UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CENTRALSQUARE TECHNOLOGIES, LLC
Petitioner

v.

CARBYNE, LTD
Patent Owner

Case No. IPR2025-01179
U.S. Patent No. 11,689,383

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 11,689,383

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I. Introduction

Petitioner CentralSquare Technologies, LLC requests *inter partes* review of claims 1-20 of U.S. Patent No. 11,689,383 ("the '383 patent") (Ex. 1001) assigned to Patent Owner Carbyne Limited, and cancellation of the same based on the following grounds:

Grounds	Claims	Basis	Prior Art
1A	1-6, 8-13, and 15-19	§102	Ramanujaiaha
1B		§103	
2	1-20	§ 103	Ramanujaiaha and Krishnan

II. The '383 Patent (Ex. 1001)

The '383 patent issued on June 27, 2023 and filed on September 13, 2022, claims priority to U.S. Provisional Application No. 62/544,835 (filed August 13, 2017). Ex. 1001, cover (codes (22), (45), (60)).

The '383 patent relates to systems and methods "for streaming real-time data from a user device to a call center." *Id.*, 1:25-28, 4:25-27. The system includes one or more user devices (UD)—such as "a smartphone, a mobile phone, a laptop," etc.—and one or more "call centers" configured to receive "calls" and "real-time data captured by the [user device]" over a network. *Id.*, 5:16-35. The user device "may connect to the network 110 using voice calls as well as voice over internet protocol (VOIP)." *Id.*, 5:16-26. Figure 1, below, illustrates the networked system for

streaming "real-time data" between a "user device" and a "call center." *Id.*, 4:5-6, FIG. 1.

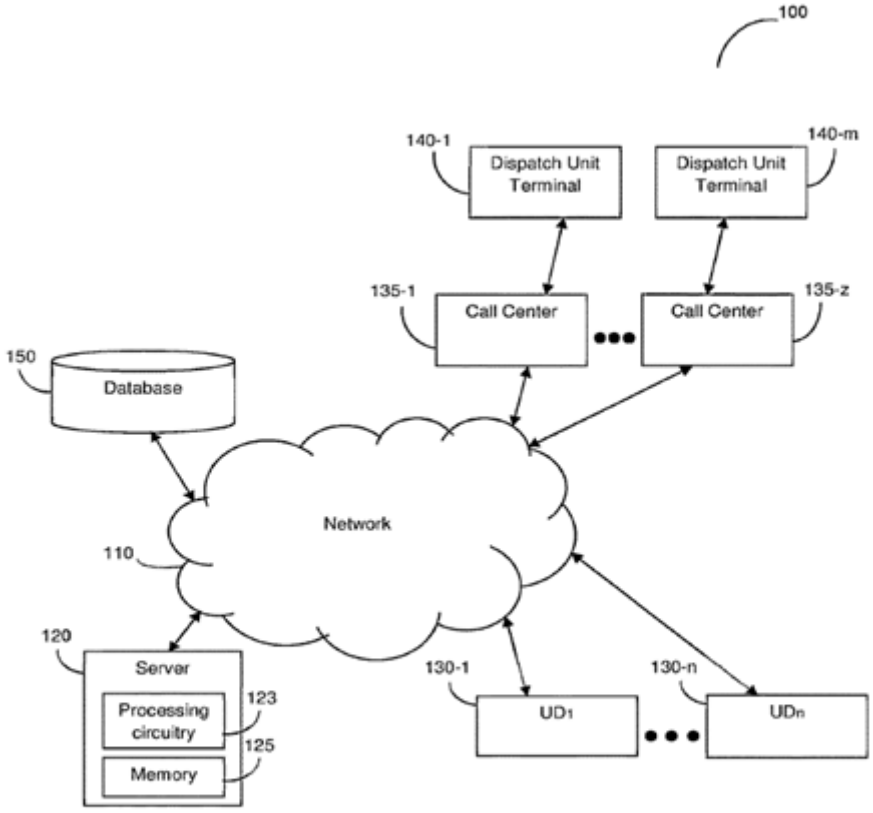


FIG. 1

Id., FIG. 1.

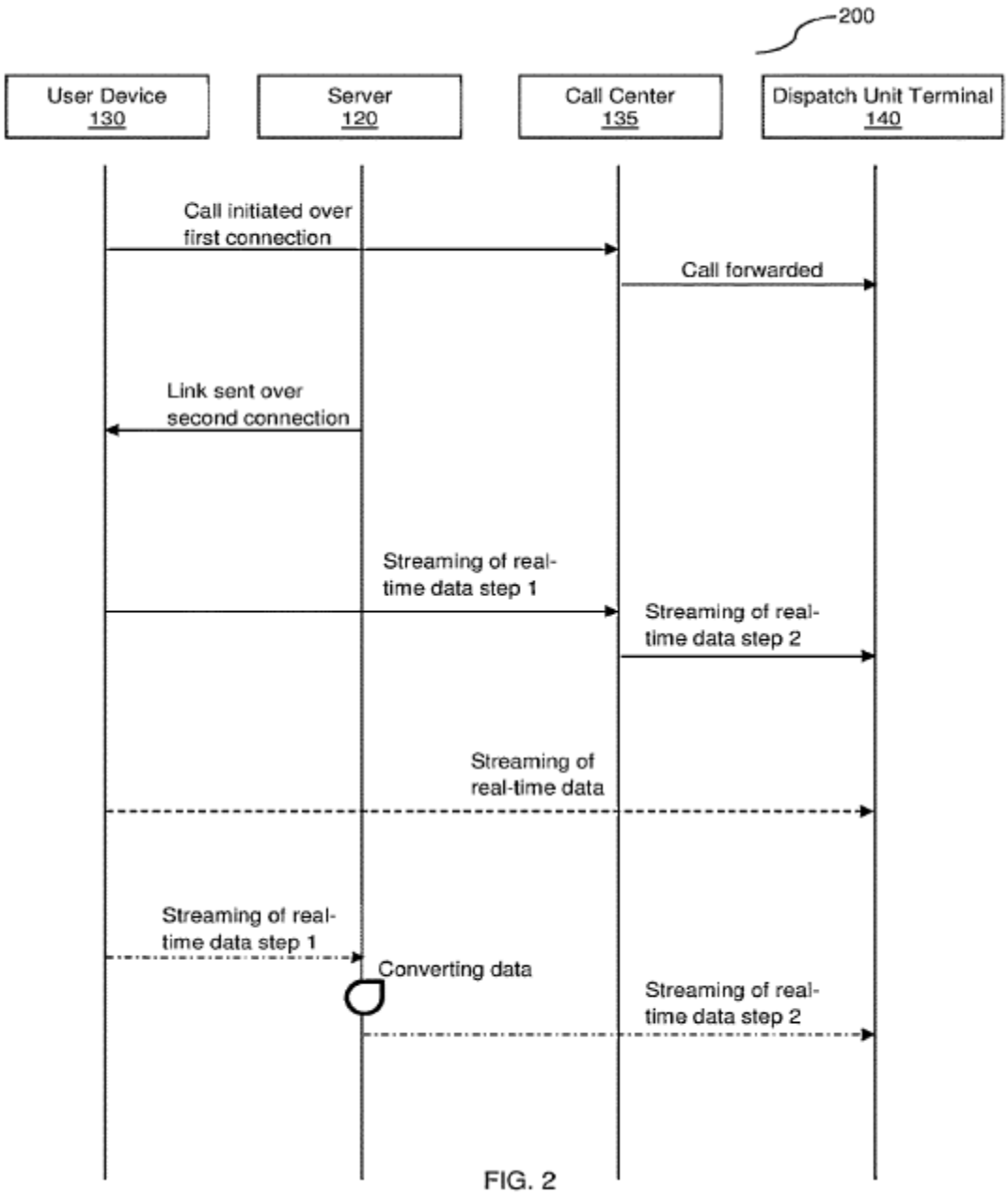
In an exemplary method, UD 130 establishes a "first connection" with a call center over a "cellular network" by dialing 9-1-1. *Id.*, 6:58-61, 7:38-41, 8:36-40. The call may also be "forwarded" to a dispatch unit terminal (DUT), "such as police, firefighting, ambulance services, and the like." *Id.*, 1:39-44, 5:40-44. "When the call is answered, or while still in queue" a server 120 detects the first connection and "identifies the UD 130" by a "unique identifier" such as a "phone number or other

unique identifier associated with the user device." *Id*., 6:7-9, 7:42-55, 8:47-50; *see also id.*, 6:19-22 ("The identifier may be, for example, a code snippet, a randomly generated string, a signature, and so on."). Using the identifier, the server sends an "electronic message" containing a "link" to the UD "over a second connection over the network." *Id*., 6:10-15. The electronic message may be "a short message service (SMS), an MMS, an electronic mail (email) message, and the like." *Id*., 6:15-17. The "second connection" may also be an SMS. *Id*., 7:43-35 ("the server 120 identifies the UD 130 and sends a link over a second connection, such as an SMS, to the UD 130").

When the user selects the link, "a web browser is launched, enabling the streaming of real-time data, such as video, audio, location data, and the like, from the UD 130 to the call center 135. The call center then forwards the real-time data to the DUT 140." *Id*., 7:45-49; *see also id.*, 2:66-3:5, 6:26-32. In one example, "streaming the real-time data" (e.g., audio, video, or location data) "is achieved using a Web Real-Time Communication (WebRTC) API that enables real-time communication over peer-to-peer connections." *Id.*, 6:61-64. Here, selecting the link "cause[s] the UD 130 to establish a WebRTC session using a WebRTC API that would allow streaming real-time data from the UD 130 to the call center 135 and/or the DUT 140." *Id*., 6:64-7:2.

Figure 2 below illustrates the exemplary method for directing

communications between a user device and a call center "for emergency or non-emergency situations." *Id.*, 2:21-31, 5:9-25, FIG. 2.



Id., FIG. 2.

III. Level of Ordinary Skill in the Art

A person of ordinary skill in the art ("POSITA") in the field of the '383 patent

would have had at least a bachelor's degree in electrical engineering, computer science, or a related discipline, and two years of experience in telecommunication systems or services using Internet protocols for sharing multimedia. Relevant work experience can substitute for formal education and additional education could substitute for work experience. Ex. 1003, Lipoff Declaration ("Decl.") ¶52.

IV. Claim Construction

The Board construes claims using the standards set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Claims should be construed only to the extent necessary to resolve a controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). No terms need construction to resolve the unpatentability issues in this Petition.[1] *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019).

V. Claims 1-20 Are Unpatentable and Should Be Cancelled.

A. Overview of the Prior Art

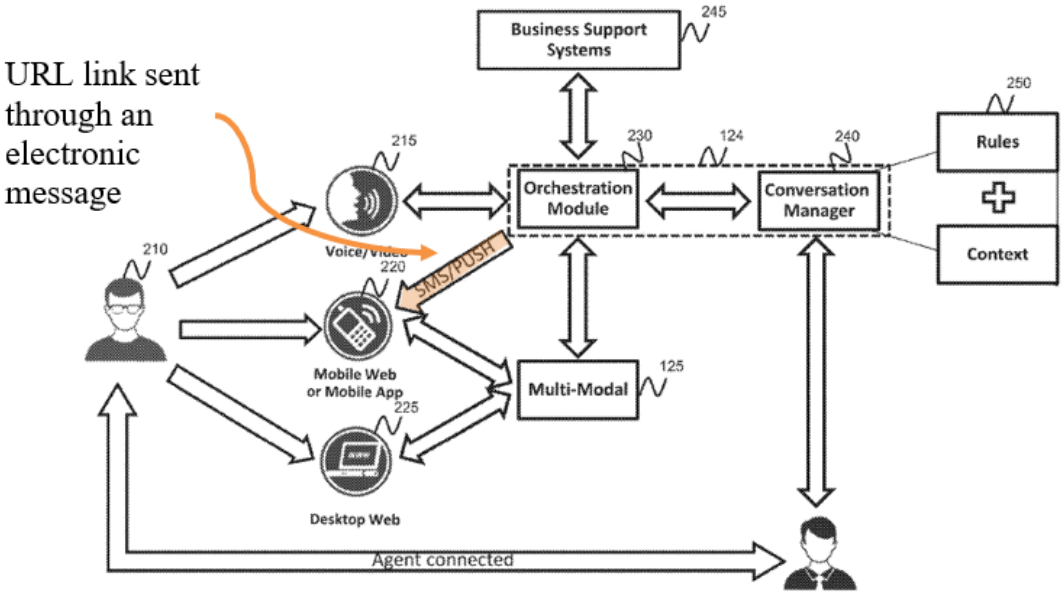
1. Overview of Ramanujaiaha (Ex. 1005)

Ramanujaiaha was filed on September 21, 2016, and issued on

[1] Petitioner reserves the right to argue that certain limitations in the challenged claims are indefinite and/or require construction to resolve controversies in other forums.

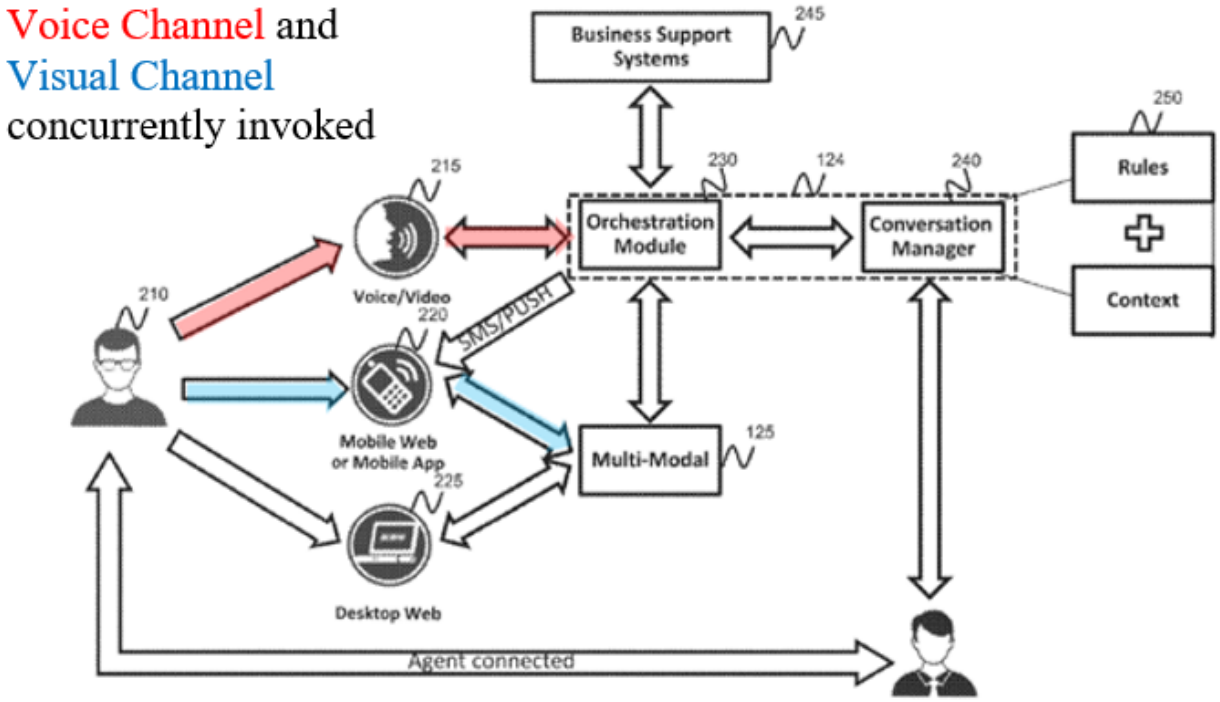
September 12, 2017, making Ramanujaiaha, prior art under 35 U.S.C. § 102(a)(2). Ramanujaiaha, cover (codes (22), (45)). Ramanujaiaha discloses systems and methods for "manag[ing] resources (e.g. personnel, computers, software programs, data management, and telecommunication equipment) to enable delivery of services via telephone or other communication mechanisms." *Id.*, 6:13-17. These "services" include "emergency response" services *Id.*, 6:17-20.

As Ramanujaiaha explains, an emergency contact center (also referred to as a call center) may "identify" that a "caller" (also called a "user") is engaging with the contact center "via a smart phone or a mobile phone" and send "a link including a unique URL or corresponding to the user's phone number … to the user's device via an SMS …, to invite the user to a multimodal session." *Id.*, *Id.*, 12:5-13, FIG. 2.



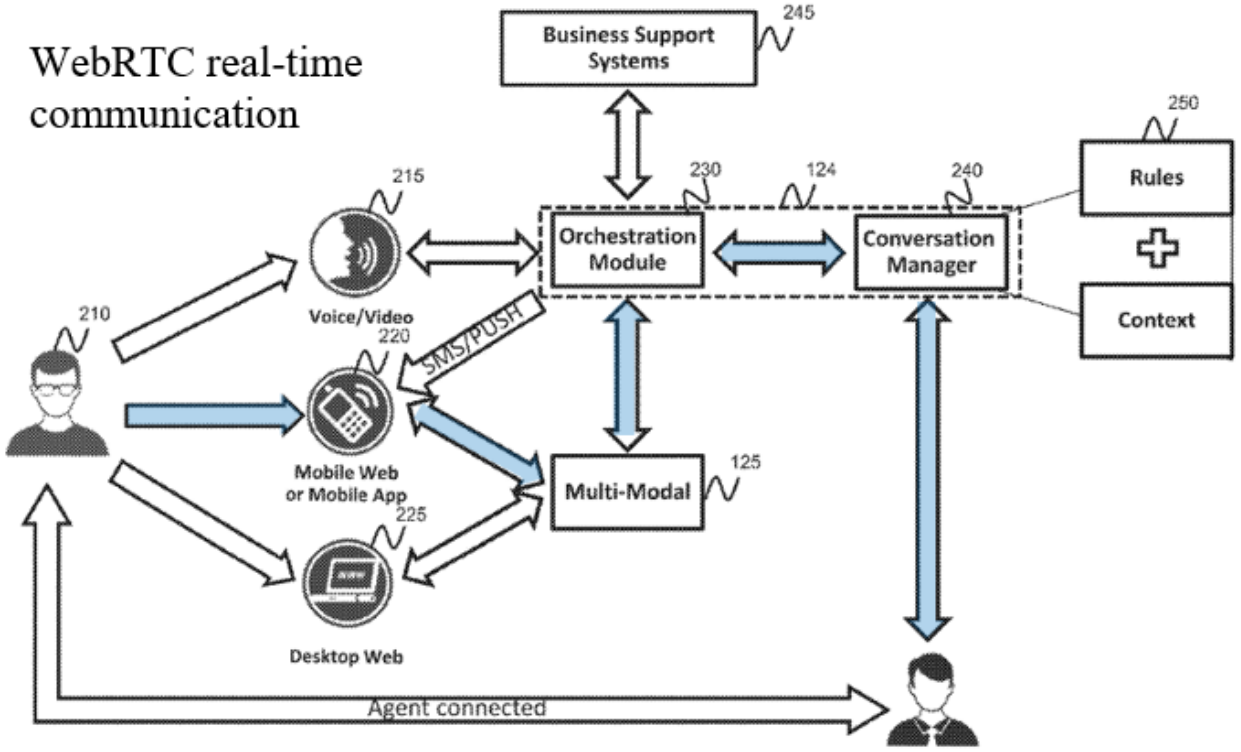
Id., FIG. 2 (annotated).

As Ramanujaiaha explains, "clicking on the link" opens a "visual communication channel" using the "mobile web" such that the user is "engaged" with the call center "through two modalities, a voice media channel that uses the media connection device 215, and a visual media channel that uses the … mobile web 220." *Id.*, 12:14-26; *see also id.*, 10:38-42 (explaining the user device may access a visual interface device "such as mobile web browser … to render visual content."), 10:55-59 (explaining that "a voice channel and a visual channel are concurrently invoked"). Annotated Figure 2 below illustrates a multimodal communication between the user's mobile device and the emergency contact center.



Id., FIG. 2 (annotated).

Using the visual channel, the user may transmit "video communications" to the emergency contact center, using e.g., "web real-time communication" so to that the center can provide emergency response service. *Id.*, 9:46-52, 10:34-42, FIG. 2. Annotated Figure 2 below illustrates a pathway of the visual communication from the mobile device to the call center and its agent.



Id., FIG. 2 (annotated).

2. Overview of Krishnan (Ex. 1006)

Krishnan was filed on March 30, 2015, and issued on August 16, 2016, making Krishnan prior art under 35 U.S.C. § 102(a)(1). Krishnan, cover (code (45)). Krishnan discloses systems and methods for facilitating communication between an "emergency caller" and an emergency call center, such as a "Public Safety Access Point (PSAP)" over a "cellular" or "other type of packet-switched or circuit switched network." *Id*., Abstract, 1:41-49, 2:4-21, 4:28-47, FIGS. 1-3. Figure 2 illustrates a "caller 204" placing an emergency voice call using a "[customer] communication device 206," such as a "cellular phone" or "smart phone … adapted to support video, audio, text, and/or data communications" to report an "emergent event 202." *Id*.,

4:61-62, 5:46-56, 6:43-49. The call is transmitted over the "communication network" to the "PSAP agent 112" via a "PSAP server." *Id*., 1:44-49, 7:7-17, FIG. 2.

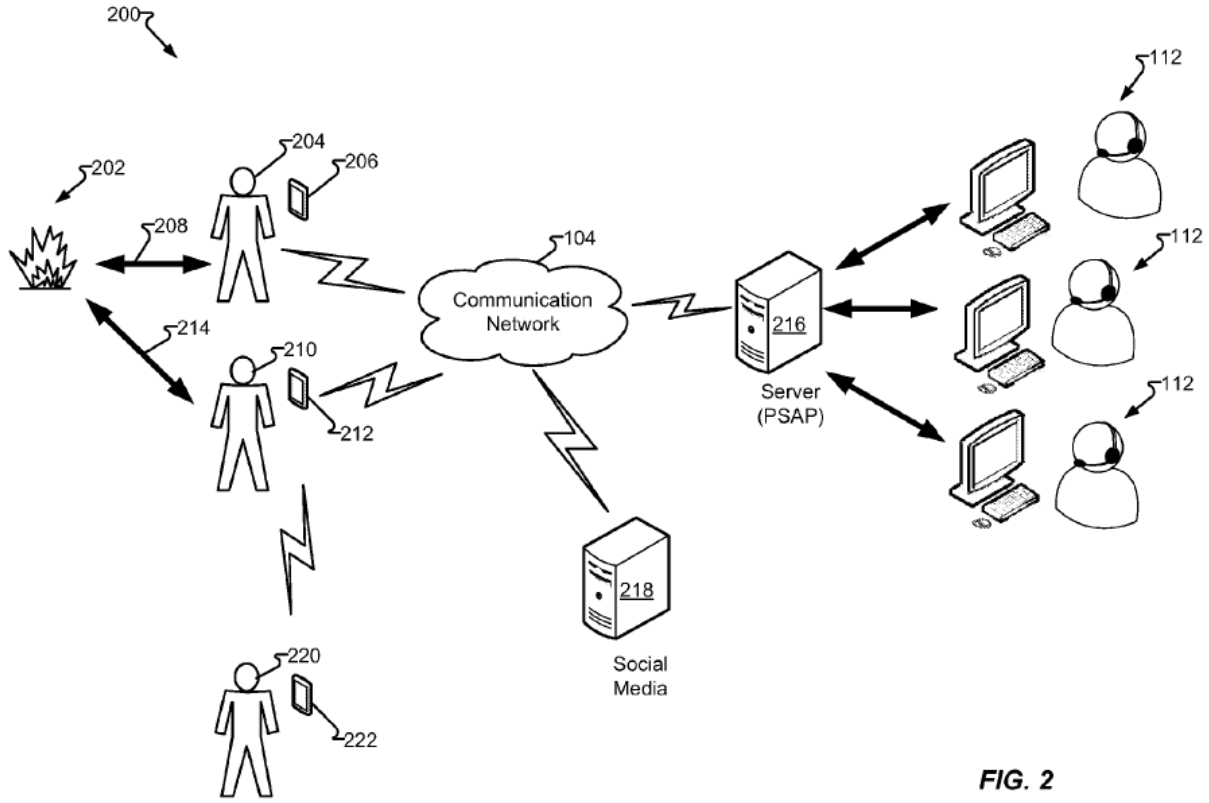


FIG. 2

Id., FIG. 2.

To improve emergency reporting, Krishan (like Ramanujaiaha) also utilizes multiple data channels to enable the user to maintain a voice call with the emergency center while sending video footage of the emergent event. *Id*., 1:41-49. The emergency caller may be "asked to establish a trusted data channel (e.g., a WebRTC call) with a PSAP system then provide their perspective about the event via the data channel." *Id*., 1:41-45, 7:27-35. For example, if the caller initiates "a voice only

communication channel, PSAP server 216, may *prompt the user* device and/or user to cause the user device to establish a data interaction connection" by "*sending a text message with a link to cause the establishment of the data channel*. The establishment of a data channel may convey packets, such as Internet Protocol (IP) packets over communication network 104 and may further comprise a WebRTC, HTML5, or other data channel paradigm." *Id*., 7:27-35 (emphases added). In this way, the PSAP "can use *information incoming from each of the data channels* (*e.g*., pictures, *videos*, text information, etc.) to help determine information about the event." *Id*., 1:45-49 (emphases added), 10:56-66 (describing "sending video of an emergent event" while "audio communications" are provided via "voice-only channel"), 11:28-31, FIG. 3.

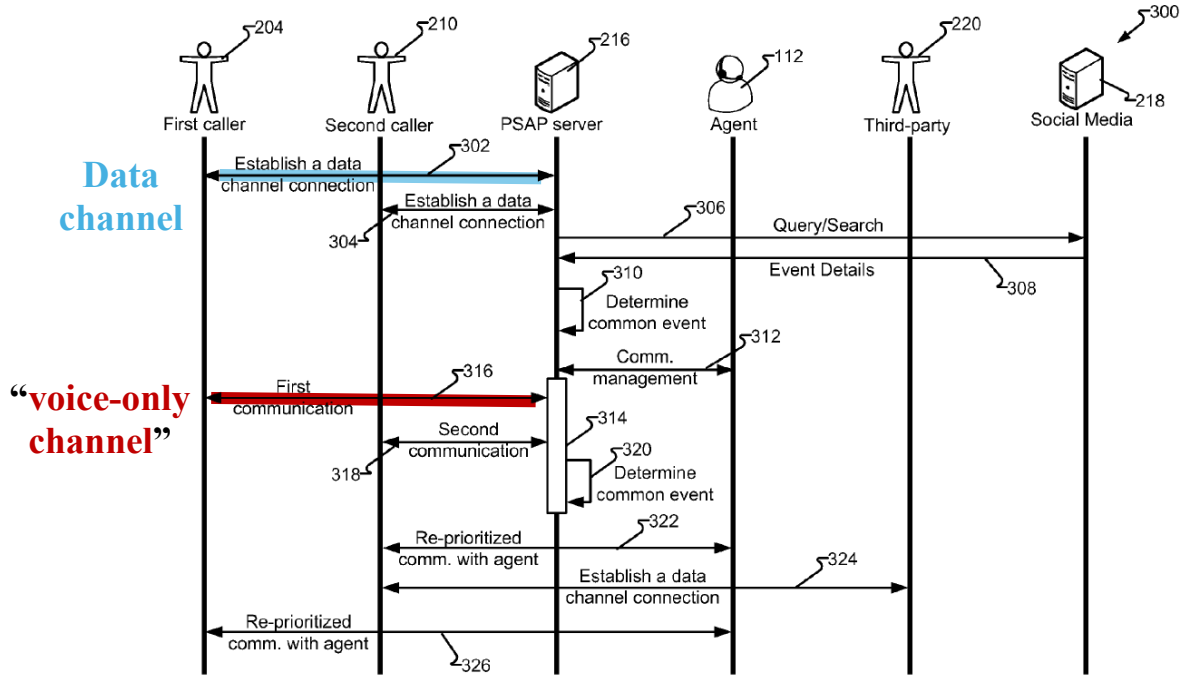


FIG. 3

Id., FIG. 3 (annotated).

B. Ramanujaiaha and Krishnan Are Analogous Art.

Ramanujaiaha and Krishnan are analogous art to the '383 patent because each reference is directed to the same field of endeavor as the '383 patent: streaming data from a user device. *Compare* Ramanujaiaha, Abstract, 5:6-21, 10:28-38 and Krishnan, Abstract, FIG. 3 *with* Ex. 1001, Abstract, 1:25-28; Decl. ¶64. Furthermore, Ramanujaiaha and Krishnan are directed to the same problem as the '383 patent: improving call center response services (such as emergency response services) by allowing a user to provide visual and audio communications. *Compare* Ramanujaiaha, 5:6-21, 6:13-20, 10:28-38, FIG. 2 and Krishnan, Abstract, FIG. 3 *with* Ex. 1001, Abstract, 1:45-50, FIG. 3; Decl. ¶64.

C. Grounds 1A-1B: Claims 1-6, 8-13, and 15-19 Are Anticipated or Obvious over Ramanujaiaha.

1. Independent Claim 1

Ramanujaiaha discloses or renders obvious claim 1. Decl. ¶¶68-118.

a. [1Preamble]: "A method implemented via execution of computing instructions configured to run at one or more processors, the method comprising:"[2]

Ramanujaiaha discloses [1Preamble] because it discloses that its "various [disclosed] functionalities" (methods) may be implemented using "one or more processors, in one or more computing devices 1500 (e.g., FIG. 15A, FIG. 15B), executing computer program instructions." Ramanujaiaha, Abstract, 35:10-18; Decl. ¶¶68-70.

Ramanujaiaha's system uses servers that "may each include one or more processors executing computer program instructions and interacting with other system components for performing the various functionalities …. The computer program instructions are stored in a memory implemented using a standard memory device, such as, for example, a random access memory (RAM). The computer program instructions may also be stored in other non-transitory computer readable media such as, for example, a CD-ROM, flash drive, or the like." Ramanujaiaha,

[2] Petitioner does not concede the preamble of any independent claim is limiting. If Patent Owner argues it is, Ramanujaiaha discloses it.

9:30-45. In an example, a "contact center system manages resources (e.g. personnel, *computers, software programs*, data management, and telecommunication equipment) to enable delivery of services via telephone or other communication mechanisms." *Id*., 6:13-17 (emphasis added).

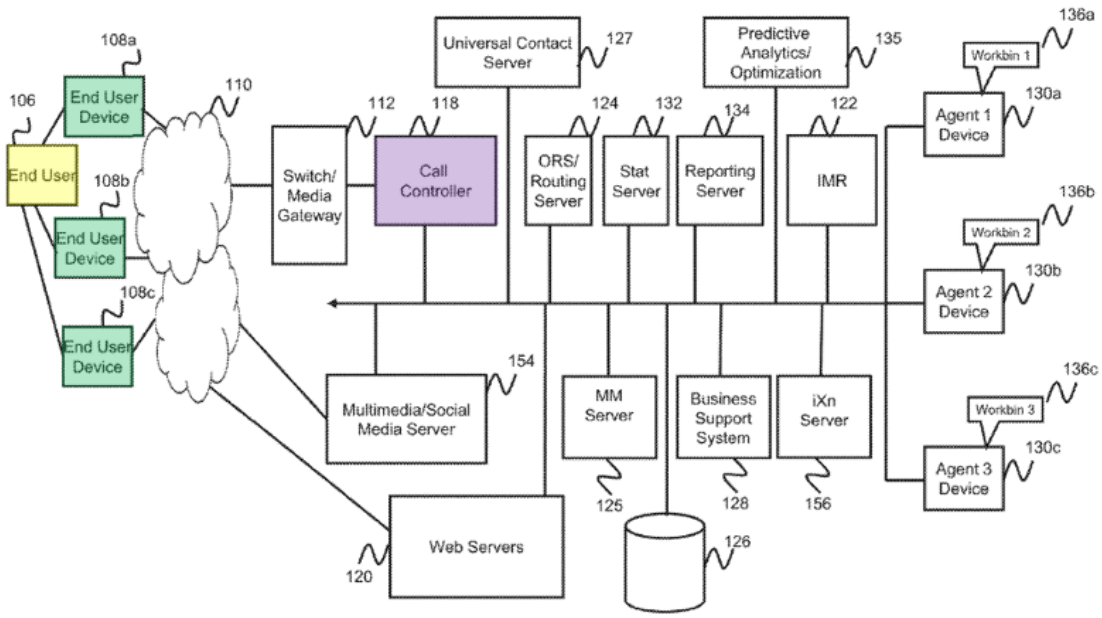
The contact center's "services" include "emergency response" services as explained in [1a]-[1b], below. *Id*., 6:17-20.

b. [1a]: "obtaining a phone number of a mobile device used by a user making an emergency call,"

Ramanujaiaha discloses [1a] because it discloses *receiving*, at an "emergency service" contact center, "inbound communications (e.g., telephony calls)" from one or more "end users" operating "one or more end user devices" such as a "wireless phone, smart phone, personal computer, electronic tablet, and/or the like" and "*extract[ing]*… the caller's telephone number" once received. Ramanujaiaha, 6:13-32, 7:11-14; Decl. ¶¶71-73.

As Ramanujaiaha explains, each emergency call center may be associated with a "call controller" configured to "process PSTN calls, VoIP calls, and the like." Ramanujaiaha, 7:4-5. When the center receives a call from the user's mobile device (smart phone, wireless phone, etc.), the controller "extract[s] data about the customer interaction such as the caller's telephone number, often known as the automatic number identification (ANI) number, or the customer's internet protocol (IP)

address, or email address." *Id*., 7:10-16. Annotated Figure 1 below illustrates an emergency call center system including a call controller for extracting a telephone number during an interaction between the end user's (customer's) end user device and call center:



Id., FIG. 1 (annotated).

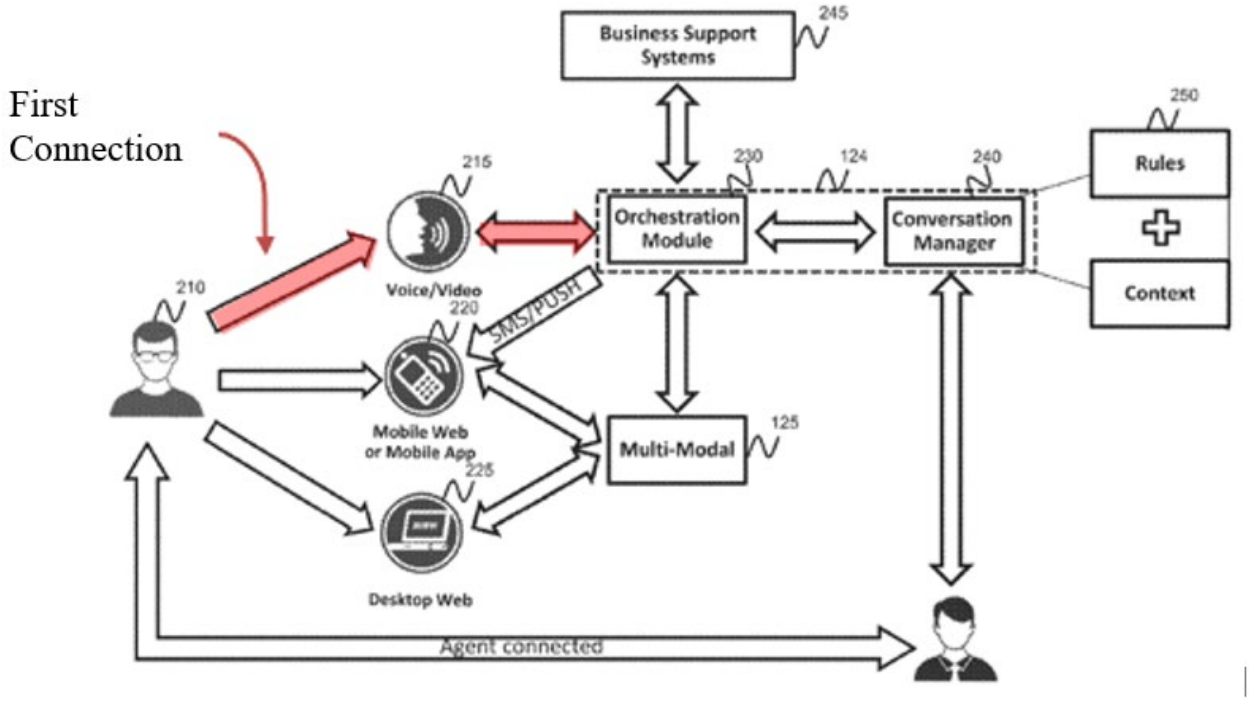
Thus, Ramanujaiaha discloses obtaining a phone number (telephone number) of a mobile device (smart phone, wireless phone, etc.) used by a user making an emergency call (end user calling an emergency call center). Decl. ¶¶71-73.

c. [1b]: "wherein the emergency call is conducted with a recipient through a first connection;"

Ramanujaiaha discloses [1b] because, as explained for [1a], the "telephony call" is received by a "call center" (recipient) through a first "communication

channel[] e.g., medium[] or modalit[y])" such as PSTN, VoIP, or "the like" (first connection). Ramanujaiaha, 5:9-16, 7:4-5; Decl. ¶¶74-77.

For example, Ramanujaiaha discloses that "[i]nbound and outbound communications from and to the end user devices 108 may traverse a telephone, *cellular*, and/or data communication *network* 110 depending on the type of device that is being used." Ramanujaiaha, 6:33-36 (emphases added); *see also id.*, 5:9-16 (explaining that "interactions between contact center resources (e.g., live agents and self-service systems) and outside entities (e.g., customers) may be conducted over communication channels such as voice/telephony (e.g., telephone calls, voice over IP or VoIP calls, etc.)." The communications network 110 may include "a wireless carrier network including a code division multiple access (CDMA) network, global system for mobile communications (GSM) network, or any wireless network/technology conventional in the art, including but to limited to 3G, 4G, LTE, and the like." *Id.*, 6:39-44. Annotated Figure 2 below illustrates a user 210 initiating "a first interaction by placing a phone/video call to the call center" via a first connection. *Id.*, 11:59-61, FIG. 2.



Id., FIG. 2 (annotated).

The '383 patent similarly discloses that the "first connection may be, for example a voice call over a cellular network, such as when a phone call is established between the user device and a call center." Ex. 1001, 5:56-58.

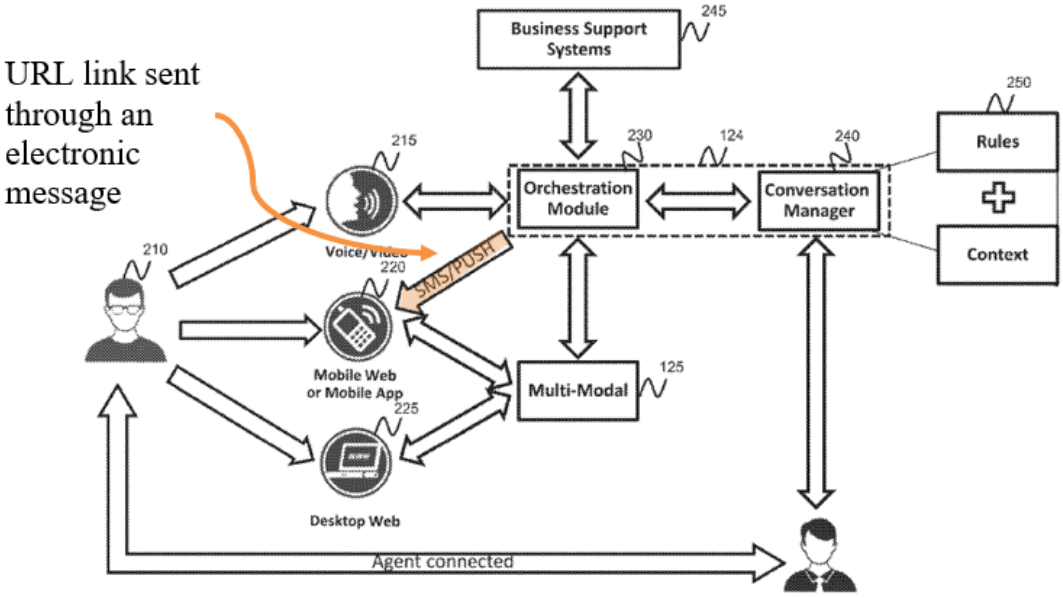
Thus, Ramanujaiaha discloses that the emergency call (emergency service center telephony call) is conducted with a recipient (call center) through a first connection (voice call), as recited in [1b]. Decl. ¶¶74-77.

d. [1c]: "transmitting a uniform resource locator (URL) link to the mobile device through an electronic message,"

Ramanujaiaha discloses [1c] because it discloses sending (transmitting) "a link including a unique URL … *to the user's device via an SMS*." Ramanujaiaha,

12:6-12 (emphasis added), FIG. 2; Decl. ¶¶78-81.

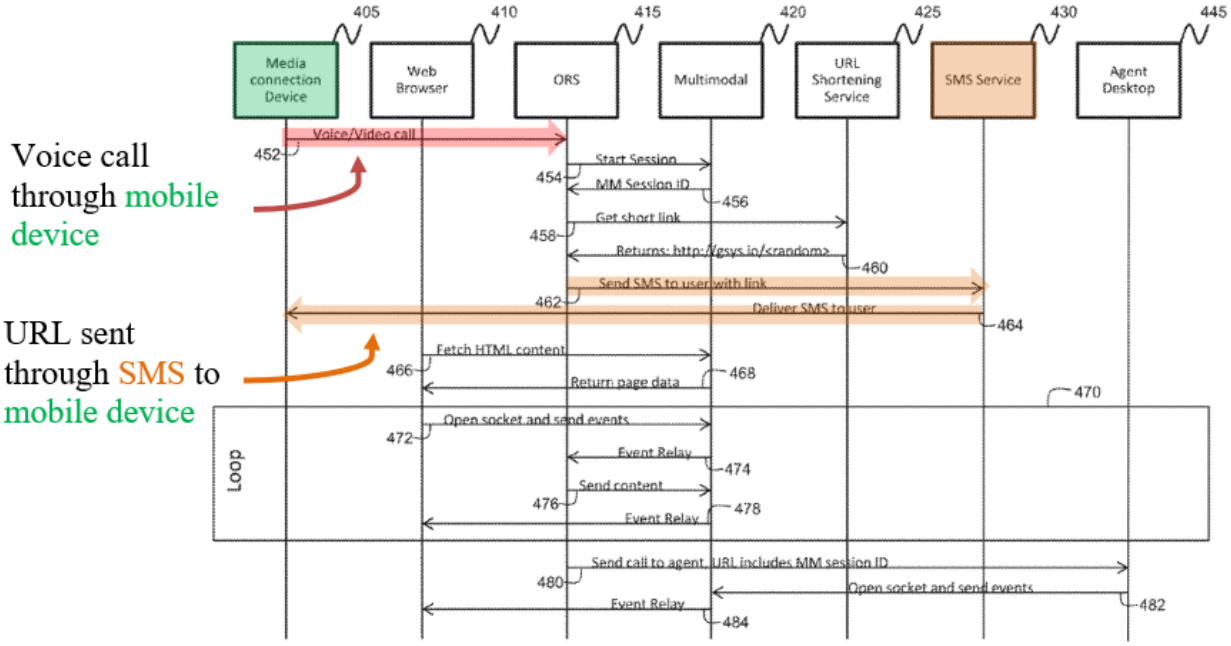
For example, the contact center may use an "orchestration module" to "identify that the user is engaging via a smart phone or a mobile phone" and send "a link including a unique URL or corresponding to the user's phone number … to the user's device via an SMS …, to invite the user to a multimodal session." Ramanujaiaha, 12:5-13, FIG. 2. Annotated Figure 2 below illustrates the transmitting SMS containing the URL link.



Id., FIG. 2 (annotated).

Figure 4 similarly illustrates a process whereby "a user places a voice/video call at act 452 to the contact center via a media connection device (e.g., a mobile phone or a LAN line phone) 405, and in response, an orchestration module 415 and … *sends an SMS with the short link URL* at act 462 to an SMS service 430, and

the SMS service 430 delivers the SMS at act 464 to the user's media connection device 405." *Id.*, 14:57-15:8 (emphasis added).



Id., FIG. 4 (annotated).

This is consistent with the '383 patent, which also sends a URL link through an "electronic message" such as "a short message service (SMS), an MMS, an electronic mail (email) message, and the like." Ex. 1001, 6:10-17. Accordingly, Ramanujaiaha discloses transmitting a uniform resource locator (URL) link to the mobile device (user smart phone/wireless phone) through an electronic message (SMS), as recited in [1c]. Decl. ¶¶78-81.

e. [1d]: "wherein the electronic message is transmitted through a second connection using the phone number,"

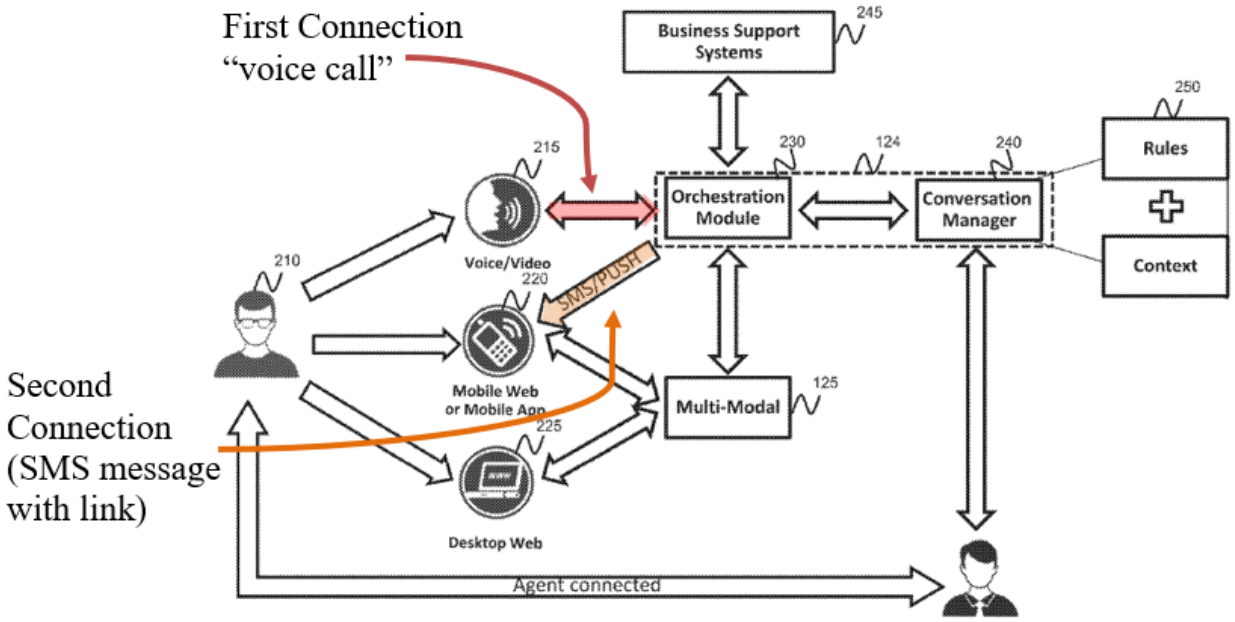
Ramanujaiaha discloses [1d] because the SMS (electronic message) is

transmitted through a "digital" (e.g., "text" or "SMS") "communication channel" (second connection) to the caller's mobile device (using the phone number). Ramanujaiaha, 4:59-5:3, 5:9-16, 12:5-13, 14:57-15:8, FIGS. 2, 4; Decl. ¶¶82-85.

As explained for [1a], each emergency contact center may be associated with a "call controller" configured to "process PSTN calls, VoIP calls, and the like" and "extract data about the customer interaction *such as the caller's telephone number*, often known as the automatic number identification (ANI) number, or the customer's internet protocol (IP) address, or email address." Ramanujaiaha, 7:4-5, 7:10-16 (emphasis added). And as explained for [1c], the call center may use an "orchestration module" to send "a link including a unique URL or corresponding to the user's phone number … to the user's device via an SMS …, to invite the user to a multimodal session." *Id*., 12:5-13, 14:57-15:8, FIGS. 2, 4.

Ramanujaiaha further discloses that users "regularly use two or more communication channels to accomplish their goals" and that "interactions between contact center resources (e.g., live agents and self-service systems) and outside entities (e.g., customers) may be conducted over [multiple] communication channels such as voice/telephony (e.g., telephone calls, voice over IP or VoIP calls, etc.)" (the first connection of [1b]) and "text (e.g., emails, text chat, etc.)" (a second connection). *Id*., 5:9-16; *see also id.*, 4:59-5:3 (describing chat and SMS as a "digital" "communication channel" that is distinct from the "voice/telephony"

communication channel). Annotated Figure 2 below illustrates the electronic message (SMS) transmitted through the second connection (digital communication channel, e.g., SMS) to the user's mobile device. *Id.*, 12:3-11, FIG. 2.



Id., FIG. 2 (annotated).

Because Ramanujaiaha explains that the emergency contact center sends the electronic message to the "user's device via an SMS … to invite the user to a multimodal session" when it "identif[ies] that the user is engaging via a smart phone or a mobile phone," a POSITA would have understood that Ramanujaiaha likewise discloses that the electronic message is transmitted through the second connection using the user's phone number. Ramanujaiaha, 12:5-13 (emphasis added), FIG. 2; Decl. ¶84 (citing Ex. 1007, 11).

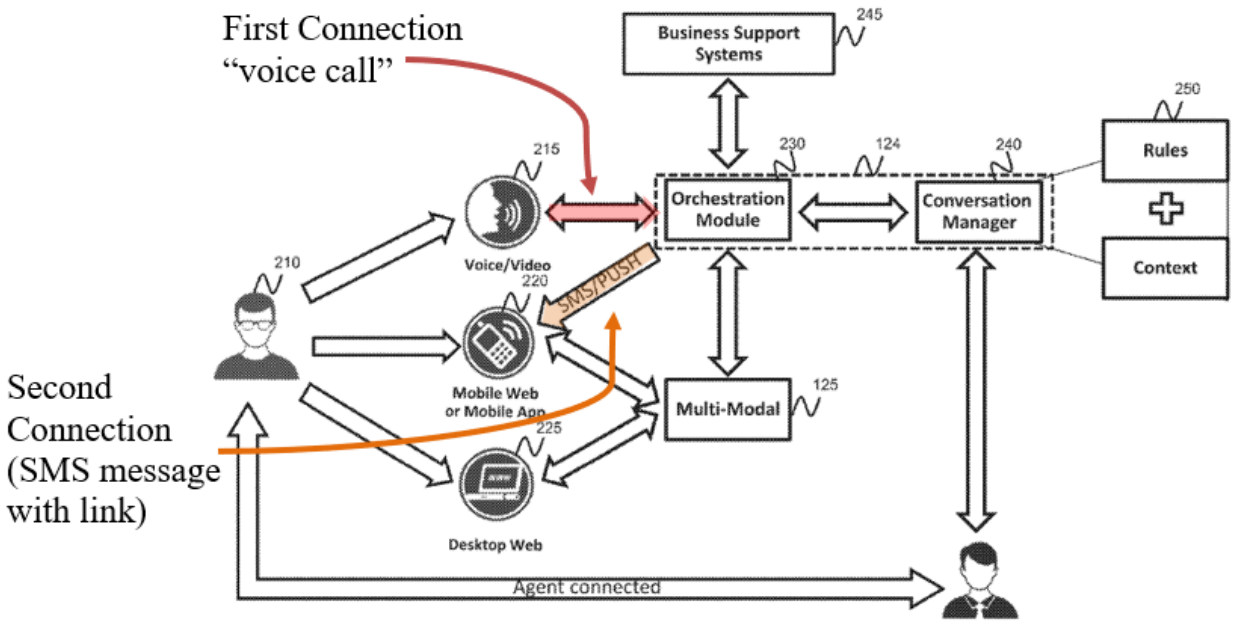
The '383 patent similarly discloses that the "second connection" may be an

"SMS." Ex. 1001, 7:43-45, claim 10, 11:66-12:2 ("the electronic message is a text message; and the second connection is a text message service."). Accordingly, Ramanujaiaha discloses the electronic message (SMS) is transmitted through a second connection (digital communication channel such as SMS) using the phone number. Decl. ¶¶82-85.

f. [1e]: "wherein the second connection is different from the first connection,"

Ramanujaiaha discloses [1e] because, as explained in [1b] and [1d], the first connection is a "voice/telephony" communication channel, and the second connection is a separate "digital," e.g., "text" communication channel such as SMS. Ramanujaiaha, 5:9-16; *see also id.*, 4:59-5:3 (describing chat and SMS as a "digital" communication channel that is distinct from the "voice/telephony" communication channel); Decl. ¶86.

Using the fist "voice/telephony" communication channel "end users … desiring to receive services from the contact center may initiate inbound communications (*e.g., telephone calls*) to the contact center via one or more end user devices," and using the second, different, "digital" communication channel, a link is "*sent to the user's device via an SMS*." Ramanujaiaha, 5:9-16, 6:21-29 (emphasis added), 12:6-12 (emphasis added), FIG. 2.



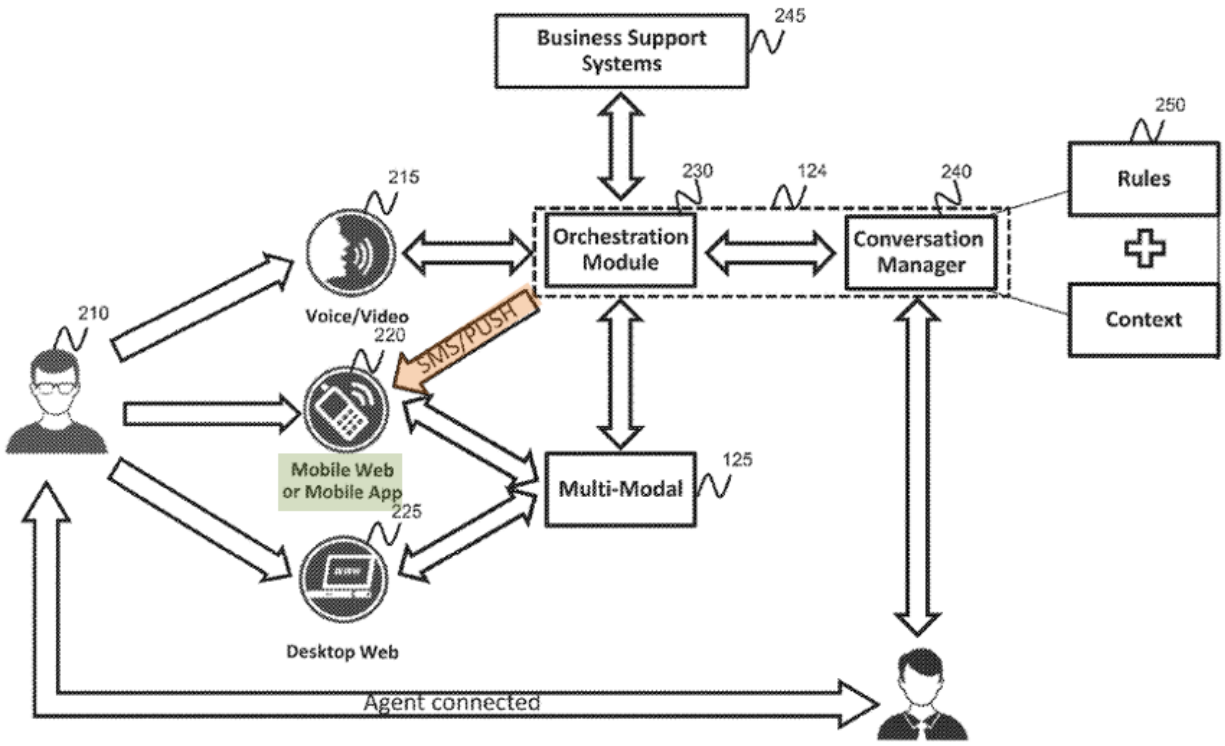
Ramanujaiaha, FIG. 2 (annotated).

g. [1f]: "wherein the electronic message allows the user to click on the URL link to access a web browser on the mobile device, instead of a full application on the mobile device,"

Ramanujaiaha discloses [1f] because it discloses that "the user may utilize the link to open a visual communication channel on [] the smart phone/mobile phone 220." Ramanujaiaha, 10:38-42, 11:3-12, 12:14-26; Decl. ¶¶87-90.

As explained for [1c], the call center may use an "orchestration module" to "identify that the user is engaging via a smart phone or a mobile phone" and send "a link including a unique URL or corresponding to the user's phone number … to the user's device via an SMS … to invite the user to a multimodal session." Ramanujaiaha, 12:5-13, FIG. 2. Ramanujaiaha further explains that "clicking on the

link" opens a "visual communication channel" using the "mobile web" such that the user is "engaged" with the call center "through two modalities, a voice media channel that uses the media connection device 215, and a visual media channel that uses the … mobile web 220." *Id.*, 12:14-26; *see also id.*, 10:38-42 (explaining the user device may access a visual interface device "such as *mobile web browser* … to render visual content."), 11:3-12 ("the multimodal server 125 may dynamically generate visual user interfaces (e.g., IVR menu, video, etc.) that are rendered by the one or more end user devices (e.g., visual interface device 220, web browser device 225, etc.)").



Id., FIG. 2 (annotated).

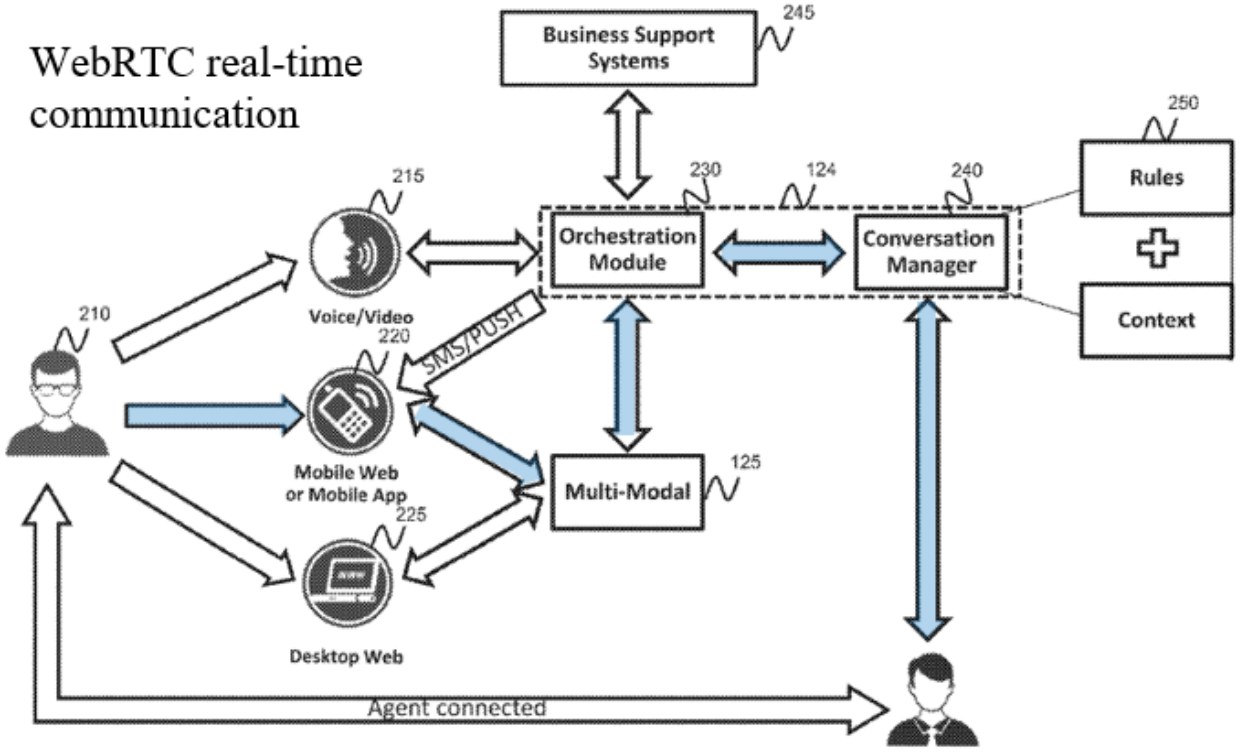
Like in the '383 patent, clicking the link directs the user to a "native application, e.g. a mobile web browser" for rendering visual content (*Id*., 10:38-42) and does not require "a user to download and install a full application file." Ex. 1001, 6:33-37, 9:7-12 (distinguishing "native" browser applications from "full" applications that require downloading). Accordingly, Ramanujaiaha discloses the electronic message (SMS) allows the user to click on the URL link to access a web browser on the mobile device (mobile web browser), instead of a full application on the mobile device, as recited in [1f]. Decl. ¶¶87-90.

h. [1g]: "to establish a WebRTC (Web Real-Time Communication) session to transmit a real-time video stream from the mobile device,"

Ramanujaiaha at least suggests [1g] because it discloses that the user may use the web browser to send the call center "visual content" such as "video communications" using "web real time communication (WebRTC)." Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶¶91-93.

As explained in [1f], Ramanujaiaha discloses that "clicking on the link" opens a "visual communication channel" using the "mobile web" such that the user is "engaged" with the call center "through two modalities, a voice media channel that uses the media connection device 215, and a visual media channel that uses the … mobile web 220." Ramanujaiaha, 12:14-26. Ramanujaiaha further discloses that visual media communicated over the visual media channel (e.g., "video

communications") may be transmitted to the contact center using WebRTC. 9:46-52 (explaining the terms "interaction" and "communication" encompasses "real-time" interactions that use "web real-time communication (e.g. WebRTC calls)"), 10:34-42 ("the user 210 may have access to a media connection device (e.g., a mobile phone or a LAN line phone) 215 capable of voice or video communications (e.g., PSTN, WebRTC, Siri, Facetime, etc.)."). Thus, a POSITA would have understood that opening a "visual communication channel" using the "mobile web" such that the user is "engaged" with the contact center through "a visual media channel" likewise establishes a WebRTC session that allows the user to transmit "video communications" to the contact center. *Id*., 9:46-52, 10:34-42, FIG. 2; Decl. ¶93.



Ramanujaiaha, FIG. 2 (annotated).

To the extent Patent Owner disputes or the Board finds that Ramanujaiaha does not disclose the additional limitations of [1g], a POSITA would have found it obvious to use Ramanujaiaha's mobile web browser to establish a WebRTC session to transmit a real-time video stream from the mobile device. Decl. ¶¶94-97.

(1) Motivation

As explained above, Ramanujaiaha expressly contemplates using a WebRTC session to transmit video communications from the user device to the contact center. Ramanujaiaha, 9:46-52, 10:34-42. Accordingly, a POSITA would have been motivated to establish a WebRTC session because it would have comported with Ramanujaiaha's express goal of facilitating "real-time" interactions between the

"contact center resources (e.g., live agents)" and "outside entities (e.g., customers)." *Id*., 5:9-15, 9:46-52, 10:46-51 (describing "deliver[ing] real-time updates and actions on each of the channels in response to customer activities"); Decl. ¶95. A POSITA would have also appreciated the advantages of utilizing such real-time communication in emergency situations. For example, a POSITA would have recognized that real-time communication via WebRTC would have allowed the user to quickly and accurately convey the nature of their emergency (e.g., through video communication), thus enabling the contact center to provide more timely emergency services. Decl. ¶96.

(2) Expectation of Success

A POSITA would have also reasonably expected to succeed in establishing the WebRTC session because it is expressly envisioned by Ramanujaiaha and would have only required routine skill to implement. Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶97. Furthermore, establishing a WebRTC session would have been a straightforward application of known, conventional techniques used according to their known functions to yield predictable results. Decl. ¶97. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007); *Slot Speaker Techs., Inc. v. Apple Inc.*, 680 F. App'x 932, 943-44 (Fed. Cir. 2017).

Accordingly, it would have been obvious to use Ramanujaiaha's mobile web browser to establish a WebRTC session to transmit a real-time video stream from

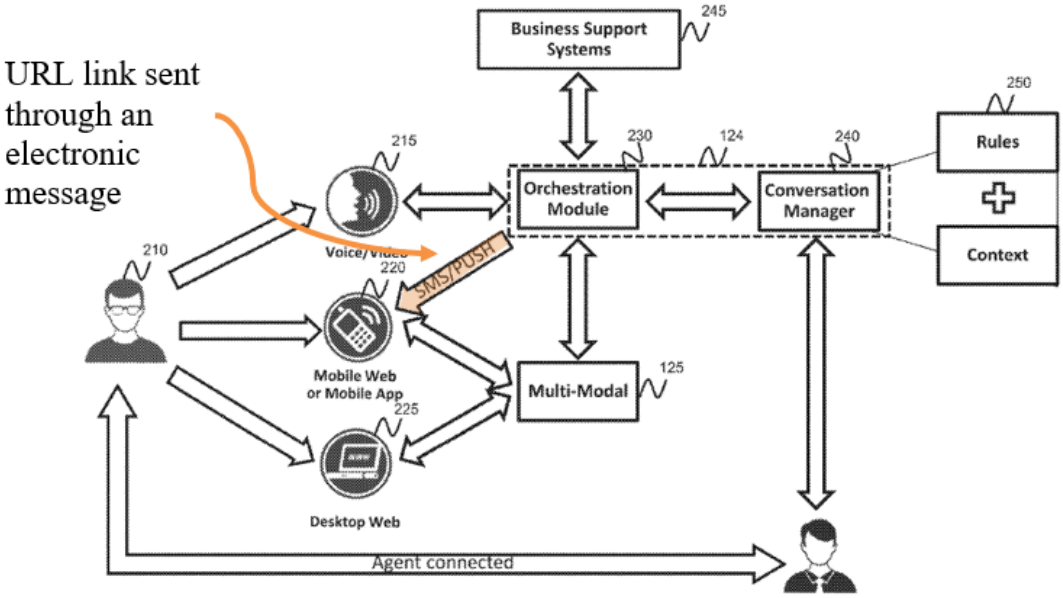
the mobile device. Decl. ¶¶94-97.

i. [1h]: "and wherein the URL link is associated with the phone number of the mobile device;"

Ramanujaiaha discloses or renders obvious [1h] because the emergency contact center "extract[s] data about the customer interaction *such as the caller's telephone number*" and sends the URL to the user "over SMS" when it "*identif[ies]* that the user is engaging via a smart phone or a mobile phone." Ramanujaiaha, 7:4-5, 7:10-16 (emphasis added), 12:6-12, FIG. 2; Decl. ¶¶98-103; *see also* [1a], [1c], and [1f].

As explained for [1a], each emergency contact center may be associated with a "call controller" configured to "process PSTN calls, VoIP calls, and the like" and "extract data about the customer interaction *such as the caller's telephone number*, often known as the automatic number identification (ANI) number, or the customer's internet protocol (IP) address, or email address." Ramanujaiaha, 7:4-5, 7:10-16 (emphasis added).

And as explained for [1c], Ramanujaiaha further discloses that the emergency contact center may use an "orchestration module" to send the link including the "unique URL" to the "user's device via an SMS o… to invite the user to a multimodal session" when it "identif[ies] that the user is engaging via a smart phone or a mobile phone." Ramanujaiaha, 12:5-13, FIG. 2.



Ramanujaiaha, FIG. 2 (annotated).

Thus, a POSITA would have understood that the URL link is associated[3] with the phone number of the mobile device because it is transmitted via an SMS that is associated with the mobile device's identity—i.e., "the *caller's telephone number*, often known as the automatic number *identification* (ANI) number." Ramanujaiaha, 7:4-5, 7:10-16, (emphases added), 12:6-12; Decl. ¶100.

To the extent Patent Owner disputes this, or the Board determines otherwise,

[3] The '383 patent does not define "associated with" but explains that its "call center," like the contact center described in Ramanujaiaha, identifies the user's phone number when a call is made, and that a link is subsequently sent to the same calling device from which the number was extracted. Ex. 1001, 6:1-13.

a POSITA would have found it obvious to associate the user's phone number with the URL because Ramanujaiaha expressly contemplates associating the users' telephone number with user communications. Ramanujaiaha, 17:7-10; Decl. ¶¶101-103.

A POSITA would have been motivated to associate the user's phone number with the URL because it would have comported with Ramanujaiaha's express goal of facilitating and tracking communications between the "contact center resources (e.g., live agents)" and "outside entities (e.g., customers)." Ramanujaiaha, 5:9-15, 9:46-52, 11:63-67, 12:21-26; Decl. ¶102. A POSITA would have also appreciated that associating the phone number with the URL would have been a straightforward and routine solution for tracking the communication because Ramanujaiaha's controller is already configured to extract and provide the phone number to the contact center (as explained in [1a]) and may be used to track user communications. Decl. ¶102.

Similarly, a POSITA would have reasonably expected to succeed in associating the phone number with the URL because Ramanujaiaha expressly contemplates associating the users' telephone number with user communications, and would have only required routine skill to implement. Decl. ¶103; *KSR Int'l Co.*, 550 U.S. at 416 (2007).

Accordingly, it would have also been obvious to associate the URL link with

the phone number of the end user's mobile device. Decl. ¶¶101-103.

j. [1i]: "receiving the real-time video stream from the mobile device through the WebRTC session; and"

Ramanujaiaha discloses or renders obvious [1i] because, as explained above for [1g], the real-time video communication is transmitted from the user's device and received by the emergency contact center through the WebRTC session. Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶¶104-107.

For example, Ramanujaiaha discloses that visual media communicated over the visual media channel (e.g., "video communications") may be transmitted to the contact center using WebRTC. Ramanujaiaha, 9:46-52 (explaining the terms "interaction" and "communication" encompasses "real-time" interactions that use "web real-time communication (e.g. WebRTC calls)"), 10:34-42 ("the user 210 may have access to a media connection device (e.g., a mobile phone or a LAN line phone) 215 capable of voice or video communications (e.g., PSTN, WebRTC, Siri, Facetime, etc.)."). Ramanujaiaha also explains that the contact center's "orchestration module may contain logic for handling [the] multimodal/omnichannel interactions utilizing two or more communication channels" such that it "coordinate[s] with the multimodal server 125 to deliver real-time updates and actions on each of the channels *in response to* customer activities on any of the channels." Ramanujaiaha, 10:46-55.

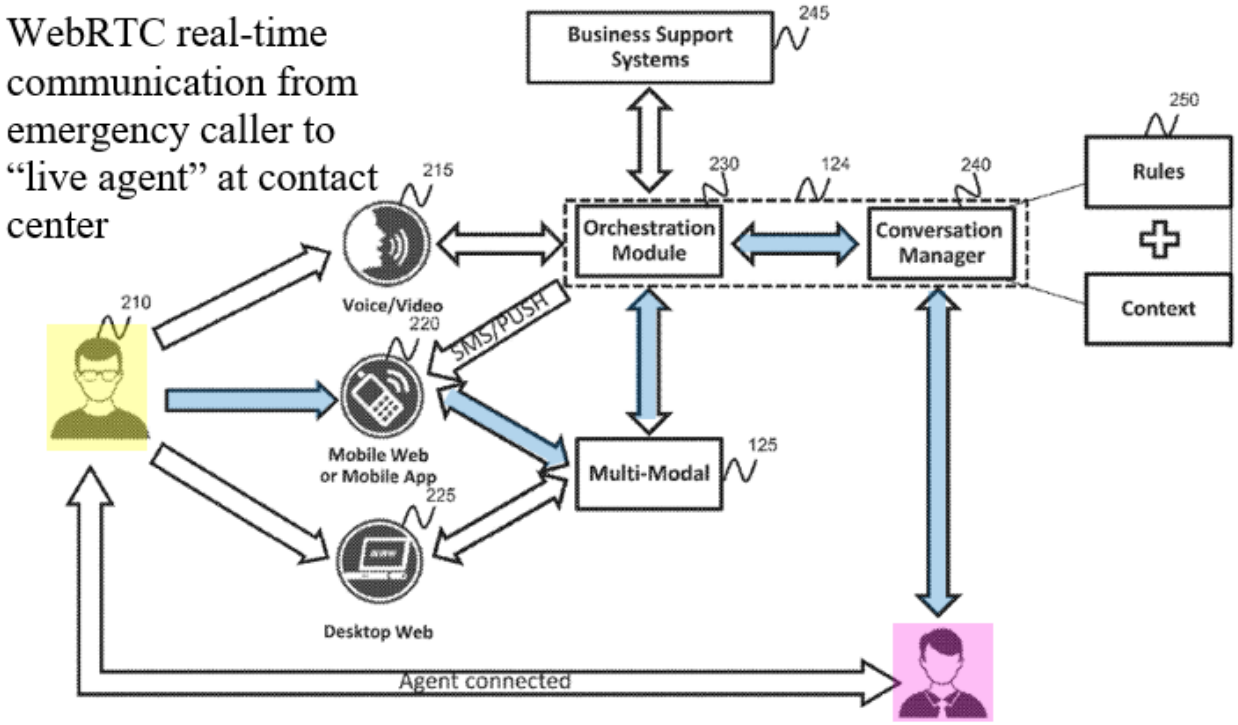
Accordingly, Ramanujaiaha discloses or renders obvious receiving (at the call center) the real-time video stream from the mobile device through the WebRTC session. Decl. ¶¶104-107.

k. [1j]: "sending the real-time video stream to the recipient for display on a screen of the recipient,"

Ramanujaiaha discloses or renders obvious [1j] because, as explained for [1g] and [1i], the real-time video communication is transmitted from the user's device and *received* by the contact center through the WebRTC session. Ramanujaiaha, 9:46-52 (explaining the terms "interaction" and "communication" encompasses "real-time" interactions that use "web real-time communication (e.g. WebRTC calls)"), 10:34-42 ("the user 210 may have access to a media connection device (e.g., a mobile phone or a LAN line phone) 215 capable of voice or video communications (e.g., PSTN, WebRTC, Siri, Facetime, etc.)."); *see also id.*, 5:9-15 ("interactions between contact center resources (e.g., live agents and self-service systems) and outside entities (e.g., customers) may be conducted over communication channels such as … *video* (*e.g., video chat, video conferencing, etc.*)." (emphasis added)), FIG. 2; Decl. ¶¶108-112.

A POSITA would have understood that the received real-time video communication is for display on a screen at the contact center (recipient) because an "agent device" at the contact center may include a computer for "interfacing with

customers via voice and other multimedia communication mechanisms." Ramanujaiaha, 7:66-8:3. Indeed, Ramanujaiaha expressly discloses that the computing devices of the disclosed system include "one or more display devices." *Id*., 35:57-66, 36:55-56 ("output devices include video display devices").



Id., FIG. 2 (annotated).

Thus, Ramanujaiaha discloses sending the real-time video stream to the recipient (contact center/agent) for display on a screen (computer video display) of the recipient, as recited in [1j]. Decl. ¶¶108-110.

To the extent Patent owner argues or the Board finds that Ramanujaiaha does not disclose "display on a screen of the recipient," a POSITA would have found it obvious because it would have comported with Ramanujaiaha's goal of providing

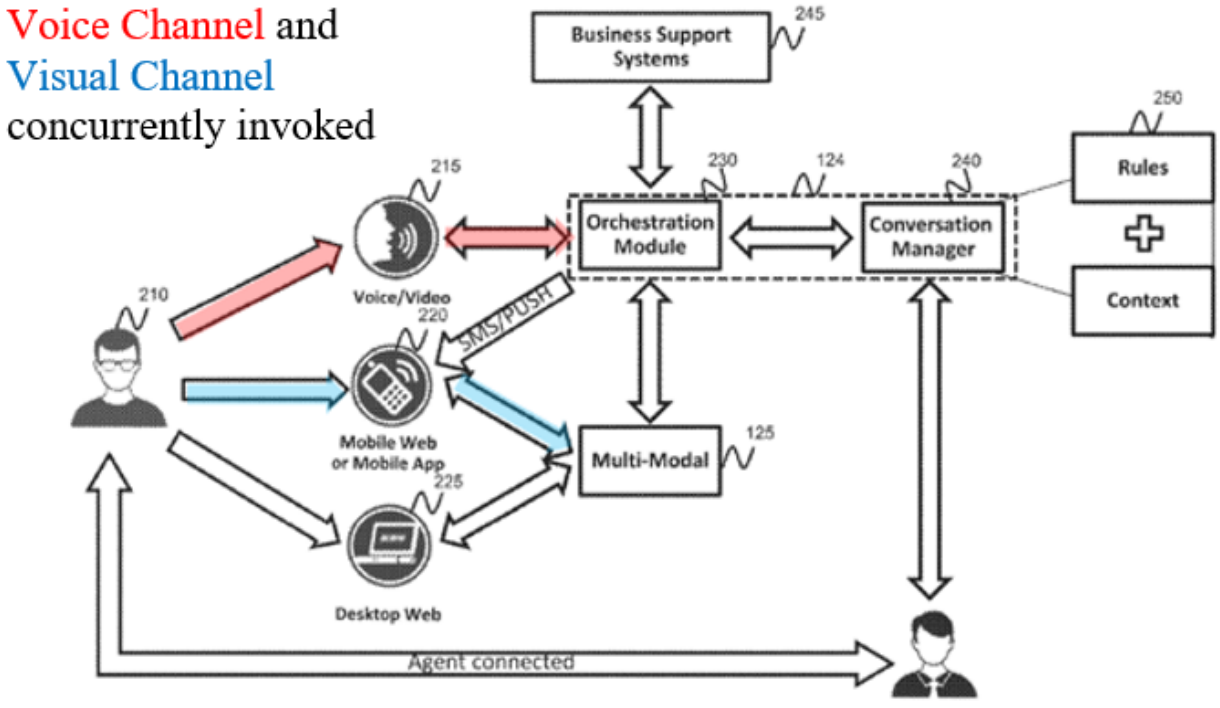
interactions between the "contact center resources (e.g., live agents)" and "outside entities (e.g., customers) … over communication channels such as … video (e.g., video chat, video conferencing, etc.)." Ramanujaiaha, 5:9-15; Decl. ¶¶111-112. A POSITA would have understood that video interactions, such as "video chat" and "WebRTC," as disclosed in Ramanujaiaha, would necessarily require that the "real-time video stream" be "display[ed] on a screen of the recipient." Decl. ¶112. Indeed, failing to display such content on a screen would have undermined the entire premise of video communications. *Id*.

l. [1k]: "wherein the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection, and"

Ramanujaiaha discloses or renders obvious [1k] because, as explained for [1g], "clicking on the link" opens a "visual communication channel" (e.g., WebRTC) using the "mobile web" such that the user is "engaged" with the call center "through *two modalities, a voice media channel that uses the media connection device 215, and a visual media channel that uses the … mobile web 220*." Ramanujaiaha, 9:46-52, 10:34-42, 12:14-26 (emphasis added); Decl. ¶¶113-115.

Ramanujaiaha further discloses that communications over the two modalities—video stream using WebRTC session over the video media channel and a voice call over the voice media channel (first connection)—are received together

because it describes "concurrently invok[ing]" such communications: "if a *voice channel* and *a visual channel* are *concurrently invoked during an interaction*, the orchestration module 230 *provides visual content and corresponding voice content to the multimodal server* 125." *Id*., 10:55-59 (emphasis added), FIG. 2. Moreover, Ramanujaiaha explains that when the user is "engaged through two modalities, … [t]he interaction in both modalities is *tracked and synchronized*, *and context is maintained as the customer concurrently utilizes both modalities at the same time*." *Id*., 12:23-30 (emphasis added). Annotated Figure 2 below illustrates receiving the real-time video stream through the WebRTC session while audio content of the emergency call is received through the first connection.



Ramanujaiaha, FIG. 2 (annotated).

Accordingly, Ramanujaiaha discloses or renders obvious [1k]. Decl. ¶¶113-115.

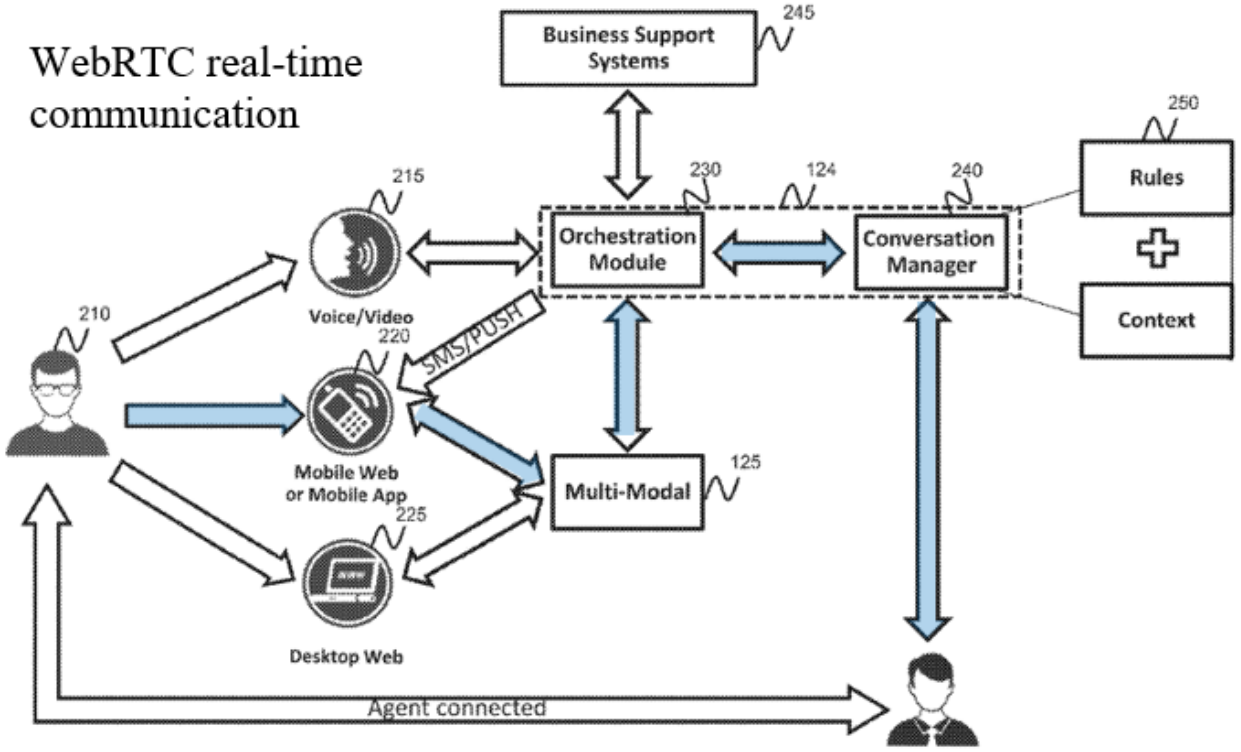
m. [1l]: "wherein the real-time video stream is associated with a unique identifier for the mobile device."

Ramanujaiaha discloses [1l] because the multimodal session, which includes the real-time video stream, is "associated with" a "session ID" uniquely identifying the communication between the end user and the contact center, and the "caller's telephone number." Ramanujaiaha, 10:55-59, 11:63-67, 12:3-11, 12:21-30, 15:3-9, 16:48-51; Decl. ¶¶116-118.

For example, Ramanujaiaha discloses that the controller (1) "generate[s]" a "session ID" "associated with" the "first interaction" (the user's call over the "voice media channel" described in [1a]-[1b], [1e]) and the "multimodal session" (the session comprised of the voice media channel and the visual media channel that uses the mobile web, as described in [1e]-[1g]), and (2) "passe[s] along" the session ID to the orchestration module. Ramanujaiaha, 11:63-67 ("the first interaction is associated with a session ID which may be generated, for example, by the call controller 118 and passed along to the orchestration module 230."), 12:21-26 ("The multimodal session is associated with the session ID of the first interaction."). A POSITA would have understood that the session ID is a unique identifier because it corresponds to specific interactions between a specific caller device and the

emergency contact center. *Id*., 11:63-67, 12:21-26; Decl. ¶117. A POSITA would have also understood that the "session ID" is a unique identifier associated with the real-time video stream, as recited in [1l] because it is also associated with the multimodal session that includes the real-time video stream. Ramanujaiaha, 11:63-67, 12:21-26; Decl. ¶117.

Ramanujaiaha also discloses [1l] because the real-time video stream is associated with the caller's telephone number (another type of unique identifier). Ramanujaiaha, 10:55-59, 12:23-30; Decl. ¶118. As explained for [1k], communications over the two modalities—video stream using WebRTC session over the video media channel, and voice call over the voice media channel (first connection)—are "concurrently invoke[ed]" such that "visual content and corresponding voice content" are transmitted from the mobile device to the call center. Ramanujaiaha, 10:55-59, 12:23-30. Thus, the video stream originates from (and is therefore associated with) the calling mobile device and its corresponding telephone number. *Id*., 7:4-5, 7:10-16, 10:55-59, 12:23-30, FIG. 3; Decl. ¶118; *see also* [1d] and [1h], *supra* (explaining that the mobile device's identity corresponds to "the *caller's telephone number*, often known as the automatic number *identification* (ANI) number.").



Ramanujaiaha, FIG. 2 (annotated).

2. Claim 2: "The method of claim 1, wherein the recipient is at least one of an emergency call center or a dispatch unit."

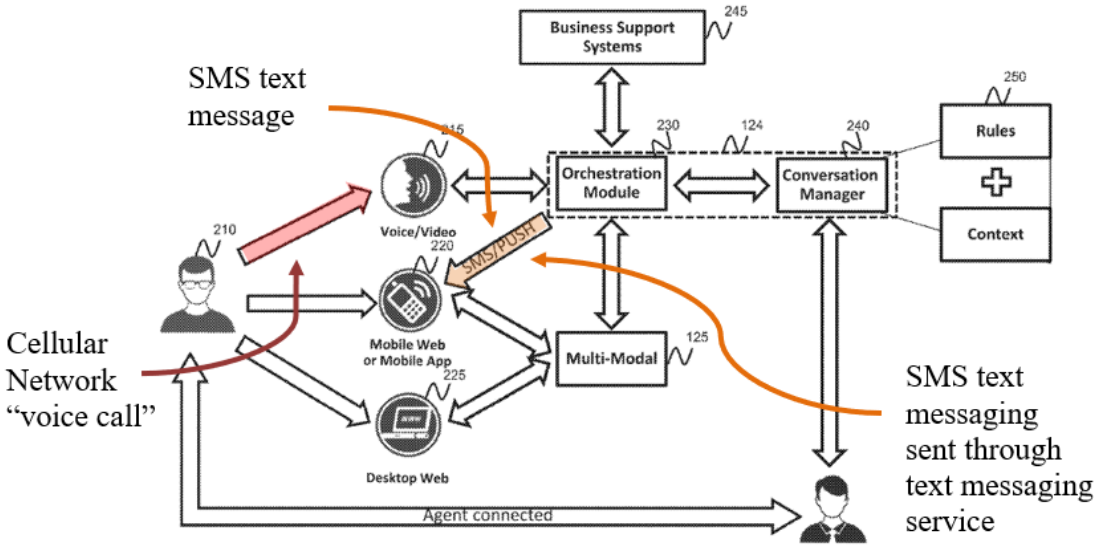
Ramanujaiaha discloses the additional limitations of claim 2 because, as explained in [1a], an "emergency service" contact center receives "inbound communications (e.g., telephony calls)" from one or more "end users" operating "one or more end user devices" such as a "wireless phone, smart phone, personal computer, electronic tablet, and/or the like." Ramanujaiaha, 6:13-32; Decl. ¶119.

3. Claim 3: "The method of claim 1, wherein at least one of: (a) the first connection is a voice call over a cellular network; (b) the electronic message is a text message; or (c) the second connection is a text messaging service."

Ramanujaiaha discloses the additional limitations of claim 3 because, as

explained for [1b], [1c], and [1d], the first connection is a "voice/telephony" communication channel for facilitating a voice call from the end user to the contact center over a cellular network; the electronic message is an SMS (text message); and the second connection is a separate "digital" communication channel such as SMS (a text messaging service). Ramanujaiaha, 4:59-5:3 (describing chat and SMS as a "digital" communication channel that is distinct from the "voice/telephony" communication channel), 5:9-16, 6:39-44, 11:59-61, 12:5-13, FIG. 2; Decl. ¶¶120-121.

Annotated Figure 2 below illustrates (a) the voice call over a cellular network; (b) the SMS text message; and (c) the SMS text messaging service for transmitting the SMS text.



Ramanujaiaha, FIG. 2 (annotated).

4. Claim 4: "The method of claim 1, wherein the unique identifier comprises the phone number of the mobile device."

Ramanujaiaha discloses or renders obvious the additional limitations of claim 4 because, as explained for [1l], a POSITA would have understood that the caller's telephone number (unique identifier) is associated with the video stream. Ramanujaiaha, 7:4-5, 7:10-16, 10:55-59, 12:23-30; Decl. ¶122.

5. Claim 5: "The method of claim 1, wherein the real-time video stream is transmitted from the mobile device to the recipient through a server that is separate from the mobile device and the recipient."

Ramanujaiaha discloses the additional limitations of claim 5 because the real-time video stream (as described in [1g] and [1i]) is transmitted to the call center from the end-user device (mobile device) through a series of servers such as an "off-site" or "remote" "orchestration server" and "multimodal server." Ramanujaiaha, 9:5-9, 9:53-59, 10:46-51, 12:14-30, 35:38-43; Decl. ¶¶123-126.

As explained in [1g] and [1i], Ramanujaiaha discloses that the real-time video stream is transmitted from the mobile device to the recipient because it discloses (1) that visual media communicated over the visual media channel (e.g., "video communications") may be transmitted to the contact center using WebRTC, and (2) that the contact center's "orchestration module may contain logic for handling [the] multimodal/omnichannel interactions utilizing two or more communication channels" such that it "coordinate[s] with the multimodal server 125 to deliver real-

time updates and actions on each of the channels *in response to* customer activities on any of the channels." Ramanujaiaha, 9:46-52, 10:34-42, 10:46-55; Decl. ¶124.

Ramanujaiaha further explains that the "orchestration module" facilitating the transmission resides on an "orchestration server" and that the orchestration module "coordinates" with the "multimodal server." Ramanujaiaha, 9:53-59, 10:46-51. For example, when the user "initiates a second interaction through the link by clicking on the link" (as described in [1f] and [1g]), "[a]n event is relayed from the user device to the multimodal server 125, which is then forwarded to the orchestration module 230" residing on the orchestration server. Ramanujaiaha, 9:53-59 ("orchestration server 124 may include an orchestration module 230"), 10:46-51 ("the orchestration module 230 may coordinate with the multimodal server 125 to deliver real-time updates and actions on each of the channels in response to customer activities on any of the channels"); *see also id.*, 9:5-9 ("In some embodiments, the contact center system may include a *multimodal server (MM server) 125 configured to work with the orchestration/routing server 124 for coordinating a multimodal interaction* occurring in two or more communication channels." (emphasis added)). Thus, the real-time video is transmitted through a server. Decl. ¶125.

Finally, Ramanujaiaha explains that its "various servers may be located on a computing device on-site at the same physical location as the agents of the contact center or *may be located off-site (or in the cloud) in a geographically different*

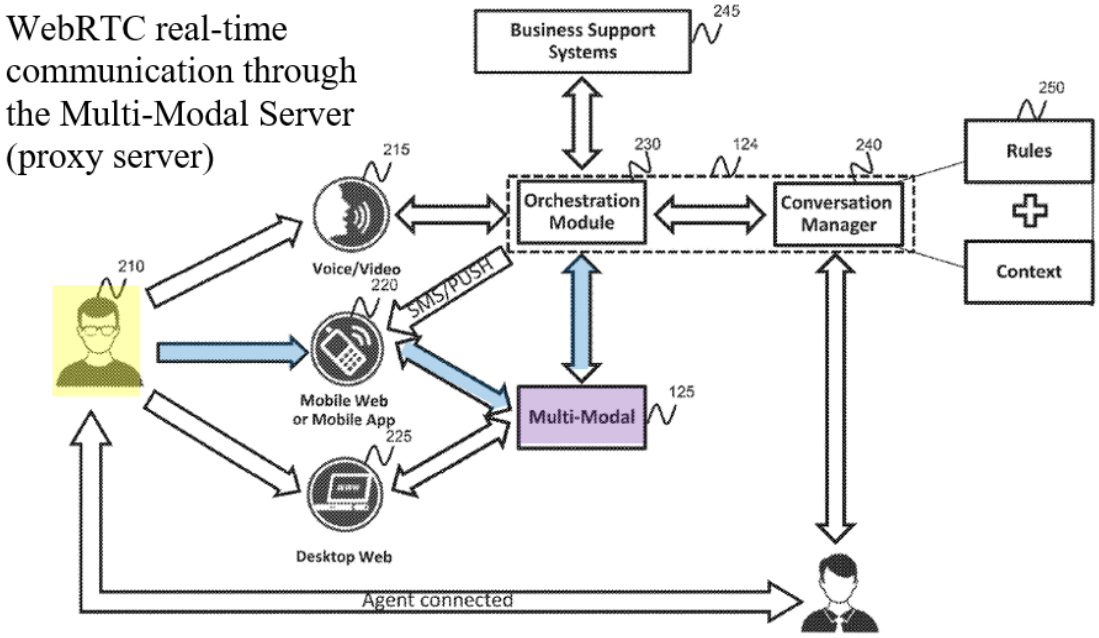
location, e.g., in a remote data center." Ramanujaiaha, 35:38-43 (emphasis added). Thus, the orchestration and multimodal servers may be separate from the mobile device and the recipient (contact center) as recited in claim 5. Decl. ¶126.

6. Claim 6: "The method of claim 5, wherein the server is a proxy server configured to convert a data format of the real-time video stream."

Ramanujaiaha at least suggests the additional limitations of claim 6 because it further discloses that "the multimodal server 125 provides a real-time interface to the orchestration module 230 by proxy" and that the multimodal server "adapt[s] incoming data from the orchestration server 124 into a format that may be rendered on one or more of the end user devices." Ramanujaiaha, 9:11-14, 10:59-64; Decl. ¶¶127-128.

Because the multimodal server is configured to reformat "incoming data from the orchestration server," a POSITA would have understood data originating at the contact center is not necessarily suitable for the mobile device on which it is received. Decl. ¶128. A POSTA would have similarly recognized that data received from the mobile device (such as the real-time video stream) may not be suitable (or optimal) for the receiving contact center, and that the data would also require reformatting. *Id*. Thus, a POSITA would have been motivated and found it obvious to configure the multimodal server to convert a data format of the real-time video stream to ensure the contact center is capable of receiving and viewing the video

upon receipt. *Id*. A POSITA would have also had a reasonable expectation of success in making such a modification because the multimodal server is already configured to reformat incoming data and the video stream is one such type of data, as illustrated in annotated Figure 2 below. Ramanujaiaha, 9:11-14, 10:59-64, FIG. 2; Decl. ¶128.



Ramanujaiaha, FIG. 2 (annotated).

7. Independent Claim 8

Claim 8 is substantively similar to claim 1 except it recites a system instead of a method. Ramanujaiaha discloses or renders obvious claim 8 for the reasons discussed in claim 1. Decl. ¶¶129-146.

a. [8Preamble]: "A system comprising:"

Ramanujaiaha discloses [8Preamble] because it discloses a "contact center system." Ramanujaiaha, 6:13-17, 13:13-20; Decl. ¶130. The "contact center system

manages resources (e.g. personnel, computers, software programs, data management, and telecommunication equipment) to enable delivery of services via telephone or other communication mechanisms." Ramanujaiaha, 6:13-17. These "services" include "emergency response" services as explained in [1a]-[1b]. Ramanujaiaha, 6:17-20.

b. [8a]: "processing circuitry; and"

Ramanujaiaha discloses [8a] because the system includes "one or more processors" (processing circuity) for executing "various [disclosed] functionalities" in one or more computing devices. Ramanujaiaha, Abstract, 6:13-17 (explaining the "contact center system manages resources (e.g. personnel, *computers, software programs*, data management, and telecommunication equipment) to enable delivery of services via telephone or other communication mechanisms" (emphasis added)), 9:30-45, 35:10-18; Decl. ¶¶131-132.

For example, the system's servers "may each include one or more processors executing computer program instructions and interacting with other system components for performing the various functionalities …. The computer program instructions are stored in a memory implemented using a standard memory device, such as, for example, a random access memory (RAM). The computer program instructions may also be stored in other non-transitory computer readable media such as, for example, a CD-ROM, flash drive, or the like." Ramanujaiaha, 9:30-45.

c. [8b]: "a non-transitory computer-readable medium storing computing instructions that, when executed on the processing circuitry, cause the processing circuitry to perform:"

Ramanujaiaha discloses [8b] because, as explained in [8a], "[t]he computer program instructions are stored in a memory implemented using a standard memory device, such as, for example, a random access memory (RAM)" or "other non-transitory computer readable media such as, for example, a CD-ROM, flash drive, or the like." Ramanujaiaha, 9:33-39; Decl. ¶133.

d. [8c]: "obtaining a phone number of a mobile device used by a user making an emergency call,"

Ramanujaiaha discloses [8c] for the reasons discussed for [1a]. Decl. ¶134.

e. [8d]: "wherein the emergency call is conducted with a recipient through a first connection;"

Ramanujaiaha discloses [8d] for the reasons discussed for [1b]. Decl. ¶135.

f. [8e]: "transmitting a uniform resource locator (URL) link to the mobile device through an electronic message,"

Ramanujaiaha discloses or renders obvious [8e] for the reasons discussed for [1c]. Decl. ¶136.

g. [8f]: "wherein the electronic message is transmitted through a second connection using the phone number,"

Ramanujaiaha discloses [8f] for the reasons discussed for [1d]. Decl. ¶137.

h. [8g]: "wherein the second connection is different from the first connection,"

Ramanujaiaha discloses [8g] for the reasons discussed for [1e]. Decl. ¶138.

i. [8h]: "wherein the electronic message allows the user to click on the URL link to access a web browser on the mobile device, instead of a full application on the mobile device,"

Ramanujaiaha discloses [8h] for the reasons discussed for [1f]. Decl. ¶139.

j. [8i]: "to establish a WebRTC (Web Real-Time Communication) session to transmit a real-time video stream from the mobile device,"

Ramanujaiaha discloses or renders obvious [8i] for the reasons discussed for [1g]. Decl. ¶140.

k. [8j]: "and wherein the URL link is associated with the phone number of the mobile device;"

Ramanujaiaha discloses or renders obvious [8j] for the reasons discussed for [1h]. Decl. ¶141.

l. [8k]: "receiving the real-time video stream from the mobile device through the WebRTC session; and"

Ramanujaiaha discloses or renders obvious [8k] for the reasons discussed for [1i]. Decl. ¶142.

m. [8l]: "sending the real-time video stream to the recipient for display on a screen of the recipient,"

Ramanujaiaha discloses or renders obvious [8l] for the reasons discussed for

[1j]. Decl. ¶143.

n. [8m]: "wherein the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection, and"

Ramanujaiaha discloses or renders obvious [8m] for the reasons discussed for [1k]. Decl. ¶144.

o. [8n]: "wherein the real-time video stream is associated with a unique identifier for the mobile device."

Ramanujaiaha discloses or renders obvious [8n] for the reasons discussed for [1l]. Decl. ¶145.

8. Claim 9: "The system of claim 8, wherein the recipient is at least one of an emergency call center or a dispatch unit."

Ramanujaiaha discloses the additional limitations of claim 9 for the reasons discussed for claim 2. Decl. ¶146.

9. Claim 10: "The system of claim 8, wherein at least one of: (a) the first connection is a voice call over a cellular network; (b) the electronic message is a text message; or (c) the second connection is a text messaging service."

Ramanujaiaha discloses the additional limitations of claim 10 for the reasons discussed for claim 3. Decl. ¶147.

10. Claim 11: "The system of claim 8, wherein the unique identifier comprises the phone number of the mobile device."

Ramanujaiaha discloses or renders obvious claim 11 for the reasons discussed

for claim 4. Decl. ¶148.

11. Claim 12: "The system of claim 8, wherein the real-time video stream is transmitted from the mobile device to the recipient through a server that is separate from the mobile device and the recipient."

Ramanujaiaha discloses the additional limitations of claim 12 for the reasons discussed for claim 5. Decl. ¶149.

12. Claim 13: "The system of claim 12, wherein the server is a proxy server configured to convert a data format of the real-time video stream."

Ramanujaiaha at least suggests and renders obvious the additional limitations of claim 13 for the reasons discussed for claim 6. Decl. ¶160.

13. Independent Claim 15

Claim 15 is substantively similar to claims 1 and 8 except it recites a "non-transitory computer-readable medium storing computing instructions," instead of a method or a system as in claims 1 and 8, respectively. Claim 15 is disclosed or rendered obvious over Ramanujaiaha for the reasons discussed in claims 1 and 8. Decl. ¶151.

a. [15Preamble]: "A non-transitory computer-readable medium storing computing instructions that, when executed on the processing circuitry, cause the processing circuitry to perform:"

Ramanujaiaha discloses [15Preamble] for the reasons discussed for [8a]-[8b]. Decl. ¶152.

b. [15a]: "obtaining a phone number of a mobile device used by a user making an emergency call,"

Ramanujaiaha discloses [15a] for the reasons discussed for [1a]. Decl. ¶153.

c. [15b]: "wherein the emergency call is conducted with a recipient through a first connection;"

Ramanujaiaha discloses [15b] for the reasons discussed for [1b]. Decl. ¶154.

d. [15c]: "transmitting a uniform resource locator (URL) link to the mobile device through an electronic message,"

Ramanujaiaha discloses [15c] for the reasons discussed for [1c]. Decl. ¶155.

e. [15d]: "wherein the electronic message is transmitted through a second connection using the phone number,"

Ramanujaiaha discloses [15d] for the reasons discussed for [1d]. Decl. ¶156.

f. [15e]: "wherein the second connection is different from the first connection,"

Ramanujaiaha discloses [15e] for the reasons discussed for [1e]. Decl. ¶157.

g. [15f]: "wherein the electronic message allows the user to click on the URL link to access a web browser on the mobile device, instead of a full application on the mobile device,"

Ramanujaiaha discloses [15f] for the reasons discussed for [1f]. Decl. ¶158.

h. [15g]: "to establish a WebRTC (Web Real-Time Communication) session to transmit a real-time video stream from the mobile device,"

Ramanujaiaha discloses or renders obvious [15g] for the reasons discussed for

[1g]. Decl. ¶159.

i. [15h]: "and wherein the URL link is associated with the phone number of the mobile device;"

Ramanujaiaha discloses or renders obvious [15h] for the reasons discussed for [1h]. Decl. ¶160.

j. [15i]: "receiving the real-time video stream from the mobile device through the WebRTC session; and"

Ramanujaiaha discloses or renders obvious [15i] for the reasons discussed for [1i]. Decl. ¶161.

k. [15j]: "sending the real-time video stream to the recipient for display on a screen of the recipient,"

Ramanujaiaha discloses or renders obvious [15j] for the reasons discussed for [1j]. Decl. ¶162.

l. [15k]: "wherein the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection, and"

Ramanujaiaha discloses or renders obvious [15k] for the reasons discussed for [1k]. Decl. ¶163.

m. [15l]: "wherein the real-time video stream is associated with a unique identifier for the mobile device."

Ramanujaiaha discloses or renders obvious [15l] for the reasons discussed for

[1l]. Decl. ¶164.

14. Claim 16: "The non-transitory computer-readable medium of claim 15, wherein the recipient is at least one of an emergency call center or a dispatch unit."

Ramanujaiaha discloses the additional limitations of claim 16 for the reasons discussed for claim 2. Decl. ¶165.

15. Claim 17: "The non-transitory computer-readable medium of claim 15, wherein at least one of: (a) the first connection is a voice call over a cellular network; (b) the electronic message is a text message; or (c) the second connection is a text messaging service."

Ramanujaiaha discloses the additional limitations of claim 17 for the reasons discussed for claim 3. Decl. ¶166.

16. Claim 18: "The non-transitory computer-readable medium of claim 15, wherein the unique identifier comprises the phone number of the mobile device."

Ramanujaiaha discloses or renders obvious the additional limitations of claim 18 for the reasons discussed for claim 4. Decl. ¶167.

17. Claim 19: "The non-transitory computer-readable medium of claim 15, wherein (a) the real-time video stream is transmitted from the mobile device to the recipient through a server that is separate from the mobile device and the recipient; and (b) the server is a proxy server configured to convert a data format of the real-time video stream."

Ramanujaiaha discloses the additional limitations of claim 19(a)for the reasons discussed for claim 5 and at least suggests and renders obvious the additional limitations of 19(b) for the reasons discussed in claim 6. Decl. ¶168.

D. Ground 2: Claims 1-20 Are Obvious over Ramanujaiaha and Krishnan.

1. Independent Claim 1

To the extent Patent Owner argues or the Board finds that Ramanujaiaha does not disclose or render obvious claim 1, claim 1 would have been obvious over the combination of Ramanujaiaha and Krishnan, as discussed below. Decl. ¶¶169-194.

a. [1Preamble]: "A method implemented via execution of computing instructions configured to run at one or more processors, the method comprising:"

Ramanujaiaha discloses [1Preamble] for the reasons discussed in Grounds 1A-1B. Decl. ¶170.

b. [1a]: "obtaining a phone number of a mobile device used by a user making an emergency call,"

Ramanujaiaha discloses [1a] for the reasons discussed in Grounds 1A-1B. Decl. ¶171.

c. [1b]: "wherein the emergency call is conducted with a recipient through a first connection;"

Ramanujaiaha discloses [1b] for the reasons discussed in Grounds 1A-1B. Decl. ¶172.

d. [1c]: "transmitting a uniform resource locator (URL) link to the mobile device through an electronic message,"

Ramanujaiaha discloses [1c] for the reasons discussed in Grounds 1A-1B.

Decl. ¶173.

e. [1d]: "wherein the electronic message is transmitted through a second connection using the phone number,"

Ramanujaiaha discloses [1d] for the reasons discussed in Grounds 1A-1B. Decl. ¶174.

f. [1e]: "wherein the second connection is different from the first connection,"

Ramanujaiaha discloses [1e] for the reasons discussed in Grounds 1A-1B. Decl. ¶175.

g. [1f]: "wherein the electronic message allows the user to click on the URL link to access a web browser on the mobile device, instead of a full application on the mobile device,"

Ramanujaiaha discloses [1f] for the reasons discussed in Grounds 1A-1B. Decl. ¶176.

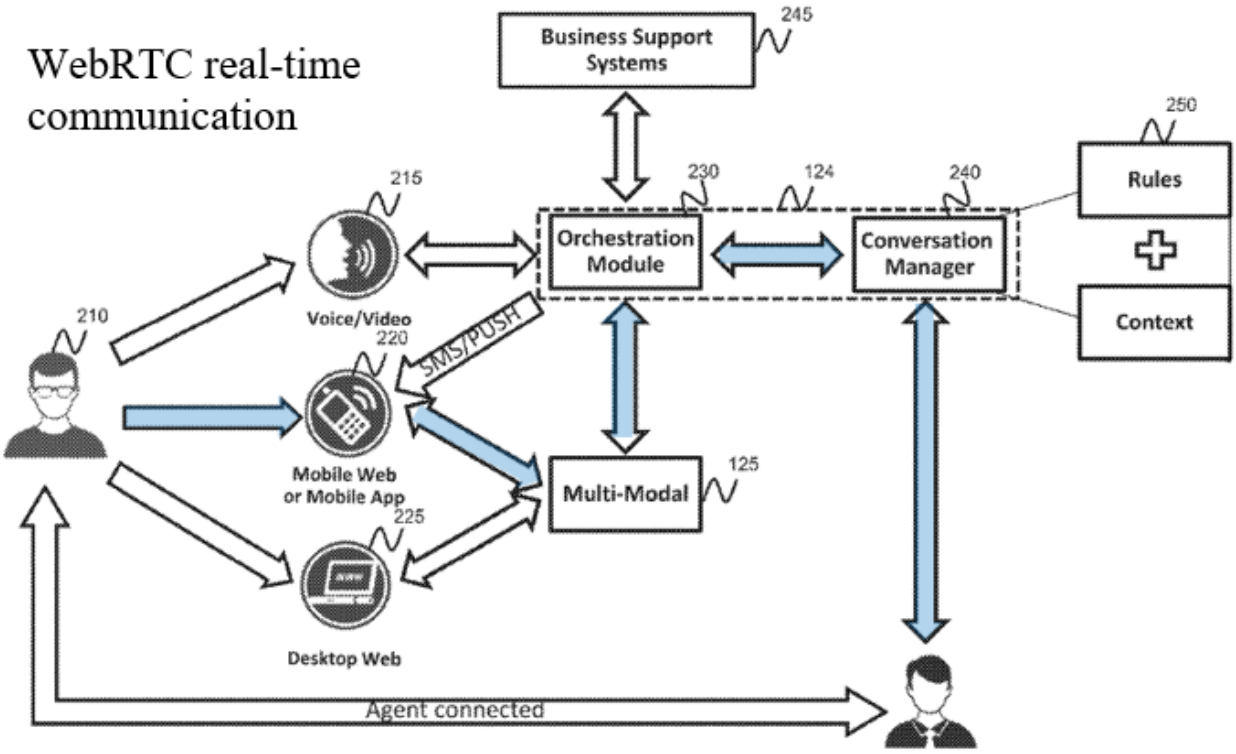
h. [1g]: "to establish a WebRTC (Web Real-Time Communication) session to transmit a real-time video stream from the mobile device,"

Ramanujaiaha and Krishnan render obvious [1g]. Decl. ¶¶180-187.

As explained in Grounds 1A-1B, Ramanujaiaha at least suggests [1g] because it discloses that the user may use the web browser to send the call center "visual content" such as "video communications" using "web real time communication (WebRTC)." Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶178. For example, a POSITA

would have understood that opening a "visual communication channel" using the "mobile web" such that the user is "engaged" with the contact center through "a visual media channel" likewise establishes a WebRTC session that allows the user to transmit "video communications" to the contact center. Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶178.

A POSITA would have also found it obvious to use Ramanujaiaha's mobile web browser to establish a WebRTC session to transmit a real-time video stream from the mobile device because, as explained in Grounds 1A-1B, Ramanujaiaha expressly contemplates using a WebRTC session to transmit video communications from the user device to the contact center. Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶179.



Ramanujaiaha, FIG. 2 (annotated).

To the extent Patent Owner disputes or the Board finds that Ramanujaiaha alone does not disclose or render obvious [1g], Krishnan does. Decl. ¶¶180-187.

Like Ramanujaiaha, Krishnan discloses a method for facilitating communication between an "emergency caller" and an emergency call center, such as a "Public Safety Access Point (PSAP)" over a "cellular" or "other type of packet-switched or circuit switched network." Krishnan, Abstract, 1:41-49, 2:4-21, 4:28-47, FIGS. 1-3; Decl. ¶181. Figure 2 illustrates *inter alia* a "caller 204" placing an emergency voice call using a "[customer] communication device 206" such as a "cellular phone" or "smart phone … adapted to support video, audio, text, and/or data communications" to report an "emergent event 202." Krishnan, 4:61-62, 5:46-56, 6:43-49. The call is transmitted over the "communication network" to the "PSAP agent 112" via a "PSAP server." *Id*., 1:44-49, 7:7-17, FIG. 2.

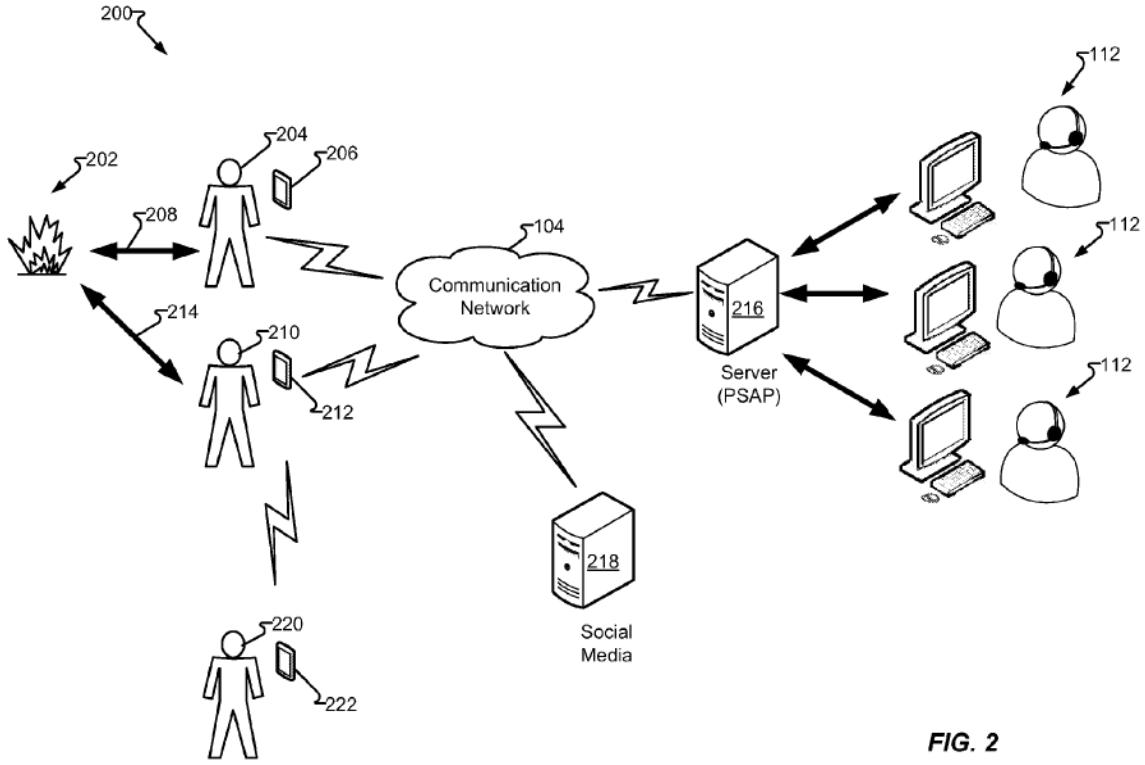


FIG. 2

Id., FIG. 2.

To improve emergency reporting, Krishan (like Ramanujaiaha) also utilizes multiple data channels to enable the user to maintain a voice call with the emergency center while sending video footage of the emergent event. Krishnan, 1:41-49; Decl. ¶182. The emergency caller may be "asked to establish a trusted data channel (e.g., a WebRTC call) with a PSAP system then provide their perspective about the event via the data channel." Krishnan, 1:41-45, 7:27-35. For example, if the caller initiates "a voice only communication channel, PSAP server 216, may *prompt the user* device and/or user to cause the user device to establish a data interaction connection" by "*sending a text message with a link to cause the establishment of the data channel*. The establishment of a data channel may convey packets, such as Internet Protocol

(IP) packets over communication network 104 and may further comprise a WebRTC, HTML5, or other data channel paradigm." *Id*., 7:27-35. In this way, the PSAP "can use *information incoming from each of the data channels* (*e.g*., pictures, *videos*, text information, etc.) to help determine information about the event." *Id*., 1:45-49 (emphasis added), 10:56-66 (describing "sending video of an emergent event" while "audio communications" are provided via "voice-only channel"), 11:28-31.

Thus, Krishnan expressly discloses transmitting an electronic message (a "text message") through a second connect ("data channel") that is different from a first channel ("voice only communication channel"), wherein the electronic message ("text message") allows the user to click on a "link" on the mobile device ("smart phone," "cellular phone," etc.) to "establish" a WebRTC session to transmit a real-time video stream from the mobile device, as required in [1g]. *Id*., 1:41-45, 5:49-53, 7:27-35; Decl. ¶183.

(1) Motivation to Combine

As explained in Grounds 1A-1B, Ramanujaiaha expressly contemplates using a WebRTC session to transmit video communications from the user device to the contact center. Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶¶95-96, 184. A POSITA would have been motivated to utilize Ramanujaiaha's link to the web browser to establish a WebRTC session, as taught by Krishnan, because it would have

comported with Ramanujaiaha's express goal of facilitating "real-time" interactions between the "contact center resources (e.g., live agents)" and "outside entities (e.g., customers)." Ramanujaiaha, 5:9-15, 9:46-52, 10:46-51 (describing "deliver[ing] real-time updates and actions on each of the channels in response to customer activities"); Decl. ¶184.

A POSITA would have also appreciated the advantages of utilizing such real-time communication in emergency situations, as taught by Krishnan. For example, a POSITA would have recognized that real-time communication via WebRTC would have allowed the user to quickly and accurately convey the nature of their emergency (e.g., through video communication); thus enabling the contact center to provide more timely emergency services. Krishnan, 1:45-49, 7:27-35, 10:56-66; Decl. ¶185.

(2) Expectation of Success

A POSITA would have reasonably expected to succeed in configuring Ramanujaiaha to establish the WebRTC session because it is expressly envisioned by Ramanujaiaha and would have only required routine skill to implement. Ramanujaiaha, 9:46-52, 10:34-42; Decl. ¶186. As explained above, Ramanujaiaha and Krishnan each use similar components (e.g., a smart phone adapted to simultaneously communicate with an emergency call center over voice-only and data channels), to achieve a common purpose (providing voice and visual

communication to improve customer service). *Compare* Ramanujaiaha, 5:9-16, 9:46-52, 10:34-42, FIG. 2 *with* Krishan, Abstract, 1:41-49, 2:4-21, 4:28-47, 10:56-66, FIGS. 1-3. Thus, configuring Ramanujaiaha's mobile web browser link to establish WebRTC data, as taught by Krishnan, would have been a straightforward application of known elements (a mobile device, link and WebRTC session) used according to their known functions (real-time video) to yield predictable results (communicating with an emergency center using distinct voice and data communication channels). Krishnan, 1:41-45, 7:27-35, 10:56-66; Decl. ¶186; *KSR Int'l Co.*., 550 U.S. at 416.

Accordingly, it would have been obvious to configure Ramanujaiaha's mobile web browser link to establish a WebRTC session to transmit a real-time video stream from the mobile device, as taught by Krishnan. Decl. ¶¶180-187.

i. [1h]: "and wherein the URL link is associated with the phone number of the mobile device;"

Ramanujaiaha discloses or renders obvious [1h] for the reasons discussed in Grounds 1A-1B. Decl. ¶188.

j. [1i]: "receiving the real-time video stream from the mobile device through the WebRTC session; and"

Ramanujaiaha and Krishnan render obvious [1i] because, as explained for Grounds 1A-1B, the real-time video communication is transmitted from the user's device and received by the emergency contact center. Ramanujaiaha, 9:46-52,

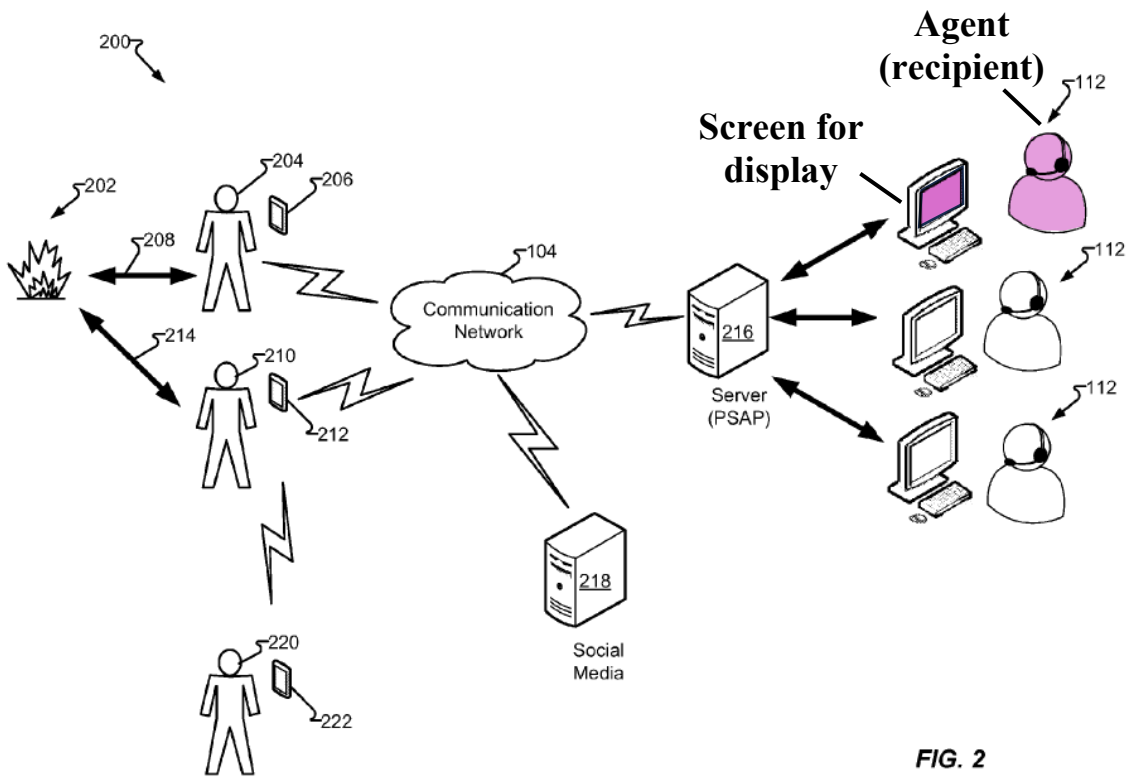
10:34-42, 10:45-55; Decl. ¶189. Krishnan further renders obvious [1i] because, as explained for [1g], the PSAP "use[s] *information incoming from each of the data channels* (*e.g.*, pictures, *videos*, text information, etc.)" of the user's communication device "to help determine information about the [emergent] event." Krishnan, 1:45-49 (emphasis added), 10:56-66 (describing "sending video of an emergent event" while "audio communications" are provided via "voice-only channel"), 11:28-31; Decl. ¶189.

k. [1j]: "sending the real-time video stream to the recipient for display on a screen of the recipient,"

Ramanujaiaha and Krishnan render obvious [1j] because, as explained for Grounds 1A-1B, a POSITA would have understood that the received real-time video communication is for display on a screen at the contact center (recipient) because an "agent device" at the contact center may include a computer for "interfacing with customers via voice and other multimedia communication mechanisms." Ramanujaiaha, 7:66-8:3, 35:57-66, 36:55-56; Decl. ¶190.

Krishnan further renders obvious [1j] because, as explained for [1g], the PSAP "use[s] *information incoming from each of the data channels* (*e.g.*, pictures, *videos*, text information, etc.)" of the user's communication device "to help determine information about the [emergent] event." Krishnan, 1:45-49 (emphases added), 10:56-66, 11:28-31 ("interaction content, such as multimedia data, *may be captured*

by first user device 206 and sent to PSAP server 216 … for presentation to resource 112." (emphasis added)); Decl. ¶191. Annotated Figure 2 below illustrates the PSAP agent and corresponding display screen on which the real-time video is presented to the agent.

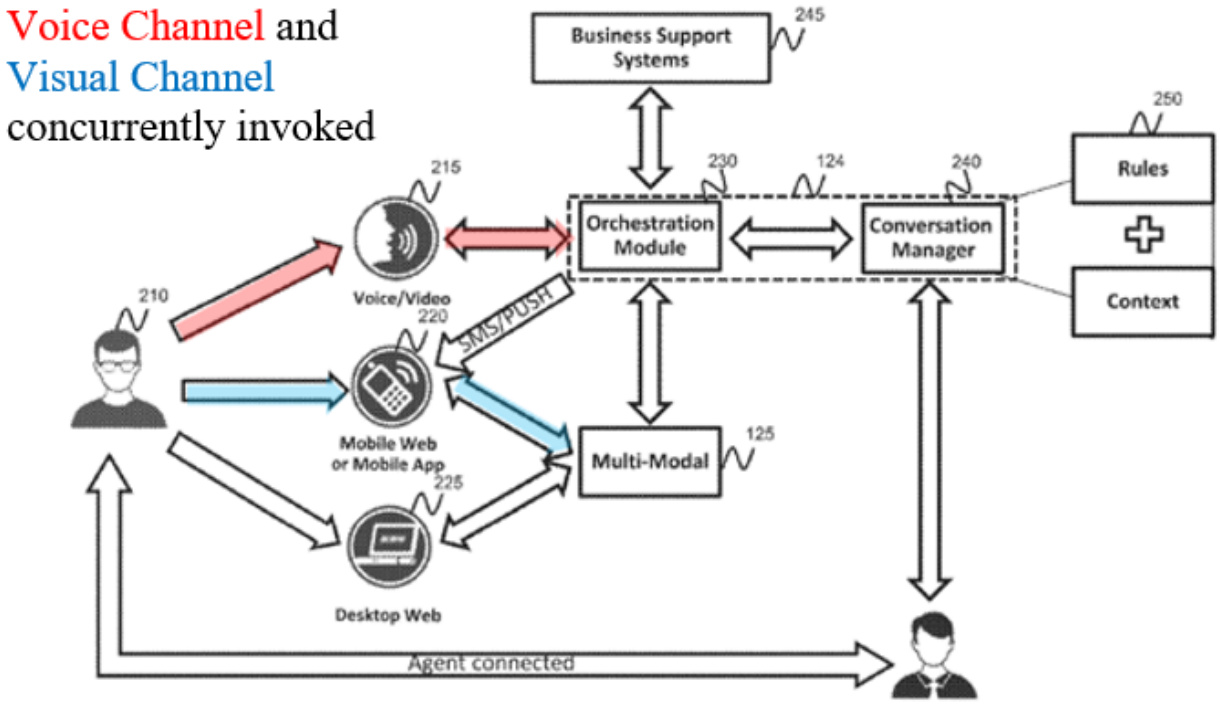


Krishnan, FIG. 2 (annotated).

l. [1k]: "wherein the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection, and"

Ramanujaiaha and Krishnan render obvious [1k] because, as explained for Grounds 1A-1B, Ramanujaiaha further discloses "concurrently invok[ing]" video streaming over the video media channel and a voice call over the voice media

channel (first connection). Ramanujaiaha, 10:55-59, FIG. 2; Decl. ¶192. Annotated Figure 2 below illustrates receiving the real-time video stream through the WebRTC session while audio content of the emergency call is received through the first connection. Decl. ¶192.



Ramanujaiaha, FIG. 2 (annotated).

Krishnan further renders obvious [1k] because, as explained for [1g], Krishan discloses "sending video of an emergent event" using a "data channel" while "audio communications" are provided via "voice-only channel" (a first connection). Krishnan, 11:28-31; *see also id*., 1:41-49, (describing calls "based solely on data received via the data channel, audio channel, *or a combination thereof*" (emphasis added)), 1:61-63, 7:27-35 (if the caller initiates "a voice only communication

channel, PSAP server 216, may *prompt the user* device and/or user to cause the user device to establish a data interaction connection"); Decl. ¶193. Annotated Figure 3 below illustrates the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection. Krishnan, FIG. 3; Decl. ¶193.

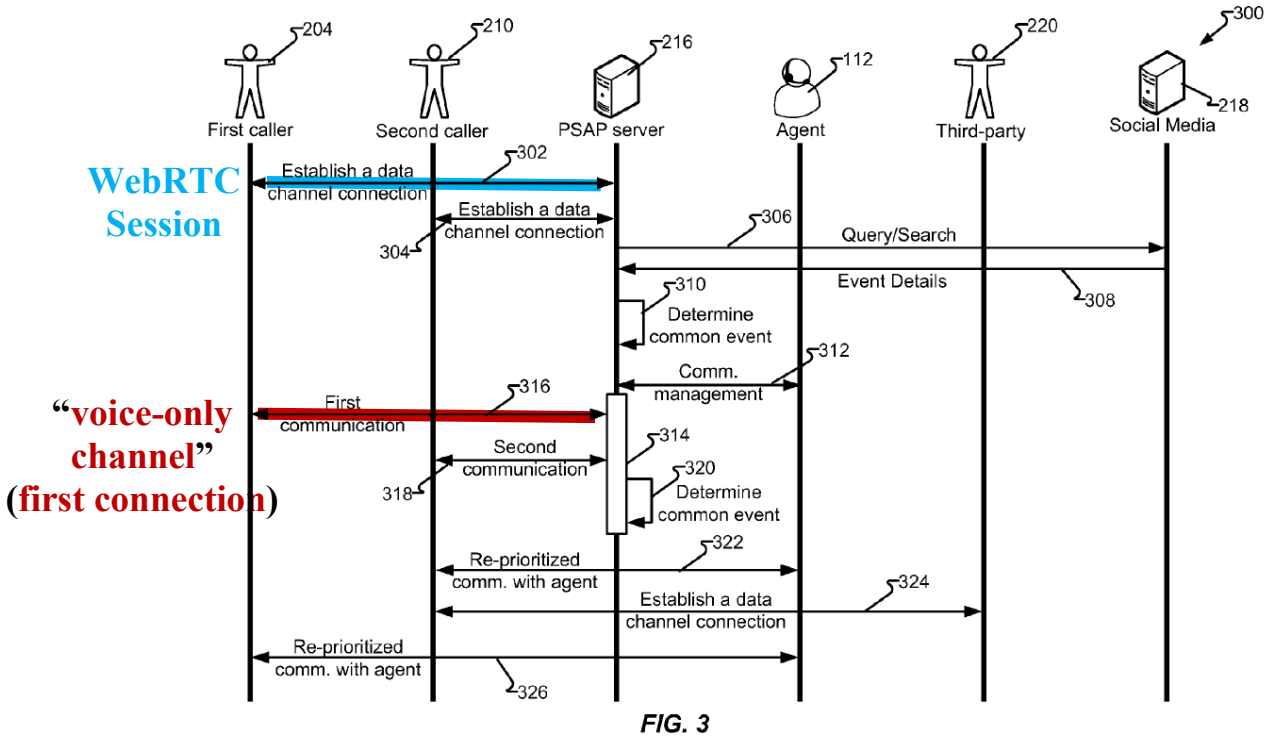


FIG. 3

Krishnan, FIG. 3 (annotated).

m. [1l]: "wherein the real-time video stream is associated with a unique identifier for the mobile device."

Ramanujaiaha discloses or renders obvious [1l] for the reasons discussed in Grounds 1A-1B. Decl. ¶194.

2. Claim 2: "The method of claim 1, wherein the recipient is at least one of an emergency call center or a dispatch unit."

Ramanujaiaha discloses the additional limitations of claim 2 for the reasons discussed in Grounds 1A-1B. Decl. ¶195.

3. Claim 3: "The method of claim 1, wherein at least one of: (a) the first connection is a voice call over a cellular network; (b) the electronic message is a text message; or (c) the second connection is a text messaging service."

Ramanujaiaha discloses the additional limitations of claim 3 for the reasons discussed in Grounds 1A-1B. Decl. ¶196.

4. Claim 4: "The method of claim 1, wherein the unique identifier comprises the phone number of the mobile device."

Ramanujaiaha discloses or renders obvious the additional limitations of claim 4 for the reasons discussed in Grounds 1A-1B. Decl. ¶197.

5. Claim 5: "The method of claim 1, wherein the real-time video stream is transmitted from the mobile device to the recipient through a server that is separate from the mobile device and the recipient."

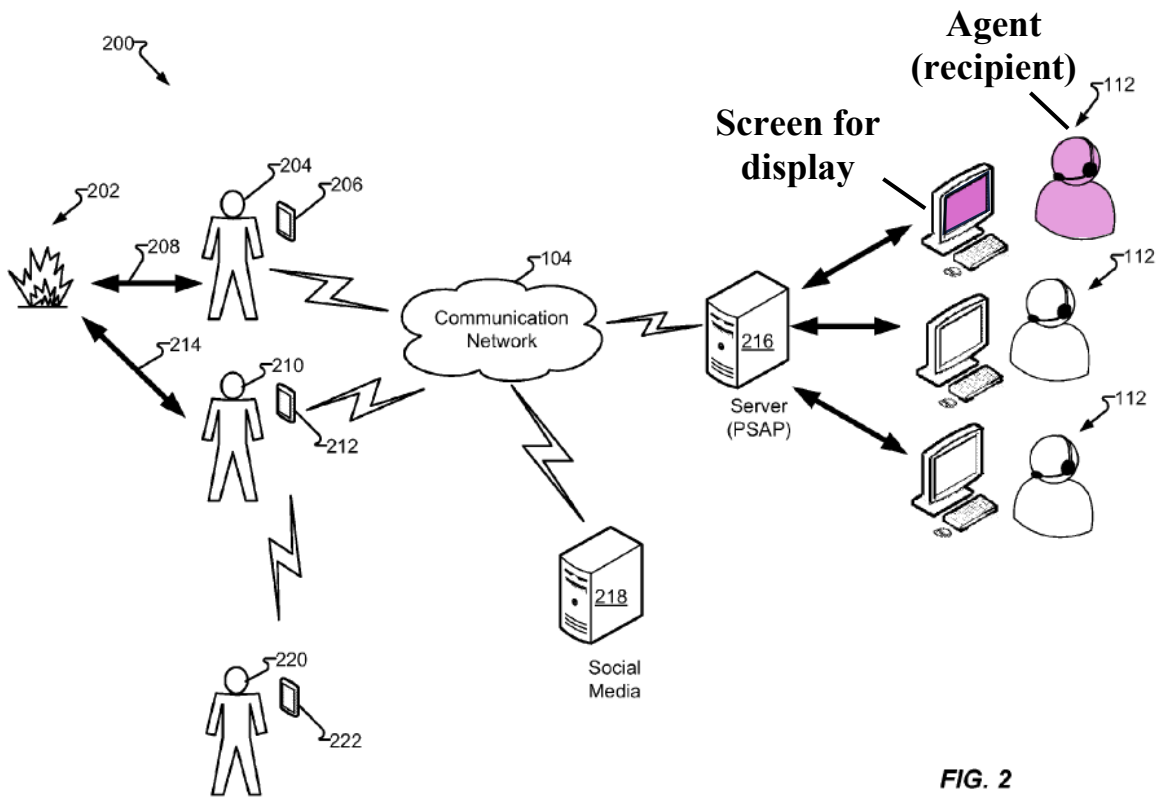
Ramanujaiaha discloses the additional limitations of claim 5 for the reasons discussed in Grounds 1A-1B. Decl. ¶198.

6. Claim 6: "The method of claim 5, wherein the server is a proxy server configured to convert a data format of the real-time video stream."

Ramanujaiaha at least suggests and renders obvious the additional limitations of claim 6 for the reasons discussed in Grounds 1A-1B. Decl. ¶199.

7. Claim 7: "The method of claim 1, wherein the WebRTC session further transmits at least one of (i) GPS location data of the mobile device for display on the screen of the recipient or (ii) one or more photographs taken on the mobile device for display on the screen of the recipient."

Ramanujaiaha and Krishnan render obvious claim 7 because, as explained for [1g] and [1j], Krishan discloses that the PSAP is "present[ed]" with and "use[s] *information incoming from each of the data channels* (*e.g.*, *pictures*, videos, text information, etc.)" of the user's communication device "to help determine information about the [emergent] event." Krishnan, 1:45-49 (emphasis added), 10:56-66 (describing "sending video of an emergent event" while "audio communications" are provided via "voice-only channel"), 11:28-31; Decl. ¶¶200-201.



Krishnan, FIG. 2 (annotated).

Krishan also expressly discloses that the "multimedia content provided over the *data channel* may comprise … *GPS coordinates.*" Krishnan, 11:20-23 (emphasis added); *see also id.*, 10:62-66 ("other content is exchanged via the data channel, content such as … *images* … *position data*."), 7:43-58. This information is received over the WebRTC session as explained in [1g] and [1i]. Decl. ¶201. Accordingly, Ramanujaiaha and Krishnan render obvious claim 7. Decl. ¶¶200-201.

8. Independent Claim 8

Claim 8 is substantively similar to claim 1 except it recites a system instead of a method. Claim 8 is obvious over Ramanujaiaha and Krishnan for the reasons

discussed in claim 1. Decl. ¶202.

a. [8Preamble]: "A system comprising:"

Ramanujaiaha discloses [8Preamble] because it discloses a "contact center system" as explained in Grounds 1A-1B. Ramanujaiaha, 6:13-17, 13:13-20; Decl. ¶203.

b. [8a]: "processing circuitry; and"

Ramanujaiaha discloses [8a] because the system includes "one or more processors" (processing circuity) for executing "various [disclosed] functionalities" in one or more computing devices, as explained in Grounds 1A-1B. Ramanujaiaha, Abstract, 6:13-17, 9:30-45, 35:10-18; Decl. ¶204.

c. [8b]: "a non-transitory computer-readable medium storing computing instructions that, when executed on the processing circuitry, cause the processing circuitry to perform:"

Ramanujaiaha discloses [8b] because "[t]he computer program instructions are stored in a memory implemented using a standard memory device, such as, for example, a random access memory (RAM)" or "other non-transitory computer readable media such as, for example, a CD-ROM, flash drive, or the like," as explained in Grounds 1A-1B. Ramanujaiaha, 9:33-39; Decl. ¶205.

d. [8c]: "obtaining a phone number of a mobile device used by a user making an emergency call,"

Ramanujaiaha discloses [8c] for the reasons discussed for [1a]. Decl. ¶206.

e. [8d]: "wherein the emergency call is conducted with a recipient through a first connection;"

Ramanujaiaha discloses [8d] for the reasons discussed for [1b]. Decl. ¶207.

f. [8e]: "transmitting a uniform resource locator (URL) link to the mobile device through an electronic message,"

Ramanujaiaha discloses [8e] for the reasons discussed for [1c]. Decl. ¶208.

g. [8f]: "wherein the electronic message is transmitted through a second connection using the phone number,"

Ramanujaiaha discloses [8f] for the reasons discussed for [1d]. Decl. ¶209.

h. [8g]: "wherein the second connection is different from the first connection,"

Ramanujaiaha discloses [8g] for the reasons discussed for [1e]. Decl. ¶210.

i. [8h]: "wherein the electronic message allows the user to click on the URL link to access a web browser on the mobile device, instead of a full application on the mobile device,"

Ramanujaiaha discloses [8h] for the reasons discussed for [1f]. Decl. ¶211.

j. [8i]: "to establish a WebRTC (Web Real-Time Communication) session to transmit a real-time video stream from the mobile device,"

Ramanujaiaha and Krishnan render obvious [8i] for the reasons discussed for [1g]. Decl. ¶212.

k. [8j]: "and wherein the URL link is associated with the phone number of the mobile device;"

Ramanujaiaha discloses or renders obvious [8j] for the reasons discussed for [1h]. Decl. ¶213.

l. [8k]: "receiving the real-time video stream from the mobile device through the WebRTC session; and"

Ramanujaiaha and Krishnan render obvious [8k] for the reasons discussed for [1i]. Decl. ¶214.

m. [8l]: "sending the real-time video stream to the recipient for display on a screen of the recipient,"

Ramanujaiaha discloses [8l] for the reasons discussed for [1j]. Decl. ¶215.

n. [8m]: "wherein the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection, and"

Ramanujaiaha and Krishnan render obvious [8m] for the reasons discussed for [1k]. Decl. ¶216.

o. [8n]: "wherein the real-time video stream is associated with a unique identifier for the mobile device."

Ramanujaiaha discloses [8n] for the reasons discussed for [1l]. Decl. ¶217.

9. Claim 9: "The system of claim 8, wherein the recipient is at least one of an emergency call center or a dispatch unit."

Ramanujaiaha discloses the additional limitations of claim 9 for the reasons

discussed for claim 2. Decl. ¶218.

10. Claim 10: "The system of claim 8, wherein at least one of: (a) the first connection is a voice call over a cellular network; (b) the electronic message is a text message; or (c) the second connection is a text messaging service."

Ramanujaiaha discloses the additional limitations of claim 10 for the reasons discussed for claim 3. Decl. ¶219.

11. Claim 11: "The system of claim 8, wherein the unique identifier comprises the phone number of the mobile device."

Ramanujaiaha discloses or renders obvious the additional claim 11 for the reasons discussed for claim 4. Decl. ¶220.

12. Claim 12: "The system of claim 8, wherein the real-time video stream is transmitted from the mobile device to the recipient through a server that is separate from the mobile device and the recipient."

Ramanujaiaha discloses the additional limitations of claim 12 for the reasons discussed for claim 5. Decl. ¶221.

13. Claim 13: "The system of claim 12, wherein the server is a proxy server configured to convert a data format of the real-time video stream."

Ramanujaiaha at least suggests and renders obvious the additional limitations of claim 13 for the reasons discussed for claim 6. Decl. ¶222.

14. Claim 14: "The system of claim 8, wherein the WebRTC session further transmits at least one of (i) GPS location data of the mobile device for display on the screen of the

recipient or (ii) one or more photographs taken on the mobile device for display on the screen of the recipient."

Ramanujaiaha and Krishnan render obvious claim 14 for the reasons discussed for claim 7. Decl. ¶223.

15. Independent Claim 15

Claim 15 is substantively similar to claims 1 and 8 except it recites a "non-transitory computer-readable medium storing computing instructions," instead of a method or a system as in claims 1 and 8, respectively. Claim 15 is obvious over Ramanujaiaha and Krishnan for the reasons discussed in claim 1. Decl. ¶224.

a. [15Preamble]: "A non-transitory computer-readable medium storing computing instructions that, when executed on the processing circuitry, cause the processing circuitry to perform:"

Ramanujaiaha and Krishnan disclose or render obvious [15Preamble] for the reasons discussed for [1Preamble]. Decl. ¶225.

b. [15a]: "obtaining a phone number of a mobile device used by a user making an emergency call,"

Ramanujaiaha discloses [15a] for the reasons discussed for [1a]. Decl. ¶226.

c. [15b]: "wherein the emergency call is conducted with a recipient through a first connection;"

Ramanujaiaha discloses [15b] for the reasons discussed for [1b]. Decl. ¶227.

d. [15c]: "transmitting a uniform resource locator (URL) link to the mobile device through an electronic message,"

Ramanujaiaha discloses [15c] for the reasons discussed for [1c]. Decl. ¶228.

e. [15d]: "wherein the electronic message is transmitted through a second connection using the phone number,"

Ramanujaiaha discloses [15d] for the reasons discussed for [1d]. Decl. ¶229.

f. [15e]: "wherein the second connection is different from the first connection,"

Ramanujaiaha discloses [15e] for the reasons discussed for [1e]. Decl. ¶230.

g. [15f]: "wherein the electronic message allows the user to click on the URL link to access a web browser on the mobile device, instead of a full application on the mobile device,"

Ramanujaiaha discloses [15f] for the reasons discussed for [1f]. Decl. ¶231.

h. [15g]: "to establish a WebRTC (Web Real-Time Communication) session to transmit a real-time video stream from the mobile device,"

Ramanujaiaha and Krishnan render obvious [15g] for the reasons discussed for [1g]. Decl. ¶232.

i. [15h]: "and wherein the URL link is associated with the phone number of the mobile device;"

Ramanujaiaha discloses or renders obvious [15h] for the reasons discussed for [1h]. Decl. ¶233.

j. [15i]: "receiving the real-time video stream from the mobile device through the WebRTC session; and"

Ramanujaiaha and Krishnan render obvious [15i] for the reasons discussed for [1i]. Decl. ¶234.

k. [15j]: "sending the real-time video stream to the recipient for display on a screen of the recipient,"

Ramanujaiaha discloses [15j] for the reasons discussed for [1j]. Decl. ¶235.

l. [15k]: "wherein the real-time video stream is received through the WebRTC session while audio content of the emergency call is received through the first connection, and"

Ramanujaiaha and Krishnan render obvious [15k] for the reasons discussed for [1k]. Decl. ¶236.

m. [15l]: "wherein the real-time video stream is associated with a unique identifier for the mobile device."

Ramanujaiaha discloses or renders obvious [15l] for the reasons discussed for [1l]. Decl. ¶237.

16. Claim 16: "The non-transitory computer-readable medium of claim 15, wherein the recipient is at least one of an emergency call center or a dispatch unit."

Ramanujaiaha discloses the additional limitations of claim 16 for the reasons discussed for claim 2. Decl. ¶238.

17. Claim 17: "The non-transitory computer-readable medium of claim 15, wherein at least one of: (a) the first

connection is a voice call over a cellular network; (b) the electronic message is a text message; or (c) the second connection is a text messaging service."

Ramanujaiaha discloses the additional limitations of claim 17 for the reasons discussed for claim 3. Decl. ¶239.

18. Claim 18: "The non-transitory computer-readable medium of claim 15, wherein the unique identifier comprises the phone number of the mobile device."

Ramanujaiaha discloses or renders obvious the additional limitations of claim 18 for the reasons discussed for claim 4. Decl. ¶240.

19. Claim 19: "The non-transitory computer-readable medium of claim 15, wherein (a) the real-time video stream is transmitted from the mobile device to the recipient through a server that is separate from the mobile device and the recipient; and (b) the server is a proxy server configured to convert a data format of the real-time video stream."

Ramanujaiaha discloses the additional limitations of claim 19(a) for the reasons discussed for claim 5 and at least suggests and renders obvious the additional limitations of 19(b) for the reasons discussed in claim 6. Decl. ¶241.

20. Claim 20: "The non-transitory computer-readable medium of claim 15, wherein the WebRTC session further transmits at least one of (i) GPS location data of the mobile device for display on the screen of the recipient or (ii) one or more photographs taken on the mobile device for display on the screen of the recipient."

Ramanujaiaha and Krishnan render obvious claim 20 for the reasons discussed for claim 7. Decl. ¶242.

VI. Mandatory Notices

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

The real party-in-interest is CentralSquare Technologies, LLC.

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

CentralSquare identifies the following related matters: *CentralSquare Technologies LLC v. Carbyne, Inc. et al.*, 1-24-cv-01497 (EDTX).

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

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* Admission *pro hac vice* anticipated pursuant to 37 C.F.R. § 42.10(c).

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

Please address correspondence to lead and back-up counsel at the addresses above and CentralSquare-Carbyne-IPR@finnegan.com. Petitioner consents to electronic service by e-mail.

VII. Standing

Petitioner certifies that the ’383 patent is available for *inter partes* review and Petitioner is not barred or estopped from requesting *inter partes* review to challenge the claims on the grounds herein.

VIII. Conclusion

Petitioner has established a reasonable likelihood of prevailing for the challenged claims and requests the Board institute *inter partes* review and cancel each challenged claim as unpatentable.

Date: June 27, 2025

Respectfully submitted,

By: /Lionel M. Lavenue/
Lionel M. Lavenue
Reg. No. 46,859

CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that the foregoing Petition for *Inter Partes* Review contains 12,513 words, excluding those portions identified in 37 C.F.R. § 42.24(a), as measured by the word-processing system used to prepare this paper.

By: /Lionel M. Lavenue/
Lionel M. Lavenue
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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(a), the undersigned certifies that on June 27, 2025, a copy of the foregoing Petition for *Inter Partes* Review, Petitioner's Power of Attorney, and Exhibits 1001-1007 were served by FedEx Priority Overnight on the correspondence address of record indicated in the Patent Office's Patent Center system for U.S. Patent No. 11,689,383:

Cory Smith
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A courtesy copy has also been mailed to litigation counsel for Patent Owner at:

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Date: June 27, 2025

/Lisa C. Hines/
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