstrate. “In such cases, the institution of a trial may serve the interest of overall system efficiency and integrity because it allows the proceeding to continue in the event that the parallel proceeding settles or fails to resolve the patentability question presented in the PTAB proceeding.” *Google*, Paper 9 at 21 (quoting *Fintiv*, Paper 11 at 14-15); *Fintiv*, IPR2020-00019, Paper 11 at 14-15; Ex[1023], p.4 (USPTO Guidance indicating “compelling, meritorious challenges

will be allowed to proceed at the PTAB even where the district court litigation is proceeding in parallel”).

B. Discretion Under 35 U.S.C. §325(d)

The Board should not exercise its discretion under 35 U.S.C. §325(d). None of the references relied upon in Grounds 1-3 were presented to the Office or considered during prosecution. Ex[1001], Cover.

XII. CONCLUSION

Petitioner respectfully requests institution of IPR and that the Challenged Claims be canceled as unpatentable pursuant to 35 U.S.C. §318(b).

Petition for *Inter Partes* Review of U.S. Patent No. 7,324,802

Respectfully Submitted,

August 21, 2023

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CERTIFICATE OF SERVICE

In accordance with 37 C.F.R. §§42.6(e) and 42.105, the undersigned certifies that on August 22, 2023, a complete and entire copy of the **PETITION FOR *INTER PARTES* REVIEW OF CLAIMS 1-21 OF U.S. PATENT NO. 7,324,802 B2** including exhibits and testimony relied upon were served on Patent Owner via FedEx overnight at the correspondence address of record for the '802 Patent and counsel for Patent Owner in the EDTX Litigation, as included below:

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CERTIFICATION UNDER 37 C.F.R. §42.24(d)

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that the word count under §42.24(a)(1) for the foregoing Petition for *Inter Partes* Review totals 13,936 words, within the 14,000 word limit allowed under §42.24(a)(1)(i).

Date: August 21, 2023

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