

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**AT&T SERVICES, INC. and STREAMWIDE INC.
Petitioners,**

v.

**BK TECHNOLOGIES, INC.
Patent Owner.**

Case: IPR2026-00349

U.S. Patent No. 12,375,890

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT

12,375,890

TABLE OF CONTENTS

	PAGE
I. INTRODUCTION	1
II. STANDING UNDER 37 C.F.R. § 42.104(a).....	1
III. OVERVIEW OF CHALLENGES AND RELIEF REQUESTED.....	1
IV. BACKGROUND	1
A. Technical Background	1
1. Push-to-talk.....	2
2. POC Service	2
3. POC Talkgroups.....	4
B. Overview of the ‘890 Patent.....	5
C. Prosecution History.....	7
D. Priority Date	8
E. Claim Construction	8
V. PRIOR ART.....	9
A. U.S. Patent No. 9,794,761 (Mazzarella et al.)	9
B. U.S. Patent No. 9,525,981 (Tillet ‘981)	13
C. U.S. Patent No. 9,763,066 (Tillet ‘066)	17
VI. LEVEL OF ORDINARY SKILL IN THE ART	20
VII. THE CHALLENGED CLAIMS ARE UNPATENTABLE	20
A. Ground I.....	21
1. Claim 1	21
2. Claim 3	27
3. Claim 5	29
4. Claim 6	30
5. Claim 7	31
6. Claim 8	32
7. Claim 10	35
8. Claim 12	36

B.	Ground 2	36
1.	Motivation to Combine	37
2.	Revoking Claims	42
a.	Claim 2	42
b.	Claim 9	44
c.	Claim 4	44
d.	Claim 11	48
VIII.	CONCLUSION	49
IX.	MANDATORY NOTICES UNDER 37 C.F.R. §42.8	50
A.	Real Party-in-Interest	50
B.	Related Matters	50
C.	Designated Counsel	50
D.	Service Information	51
X.	CERTIFICATE OF SERVICE	52
XI.	CERTIFICATE OF WORD COUNT	53

TABLE OF EXHIBITS

Exhibit	Short Name	Description
EX. 1001	'890 Patent	U.S. Patent No. 12,375,890
EX. 1002	'890 Patent Prosecution History	File History of U.S. Patent No. 12,375,890
EX. 1003	'568 Patent Prosecution History	File History of U.S. Patent No. 11,997,568
EX. 1004	Provisional File History	File History of U.S. Provisional Application No. 63/300,899
EX. 1005	Mazzarella	U.S. Patent No, 9,794,761
EX. 1006	Tillet '981	U.S. Patent No. 9,525,981
EX. 1007	Tillet '066	U.S. Patent No. 9,763,066

LISTING OF CLAIMS

Claim Element	Claim Language
[1.0]	A method of managing access to a push-to-talk-over-cellular (POC) talkgroup, the method comprising:
[1.1]	providing a control device configured to: provide a POC service; and manage a first POC talkgroup;
[1.2]	controlling the control device to grant a first non-subscriber device access to the POC service and the first POC talkgroup such that the first non-subscriber device is permitted to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service; and
[1.3]	transmitting, from the control device to the first non-subscriber device, a first communication including a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service.
[2.0]	The method of claim 1, further comprising automatically revoking access of the first non-subscriber device to the first POC talkgroup after a predetermined period of time has elapsed.
[3.0]	The method of claim 1, further comprising: providing a first subscriber device; and
[3.1]	transmitting, from the first subscriber device to the control device, first non-subscriber contact information associated with the first non-subscriber device.
[4.0]	The method of claim 3, further comprising: setting a predetermined time via the first subscriber device; and
[4.1]	automatically revoking access of the first non-subscriber device to the first POC talkgroup after the predetermined period of time has elapsed.
[5.0]	The method of claim 3, wherein: the first non-subscriber device is a cellular device; and
[5.1]	the first non-subscriber contact information is a first cellular telephone number.
[6.0]	The method of claim 1, wherein: the first non-subscriber device is one of a plurality of non-subscriber devices;
[6.1]	the granting the first non-subscriber device access to the first POC talkgroup comprises granting the plurality of non-subscriber devices access to the first POC talkgroup; and

Claim Element	Claim Language
[6.2]	the transmitting the first communication comprises transmitting the first communication to each non-subscriber device of the plurality of non-subscriber devices.
[7.0]	The method of claim 1, wherein: the first POC talkgroup is one of a plurality of POC talkgroups; and
[7.1]	each POC talkgroup of the plurality of POC talkgroups is linked as part of a single virtual incident.
[8.0]	A method of managing access to a push-to-talk-over-cellular (POC) talkgroup, the method comprising:
[8.1]	providing a control device configured to: provide a POC service; and manage a first POC talkgroup;
[8.2]	granting a first non-subscriber device access to the POC service and the first POC talkgroup such that the first non-subscriber device is permitted to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service;
[8.3]	transmitting, from the control device to the first non-subscriber device, a first communication including a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service; and
[8.4]	controlling the first non-subscriber device to install the POC software application and use the POC software application to communicate with the first POC talkgroup via the POC service.
[9.0]	The method of claim 8, further comprising automatically revoking access of the first non-subscriber device to the first POC talkgroup after a predetermined period of time has elapsed.
[10.0]	The method of claim 8, further comprising: providing a first subscriber device; and
[10.1]	transmitting, from the first subscriber device to the control device, first non-subscriber contact information associated with the first non-subscriber device.
[11.0]	The method of claim 10, further comprising: setting a predetermined time via the first subscriber device; and
[11.1]	automatically revoking access of the first non-subscriber device to the first POC talkgroup after the predetermined period of time has elapsed.

Claim Element	Claim Language
[12.0]	The method of claim 10, wherein: the first non-subscriber device is a cellular device; and
[12.1]	the first non-subscriber contact information is a first cellular telephone number.

I. INTRODUCTION

AT&T Services, Inc. and StreamWide (“Petitioners”) petition for *Inter Partes* Review (“IPR”) of Claims 1–12 (“the Challenged Claims”) of U.S. Patent No. 12,375,890 (the “‘890 patent”), which, according to PTO records, is assigned to BK Technologies, Inc. For the reasons set forth below, the Challenged Claims should be found unpatentable and canceled.

II. STANDING UNDER 37 C.F.R. § 42.104(a)

Petitioners certify that the ‘890 patent is available for IPR, and that Petitioners are not barred or estopped from requesting IPR.

III. OVERVIEW OF CHALLENGES AND RELIEF REQUESTED

Pursuant to § 42.22(a)(1) and § 42.104(b)(1) and (2), Petitioners request cancellation of the Challenged Claims pursuant to the grounds below.

Ground 1: Claims 1, 3, 5-8, 10, and 12 are unpatentable under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 9,794,761 (“Mazzarella”).

Ground 2: Claims 2, 4, 9, and 11 are unpatentable under 35 U.S.C. § 103 as obvious over Mazzarella in view of U.S. Patent No. 9,525,981 (“Tillet ‘981”) and U.S. Patent No. 9,763,066 (“Tillet ‘066”).

IV. BACKGROUND

A. Technical Background

1. Push-to-talk

Push-to-talk (PTT) is a convenient technology, but not a new one, dating back to the early days of two-way radio communication and walkie-talkies. To use these systems, the user pushes a button, also known as a key, to trigger the microphone that transmits their voice over the radio or device. Throughout history, push-to-talk has been known by other names, including “push-to-speak,” “press-to-transmit,” “hold-to-speak,” and “toggle-to-talk.” The technical term for PTT is “half-duplex transmission,” meaning that the user can either transmit or listen, but cannot do both simultaneously. These one-button-communication or mic key devices are different from “full-duplex” devices or radios, which continuously transmit audio from every connected user.¹

2. POC Service

In the early 2000s, mobile phone services began offering PTT over cellular (“POC”) service, and since then, many services and communication or messaging apps began offering various PTT features using Voice Over Internet Protocol (“VoIP”) technology. These included two-way voice chat and asynchronous voice messaging.² POC service therefore is a well-known two-way form of communication that allows users to engage in rapid communication with one or

¹ <https://www.verizon.com/business/learn/what-is-push-to-talk-and-how-does-it-work/>

² <https://www.verizon.com/business/learn/what-is-push-to-talk-and-how-does-it-work/>

more other users over a cellular network. POC service is similar to the “walkie-talkie” application where a user presses a button to talk with an individual user or broadcast to a group of participants, with the button allowing the user to switch between transmit and receive modes. If a user wishes to transmit a voice signal to one or more other users, the user will press the button and start talking into a microphone. To terminate the transmission, the user will release the button and the device will return to a receive mode. Other participants can respond to the message once this initial communication is complete. The communication is half-duplex, such that one person can talk at a time and all other participants must listen. This contrasts with voice calls, which are full duplex, where more than one person can talk at a time.³

Today, typical communication systems employ POC technology that allows users to utilize a traditional mobile/cellular telephone (e.g., a smart phone) in a similar way as a two-way radio. A user’s phone may be configured with a suitable POC application program (e.g., a POC client application) to provide the user device with a POC capability.⁴

³ Open Mobile Alliance Ltd., “Push to Talk over Cellular Requirements” Approved Version 1.0 – 09 Jun 2006, Open Mobile Alliance OMA-RD-PoC-V1_0-20060609-A, 2006, 75 pages https://www.openmobilealliance.org/release/PoC/V1_0-20060609-A/OMA-RD-PoC-V1_0-20060609-A.pdf (“OMA”)

⁴ US20180302948

3. POC Talkgroups

Typical POC devices allow a user to make a group call in which the user may send a transmission to a group of users who are all members of a given talkgroup. The user may select a particular talkgroup and then press a POC button to start communicating with that talkgroup. The term “talkgroup” broadly refers to any group of users to whom a POC-related transmission may be simultaneously sent or broadcasted to, whether through virtual channel(s) (e.g., as in trunked radio systems, for instance), physical channel(s) (e.g., a group of radio characteristics, such as particular transmit/receive frequency pair(s)), chat(s), zone(s) (e.g., a group of channels), or any combination of the aforementioned, such as for example, a combination of a zone and a channel.⁵ Such talkgroups are commonly used by emergency workers and first responders.

B. Overview of the ‘890 Patent

The ‘890 patent is directed to methods and systems for “managing access to a push-to-talk-over-cellular (POC) talkgroup.” EX. 1001, C1:L53-54. Specifically, the ‘890 patent alleges improvements to existing means for communications between individuals from different public safety agencies. EX. 1001, C1:L18-32. The ‘890 patent states that “[m]odern society relies on a number of different public

⁵ US20180302948

safety agencies, such as fire departments, police departments, ambulance services, etc., to respond to emergency situations” and “[i]n many situations, inter-agency coordination is critical to effectively responding and protecting the public.

However, coordination may be hampered by the lack of communication interoperability between agencies.” EX. 1001, C1:L18-24. The patent describes the need for methods and systems to “allow users to quickly set up ad hoc talkgroups in the field for interagency communication, without required complicated administrative procedures.” EX. 1001, C9:L16-62. In particular, the ‘890 patent purports to solve the problem by describing a method and system for adding a “non-subscriber” device to a POC talkgroup and allowing this non-subscriber to participate in a talkgroup along with the subscribers.

The ‘890 specification illustrates a hypothetical scenario in which a first responder, who is a subscriber to a particular POC system, wants to add another first responder, who is not subscribed to that POC system, to a talkgroup created for a particular emergency incident. As described in the ‘890 patent, the subscriber “(hereinafter referred to as an administrator) such as a senior police officer or senior firefighter may have control of the first subscriber device 114.” EX. 1001, C4:L41-44. The “administrator may send a command 204 to the control device 104 including first non-subscriber contact information associated with the first non-subscriber device 202.” EX. 1001, C4:L60-63. In response to the administrator’s

command 204, “the control device 104 may grant the first non-subscriber device 202 access to the first talkgroup. Further, the control device 104 may send a first communication 206 to the first non-subscriber device 202 notifying it that access has been granted to first talkgroup.” EX. 1001, C5:L30-35. Thus, the subscriber / administrator sends a command directly to the control device (which can be a server (EX. 1001, C3:L44-45)) to provide the control device with the non-subscribers contact information and the control device subsequently grants the non-subscriber access.

The ‘890 patent explains that a “‘subscriber device’ may refer to a device that subscribes to a service provided by an operator of the control device” (EX. 1001, C3:L27-29) while a “non-subscriber device” is a device that does not subscribe to the POC service provided by the operator of the control device 104. (EX. 1001, C3:L32-34). The “non-subscriber device may subscribe to a different POC service than the service provided by the operator of the control device 104, or the non-subscriber device may not subscribe to any POC service at all and may not even have any POC software installed on the device.” EX. 1001, C3:L35-39.

To add this non-subscriber to the talkgroup, the control device transmits to the first non-subscriber device, specifically, a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service. (*See* Step 414 of FIG. 4 and C7:L35-41

of EX. 1001). Upon receipt of the link, the non-subscriber device uses the link to install the POC software, allowing it to join the talkgroup. (*See* Step 416 of FIG. 4 and C7:L42-52 of EX. 1001). However, as described herein, this system and method were well known in the art before the effective filing date of the ‘890 patent.

C. Prosecution History

Patent Owner filed Application No. 18/431,686 (the “‘686 Application”) on February 2, 2024, which resulted in the ‘890 patent issuing on July 29, 2025. The ‘686 Application was filed as a continuation of Application No. 17/844,488 (the “‘488 Application”).

Patent Owner filed the ‘488 Application on June 20, 2022, which resulted in the U.S. Patent No. 11,997,568 (the “‘568 patent”) issuing on May 28, 2024.

The ‘488 Application claimed priority to Provisional Application 63/300,899, filed January 19, 2022. However, both the ‘686 Application and the ‘488 Application contained significant new matter that was not included in Provisional Application 63/300,899.

The ‘890 patent’s prosecution history (EX. 1002) included a single Non-Final Rejection. In the Non-Final Rejection, dated November 1, 2024, the Examiner rejected the claims on the grounds of nonstatutory double patenting as unpatentable over Claims 1-21 of the ‘568 patent. (*See* EX. 1002, P42-48). In

response, Patent Owner filed both a Terminal Disclaimer (*See* EX. 1002, P37-38) and a Response to the Non-Final Rejection without any distinguishing argument, on February 3, 2025. (*See* EX. 1002, P39-41). The Terminal Disclaimer was approved February 5, 2025 (*See* EX. 1002, P32).

A Notice of Allowance was mailed April 1, 2025, which included an Examiner's amendment cancelling pending Claims 8-15, without explanation. *See* EX. 1002, P13-20.

D. Priority Date

The '890 patent claims priority to the '568 patent. The extensive history of Rejections and Appeals in the '568 patent are included as EX. 1003, which is the '568 Patent Prosecution history.

Both the '890 patent and the '568 patent claims priority to a provisional application filed on January 19, 2022. EX. 1004. *Neither* the '890 patent nor the '568 patent are entitled to this priority date because that provisional application does not support the claims of either the '890 patent or the '568 patent. The '890 patent is not entitled to a priority date earlier than the filing date of the '568 patent- June 20, 2022. However, because the art relied upon in this Petition predates the earliest provisional application (Jan.19, 2022) relied upon by Applicant, the later priority date is irrelevant to this Petition.

E. Claim Construction

The claims are construed herein “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b).” 37 C.F.R. §42.100(b) (Nov. 13, 2018). Unless otherwise specified, the terms should receive their respective plain and ordinary meanings as understood by a person of ordinary skill in the art under *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). Claims must 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).

V. PRIOR ART

A. U.S. Patent No. 9,794,761 (Mazzarella et al.)

U.S. Patent No. 9,794,761 (“Mazzarella”), entitled “Intelligent Formation and Management of Dynamic Talk Groups,” was filed on March 24, 2017 and issued October 17, 2017. (Ex. 1005). Mazzarella is a Continuation of Patent Application No. 14/609,815, filed on Jan. 30, 2015, now U.S. Patent No. 9,615,218. Mazzarella is prior art at least under 35 U.S.C. § 102(a)(1) because it is a printed publication that was available to the public before the earliest possible effective filing date of the ‘890 patent.

Mazzarella discloses “a system, method, and computer program product that enable intelligent formation and management of dynamic talk groups.” EX. 1005 at Abstract. It teaches methods and systems relating to electronic communications,

providing for the formation and management of dynamic talk groups for PTT service, including incident communications networks. *See, e.g.*, EX. 1005, C1:L17-22. Mazzarella notes that a “PTT application is a two-way push to talk voice communication and data communications sharing application,” and that the “PTT application enables the transmission and receipt, of real time voice communications, video streams, files, text, and other data between and among PTT users who are members of a talk group.” EX. 1005, C5:L58-63. FIG. 1 of Mazzarella, shown below, “is a block diagram of a system 100 for intelligently forming and managing dynamic PTT talk groups”. EX. 1005, C5:L42-43.

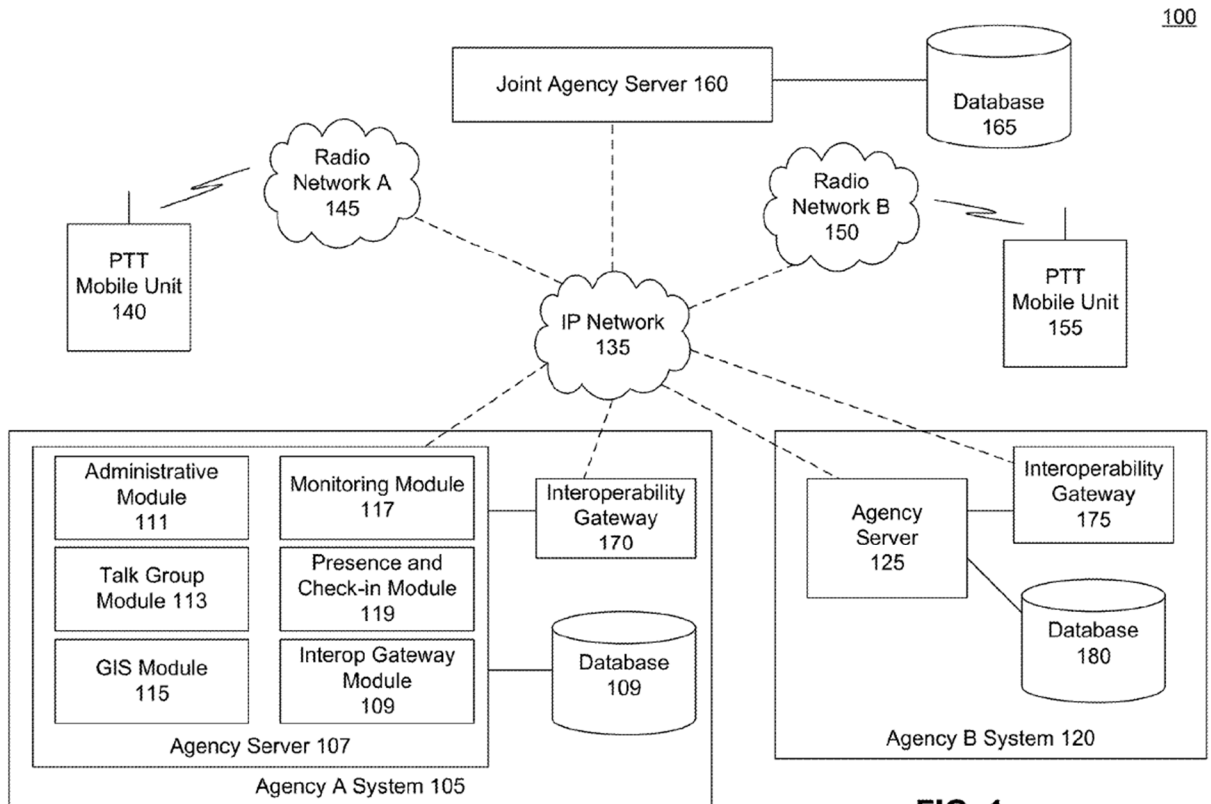


FIG. 1

Mazzarella discloses that the PTT talk groups may be accessed using specifically cellular devices or over a cellular network, thus rendering the PTT talk groups described in Mazzarella as POC talk groups. EX. 1005, C7:L20-22; C10:L48-53.

Mazzarella seeks specifically to manage access to PTT talkgroups between different agencies, explaining that “[e]ach agency includes an agency PTT application server that connects[[,]] routes, and exchanges voice and data messages among PTT application clients on computing devices whose users are members of a talk group.” EX. 1005, C5:L55-58. Mazzarella provides a method for managing access to a PTT talkgroup, using as an example, “Agency A’s” talkgroup (EX. 1005, C6:L16-24). It further provides a means for adding non-subscribers to the talkgroup, which it explains are people “not associated with the agencies that have established a secure communication” and/or “a user whose agency is not a member of an interoperability network” EX. 1005, C10:L14-18. Mazzarella explains that the non-subscribers to a talk group “may include members from one or more agencies as well as members of different networks such as the public switched telephone network, other land mobile radio networks, mobile telephone networks, and private multimedia broadband networks.” EX. 1005, C5:L66-C6:L16. It therefore teaches a way for individuals from outside Agency A, who are not subscribers to the talkgroup, to nonetheless be granted access.

In order to grant such access, one of the talk group members transmits a message to an “agency server” requesting a non-subscriber be provided access. *See* EX. 1005, C6:L17-24 (teaching that the agency server “directly receives and transmits PTT messages from talk group members that are associated with the same agency (e.g., agency A)”). Then, the agency server sends an invitation to the non-subscriber. Mazzarella explains that:

The invitation may be an email message or an SMS message that contains a hyperlink with access to a client PTT application of the inviting agency. The invitation or a subsequent invitation may invite the user to subscribe to an information channel. If the user accepts the talk group invitation, the user may download the agency's client PTT application to their mobile computing device, enter User Identity & Credentials in an acceptance email, and electronically transmit the acceptance email response to the inviting agency's agency PTT administrator.

EX. 1005, C10:L18-27. “Once the accepting user is added to the talk group, the accepting user may electronically transmit communications to and electronically receive communications from the talk group.” EX. 1005, C10:L42-45.

Once a non-subscriber is added to a talkgroup, Mazzarella also contemplates managing access by removing or “revoking” privileges when their participation is

longer required. *See* EX. 1004, C9:L1-2 (“[A] PTT user may also electronically receive or view less information, when a different rule is satisfied.”).

B. U.S. Patent No. 9,525,981 (Tillet ‘981)

Tillet ‘981 was filed on February 9, 2015 and issued on December 20, 2016. EX. 1006. Tillet ‘981 is prior art at least under 35 U.S.C. § 102(a)(1) because it is a printed publication that was available to the public before the earliest possible effective filing date of the ‘890 patent. Tillet ‘981 is directed to solving a very similar problem to that which the ‘890 patent attempts to solve in its dependent claims—revoking access to POC talkgroups after a predetermined period of time has elapsed. *See, e.g.*, EX. 1001, C6:L35-40 and C9:L21-29; and EX. 1006, C16:L43-47. Both Tillet ‘981 and the ‘890 patent, like Mazzarella, recognize the control and security importance of terminating access to a talkgroup, especially when the talkgroup is created to allow emergency personnel to communicate in an emergency situation.

Tillet ‘981 teaches “a talkgroup sharing module that allows an organization, such as the fire-fighting organization ... to control the security and privacy of the organization’s own talkgroups so that any talkgroup sharing with another organization may be for a limited period of time or for a limited number of devices.” EX. 1006, C9:L29-35. Similarly, the ‘890 patent-at-issue discloses that

“automatically revoking access to talkgroups may help to maintain the integrity and security of agency talkgroups by reducing the likelihood of unauthorized access after the emergency situation has passed.” EX. 1001, C9:L25-29.

Like Mazzarella and the ‘890 patent, Tillet ‘981 is directed to “sharing a Push-To-Talk talkgroup.” EX. 1006, C1:L5-7. It teaches that these talkgroups can be managed by a cloud service and that the “[c]loud 140 may facilitate the transmission of information among users or devices (e.g., operation hub 130, devices 120) that are connected to cloud 140 through any number of communication means, such as a wireless transmission infrastructure.” EX. 1006, C4:L46-50. Tillet ‘981 teaches the connection of mobile phones with land mobile radio systems within the same talkgroup, stating that the sharing of PTT talkgroups can be “applied to cellular-based PTT communication systems, other terrestrial-based PTT communication systems, land mobile radio (“LMR”) communication systems, [and] hybrid communication systems using one or more of the communication systems described herein.” EX. 1006, C19:L8-14.

Tillet ‘981’s cloud 140 manages interaction of the PTT talkgroups, even amongst non-subscribers, such as users with devices not affiliated with those organizations to which PTT talkgroups have been assigned. EX 1005, C4:L63-C5:L21. Tillet ‘981 explains that:

One or more communication devices 120 may connect with cloud 140. Such devices 120 may communicate with communication devices 150 via cloud 140 ...

Devices 120 may include, for example, one or more general purpose computing devices, ..mobile phones ... Particular devices 120 may be affiliated with particular organizations to which PTT talkgroups have been assigned, for example. Certain devices 120 connected with cloud 140 may be affiliated with organizations to which PTT talkgroups have not been assigned.

EX. 1006, C4:L52-67. Tillet ‘981 further explains that through the cloud 140, an operation hub 130 can manage several devices 120. The operation hub 130 “may maintain a first account (e.g., talkgroup owning organization’s account 310) for a first organization (e.g., talkgroup owning organization 300) and a second account (e.g., sharing organization’s account 410) for a second organization (e.g., sharing organization 400).” EX. 1006, C92:L55-60. The “second account” of Tillet ‘981 is analogous to the “non-subscriber” of the ‘890 Patent, because the “second account” does not subscribe to the “talkgroup owning organization’s” account. Rather, the talkgroup owning organization must share access with the second account.

Even after granting access, the talkgroup owning organization retains capabilities over the talkgroup, including the ability to revoke access of non-subscribers. *See* EX. 1006, C9:L37-43 (“the talkgroup owning organization may be configured to retain ownership capabilities (e.g., ability to select the time period of the shared talkgroup, the number of devices that may be added to the shared talkgroup, terminate the talkgroup share at any time, and other suitable capabilities)”). That revocation can be automatic, as Tillet ‘981 teaches that “talkgroup owning organization 300 may specify various parameters related to the talkgroup share, such as, for example...an end date 692 indicating when communication devices affiliated with talkgroup sharing organization 400 will no longer be able to access the shared talkgroup.” EX. 1006, C12:L65-C12:L6. The automatic revocation of access of non-subscriber devices to the POC talkgroup after a predetermined period of time is configurable in Tillet ‘981, for example through an interface like the one shown below having a predetermined end date 692:

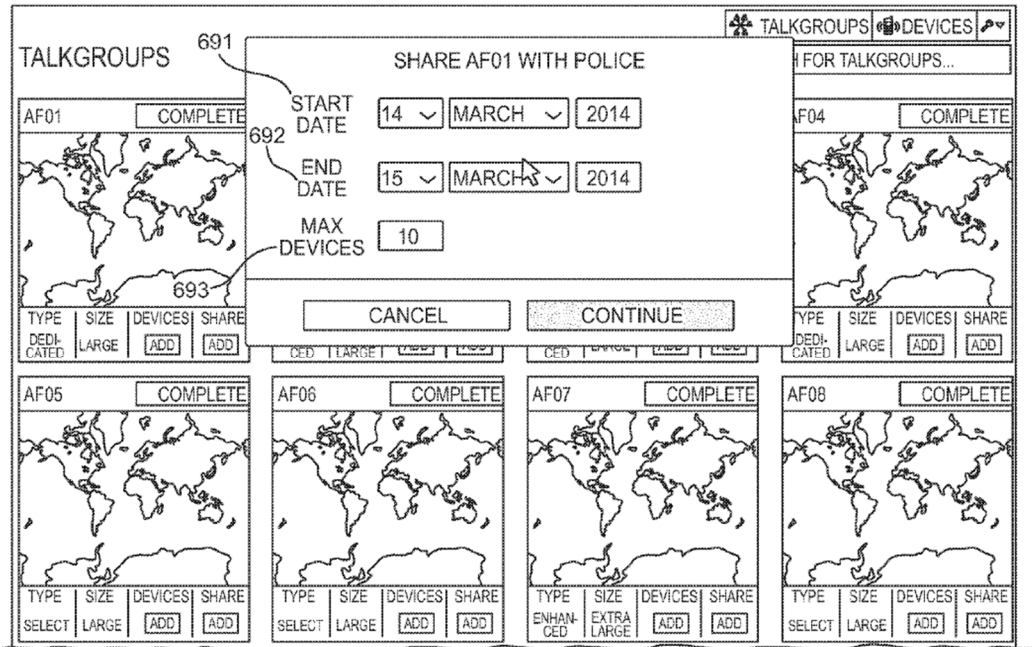


FIG. 6C

FIG. 6C of EX. 1006.

Thus, just like the '890 patent, Tillet '981 is specifically directed to the administration of talkgroups in emergency situations on a cellular network, with those personnel's mobile, cellular phones as the communication devices.

C. U.S. Patent No. No. 9,763,066 (Tillet '066)

Tillet '066 was filed on November 7, 2016 and issued on September 12, 2017. EX. 1007. Tillet '066 is a Continuation of Patent Application No. 15/016,897, filed on February 5, 2016, now Patent No. 9,491,595, which claims priority to Provisional Application No. 62/112/270, filed on February 5, 2015. Tillet '066 is prior art at least under 35 U.S.C. § 102(a)(1) because it is a printed

publication that was available to the public before the earliest possible effective filing date of the '890 patent.

Tillet '066 is generally directed to Push-to-Talk (PTT) talkgroups and discloses “instantiating talkgroups in a PTT communication system.” EX. 1007, C1 L14-16. Tillet '066 is specifically directed to solving security and control problems in Push-to-Talk (PTT) talkgroups by allowing for the revocation of access to POC talkgroups after a predetermined period of time has elapsed. *See, e.g.*, EX. 1001, C6:L35-40 and C9:L21-29; EX. 1007, C15:L46-63.

The talkgroups of Tillet '066 can be managed by a cloud service. *See* EX. 1007, C6:L53-58. (The “[c]loud 140 may facilitate the transmission of information among users or devices (e.g., management center 130, devices 120) that are connected to cloud 140 through any number of communication means, such as wireless transmission of information.”). The cloud 140 can manage interaction for the PTT talkgroups even amongst non-subscribers, such as users with devices not affiliated with organizations to which PTT talkgroups have been assigned. Tillet '066 explains that:

A plurality of talkgroups may be available to particular communication devices or users. For example, available talkgroups for particular communication devices or users may be provisioned by management center 130, gateway 135, or a device 120 based on the

communication devices' or users' affiliation with an organization. As an example, one set of available talkgroups may be provisioned for users or devices affiliated with a particular branch or division of the U.S. military, while another set of available talkgroups may be provisioned for a petroleum prospecting company... Each set of available talkgroups may include a plurality of talkgroups that may only be accessible (e.g., available) to devices or users associated with the organization to which the respective set of available talkgroups was provisioned.

EX. 1007, C11:L61-C12:L9. Thus, each set of available talkgroups can include talkgroups that are not “accessible” to a particular device, which is akin to the “non-subscriber device” of the ‘890 patent. Tillet ‘066 discloses devices (120) that that are subscribed to the POC service provided by an operator of a management center (130). The devices (120) of Tillet ‘066 can manage talkgroups, such as setting a predetermined amount of time that non-subscriber devices, such as the communication devices 150 of Tillet ‘066 or the second account devices of Tillet ‘981, would have access for security reasons. The devices (120) of Tillet ‘066 can also control revocation of access to talkgroups by non-subscriber communication devices (150). Tillet ‘066 states that “[i]n S414, device 120 may instruct [via the management center 130] the [service] providing the traffic channels for the

particular talkgroup to tear down (e.g., reallocate or terminate) the traffic channels for the particular talkgroup.” EX. 1007 C17:L61-66.

Tillet ‘066 also teaches connecting mobile phones with land mobile radio systems in the same talkgroup, stating that the sharing of PTT talkgroups can be “applied to cellular-based PTT communication systems, other terrestrial-based PTT communication systems, land mobile radio (“LMR”) communication systems, [and] hybrid communication systems using one or more of the communication systems described herein.” EX. 1007, C21:L12-22. Thus, like the ‘890 patent, Tillet ‘066 is specifically directed to the administration of talkgroups in emergency situations on a cellular network, with those personnel’s mobile, cellular phones as the communication devices.

VI. LEVEL OF ORDINARY SKILL IN THE ART

A person having ordinary skill in the art (POSITA) would be a person having, as of January 19, 2022, (1) at least an undergraduate degree in computer sciences, engineering, or a closely related field, or similar advanced post-graduate education in this area; and (2) one or more years of experience with wireless communication devices and networks, with more education substituting for less experience and vice versa. Such a POSITA would have been capable of understanding the ‘890 patent and the prior art references discussed herein.

VII. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Ground 1

Claims 1, 3, 5-8, 10, and 12 are invalid as anticipated under 35 U.S.C. §102(a)(1) by Mazzarella. As explained above, Mazzarella is directed to solving precisely the same problem as the ‘890 patent—facilitating interagency communications during an emergency incident without requiring complicated administrative procedures so that different responding personnel with smart phones can communicate with each other, even if they are from different agencies and do not subscribe to the same POC service. *See, e.g.*, EX. 1001, C1:L18-32, and EX. 1005, C1:L17-51 and C3:L34-47. Both Mazzarella and the ‘890 patent solve this problem the same way, by creating and managing access to POC talkgroups that allow access to these talkgroups by invited guests.

1. Claim 1

a. [1.0] A method of managing access to a push-to-talk-over-cellular (POC) talkgroup, the method comprising:

To the extent the preamble is limiting, Mazzarella discloses a method of managing access to POC talkgroups. The disclosed embodiments of Mazzarella “generally relate to electronic communications between secure communities, and more particularly, to providing intelligent formation and management of dynamic talk groups for push to talk (“PTT”) service among secure communities, including incident communications networks.” EX. 1005, C1:L17-21. Mazzarella teaches that the devices operating on the PTT talk groups may be cellular devices, thus

rendering the PTT talk groups described in Mazzarella as POC talk groups. *See* EX. 1005, C7:L20-22 (teaching that the PTT devices may be “mobile computing device (e.g., a mobile radio unit such as a cellular phone”). Mazzarella also discloses that the utilized network may be a cellular network. *See* EX. 1005, C10:L48-53 (“For example, Agency A PTT administrator or a PTT mobile unit user of Agency A with delegation authority may electronically transmit an invitation to a mobile computing device whose user is not associated with agencies responding to an incident (e.g., Agency C ... that has a complementary radio system (e.g., a cellular network).” Indeed, because Mazzarella’s PTT talkgroup can be operated over a “cellular” network, the disclosed PTT talkgroup is, by definition, a POC talkgroup. *See also* EX. 1005, C3:L15-20 (further teaching that it accomplishes PTT communications on a cellular network using “[i]nternet protocol systems using Voice over IP (VOIP) and other digital voice transmission over data network technologies enable client software operated on computing devices such as mobile smartphones to simulate PTT type functionality among a group of users”).

b. [1.1] providing a control device configured to: provide a POC service; and manage a first POC talkgroup

Mazzarella discloses a method for providing a control device (an “agency server”) that is configured to provide a POC service and manage a first POC talkgroup. Mazzarella teaches that “[e]ach agency includes an agency PTT

application server that connects, routes, and exchanges voice and data messages among PTT application clients on computing devices whose users are members of a talk group.” EX. 1005, C5:L55-58. Mazzarella’s “joint agency server 160 may be used by one or more designated commanders from each agency to coordinate activities of responding personnel.” EX. 1005, C14:L28-29. The “agency server (e.g., agency server 107) directly receives and transmits PTT messages from talk group members that are associated with the same agency (e.g., agency A). The agency server (e.g., agency server 107) receives and transmits PTT messages from the remaining talk group members that are not associated with the same agency (e.g., not associated with agency A) via an interoperability gateway.” EX. 1005, C6:L16-23. Therefore, Mazzarella’s agency server 107 and/or the joint agency server 160 is identical to the “control device” of the ‘890 patent. The ‘890 patent teaches that, like in Mazzarella, “the control device 104 may be a server that is accessible via communication over internet 124”(EX. 1001, C3: L44-46), that the control device is “configured to provide a POC service and manage a first POC talkgroup” (EX. 1001, C2: L11-12), that the “control device [is configured] to grant a first non-subscriber device access to the POC service” (EX. 1001, C1: L57-58), and that the control device is configured to transmit “a first communication including a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC

service.” EX. 1001, C1: L62-67. Mazzarella’s “agency sever” performs the same function as the ‘890’s “control device,” for the same reason.

Mazzarella’s agency server is also what provides the POC service and manages the POC talkgroup. The specification states that “[i]n either radio or IP based PTT systems, a central administrator function serves to register and administer members of a talk group and a talk group is typically limited to enterprise use (members within the same agency or enterprise) or user-defined where an authorized user may establish a talk group and invite members via the central administrator.” EX. 1005, C3:L27-33.

- c. [1.2] controlling the control device to grant a first non-subscriber device access to the POC service and the first POC talkgroup such that the first non-subscriber device is permitted to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service; and**

The method of Mazzarella controls the control device (Mazzarella’s “agency server”) to grant a non-subscriber device access by providing for the invitation to a POC talkgroup to a person “not associated with the agencies that have established a secure communication” and/or “a user whose agency is not a member of an interoperability network.” EX. 1005, C10:L14-18.

Mazzarella further explains that “Agency A PTT administrator or a PTT mobile unit user of Agency A with delegation authority may electronically transmit an invitation *to a mobile computing device whose user is not associated with*

agencies responding to an incident [non-subscriber] (e.g., Agency C...that has a complementary radio system (e.g., a cellular network) or that has a separate land mobile radio system (e.g., an emergency first responder radio network).” EX. 1005, C10:L48-55.

The PTT mobile unit can also control the agency server to grant the first non-subscriber access to the POC service and the first POC talkgroup. The PTT mobile unit can control the agency server’s talk group module by requesting that the module transmit an invitation to the first non-subscriber device and thereby grant access to that first non-subscriber device. Specifically, the “talk group module may be configured to electronically receive a request to create, modify, and delete a talk group. The request may be from the agency’s PTT administrator or a PTT mobile unit user associated with the same agency.” EX. 1005, C9:L34-38. Upon receipt of that controlling request, the agency server’s “talk group module creates a talk group, talk group permission rules, assigns the talk group to a radio channel, and sends invitations to PTT users and PTT mobile unit users accordingly to join the talk group.” EX. 1005, C9:L46-49. The invitation is required because the user does otherwise have access to the PTT service and is thus a non-subscriber to the PTT service.

“Once the user is added to the talk group, the user may electronically transmit communications to and electronically receive communications from the

talk group as well as electronically receive subscribed information.” EX. 1005, C10:L63-65. Therefore, in Mazzarella, the non-subscriber’s device is granted access to the talk group by receiving the invitation to subscribe from the control device, which permits the non-subscriber’s device to join the existing talk group and to communicate in that talk group.

- d. [1.3] transmitting, from the control device to the first non-subscriber device, a first communication including a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service.**

Mazzarella discloses transmitting, from the control device (Mazzarella’s “agency server”) to a first non-subscriber device (a “user is not associated with agencies responding to an incident” and “not a member of an interoperability network”), a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service. Mazzarella states that “[t]he talk group module creates a talk group, talk group permission rules, assigns the talk group to a radio channel, and *sends invitations to PTT users and PTT mobile unit users accordingly to join the talk group.*” EX. 1005, C9:L45-48 (emphasis added). The communication “may invite users with mobile computing devices (e.g., a smart phone or a land mobile radio device) that are not associated with the agencies that have established a secure communication (e.g., a user whose agency is not a member of an interoperability

network), to join a talk group.” EX. 1005, C10:L11-18. The communication can “be an email message or an SMS message that contains a hyperlink with access to a client PTT application of the inviting agency.” EX. 1005, C10:L18-20. “If the user accepts the talk group invitation, the user may download the agency’s client PTT application to their mobile computing device, enter User Identity & Credentials in an acceptance email, and electronically transmit the acceptance email response to the inviting agency’s agency PTT administrator.... Once the accepting user is added to the talk group, the accepting user may electronically transmit communications to and electronically receive communications from the talk group.” EX. 1005, C10:L18-47. Therefore, upon receiving the link from the agency server, the non-subscriber can use the link to download the POC software, join the talkgroup, and participate in the talkgroup.

2. Claim 3

a. [3.0] The method of claim 1, further comprising: providing a first subscriber device; and

Mazzarella teaches PTT mobile units that are first subscriber devices. Specifically, as seen in FIG. 1 of Mazzarella “[a] PTT mobile unit (e.g., PTT mobile unit 140/155) may be a mobile computing device (e.g., a smart phone, a tablet, a personal digital assistant (PDA), or a laptop computer) that includes a client PTT application.” EX. 1005, C6 L36-39.

b. [3.1] transmitting, from the first subscriber device to the control device, first non-subscriber contact information associated with the first non-subscriber device.

Mazzarella discloses transmitting from the first subscriber device (PTT mobile unit 155) contact information of a non-subscriber device to the control service (agency server 107) to be stored in an agency host directory. Mazzarella teaches that a “PTT mobile unit 155 may query a host directory in a database such as database 180, obtain User Identity and Credentials based on the respective dynamic access permissions, and store the User Identity and Credentials in a directory of PTT mobile units in a local memory such as the memory of PTT mobile unit 155.” EX. 1005, C9:L3-8. Therefore, Mazzarella’s PTT mobile unit 155 (first subscriber device) can locally store a directory of information from other, non-subscribing PTT mobile units. When the PTT mobile unit 155 invites a member from another land radio network, it is inviting a “non-subscriber” because the member from another land radio network does not currently subscribe, or have access, to the talkgroup the PTT mobile unit 155 is a delegate of. The invitation from the subscriber PTT mobile unit is first sent to the talk group module 113 of the agency server 107. Then, an invitation is sent from the agency server 107 to the non-subscriber. The invitation from the subscriber device PTT mobile unit 155 to the agency server 107 necessarily includes contact information associated with that non-subscriber device because the invitation from the agency server 107 to the

non-subscriber device is “sent via other communications networks or means, including email, short message service (SMS), a voice mail which contains a hyperlink or other executable function.” EX. 1005, C9: L53-57. Thus, the PTT mobile unit 155 must transmit an email address and/or phone number for SMS messaging and voice mail, from the local memory of the PTT mobile unit 155 to the agency server 107 such that the agency server 107 can send the invitation to the non-subscriber device.

3. Claim 5

a. [5.0] The method of claim 3, wherein the first non-subscriber device is a cellular device; and

As explained above, Mazzarella teaches all elements of Claim 3. Mazzarella additionally discloses that the PTT mobile unit 140 may be a cellular device, teaching that “[a] PTT mobile unit (e.g., PTT mobile unit 140/155) may be a mobile computing device (e.g., a smart phone, a tablet, a personal digital assistant (PDA), or a laptop computer) that includes a client PTT application.” EX. 1005, C6:L36-39. *See also* EX. 1005, C7:L20-22 (teaching that the PTT devices may be “mobile computing device (e.g., a mobile radio unit such as a cellular phone”). The PTT mobile units of Mazzarella are thus cellular devices that transmit information over “a cellular network.” EX. 1005, C10:L53.

b. [5.1] the first non-subscriber contact information is a first cellular telephone number.

Mazzarella discloses that the cellular telephone number of the PTT mobile unit 140 can be stored on the Administrative Module 111 of the Agency Server 107, and that Administrative Module 111 may also store “other information assigned or associated with the mobile computing device” such as “[i]nformation about a PTT mobile unit user, User Identity and Credentials” which “includes but is not limited to at least one of... a telephone number.” EX. 1005, C7:26-279; C7:30-40.

4. Claim 6

- a. **[6.0] The method of claim 1, wherein the first non-subscriber device is one of a plurality of non-subscriber devices;**

Mazzarella teaches that there can be multiple users and a plurality of PTT mobile units beyond PTT mobile units 140 and 155, stating that “an agency PTT administrator or a PTT mobile unit user with delegation authority (e.g., authority to add/delete members of talk group) may invite *users* [plural] with mobile computing devices (e.g., a smart phone or a land mobile radio device) that are not associated with the agencies.” EX. 1005, C10:L11-16 (emphasis added).

- b. **[6.1] the granting the first non-subscriber device access to the first POC talkgroup comprises granting the plurality of non-subscriber devices access to the first POC talkgroup; and**

Mazzarella discloses granting access to a plurality of non-subscribers. *See* EX. 1005, C10:L11-47 (“[A]n agency PTT administrator or a PTT mobile unit user

with delegation authority (e.g., authority to add/delete *members* of talk group) may invite *users* with mobile computing devices (e.g., a smart phone or a land mobile radio device) that are not associated with the agencies that have established a secure communication (e.g., a user whose agency is not a member of an interoperability network), to join a talk group. ... The agency PTT administrator may use a talk group module to add the accepting user to the talk group.”). The invitation in Mazzarella can be used to invite a plurality of “users,” which will then be granted access as discussed further above in description of claim element [1.2].

- c. **[6.2] the transmitting the first communication comprises transmitting the first communication to each non-subscriber device of the plurality of non-subscriber devices.**

In Mazzarella, the talk group module of the agency server 107 can transmit the first communication to a plurality of non-subscriber devices by sending a plurality of invitations. Specifically “[t]he talk group module creates a talk group, talk group permission rules, assigns the talk group to a radio channel, and sends *invitations* to PTT users and PTT mobile unit users accordingly to join the talk group.” EX. 1005, C9:L45-48 (emphasis added). Such transmission is discussed further above in the discussion of claim element [1.3].

5. Claim 7

- a. **[7.0] The method of claim 1, wherein the first POC talkgroup is one of a plurality of POC talkgroups; and**

Mazzarella discloses a plurality of POC talkgroups being formed, stating that “[o]ne or more *talk groups* may be created and assigned to an incident control area by various agencies responding to the incident creating one or more geotalk groups.” EX. 1005, C11:L23-26 (emphasis added).

b. [7.1] each POC talkgroup of the plurality of POC talkgroups is linked as part of a single virtual incident.

Mazzarella teaches an “incident control area” that links together a plurality of talkgroups relating to a particular incident. Mazzarella states that “[w]hen an incident control area is associated with a talk group, the talk group is called a geotalk group. One or more talk groups may be created and assigned to an incident control area by various agencies responding to the incident creating one or more geotalk groups.” EX. 1005, C11:L22-26.

6. Claim 8

a. [8.0] A method of managing access to a push-to-talk-over-cellular (POC) talkgroup, the method comprising:

See claim element [1.0] above.

b. [8.1] providing a control device configured to: provide a POC service; and manage a first POC talkgroup

See claim element [1.1] above.

c. [8.2] granting a first non-subscriber device access to the POC service and the first POC talkgroup such that the first non-subscriber device is permitted to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service;

The method of Mazzarella grants non-subscriber device access by providing for the invitation to a POC talkgroup a person “not associated with the agencies that have established a secure communication” and/or “a user whose agency is not a member of an interoperability network.” EX. 1004, C10:L14-18. Mazzarella further explains that that “Agency A PTT administrator or a PTT mobile unit user of Agency A with delegation authority may electronically transmit an invitation *to a mobile computing device whose user is not associated with agencies responding to an incident* [non-subscriber] (e.g., Agency C ... that has a complementary radio system (e.g., a cellular network) or that has a separate land mobile radio system (e.g., an emergency first responder radio network).” EX. 1004, C10:L48-55. *See also* EX. 1004, C10:L11-47 (teaching that an agency administrator “may invite users with mobile computing devices (e.g., a smart phone or a land mobile radio device) that are not associated with the agencies that have established a secure communication (e.g., a user whose agency is not a member of an interoperability network), to join a talk group. ... The agency PTT administrator may use a talk group module to add the accepting user to the talk group.”). The invitation is required because the user does not otherwise have access to the PTT service and is thus a non-subscriber to the PTT service.

“Once the user is added to the talk group, the user may electronically transmit communications to and electronically receive communications from the

talk group as well as electronically receive subscribed information.” EX. 1004, C10:L63-65. Therefore, in Mazzarella, the non-subscriber’s device is granted access to the talk group by receiving the invitation to subscribe, which permits the non-subscriber’s device to join the existing talk group and to communicate in that talk group.

- d. **[8.3] transmitting, from the control device to the first non-subscriber device, a first communication including a link to download a POC software application configured to join the first POC talkgroup and communicate via the first POC talkgroup using the POC service; and**

See claim element [1.3] above.

- e. **[8.4] controlling the first non-subscriber device to install the POC software application and use the POC software application to communicate with the first POC talkgroup via the POC service.**

Mazzarella discloses controlling the first non-subscriber device (PTT mobile unit) to install the POC software application and using the POC software application to communicate with the first POC talkgroup via the POC service. For example, Mazzarella’s agency server’s monitoring module can control the PTT mobile unit because the monitoring module can be “configured [to] allow remote control of the PTT mobile unit when a defined event occurs” (See EX. 1005, C13:L49-52). The defined event can be transmission of the first communication of the previous claim step, then the non-subscriber device PTT mobile can be

remotely controlled to install the POC software communication since “a PTT administrator may remotely control the PTT mobile unit including but not limited to: activate and control certain functions...described above.” (EX. 1005, C14:L9-14). In Mazzarella, activation of certain functions described above includes installing the POC software application, which occurs when the first non-subscriber device (PTT mobile unit) is controlled to “download Agency A;s client PTT application to their mobile computing device (e.g., smart phone).” (EX. 1005, C10:L57-59).

Upon installation of the POC software application, the first non-subscriber device (PTT mobile unit) can use the POC software application to communicate with the first POC talkgroup via the POC service: “Once the accepting user is added to the talk group, the accepting user may electronically transmit communications to and electronically receive communications from the talk group.” EX. 1005, C10:L62-65. Therefore, upon control of the non-subscriber’s device by the monitoring module to install the POC software application, the non-subscriber can use the POC software, join the talkgroup, and communicate with the talkgroup.

7. Claim 10

- a. [10.0] The method of claim 8, further comprising:
providing a first subscriber device; and**

As demonstrated herein, Mazzarella teaches all limitations of Claim 8, from which Claim 10 depends. As demonstrated above under claim element [3.0], Mazzarella also teaches providing a first subscriber device.

[10.1] transmitting, from the first subscriber device to the control device, first non-subscriber contact information associated with the first non-subscriber device.

As demonstrated above under claim element [3.1], Mazzarella also teaches transmitting, from the first subscriber device to the control device, first non-subscriber contact information associated with the first non-subscriber device.

8. Claim 12

a. [12.0] The method of claim 10 wherein: the first non-subscriber device is a cellular device;

As demonstrated herein, Mazzarella teaches all limitations of Claim 10, from which Claim 12 depends. As demonstrated above under claim element [5.0], Mazzarella also teaches that the non-subscriber device is a cellular device.

b. [11.1] and the first non-subscriber contact information is a first cellular telephone number

As demonstrated above under claim element [5.1], Mazzarella also teaches that the non-subscriber contact information is a cell phone number.

B. Ground 2

Claims 2, 4, 9, and 11, collectively, “the Revoking Claims,” are obvious under 35 U.S.C. §103 over Mazzarella in light of Tillet ‘981 and Tillet ‘066. As explained above, Mazzarella is directed to solving precisely the same problem that the ‘890 patent attempts to solve—facilitating interagency communications during an emergency incident without complicated administrative procedures so that various responding personnel with smart phones can access talkgroups and readily communicate with each other. *See, e.g.*, EX. 1001, C1:L18-40 and EX. 1005, C1:L17-51; C3:L34-47.

While Mazzarella is directed to providing non-subscribers access to a talkgroup, it also suggests the need to limit such access. EX. 1004, C9:L1-2. A POSITA would have understood Mazzarella’s suggestion to limit or revoke access privileges for a non-subscriber and employed an obvious way to limit or revoke access by using time as a limiter.

Both Tillet ‘981 and Tillet ‘066 explicitly teach limiting access by removing (“revoking”) privileges after a specific time period has elapsed in order to make talkgroups more secure and efficient.

1. Motivation to Combine

As discussed above, Mazzarella anticipates all of the ‘890 patent claims except specifically those claims directed to revoking access based on time.

Mazzarella teaches a method for providing access to POC talkgroups by members

of different agencies, who otherwise would not be able to participate in the talkgroups because their respective agencies are “not a member of an interoperability network.” EX. 1005 C10 L11-18. Mazzarella explains that “[e]ach agency includes an agency PTT application server that connects, routes, and exchanges voice and data messages among PTT application clients on computing devices whose users are members of a talk group.” EX. 1005 C5 L55-58. Therefore, Mazzarella allows both agency members and non-members to communicate in talkgroups during an emergency by providing these non-members (“non-subscribers”) with a link through which to access the talkgroup. Mazzarella also suggests that the system, under certain circumstances, should limit access and privileges to a device (user). *See* EX. 1005, C9:L1-2. The two Tillet references further that concept by limiting or revoking privileges specifically based on time. The ‘890 revoking claims merely parrot the time-based limit on access as suggested by Mazzarella and taught explicitly by the Tillet references.

Like Mazzarella, Tillet ‘981 teaches secured PTT talkgroups. EX. 1006, C1:L5-7. It simply provides a means for “allow[ing] an organization, such as the fire-fighting organization described in the example above, to control the security and privacy of the organization’s own talkgroups so that any talkgroup sharing with another organization may be for a limited period of time or for a limited number of devices.” EX. 1006, C9:L29-35. Therefore, while Mazzarella teaches

how to add non-subscribers to a PTT talkgroup, and suggests the need to limit access under certain circumstances, Tillet '981 teaches a specific means for limiting such access.

Tillet '066 provides complementary detail to both Mazzarella and Tillet '981, with Tillet '066 teaching that the predetermined period of time during which a first non-subscriber device can access the POC talkgroup can be set via the first subscriber device. Like Mazzarella and Tillet '981, Tillet '066 discloses administration of talkgroups in emergency situations on a cellular network and notes that the security of talkgroups in emergency situations can be a concern and that "a talkgroup designated for emergency communication may ... enable more rapid communication and response." EX. 1007, C3:L45-48. To address security of those emergency talkgroups, Tillet '066 teaches that emergency talkgroups "may be utilized to reduce latency and avoid security issues." EX. 1007, C18:L55-57. In Tillet '066, it is specifically the devices 120 (the subscriber devices) that are subscribed to the POC service provided by an operator of a management center (130) which can manage talkgroups, such as by setting a predetermined amount of time that non-subscriber devices (the communication devices 150) have access. The devices 120 can also control revocation of access to talkgroups by non-subscriber communication devices 150. *See* EX. 1007, C17:L61-66 ("In S414, device 120 may instruct [via the management center 130] the

[service] providing the traffic channels for the particular talkgroup to tear down (e.g., reallocate or terminate) the traffic channels for the particular talkgroup.”).

When combined, Tillet ‘981 and Tillet ‘066 reinforce Mazzarella’s disclosure of managing security of POC talkgroups by limiting access under certain conditions, especially in emergency situations—the exact focus of the ‘890 patent. Mazzarella teaches that access to the POC talkgroups can be revoked in certain situations, with Tillet ‘981 and Tillet ‘066 providing specific teaching for revoking such access based on elapsed time. In reading Mazzarella, a POSITA would recognize that at the time of the application for the patent-at-issue there were a finite set of conditions whereby limiting or revoking access to a talkgroup would be desired. The Tillet references extend the Mazzarella teaching by making talkgroups more secure by automatically revoking access based on time. Because of the similarities in subject matter between Mazzarella, Tillet ‘981, and Tillet ‘066, a POSITA would have considered the suggestion of Mazzarella and use of a time limitation, like Tillet, to revoke access when developing a method for managing a POC talkgroup in which non-subscribers can be added and later removed.

A POSITA would also have been motivated to combine Mazzarella’s teachings with Tillet ‘981 and Tillet ‘066 because Mazzarella provides an express teaching, suggestion, or motivation to combine it with Tillet ‘981 and Tillet ‘066

by disclosing the “management of dynamic talk groups for push to talk (PTT) service among secure communities, including incident communications networks,” EX. 1005, C1:L17-21). This would have directed a POSITA, to the extent any further information was necessary, to consult closely-related, analogous art like Tillet ‘981 and Tillet ‘066 that similarly address management of secure POC talkgroups. *See In re Kahn*, 441 F.3d 977, 989–90 (Fed. Cir. 2006).

To the extent any modification or clarification of Mazzarella was required, combining Mazzarella with Tillet ‘981 and Tillet ‘066 would have been no more than combining prior art elements (*e.g.*, Mazzarella’s agency PTT application server that establishes the POC talkgroup receiving signals from Tillet ‘981’s talkgroup sharing module 210 and Tillet ‘066’s device 120 to terminate a particular talkgroup, thereby revoking access to that talkgroup) according to known methods, to yield predictable results (*e.g.*, revocation of access to Mazzarella’s talkgroups per Tillet ‘981 and Tillet ‘066). *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

Finally, a POSITA would have had an expectation of success in combining Mazzarella with Tillet ‘981 and Tillet ‘066. *See Elekta Ltd. v. ZAP Surgical Systems, Inc.*, 81 F. 4th 1368, 1377 (Fed. Cir. 2023). All three references are directed to the same technology—managing access to POC talkgroups. Their combination would have required straightforward integration of these overlapping

POC techniques, which would have been well within the capabilities of a POSITA given the clear teachings of the references. Further, Mazzarella, Tillet ‘981, and Tillet ‘066 are analogous to both the ‘890 patent and one another, as they all relate to similar systems with similar goals.

2. The Revoking Claims

a. Claim 2:

- i. **[2.0] The method of claim 1, further comprising automatically revoking access of the first non-subscriber device to the first POC talkgroup after a predetermined period of time has elapsed.**

As set forth above, Claim 1 is anticipated by Mazzarella. Tillet ‘981 discloses a method for automatically revoking access of a first non-subscriber device to the first POC talkgroup after a predetermined period of time.

Tillet ‘981 teaches that PTT talkgroups can be “applied to cellular-based PTT communication systems.” *See* EX. 1006, C19:L8-10. Thus, Tillet ‘981 teaches POC talkgroups. One or more of these talkgroups can be shared from a talkgroup owning organization 300 to a talkgroup sharing organization 400, made up of non-subscriber devices. EX. 1006, C10:L13-22. To ensure control over the non-subscriber devices of the talkgroup sharing organization 400, the talkgroup owning organization 300 can be enabled “to set a time period so as to limit the sharing of the talkgroup(s) to a defined tune[*sic*] period. For example, talkgroup sharing module 210 may enable talkgroup owning organization 300 to specify a

start date and start time and a corresponding end date and end time that define the time period” before access to the POC talkgroup is automatically revoked. EX. 1006, C12:L17-23.

Such automatic revocation of access for a first non-subscriber device is further noted in Tillet ‘981, explaining its method for “configuring the talkgroup associated with the second organization to terminate access to the talkgroup associated with the second organization by devices associated with the first organization at the end of the time period.” EX. 1006, C20:L24-29). The devices associated with the “first organization” are non-subscriber devices in Tillet ‘981 because they are the “sharing organization,” not the “talkgroup owning organization.” EX. 1006, C92:L55-60. The non-subscriber devices of the “first organization” in Tillet ‘981 have their access automatically revoked at the end of the time period, when those devices associated with the “first organization” have their access “terminate[d].”

Even if the devices of the “first organization” in Tillet ‘981 are not considered a “non-subscriber devices,” it would be obvious to replace those devices with the non-subscriber device disclosed by Mazzarella. A POSITA would be motivated to combine Mazzarella’s disclosure of a non-subscriber device with the devices of the “sharing organization” of Tillet ‘981, because both devices are

not subscribers to a POC service provided by an operator of the control device that controls the talkgroup to which the devices seek access.

b. Claim 9:

- i. [9.0] The method of claim 8, further comprising automatically revoking access of the first non-subscriber device to the first POC talkgroup after a predetermined period of time has elapsed.**

See Claim 8 above. As further explained under claim element [2.0], access of a first non-subscriber is automatically revoked after a predetermined period of time has elapsed.

c. Claim 4:

- i. [4.0] The method of claim 3, further comprising: setting a predetermined time via the first subscriber device; and**

See Claim 3 above. Tillet '981 discloses a method for setting a predetermined time that a first non-subscriber device has access to the POC talkgroup. Tillet '066 discloses that the predetermined time during which a first non-subscriber device can access the POC talkgroup can be set via the first subscriber device. Tillet '066 discloses devices (120) that equate to first subscriber devices of the '890 patent because the devices (120) of Tillet '066 are subscribed to the POC service provided by an operator of a management center (130). Specifically, Tillet '066 teaches that "[o]ne or more devices 120 may connect with management center 130. Such devices 120 and management center 130 may

transmit data therebetween. Devices 120 may include, for example, one or more general purpose computing devices, specialized computing devices...mobile phones.” EX. 1007, C6:L63-C7:L3. Tillet ‘066 also discloses that some devices, like communication device 150, can be a non-subscriber device for a talkgroup because “particular communication devices or users” can only subscribe to and access a talkgroup when that talkgroup is made “accessible (e.g., available) to devices or users associated with the organization to which the respective set of available talkgroups was provisioned.” EX. C11:L61-C12:L9. Thus, when particular communication devices 150 do not have access to a talkgroup, they are non-subscriber devices.

The devices (120) of Tillet ‘066 manage talkgroups by setting a predetermined amount of time that non-subscriber devices, such as the communication devices 150 of Tillet ‘066 or the second account devices of Tillet ‘981, have access. *See* EX. 1007, C7:L7-16 (“a device 120 connected with management center 130 may function as a management center and may manage a plurality of talkgroups ... assigned to a plurality of devices, such as communication devices 150 ,or organizations. In such implementations, the device 120 may establish, for example...security settings or keys for such talkgroups, or other protocols for talkgroups.”).

The devices (120) of Tillet ‘066 can also control revocation of access to talkgroups by non-subscriber communication devices (150). Tillet ‘066 states that “device 120 may instruct [via the management center 130] the [service] providing the traffic channels for the particular talkgroup to tear down (e.g., reallocate or terminate) the traffic channels for the particular talkgroup.” EX. 1007 C17:L61-66.

A POSITA would be motivated to combine the instruction coming from device 120 of Tillet ‘066 with the specified end time of Tillet ‘981 to “tear down” or “terminate” a particular talkgroup, because both Tillet ‘066 and Tillet ‘981 are directed to ensuring security of talkgroups through revoking access to those talkgroups (and share a common inventor).

ii. [4.1] automatically revoking access of the first non-subscriber device to the first POC talkgroup after the predetermined period of time has elapsed.

Tillet ‘981 is directed to POC talkgroups. *See* EX. 1006, C19L8-10 (disclosing that PTT talkgroups can be “applied to cellular-based PTT communication systems”). Tillet ‘066 is also directed to “talkgroups in a PTT communication system,” specifically, cellular PTT talkgroups. *See* EX. 1007, C1:L14-16; C21:L11-22 (stating that “the techniques and implementations disclosed herein may be applied to cellular-based PTT communication systems”).

In Tillet ‘981, one or more talkgroups can be shared from a talkgroup owning organization 300 to a talkgroup sharing organization 400, made up of non-subscriber devices. To ensure control over the non-subscriber devices of the talkgroup sharing organization 400, access to the POC talkgroup can be automatically revoked.

Automatic revocation of access for a first non-subscriber device is taught by Tillet ‘981, which discloses a method for “configuring the talkgroup associated with the second organization to terminate access to the talkgroup associated with the second organization by devices associated with the first organization at the end of the time period.” EX. 1006, C20:L24-29. The devices associated with the “first organization” are non-subscriber devices in Tillet ‘981 because they are the “sharing organization,” not the “talkgroup owning organization.” EX. 1006, C92:L55-60. The non-subscriber devices of the “first organization” in Tillet ‘981 have their access automatically revoked at the end of the time period. Such automatic revocation can occur based on the set “end of the time period,” which could occur through a device of the talkgroup sharing organization 400, and/or with devices (120) of Tillet ‘066 that control revocation of access to talkgroups by non-subscriber communication devices (150).

Even if the devices of the “first organization” in Tillet ‘981 are not considered a “non-subscriber device,” it would be obvious to replace those devices

with the non-subscriber device disclosed by Mazzarella and discussed in detail above in section (V)(A). It would be obvious to combine Mazzarella's teaching of a non-subscriber device with the devices of the "sharing organization" of Tillet '981, because both devices similarly do not subscribe to a POC service providing the talkgroup to which they seek access.

d. Claim 11:

- i. [11.0] The method of claim 10, further comprising:
setting a predetermined time via the first subscriber
device; and**

See Claim 10 above. As demonstrated herein under element [4.0], Tillet '981 also teaches setting a predetermined time via the first subscriber device.

- ii. [11.1] automatically revoking access of the first non-subscriber device to the first POC talkgroup after the predetermined period of time has elapsed.**

As demonstrated herein under element [4.1], Tillet '981 also teaches automatically revoking access of the first non-subscriber device to the first POC talkgroup after the predetermined period of time has elapsed.

VIII. CONCLUSION

For the reasons given above, Petitioners request institution of *inter partes* review of the '890 patent to cancel the Challenged Claims based on the grounds specified in this Petition.

Respectfully submitted,

DATE: May 1, 2026

By: /s/ Joseph V. Saphia

Joseph V. Saphia (Reg. No 53,554)
Jessica H. Zafonte (Reg. No. 64,552)
Drew Berweger (Reg. No. 60,542)
Chiesa Shahinian & Giantomasi PC
11 Times Square, 34th Floor
New York, NY 10036
jsaphia@csglaw.com
jzafonte@csglaw.com
dberweger@csglaw.com

Counsel for Petitioners

IX. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

A. Real Party-in-Interest

The real parties in interest, pursuant to 37 C.F.R. § 42.8(b)(1), are AT&T Services, Inc., AT&T Mobility LLC⁶, and StreamWide Inc.

B. Related Matter(s)

Pursuant to 37 C.F.R. § 42.8(b)(2), Petitioners are aware of the following pending lawsuit involving the ‘890 patent:

BK Technologies, Inc. v. AT&T Mobility, LLC and AT&T Services, Inc., No. 226-cv-00090 (E.D. Tex) (filed February 3, 2026).

C. Designation of Counsel

Petitioners provide the following designation of counsel pursuant to 37 C.F.R. § 42.8(b)(3):

Lead Counsel	Backup Counsel
Joseph V. Saphia (Reg. No 53,554) Jessica H. Zafonte (Reg. No. 64,552) Chiesa Shahinian & Giantomasi PC 11 Times Square, 34th Floor	Drew Berweger (Reg. No. 60,542) Chiesa Shahinian & Giantomasi PC 11 Times Square, 34th Floor New York, NY 10036

⁶ Out of an abundance of caution, Petitioners identify all current defendants in the below identified case as potential real parties in interest only for the purpose of this proceeding and only to the extent that Patent Owner contends that these separate legal entities should be named real parties in interest in this IPR. Petitioners do so to avoid the potential expenditure of resources to resolve such a challenge. The AT&T Petitioner also acknowledges that it has a number of affiliates. No unnamed entity is funding, controlling, or otherwise has an opportunity to control or direct this Petition or Petitioners’ participation in any resulting IPR. Petitioner is also not aware of any affiliate that would be barred from filing this Petition under 35 U.S.C. § 315(e).

New York, NY 10036 Tel: 212-324-7262	Tel: 212-324-7278
---	-------------------

Pursuant to 37 C.F.R. § 42.10(b), a Power of Attorney executed by
Petitioners accompanies this Petition.

D. Service Information

Pursuant to 37 C.F.R. § 42.8(b)(4), Please address all correspondence and
service to the addresses listed above. Petitioners consent to electronic service
directed to: jsaphia@csglaw.com; jzafonte@csglaw.com; dberweger@csglaw.com.

X. CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(a), the undersigned certifies that on May 5, 2026, a copy of the foregoing Petition for *Inter Partes* Review, the associated 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 website for U.S. Patent No. 12,375,890:

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING P.O. Box 570489
ATLANTA, GA 30357-0037
UNITED STATES

Courtesy copies were provided to Patent Owner's litigation counsel via email at the following addresses:

Lisa.Moyles@wbd-us.com; Jason.Radachy@wbd-us.com; Angela.Ney@wbd-us.com; Julie.Giardina@wbd-us.com; Sylvia.Morrison@wbd-us.com; Barry.Herman@wbd-us.com

Dated: May 5, 2026

By: /s/ Jessica H. Zafonte
Jessica H. Zafonte
Reg. No. 64,552

Counsel for Petitioners

XI. CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 12,375,890 contains, as measured by the word processing system used to prepare this paper, 10,254 words. This word count does not include the items excluded by 37 C.F.R. § 42.24 as not counting towards the word limit.

Dated: May 5, 2026

By: /s/ Jessica H. Zafonte
Jessica H. Zafonte
Reg. No. 64,552

Counsel for Petitioners