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Application Number	Unassigned
Filing Date	Herewith
First Named Inventor	Thomas E. KATIS
Title	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	REBLP003C14

SIGNATURE of Applicant or Patent Practitioner

Signature	/Steve D Beyer/	Date	May 2, 2017
Name	Steve D Beyer	Telephone	650-842-1300
Registration Number	31,234		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.

■ *Total of 1 forms are submitted.

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☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant:

☐ Inventor or Joint Inventor

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor

■ Assignee or Person to Whom the Inventor is Under an Obligation to Assign

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

SIGNATURE of Applicant for Patent

Signature		Date	June 13, 2014
Name	Thomas E. Katis	Telephone	
Title and Company	CEO, Voxer IP LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below *.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

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LEGAL NAME OF INVENTOR

Inventor: Thomas E. KATIS Date (Optional): February 25, 2014

Signature: _____

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

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The above-identified application was made or authorized to be made by me.

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LEGAL NAME OF INVENTOR

Inventor: Matthew J. RANNEY Date (Optional) : _____

Signature: _____

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

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LEGAL NAME OF INVENTOR

Inventor: Mary G. PANTTAJA Date (Optional): 2/25/14

Signature: Mary G. Panttaja

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

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LEGAL NAME OF INVENTOR

Inventor: James T. PANTTAJA Date (Optional): 2-25-14

Signature: J. T. Pan

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

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TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Application No. 15/231,240, filed on August 8, 2016, which is a continuation of U.S. Application No. 14/799,528, filed July 14, 2015 (now U.S. Patent No. 9,456,087). U.S. Application No. 14/799,528 is a continuation of U.S. Application No. 14/198,043, filed on March 5, 2014 (now U.S. Patent No. 9,154,628), which is a continuation of U.S. Application 13/555,034 (now U.S. Patent 8,705,714), filed July 20, 2012, which is a continuation of U.S. Application 12/037,256 (now U.S. Patent 8,243,894), filed on February 26, 2008, which is continuation of 12/028,400 (now U.S. Patent 8,180,029), filed on February 8, 2008, which claims the benefit of U.S. Provisional Patent Application Nos. 60/937,552, filed June 28, 2007 and 60/999,619, filed on October 19, 2007. All of the foregoing applications are incorporated herein by reference in their entirety for all purposes.

BACKGROUND

Field of the Invention

[0002] This invention pertains to telecommunications, and more particularly, to a telecommunication and multimedia management method and apparatus that enables users to review the messages of conversations in either a live mode or a time-shifted mode and to transition the conversation back and forth between the two modes, participate in multiple conversations and to archive the messages of conversations for later review or processing.

Description of Related Art

[0003] The current state of voice communications suffers from inertia. In spite of automated switching, high bandwidth networks and technologies such as satellites, fiber optics, Voice over IP (VoIP), wireless and cellular networks, there has been little change in how people use telephones. One is still required to pick up the phone, dial another party, wait for a connection to be made, and then engage in a full-duplex, synchronous conversation with the dialed party. If the recipient does not answer, no connection is made, and the conversation does not take place.

[0004] At best, a one-way asynchronous voice message may be left if the recipient has voice mail. The process of delivering the voice mail, however, is burdensome and time consuming. The caller is required to wait for the phone on the other end to stop ringing, transition into the voice mail system, listen to a voice message greeting, and then leave the message. Current voice mail systems are also inconvenient for the recipient. The recipient has to dial a code to access their voice mail, navigate through a series of prompts, listen to any earlier received voice messages in the queue, and then finally listen to the message of the sender.

[0005] Another drawback with typical voice mail systems is the inability to organize or permanently archive voice messages. With some voice mail systems, a user may save a message, but it is automatically deleted after a predetermined period of time and lost forever.

[0006] Yet another problem with current voice mail systems is that a connection must be made between the caller and the voice mail system before a message can be left. If no connection is made, there is no way for the caller to leave a message.

[0007] Current telephone systems are based on relatively simplistic usage patterns: real-time live calls or disjointed voice mail messages, which are typically deleted as they are heard. These forms of voice communications do not capture the real power that can be achieved with voice communication or take advantage of the advances of network speed and bandwidth that is now available. Also, if the phone network is down, or is inaccessible, (e.g., a cell phone user is in an area of no coverage or the phone lines are down due to bad weather), no communication can take place.

[0008] In general, telephone based communications have not kept pace with the advances in text-based communications. Instant messaging, emailing, faxing, chat groups, and the ability to archive text messages, are all commonplace with text based communications. Other than voice mail, there are few existing tools available to manage and/or archive voice messages. In comparison, the tools currently available to manage telephone communications are primitive compared to text communications.

[0009] The corporate environment provides just one example of the weakness in current voice communication tools. There is currently no integrated way to manage voice communications across an organization as a corporate asset. Employees generally do not record or persistently store their phone conversations. Most business related voice communication assets are gone as quickly as the words are spoken, with no way to manage or store the content of those conversations in any manageable form.

[0010] As an illustrative example, consider a sales executive at a company. During the course of a busy day, the executive may make a number of calls, and close several sales, with customers over the phone. Without the ability to organize, store, and later retrieve these conversations, there is no way for the executive to resolve potential issues that may arise, such as recalling the terms of one deal versus another, or challenging a customer who disputes the terms of a previously agreed upon sale. If this executive had the ability to easily retrieve and review conversations, these types of issues could be easily and favorably resolved.

[0011] Current tactical radio systems, such as those used by the military, fire, police, paramedics, rescue teams, and first responders, also suffer from a number of deficiencies. Most tactical radio communication must occur through a "live" radio connection between the sender of a message and a recipient. If there is no radio connection between the two parties, there can be no communication. Urgent messages cannot be sent if either the sender or the receiver does not have access to their radio, or a radio circuit connection is not established. Tactical communications are therefore plagued with several basic problems. There is no way (i) to guarantee the delivery of messages, (ii) for a recipient to go back and listen to a message that was not heard in real time; (iii) to control the granularity of the participants in a conversation; (iv) for the system to cope when there is a lack of signal integrity for a live conversation. If a message is not heard live, it is missed. There are no tools for either the sender or a recipient to manage, prioritize, archive and later retrieve (i.e. time-shift) the messages of a conversation that were previously sent.

[0012] Yet another drawback with tactical radio communication systems is that only one message can be sent at a time per channel. Consider an example of a large building fire, where multiple teams of fire fighters, police and paramedics are simultaneously rescuing victims trapped in the building, fighting the fire, providing medical aid to victims, and controlling bystanders. If each of the teams is using the same channel, communications may become crowded and chaotic. Transmissions get "stepped on" when more than one person is transmitting at the same time. Also there is no way to differentiate between high and low priority messages. A team inside the burning building fighting the fire or rescuing trapped victims should have a higher priority over other teams, such as those controlling bystanders. If high priority messages are stepped on by lower priority messages, it could not only hamper important communications, but could endanger the lives of the fire fighters and victims in the building.

[0013] One possible solution to the lack of ability to prioritize messages is to use multiple channels, where each team is assigned a different channel. This solution, however, creates its own set of problems. How does the fire chief determine which channel to listen too at any point in time? How do multiple teams communicate with one another if they are all on different channels? If one team calls for urgent help, how are other teams to know if they are listening to other channels? While multiple channels can alleviate some issues, it can also cause confusion, creating more problems than if a single channel is used.

[0014] The lack of management tools that effectively prioritize messages, that allow multiple conversations to take place at the same time, that enable the time-shifting of messages to guarantee delivery, or that support archiving and storing conversations for later retrieval and review, all contribute to the problems associated with tactical radios. In first responder situations, such as with the military, police, and fire, effective communication tools can literally mean the difference between life and death, or the success or failure of a mission. The above burning building example is useful in illustrating just some of the issues with current tactical radio communications. Similar problems exist with the military, police, first responders and others who use tactical communications.

[0015] With packet-based networks, commonly used protocols include Transmission Control Protocol (TCP) and User Datagram Protocol (UDP). UDP offers the advantage of fast delivery of data, but at the expense of completeness. Packets may be dropped in transit and not available when attempting to render the data as soon as possible at the destination. In spite of the shortcomings, UDP is the standard for Voice over Internet Protocol (VoIP) transmissions due to its speed attributes. On the other hand TCP does guarantee the delivery of perfect (i.e., an exact copy of the transmitted data) data, but at the expense of latency. All packets are delivered, regardless of how long it takes. This delay makes TCP impractical for use with "live" phone calls. Currently there are no known protocols that offer the performance advantages of both TCP and UDP, where "good enough" media can be transmitted for rendering as soon as possible, with the eventual delivery of a perfect copy of the media. Also there is no protocol that determines how much information should be sent over the network based on the presence of recipients on the network and their intentions to render the data either live or in a time-shifted mode. In addition, other factors commonly considered, such as network latency, network degradation, packet loss, packet damage, and general bandwidth conditions, are used in determining how much data to transmit. Prior art systems, however, do not consider the presence and intentions of recipients. As a result, the

default assumption is that the data is rendered by the recipient in real time. When a recipient is not going to render data immediately, these prior art systems unnecessarily use bandwidth when it is not needed, degrading the overall performance of the network.

[0016] For the reasons recited above, telephone, voicemail and tactical voice communications systems are inadequate. An improved voice and media communication and management system and method, and improvements in delivering voice and other media over packet-based networks, is therefore needed.

SUMMARY OF THE INVENTION

[0017] The above-described problems are solved by a communication application, method and apparatus that supports new modes of engaging in conversations and/or managing multiple conversations using a variety of media types, such as voice, video, text, location, sensor information, and other data. Users can engage in conversations by sending messages to designated recipients. Depending on preferences and priorities, the recipient(s) might participate in the conversation in real time, or they might simply be notified that the message is ready for retrieval. In the latter case, the recipient participates in the conversation in a time-shifted mode by reviewing and replying to the recorded message at their convenience.

[0018] Users are empowered to conduct communications in either: (i) a near-synchronous or "live" conversation, providing a user experience similar to a standard full duplex phone call; or (ii) in a series of back and forth time-delayed transmissions (i.e., time-shifted mode). Further, users engaged in a conversation can seamlessly transition from the live mode to the time-shifted mode and back again. This attribute also makes it possible for users to engage in multiple conversations, at the same time, by prioritizing and shifting between the two modes for each conversation. Two individuals using the system can therefore send recorded voice messages back and forth to each other and review the messages when convenient, or the messages can be sent at a rate where they essentially merge into a live, synchronous voice conversation. This new form of communication, for the purposes of the present application, is referred to as "Voxing."

[0019] When you "Vox" someone, the conversation consists of a series of discrete recorded messages, which are recorded in a number of locations, which may include the encoding device of the sender, (e.g. a phone or computer), servers on multiple transmission hops across the network, and the receiver's rendering device. Unlike a standard phone call or voice mail, the system provides the following features and advantages: (i) the conversation can transition between live and time-shifted or vice versa; (ii) the discrete messages of the conversation are semantically threaded together and archived; (iii) since the messages are recorded and are available for later retrieval, attention can be temporarily diverted from the conversation and then the conversation can be later reviewed when convenient; (iv) the conversation can be paused for seconds, minutes, hours, or even days, and can be picked up again where left off; (v) one can rejoin a conversation in progress and rapidly review missed messages and catch up to the current message (i.e., the live message); (vi) no dedicated circuit is needed for the conversation to take place, as required with conventional phone calls; and (vii) lastly, to

initiate a conversation, one can simply begin transmitting to an individual or a group. If the person or persons on the other end notice that they are receiving a message, they have the option of reviewing and conducting a conversation in real time, or reviewing at a later time of their choice.

[0020] The communication media management system also supports new modes of optimizing the transmission of data over a network. The system actively manages the delivery of payloads to a recipient engaged in a conversation in real time when network conditions are less than ideal. For example when network conditions are poor, the system intentionally reduces the quality of the data for transmission to the point where it is "good enough" to be rendered upon receipt by the recipient, allowing the real time participation of the conversation. The system also guarantees the eventual delivery of an "exact" copy of the messages over time. The system and method therefore provides the advantages of both speed and accuracy. The utilization of network bandwidth is optimized by making tradeoffs between timeliness and media quality, using the presence and intentions of whether or not recipient(s) intend to review to the message immediately in real time, as well as measures of network latency, network degradation, packet loss or damage, and/or current bandwidth conditions.

[0021] It should be noted that the messages of conversations may contain voice only or voice, video and other data, such as sensor information. When the messages are reviewed, they are listened to or visually reviewed, or a combination thereof, depending on the type of media contained in the messages. Although as of the filing of the present application, most conversations are voice only, it is intended that the communication system and method described herein broadly includes conversations including multiple media types, such as voice and video for example.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] The invention may best be understood by reference to the following description taken in conjunction with the accompanying drawings, which illustrate specific embodiments of the invention.

[0023] Figure 1 is a diagram of the architecture of the communication and media management system of the invention.

[0024] Figures 2A and 2B illustrate a block diagram of a Client running on a Device in the communication and management system of the invention.

[0025] Figure 3 is a block diagram of a Server used in the communication and media management system of the invention.

[0026] Figures 4A through 4D illustrate various embodiments of data payloads used in the communication and management system of the invention.

[0027] Figure 5 is a diagram illustrating data being transmitted over a shared IP network in accordance with the invention.

[0028] Figure 6 is a diagram illustrating data being transmitted over a circuit based network in accordance with the invention.

[0029] Figure 7 is a diagram illustrating data being transmitted across both a cellular network and the Internet in accordance with the invention.

[0030] Figures 8A through 8F are a series of flow diagrams illustrating a store and stream function of the communication and management system of the invention.

[0031] Figures 9A through 9C are flow diagrams illustrating the operation of a Payload Quality Manager (PQM) and Figures 9D through 9F are flow diagrams illustrating the Data Quality manager (DQM), both used by the Clients and Servers of the invention.

[0032] Figure 10 is an exemplary device having a graphical user interface that may be used with the system of the invention.

[0033] Figures 11A through 11F are diagrams illustrating multiple conversation management (MCMS) features of the invention.

[0034] Figures 12A through 12C are diagrams illustrating the multiple conversation management system – consecutive (MCMS-C) features of the invention.

[0035] Figures 13A through 13D illustrate a series of diagrams detailing the operation of the invention.

[0036] Figures 14A and 14B are block diagrams that illustrate the hardware used for running the Client and Server applications of the invention.

[0037] It should be noted that like reference numbers refer to like elements in the figures.

DETAILED DESCRIPTION OF SPECIFIC EMBODIMENTS

[0038] The invention will now be described in detail with reference to various embodiments thereof as illustrated in the accompanying drawings. In the following description, specific details are set forth in order to provide a thorough understanding of the invention. It will be apparent, however, to one skilled in the art, that the invention may be practiced without using some of the implementation details set forth herein. It should also be understood that well known operations have not been described in detail in order to not unnecessarily obscure the invention.

A. Functional Overview

[0039] An improved voice and other media communication application, method and apparatus is disclosed which provides one or more of the following features and functions:

i. enabling users to participate in multiple conversation types, including live phone calls, conference calls, voice messaging, consecutive or simultaneous communications;

ii. enabling users to review the messages of conversations in either a live mode or a time-shifted mode (voice messaging);

iii. enabling users to seamlessly transition a conversation between a synchronous "live" mode and a time shifted mode;

iv. enabling users to participate in conversations without waiting for a connection to be established with another participant or the network. This attribute allows users to begin conversations, participate in conversations, and review previously received time-shifted messages of conversations even when there is no network available, when the network is of poor quality, or other participants are unavailable;

v. enabling the system to save media payload data at the sender and, after network transmission, saving the media payload data at all receivers;

vi. enabling the system to organize messages by threading them sequentially into semantically meaningful conversations in which each message can be identified and tied to a given participant in a given conversation;

vii. enabling users to manage each conversation with a set of user controlled functions, such as reviewing "live", pausing or time shifting the conversation until it is convenient to review, replaying in a variety of modes (e.g., playing faster, catching up to live, jump to the head of the conversation) and methods for managing conversations (archiving, tagging, searching, and retrieving from archives);

viii. enabling the system to manage and share presence data with all conversation participants, including online status, intentions with respect to reviewing any given message in either the live or time-shifted mode, current attention to messages, rendering methods, and network conditions between the sender and receiver;

ix. enabling users to manage multiple conversations at the same time, where either (a) one conversation is current and all others are paused; (b) multiple conversations are rendered consecutively, such as but not limited to tactical communications; or (c) multiple conversations are active and simultaneously rendered, such as in a stock exchange or trading floor environment.

x. enabling users to store all conversations, and if desired, persistently archive them in a tangible medium, providing an asset that can be organized indexed, searched, transcribed, translated and/or reviewed as needed;

xi. enabling the system to provide real time call functionality using a best-efforts mode of message delivery at a rate "good enough" for rendering as soon as possible (similar to UDP), and the guaranteed eventual delivery of exact copies of the messages as transmitted by requesting retransmission of any missing or defective data from the originally saved perfect copy (similar to TCP); and

xii. enabling the system to optimize the utilization of network bandwidth by making tradeoffs between timeliness and media quality, using the presence and intentions of the recipient(s) (i.e., to either review the media in real-time or in a time-shifted mode), as well as measures of network latency, network degradation, packet loss or damage, and/or current bandwidth conditions.

[0040] In various embodiments, some or all of the numerous features and functions listed above may be implemented. It should be understood, however, that different embodiments of the invention need not incorporate all of the above listed features and functions.

B. Glossary

[0041] Prior to explaining the details of the invention, it is useful to define some of the terms and acronyms used throughout the written description. This glossary of terms is organized into groups of System Components, Media, Media Management, People and Conversation Management.

B.1. System Components

[0042] Client: A Client is the user application in the communication system, which includes a user interface, persistent data storage, and "Voxing" functionality. Users interact with the Client application, and the Client application manages all communications (messages and signals) and payload (Media) transfers that are transmitted or received over a network. The Client supports encoding of media (e.g., the capturing of voice, video, or other data content) and the rendering of media and supports security, encryption and authentication as well as the optimization of the transmission of data across the network. A Client may be used by one or multiple Users (i.e., multi-tenant).

[0043] Device: A physical device that runs the Client application. A User may be actively logged into a single Device or multiple Devices at any given point of time. In various embodiments, a Device may be a general-purpose computer, a portable computing device, a programmable phone, a programmable radio, or any other programmable communication device.

[0044] Servers: A computer node on the communication network. Servers are responsible for routing Messages sent back and forth between Users over the network and the persistent storage and archiving of Media payloads. Servers provide routing, transcoding, security, encryption and authentication and the optimization of the transmission of data across the network.

B.2. Media

[0045] Message: An individual unit of communication from one User to another. Each Message consists of some sort of Media, such as voice or video. Each Message is assigned certain attributes, including: (i) the User sending the message; (ii) the Conversation it belongs to; (iii) an optional or user created Importance Tag; (iv) a time stamp; and (v) the Media payload.

[0046] Media: Audio, video, text, position, sensor readings such as temperature, or other data.

[0047] Conversation: A thread of Messages (identified, persistently stored, grouped, and prioritized) between two or more Users on their Devices. Users generally participate in a Conversation using their Devices by either Reviewing Messages in real time or in a time-shifted mode, or creating and sending Messages of a Conversation as desired. When new

Messages are created, they either define a new Conversation, or they are added to an existing Conversation.

[0048] Head of a Conversation: The most recent Message of a conversation that has been encoded by the most recent speaker. It is where a User is positioned in a Conversation when reviewing "live" or where one jumps to if the "Jump To Live" feature is used.

[0049] Multiple Conversation Management System or MCMS: An application that runs as part of a Client application, which enables a User to engage in multiple Conversations using a variety of Media types. With the MCMS application, a User selects one Conversation among the multiple Conversations as current, where only the Messages of current conversation are rendered. For the selected current Conversation, the User may transition from a series of back and forth Messages in time-shifted mode to near-synchronous "live" mode, similar to a standard telephone conversation, and back again. The Messages of the non-selected Conversations are in a paused state. Messages associated with the non-selected Conversion will accumulate if others are still participating in those Conversations. The User may selectively transition the current Conversation among the multiple Conversations and Review the accumulated Messages of the selected current Conversation.

[0050] Multiple Conversation Management System-Consecutive or MCMS-C: Similar to MCMS, with the added feature of rendering and enabling Users to manage and participate in multiple Conversations consecutively through a hierarchical system of Priorities and time-shifting, which are automatically managed by the system. The MCMS-C application allows the Messages of consecutive Conversations to be rendered in a prioritized order, as opposed to MCMS where only the Messages of the currently selected Conversation are rendered. MCMS-C is particularly applicable in situations where it is important that the Messages of the consecutive Conversations are rendered, in the prioritized order, and/or the receipt of all Messages, even those belonging to lower priority Conversations, is more important than receiving the Messages in real-time. Examples of situations where MCMS-C may be suitable include, but are not limited to, hospitals, taxi fleet management, or tactical communications.

[0051] Multiple Conversation Management System-Simultaneous or MCMS-S: Similar to MCMS, with the added feature of enabling With MCMS-S, multiple Conversations are selected for simultaneous rendering, as opposed to MCMS where the Messages of only the selected current Conversation are rendered. The MCMS-S application is particularly applicable in situations where a User is listening to multiple Conversations at the same time,

such as a trader listening to multiple brokers on different exchanges and periodically sending trading requests to one or multiple of them simultaneously. MCMS-S may also be suitable for tactical communications as well.

[0052] Priority: The mechanism through which the system determines which Message to render next when a User is participating in MCMS-C. Priority is automatically managed by the system. A User can set default Priorities, or a predetermined set of system Priorities may be used. In the event of a conflict, where more than one Message is ready to be rendered at the same time, the system resolves the conflict at least partly based on Priority, to determine what Message to render immediately and what Message to time shift.

[0053] Tags: a set of attributes a User or the system may assign to a Conversation or a message, such as a topic (a company name), a directive ("action items"), a indicator ("conversation summary"), or any other label by which one might want to search or organize the data.

[0054] Importance Tags: A special Message attribute that enables a sender to specify when a Message is to be rendered, regardless of other Priority settings. An "urgent" Importance tag will override other Priorities for example. This feature is critical for tactical systems, though any system can be configured to use or disable this feature.

[0055] Packet: Any unit of binary data capable of being routed through a computer network. Each packet consists of header (meta data) and payload (media data). Includes standard packet protocols such as, but not limited to, Internet Protocol (IP), EvDO, UMTS or any other packet-based network, either radio, fiber optic, or wired.

[0056] Header or Packet Header: The portion of a packet that describes the packet; the meta data concerning the payload, its encoding type and destination.

[0057] Vox packet: A proprietary packet that enables the system and method to further refine and optimize the delivery of Messages, Media and other signaling information.

[0058] Media Payload (or Payload): The actual Media portion of a Packet.

B.3. Media Management

[0059] Time Shift Delay (TSD): The amount of time between the arrival of a Vox Packet and the rendering of the Packet on a Device. The TSD must exceed the **Minimum Time Shift Delay**. The TSD is typically determined by the User's behavior in choosing to review the Messages of a Conversation some time after receipt.

[0060] Minimum Time Shift Delay (MTSD): The time shift delay enforced by the Client to allow for jitter processing using jitter buffer techniques. This causes the system to delay rendering until an adequate number of the packets have arrived to create a usable media stream. The system will typically adaptively adjust the MTSD over time to compensate for variable conditions in the network.

[0061] Rendering: Delivering a Media stream to a User in a form suitable for User consumption (e.g., voice, text, graphic display, video, or a combination thereof).

[0062] Mixing: The Rendering of one or more Media streams. For example, the Media stream from two Participants of a Conversation may be Mixed when Rendered, creating a User experience similar to a conversation where multiple people are speaking at the same time.

[0063] Encoding: The process of translating Media either created by a User (such as voice or video) or otherwise originating on a Device (such as GPS or other sensor data), and converting the media into digital data to be processed by a Client.

[0064] Adaptive Jitter Buffer: Jitter buffers or de-jitter buffers are used to counter jitter (i.e., either the arrival of out of sequence packets or the delayed arrival of packets) introduced by packet switched networks, so that the continuous rendering of audio (or video) signals transmitted over a network can be performed without disruption. The data is stored in a buffer before Rendering to allow a reasonably sized buffer of Media to arrive. The Media may be rendered before all the Packets are received, trading off quality for currency. An Adaptive Jitter Buffer is capable of dynamically changing its size to optimize the delay/quality tradeoff.

[0065] Persistent Infinite Message Buffer (PIMB): The PIMB is a storage management system for the storage of time-based Media that performs both the de-jittering of "live" data and the storage and retrieval of archive data. The PIMB further includes the additional attributes of potentially infinite and persistence storage of Media. The PIMB maintains

"exact" or full copies of Vox Packets of a Message and Conversations at some or all Participant Devices and/or Servers.

[0066] Packet Loss Compensation or Concealment) (PLC): During Rendering of a Media stream, the PLC component compensates for missing Packets, interpolating the results to present the stream to a reviewer. Missing Packets may be rendered as silence, or information from adjacent Packets may be used to present an interpolated sound or image. The particular method to be used will be dependent on the media, Codecs in use, and other generally known parameters.

B.4. People

[0067] User: A person who is authorized to use the system.

[0068] Contact: A record of either a User or non-user of the system. Users typically engage in Conversations with members on their list of Contacts. A non-user is a user that accesses or uses the system using a legacy phone, radio or other non-Client 12 enabled device.

[0069] Group: The association of multiple Contacts. Contacts may be selectively added or deleted from a Group. When a Conversation takes place among a Group, all the members of the Group may or may not participate.

[0070] Channel: Typically used for tactical communication systems. A Channel is similar to a Group in that it associates multiple Contacts with the Channel.

[0071] Participant: A person who is identified as a member of a Conversation. Could be a User or a non-User participant.

B.5. Conversation Management

[0072] Time Shifting: Time shifting is the ability to play any Message at any time after it has been received as determined by the User-recipient. By Time-Shifting, a User may Review a Message: (i) immediately on demand by Rendering immediately after the MTSD; or (ii) time-shifted in a mode of reviewing the Message upon the discretion of the User; (iii) from the archive for searching, reconstructions, etc. of old Conversations; (iv) after a delayed period of time to accommodate the Reviewing of other higher Priority Messages (or Conversations) that need to reviewed first; (v) and/or repeatedly if necessary for the Message to be reheard and understood. In other words, Time Shifting is the ability of a user to render a Message at any time after the system imposed MTSD.

[0073] Reviewing: Listening, viewing, reading or otherwise observing the Media content in Messages. Reviewing may take place in either a near synchronous real-time "live mode" or the time-shifted mode.

[0074] Intention: Either (i) a User-defined attribute capturing whether the User wants to Review the Messages of a Conversation either as soon as possible or Review the Messages in a time-shifted mode; (ii) implied by a User's behavior; or a combination of (i) and (ii). .

[0075] Attention: A user attribute capturing whether the User is Reviewing the Messages of a given Conversation at the moment.

[0076] Catch Up To Live (CTL): A rendering mode that allows a User, who is not at the Head of a Conversation, to Review previous Messages more quickly to "Catch Up To Live" (i.e., the Head of the Conversation). The CTL feature may use any of a number of catch up techniques, such as the faster replay of Messages, the removal of gaps in the Media of the Messages, removal of hesitation particles, etc. When the User has caught up to live, the system seamlessly flows into the live Conversation. This is a very useful feature with conference calls, for example, in situations where a User needs to temporarily shift their attention away from the Conversation, but wishes to hear the entire Conversation upon their return.

[0077] Catch Up Mode: A user-configured or pre-configured mode that determines how the CTL process will catch-up (i.e., replay faster, remove silence, and hesitation particles, or a combination thereof).

[0078] Jump To Live (JTL): This feature allows a user to jump from their current position to the Head of a Conversation. A user will typically use the JTL feature when they do not want to Review all of the Messages between their current position in the Conversation and the Head. When the JTL feature is implemented, the user skips over any intervening Messages and starts Rendering the "live" Messages at the head of the Conversation.

[0079] MCMS Participant Attributes: A set of attributes, either defined by a User, interpreted by the system from the User's behaviors, assigned by an administrator, or a combination thereof, which define the Intention, Attention, Priority, and rendering preferences of a receiver for a given Conversation. The attributes include, but are not limited to: (i) the Intention of when a receiver would like to render to the Messages of the Conversation. Possible Intention values include: "now", "time-shifted", "Catch Up To Live" (CTL), "paused", and "never"; (ii) Catch Up Mode, which is a configuration setting which

determines how the CTL process should catch the receiver up to live (e.g., play faster, skip silence gaps or hesitations, or play at normal speed); (iii) Time Shift Delay (TSD), which defines how far the receiver's current position in the conversation is from the Head of the Conversation, and (iv) the Priority of the Message with regard to the receiver's other Conversations.

C. System Architecture

[0080] Referring to Figure 1, a block diagram of the telecommunication and media management system according to one embodiment of the invention is shown. The system 10 includes a plurality of Clients 12_1 through 12_n, running on Devices 13_1 through 13_n respectively. The Devices 13 communicate with one another over a communication services network 14, including one or more Servers 16. One or more networks 18_1 through 18_n, is provided to couple the plurality of Devices 13_1 through 13_n to the communication services network 14. In various embodiments, the networks 18 may be the Public Switched Telephone Network (PSTN), a cellular network based on CDMA or GSM for example, the Internet, a tactical radio network, or any other communication network, or a combination thereof. The communication services network 14 is a network layer on top of or otherwise in communication with the various networks 18_1 through 18_n. In various embodiments, the network layer 14 is either heterogeneous or homogeneous. Clients 12_1 through 12_n communicate with one another and with Servers 16 over the networks 18_1 through 18_n and network 14 using individual message units referred to as “Vox packets”, which are described in detail below.

D. Client Architecture

[0081] Referring to Figures 2A and 2B, a block diagram of a Client 12 running on a Device 13 is illustrated. As illustrated in Figure 2A, the Client 12 includes Multiple Conversation Management System (MCMS) application 20, a rendering and encoding module 21, and an MCMS applications database 22. As illustrated in Figure 2B, the Client 12 further includes a Store and Stream (SAS) module 24 with a Persistent Infinite Message Buffer (PIMB) reader 26, a PIMB writer 28, PIMB database 30, a data and network quality (DNQS) store 32, and Media driver and encoder hardware 34. The MCMS application 20 and the Store and Stream module 24 communicate with one another through message handling modules 25a and 25b respectively. The Client 12 further includes an authentication-encryption-security module 40 and a communication protocol module 44.

[0082] The module 40 provides authentication, encryption and security services during the transmission and receipt of "Vox" packets to and from the Client 12. The communication protocol module 44 encapsulates Vox packets into the native packets used by the underlying network 18 connected to the Device 13 running the Client 12 when transmitting data and de-encapsulating Vox packets from the native packets when receiving data. With the modules 40 and 44, multi-party end-to-end authentication, encryption and security is provided between Clients 12. Messages are authenticated, encrypted and secured across the networks 18_1 through 18_n and network 14, from a first sending Device 13 to second receiving Device 13.

D.1.1. The MCMS Database

[0083] The database 22 stores and manages the persistent meta data for a number of entities in the system 10, including Contacts and Participants, Conversations and Messages (live and stored), and default Priorities, and information regarding the Servers 16. In addition, the MCMS database 22 stores the moment-to-moment operational data of a User's Conversations, presence, and status, as well as that of all the Participants conversing with the User or on the User's Contact list. For example, with regard to Conversations and Messages, the database 22 keeps track of status information, such as what Messages of a Conversation a User has or has not Reviewed, Priorities, and Catch Up To Live status for each Conversation in which the Client 12 is a Participant, the presence and status of all Participants, and other network and other system management data.

D.1.2. The MCMS Application

[0084] MCMS application 20 supports the different Voxing modes of engaging in conversations and/or managing multiple conversations using a variety of media and data types (voice, video, text, location, data, etc.). Users engage in Conversations by sending Messages to designated recipients using their Client 12 enabled Devices 13. Depending on preferences and Priorities, the recipient might Review the Message in real time, or they might simply be notified that the Message is ready for Reviewing. Users can transition from a series of back and forth Messages, which are Reviewed in a time-shifted (or voice messaging) mode or in a near synchronous, full duplex conversation (similar to standard "live" phone calls) and then back to voice messaging again. The MCMS application 20 allows a User to control their interactions with their most important Conversations in real-time without missing any Messages in other ongoing Conversations. For example, the MCMS application 20 notifies a User of urgent or high priority communications from a Conversation

that they are not currently Reviewing. MCMS application 20 also enables all Messages from all Conversations to be stored for later retrieval so they can be reviewed at any time.

[0085] In accordance with various embodiments, there are several different operational modes of the MCMS application 20, including MCMS-Consecutive (MCMS-C) and MCMS-Simultaneous (MCMS-S), which support the consecutive and simultaneous rendering of Messages respectively. Each of these embodiments is described in more detail below. Unless specifically specified, the term "MCMS" is intended to generally mean the MCMS application 20, which includes the aforementioned different modes.

[0086] The MCMS application 20 is a multi-tiered architecture that includes a number of modules and services. The modules and services include the MCMS Database Module 20a, the SAS Services Module 20b, the Messaging and Signaling Services Module 20c, the User Interface Application Programming Interface (API) 20d, the User Interface Module 20e, the Conversations/Messages Management Services 20f, the Priorities Services 20g, the Contacts Service 20h, the Presence/Status Services 20i, and the Messages/Signals Services 20j.

D.1.2.1 The MCMS Database Module

[0087] The MCMS database module 20a is a service module that manages all function calls necessary for the MCMS application 20 to access the MCMS database 22.

D.1.2.2 The SAS Services Module

[0088] The SAS Services module 20b includes a set of function calls that enable communication and coordination between the MCMS application 20 and the Store and Stream module 24, and which are passed back and forth through the message handling modules 25a and 25b respectively. The set of function calls enable both the MCMS application 20 and the Store and Stream module 24 to operate as necessary to implement the various Voxing functions when invoked by Users and/or as dictated by network conditions. Some of the functionality performed by the SAS Services module 20b includes maintaining and communicating the status of Message transmissions and Message acknowledgments, the instructions for rendering of Messages, and the status and presence of Users.

D.1.2.3 The Messaging and Signaling Services Module

[0089] The Messaging and Signaling Services module 20c runs on both Clients 12 and Servers 16 and enables communication between the Client 12 and the Servers 16 of the system 10. This communication, which includes messages, data and other signals, allows the

Client 12 and the system 10 to track and administer communications, network status, Users, and User status. Types of messages and signals sent between the Message and Signaling Services modules 20c running on the Clients 12 and the Servers 16 include, for example, network availability of Users, tracking of Messages that the Server 16 has sent to the Client 12 (possibly including a "high water mark") to determine if an entire message or some portion of a message is missing, (e.g., a sequence number per Participant per Conversation created by the "generating" Client), whether a user is speaking or Reviewing Messages of a given Conversation, where a User is with respect to the Head of a Conversation, or when a Participant is no longer Reviewing a Conversation live. These are examples a few of the many types of messages and signals sent between the Message and Signaling Services modules on the Clients 12 and Servers 16 and in no way should be construed as limiting the invention.

D.1.2.4 The User Interface API

[0090] The User Interface API 20d is a module that defines a set of function calls that define the programming interface between the User Interface module 20e and the underlying services of the MCMS application 20. The User Interface API 20d supports general-purpose methods such as UI application support, and all function calls necessary for a User Interface to operate the MCMS Application 20. In various embodiments, the User Interface API 20d enables the Client 12 to support a wide variety of user interfaces and device types, such as Adobe Flash-based and/or Microsoft Windows applications, cellular or mobile phone devices, PSTN devices driven with tones, a voice user interface (VUI), and physical radio communication interfaces. In various embodiments, the User Interface API module 20d enables the design of both highly flexible and highly constrained user interfaces to support the functionality of the MCMS application 20.

D.1.2.5 The MCMS User Interface Module

[0091] The MCMS User Interface module 20e supports the operation and functions of the audio and video user interface of the Client 12. The User Interface module 20e supports a host of user interactions and can be implemented with various interaction mediums, such as, an array of graphical user interface screens, an Audio/DTMF interface, or voice user interface on the Device 13, all of which enable a User to interface with the system 10. A partial list of User interactions that are supported include, for example, functions to: log-in; manage, join, and monitor Conversations; control Conversation rendering; manage Priorities; and requests

to review archived Conversations. It should be noted that this list is exemplary and in no way should be construed as limiting the invention.

D.1.2.6 Conversation/Message Management Services

[0092] The Conversation/Message management services 20f is a module which defines a set of functions that manage the data structures and processes responsible for managing and retaining all information needed for the User to manage the receipt and Review of transmitted and received Media (e.g., voice or video content Messages) between the participants of a Conversation. The Messages are organized into Conversations. Media that is sent or received by the Device 13 running the application 12 is available for immediate Review while being received. The received Media is also recorded for Review in a time-shifted mode, Conversation management, and archival purposes. In an alternative embodiment, Messages or Conversations can be optionally marked for transience, specifying their desired retention requirements (e.g., some Messages will not be retained or stored beyond the requirements for immediate rendering). In yet another embodiment, Media can be optionally marked for review in a time-shifted mode only and cannot be reviewed immediately upon receipt.

[0093] The Conversation/Message management services 20f further enables, for each current or ongoing Conversation of the User, the sending of Media to a receiving Client 12 at any time, and the receiving Client 12 seamlessly associates these Messages with the appropriate Conversation, regardless of the actions or inaction of the receiver.

[0094] With the Conversation/Message management services 20f, all Conversations are essentially asynchronous. If two Users are actively engaged in a given Conversation and the User controlled delay between transmissions is minimal, the experience will be one of a synchronous full duplex conversation, as with current telephone or VoIP conversations. If either User delays their participation, for whatever reason, the Conversation drifts towards an asynchronous voice (or other Media) messaging experience. In alternative embodiments, Conversations can be optionally Tagged as asynchronous Messages only or synchronous Messages only. In either of these cases, the Conversation cannot drift between the two modes, unless the Tag is reset. After the Tag is reset, the Conversation again may flow between near synchronous (i.e. live or real-time) and asynchronous (i.e., time-shifted or voice messaging) modes.

[0095] The Conversation/Message management service 20f processes the transmission and receipt of Messages in a progressive fashion. When transmitting, Media may be created while

Messages are simultaneously encoded, stored and transmitted. In other words, the transmission of Messages may occur simultaneously with the generation of Media by the User (i.e., while speaking into their Device 13 or generating video). On the receiving side, the receipt, storage, and Rendering of Messages also all occur progressively. Messages do not need to be completely received before they can be Rendered. The Rendering of Messages may occur at the same time Messages are being delivered, right up to the MTSD. Further, the service 20f is also capable of the simultaneous transmission of outgoing Messages and Rendering of incoming Messages. The progressive nature of the service 20f allows a User to be engaged in a live Conversation while storing and streaming the media of the Conversation for later retrieval and review as well other functions described herein.

[0096] The time-shifting of Messages by the Conversation/Message management services 20f allows a User to "Catch Up To Live" on a Conversation if they missed earlier Messages or were involved in another Conversation. This time-shifting process eliminates the need for Users to broadcast a request to their entire Group or Channel to have Messages repeated. Older Messages may be replayed at any time at potentially higher speeds to save time. Users may easily skip forward and backward through their Messages and within individual Messages. The Reviewing process may be configured on a Message-Priority basis to potentially skip lower priority Messages.

[0097] In one embodiment, the Conversation/Message management service 20f also identifies Messages by a specific Participant (speaker) and, by default, mixes Messages of a Conversation that were delivered at the same time (MCMS-S). In an optional embodiment, a User could Review the transmissions of different Participant speakers of a Conversation separately.

[0098] The Conversation/Message management module 20f further allows Conversation sharing among Participants, who can be added to an active or archived Conversation. In one embodiment, an added Participant to a Conversation is provided access to the Conversation and has the ability to retrieve the previous Messages of the Conversation for Review. In an alternative embodiment, the added Participant is provided access to the Messages of the Conversation only from the point where the new Participant joined, and not any previous Messages of the Conversation.

[0099] The Conversation/Message management module 20f is also responsible for managing the functions used to control all rendering tasks performed by the Store and Stream module

24. These tasks include rendering Media (i.e., voice, video, etc.) appropriately for the Device 13 running application 12. These rendering tasks include, but are not limited to, the rendering of Mixed Messages (i.e., overlapping messages), as well as rendering according to user-defined criteria, such as playing faster, catching up to live, removing silence, removing hesitation particles, frequency shifting, and the ability to apply independent gain control to individual senders in a multi-party conversation.

D.1.2.7 Priority Services

[0100] The Priority service 20g is a module that defines a set of functions that manage the data structures and processes responsible for managing and retaining all information needed for a User to manage the Priority of the consecutive Conversations (i.e., MCMS-C) in which the User is engaged. When a User participates in a number of consecutive live Conversations, the User is required to prioritize the Conversations. Issues arise when Messages of different Conversations are ready to be rendered at the same time. An algorithm is used to determine the order in which the Messages are rendered that considers the availability of Messages to be rendered and the Priorities set by the User. The algorithm determines that the available Messages with the highest priority are rendered first while any concurrently available Messages are time shifted automatically just enough to allow for the rendering of the higher priority Message. As rendering time becomes available, the system will automatically render the time-shifted messages according to the User's Priorities.

D.1.2.8 Contacts Services

[0101] The Contacts services 20h is a module that defines a set of functions that manage the data structures and processes responsible for managing and retaining all information needed for authenticating and associating one or more Contacts with Conversations. When sending a Message as part of a Conversation that is associated with a number of Contacts, all of the Contacts receive the Message.

D.1.2.9 Presence/Status Services

[0102] The Presence/Status services 20i is a module that defines a set of functions that maintain the data structures and processes responsible for managing and sharing presence and status information between certain Users and/or non-users of the system. In various embodiments, the presence and status information is maintained for all User and non-users engaged in the Conversations the User of the Client 12 is engaged in, all Users and non-users in the Contacts list, or Users within a predefined domain (e.g., the members of a corporation

or other organization). These examples are merely illustrative and should not be construed as limiting. The Presence/Status services 20i module may manage and share presence and status information on any defined set of Users and/or non-users.

[0103] The Presence/Status service 20i enables Users to monitor the status of other User's Intentions, Attention, and their Time Shift delay on any given Conversation (i.e., how far back they are from Reviewing the Messages of the Conversation live). In one embodiment, privacy controls are provided concerning availability of Presence and Status data. The Presence/Status module 20i further controls the data that enables the system 10 to deliver Messages that match the behavior and Intentions of Users. For example, a User may indicate their Status by designating an Intention to either Review or not Review a Conversation live. In response, the Presence/Status services 20i issues commands that cause the rendering of Messages either "live" or time-shifted, in accordance with the Intention of the User. In addition, the Intentions of Users are shared with the other Participants of the Conversation. The service 20i is also capable of inferring other Status values from the User's behaviors. The Presence and Status information is also used to optimize network traffic and bandwidth, as described in more detail below.

D.1.2.10 Messages/Signals Services

[0104] The Messages/Signals services 20j is a module that defines a set of functions that manage the data structures and processes responsible for messaging and signaling Users of the system 10, using special messages or audible tones. The special messages or tones may include for example an indication if a Message or Messages are live or time-shifted, whom the Message(s) are from, Priority, and other factors. The Message/Signal service 20j further has the ability to (i) signal the presence or absence of Users on the network, as well as the ability to notify if one or more Users are no longer actively Reviewing the Messages of a Conversation; (ii) "ring" or otherwise notify another User to get their attention when they are paying attention to another Conversation or not paying attention to their Device 13 at all; (iii) leave a Message for Users currently not on the network 18 to immediately review the Message the next time the individual re-connects to the network 18; (iv) generate an audible or visible feedback that alerts the sender that a sent Message was not received by recipient(s), generate a confirmation when the Message has been received by the recipient(s), and/or a confirmation indicating when the Message has been Listened to by the recipient(s); and (v) implement a Priority scheme where individuals on a Conference or tactical call may be

notified that their attention is immediately needed on the call. This indication may convey multiple levels of urgency and an acknowledgement of some kind by the recipient.

D.1.2.11 Rendering and Encoding

[0105] The rendering and encoding module 21 is responsible for performing all rendering tasks for the MCMS application 20. These tasks include rendering Media appropriately for the device 13 running application 12.

D.2 The Store and Stream Module

[0106] The Store and Stream module 24 supports a number of functions and performance attributes, which are described below.

[0107] With the Store and Stream module 24, Message transmission is essentially "full-duplex", enabling any party to send a Message at any time, even while another party is also sending a Message, or if the other party is unavailable or otherwise engaged. The Store and Stream module is able to render messages as in a live PSTN or VoIP call or deliver them for time shifted messaging modes. It is able to optimize transmission and control Rendering according to the desires of the User.

[0108] The Store and Stream module 24 maintains connectivity with all target recipients (e.g., Servers 16 or other Devices 13) on the underlying network 18, manages all message, signal, and media transmissions, and optimizes the delivery speed and bandwidth usage across the network 18 to meet a User's immediate performance requirements, while managing network quality and capacity. The module 24 adapts and optimizes Media delivery commensurate with the quality and capacity of the underlying network 18. When insufficient underlying network resources are available, the quality of the transmitted Media streams can be degraded. As bandwidth becomes available, the quality of the transmitted Media streams may be increased. In addition to tradeoffs of Media quality, the Store and Stream functionality can make tradeoffs in the amount of Media transmitted in each packet based on Users' intentions to render data in real time as described below.

[0109] By dynamically controlling the delivery rate of Media based on the conditions of the underlying network 18, the Store and Stream module 24 is optimized to deliver time-sensitive Media that is "good enough" to Render upon receipt, and the guarantee eventual delivery of exact or full copies of the Media for archival purposes through a background process of requesting retransmission of missing, low quality, or damaged packets. As long as sufficient network resources exist to meet minimum Media quality levels, this retransmission does not

impede the Rendering of live call Media. The Clients 12 of the system 10 are thus designed to bridge the performance gap between the delivery of an exact or complete copy of the Media at the expense of substantial potential latency versus the quick delivery of Media, but with no guarantees of completeness. In the context of this application, the term "good enough" means that the quality of the Media is sufficient so that when it is rendered, it is intelligible. The notion of "good enough" is therefore subjective and should not be construed in absolute terms. For example, the quality level of certain Media to be good enough may vary depending on the type of Media, circumstances, and other factors.

[0110] The Store and Stream module 24 further persistently stores all Media created by or otherwise originating using a Device 13 or received over the network 18 from other Device 13 and/or users. There are several significant advantages of storing this Media on the Device 13 running the Client 12: (i) it enables Users to leave a Message for another party, even when the sender and/or the recipient has either unavailable or poor network connectivity. In the case of insufficient bandwidth, the Message will be transmitted as fast as available bandwidth can be effectively used. In the case of no connectivity, the Message is queued for transmission as soon as network connectivity becomes available, resulting in a time-shifted delivery; (ii) the User has the ability to pause, replay, fast-forward, and Catch-Up-To-Live with an ongoing Conversation, as well as retrieve and review the archived Messages of previous Conversations; and (iii) it enables the optimization of data payloads over the system 10 and improves system resilience against network bandwidth and connectivity problems that may occur from time to time.

[0111] The Store and Stream module 24 is also responsible for: Mixing Messages as appropriate to create overlapping Messages (generated by the normal overlap of speakers in a Conversation or background noise), simulating an actual Conversation where multiple parties are speaking; rendering transcriptions or translations of audio media; adjusting the rendering of Media according to a number of User-defined criteria including playing faster, removing silence gaps between spoken words, removing hesitation particles, and frequency shifting; and the ability to apply independent gain control to individual senders in a multi-party Conversation; as well as other potential Rendering options.

[0112] The Store and Stream module 24 manages control and informational messaging between itself and MCMS.

D.2.1 The Persistent Infinite Message Buffer (PIMB)

[0113] The Persistent Infinite Message Buffer or PIMB 30 is a set of indexed (i.e., time-stamped and sequentially numbered) Media payload data structures and a system for their storage and retrieval. In one embodiment, the data in the PIMB 30 is arbitrarily persistent, meaning it is available virtually forever or at least until the system runs out of storage. Various retention rates and strategies may be employed to make effective use of storage resources. Many possible implementations exist for the physical storage implementation of the PIMB 30, including, but not limited to: RAM, Flash memory, hard drives, optical media, or some combination thereof. The PIMB 30 is also "infinite" in size, meaning the amount of data that can be stored in the PIMB 30 is not inherently limited. This lack of limit is in comparison to existing jitter buffer technology that discards data as soon as it is rendered. In one specific embodiment, the PIMB 30 may be implemented using a small and relatively fast RAM cache memory coupled with a hard drive for persistent storage. As the physical storage capacity of the PIMB 30 is exceeded, the data is maintained on the Server 16 (as described below) for later retrieval on demand. User criteria or a replacement algorithm, such as least-recently-used, or first-in-last-out, is used to control the actual data stored in the PIMB 30 and the data that is maintained on the Server 16 or archived at any point in time. The PIMB 30 further provides the attributes of file system storage and the random access attributes of a database. Any number of Conversations, regardless of their duration or the number of Messages in each, may be stored and later retrieved for Review. In addition, the meta data associated with the Messages of a Conversation, such as its originator and its length, may be also stored in the PIMB 30. In alternative embodiments, the indexed Media payloads and other data can be stored for a designated period of time (e.g. 30 days). Once the age of the media exceeds the designated period, the payloads and data are discarded. In another embodiment, payloads can be discarded based on the sender and/or the recipient of the Message containing the payload, or the topic of the Conversation or Messages associated with the payload. In yet other embodiments, payloads and data may be marked for transience, meaning the Messages will not be stored in the PIMB 30 beyond the requirements for immediate Rendering.

D.2.2 The Data and Network Quality Store

[0114] The data and network quality store (DNQS) 32 is a data store for storing information regarding Media payloads and Vox packets that are either read from or written to the PIMB 30.

D.2.3 The PIMB Writer

[0115] The PIMB writer 28 writes data to the PIMB 30 for two basic purposes. The PIMB writer 28 writes data from a Media capturing device (e.g., a microphone or camera) on the Device 13 running the Client 12 ("Encode Receive"). The PIMB writer 28 also writes data received over the network 18 from other Clients 12 into the PIMB 30 ("Net Receive").

D.2.3.1 Encode Receive

[0116] For capturing Media from the Device 13, the PIMB writer 28 includes Encoder Receiver 28a and a Data Storer 28c. When a User speaks into the microphone or generates video images with the Device 13 for example, the hardware 34 receives the raw audio and/or video signals and provides them to the Encoder Receiver 28a, which encodes the signals into indexed media payloads (hereafter sometimes simply referred to as "payload" or "payloads"). The Data Store 28c stores the payloads into the PIMB 30. Other types of Media, such as sensor data is converted into payloads in a similar manner.

D.2.3.2 Net Receive

[0117] For storing Media received over the network 18 into the PIMB 30, the Net Receive function of PIMB writer 28 includes a Network Receiver 28d, a Data Bufferer 28e, a Data Storer 28f, a Data Quality Manager 28g, and a Network Quality Manager 28h. The Network Receiver 28d receives Vox packets over the network 18. The Data Bufferer 28e places the received Vox packets into their proper sequence and prevents the Rendering of the incoming Vox packets for at least the Minimum Time Shift Delay (MTSD) delay. The Data Storer 28f transforms the packets into indexed media payloads and stores the indexed media payloads in the PIMB 30. As the payloads are stored, the Data Quality Manager (DQM) 28g notes any missing or defective packets. If packets are missing or defective, the DQM 28g schedules a request for retransmission over the network 18. The sending device replies by resending the missing or defective packets. Eventually these packets are converted into indexed media payloads and stored in the PIMB 30. By retrieving the missing or defective packets, an "exact" copy of a sender's Message is eventually stored in the PIMB 30. The retransmission of missing and/or defective packets does not delay the rendering of Messages in real time, provided that the packets that have been delivered are of "good enough" quality and quantity. Retransmission requests may be delayed by the DQM 28g if insufficient network resources are available to support both the new "live" data as well as the retransmission.

D.2.4 The PIMB Reader

[0118] The PIMB reader 26 reads data from the PIMB 30 for two basic purposes. The PIMB reader 26 accesses the PIMB 30 when data is to be rendered ("Render") for the local Client 12. Data is also read from the PIMB 30 when data is to be transmitted ("Transmit") by the Client 12 over the network 18.

D.2.4.1 Render

[0119] For the rendering of messages on the Client 12, the PIMB reader 26 includes a Data Prioritizer 26a, a Data Retriever 26b, a Packet Loss Compensation/Interpolator ("PLC/Interpolator") 26c, a Data Mixer 26d and a Data Renderer 26e. The Prioritizer 26a prioritizes the data to be rendered by building an ordered queue of messages that could potentially be Rendered. It uses User configured Priority for the rendering of consecutive Conversations (MCMS-C). In addition, the Data Prioritizer uses the availability of media data to render within the limits imposed by the MTSD, the User's current Attention, and the User's defined and implied Intentions. The Data Retriever 26b retrieves the prioritized indexed media payloads from the PIMB 30. The PLC/Interpolator 26c performs packet loss compensation and interpolation on the retrieved payloads, using known packet loss compensation and interpolation algorithms. The particular method to be used is dependent on the media Codecs in use, and other well-known parameters. The Mixer 26d is used to appropriately mix concurrent data streams from multiple Messages of a single Conversation together. For example, if two or more Participants of a Conversation are speaking at the same time, the Mixer 26d mixes the Messages, creating the effect of both Participants speaking at the same time. In an alternative embodiment, the User has the option of Reviewing the multiple streams from one Participant at a time. If only one Participant in the Conversation is speaking, the Mixer 26d may simply pass the single Message stream, without performing any mixing. The Renderer 26e takes the data from the Mixer module 26d and converts it into a form suitable for the hardware driver 34. The hardware 34 then drives either the speaker or video display of the Device 13, depending on the type of Media, creating voice, video or some other audible and/or visible notifier on the Device 13.

D.2.4.2 Transmit

[0120] To prepare messages for transmission from the Client 12 over a network 18, the PIMB reader 26 includes a Data Prioritizer 26f, a Packet Quality Manager (PQM) 26g, a Data Retriever 26h, Packetizer 26i, a Transmitter 26j and an Acknowledger 26k. The Data

Prioritizer 26f prioritizes the Messages for transmission over the network 18. Priority is determined using the MCMS Participant Attributes related to payloads available for transmission, network connectivity and bandwidth conditions, and the Intentions of Users beyond the next hop to either Render live or time-shifted, and, in some embodiments, possible optimizations of transmission bundling where multiple packets to any given next network hop are available. The prioritized packets are then optimized, using the PQM 26g, which assures the timely delivery of "good enough" data quality for live Messages, while minimizing real-time bandwidth, as described in more detail below. The Data Retriever 26h retrieves the appropriate payloads from the PIMB 30. The Packetizer 26i assembles the payloads into Vox Packets, which are then transmitted by the Transmitter module 26j over the network 18. When the recipient receives the Vox packets, an acknowledgement is sent back to Acknowledger 26k over the network 18 for notifying the sending User that a Message has arrived at its destination.

D.2.5 The Packet Quality Manager

[0121] The PQM 26g has several optimization goals: (i) the timely delivery of an adequate copy of time-sensitive Media ("as soon as possible to be good enough" for Rendering); (ii) the efficient use of available bandwidth, meaning using the optimal transmission frequency, payload quality, and packet size for the underlying network; and (iii) the ability to dynamically adjust or make changes in the transmission frequency, payload content, payload quality, packet size, etc. as network conditions change.

D.2.6 The Network Quality Manager

[0122] On the receiving side of a network transmission is the Network Quality Manager 28h (NQM). The NQM is responsible for observing specific properties of network performance for each sender that has sent media to the Client 12, comparing expectations of jitter, loss, and throughput to their actual values. This is used to compute a Network Quality Rating (NQR) for every sender. This NQR is used to indicate sender availability and Conversation live-ness to the User of the receiving device.

D.2.7 The Data Quality Manager

[0123] The Data Quality Manager 28g measures the quality of the data being received over the network by observing packet loss, jitter, and throughput. The DQM 28g uses these measurements for three purposes: (i) to send receipt reports back to the sender; (ii) optionally

using those receipt reports to request retransmission of certain data; and (iii) making these measurements available to the NQM 28h.

E. Server Architecture

[0124] Referring to Figure 3, a block diagram of the application 78 that runs on the Server(s) 16. The application 78 is similar to the Client application 12 in many regards and includes an MCMS server application 80, an MCMS database 82, a store and stream module 84, a PIMB 85, a data and network quality store (DNQS) 86, MCMS-SAS message handling modules 87a and 87b which manage messages and signals back and forth between the MCMS server application 80 and Store and Stream module 84, an archive/retriever 88, and an archive 89. The application 78 further includes an authentication-encryption-security module 40 and a communication protocol module 44.

[0125] The MCMS server application 80 is a multi-tiered architecture including a MCMS Database Module 20a, a Store and Stream (SAS) Module 20b, a Messaging/Signaling Module 20c, Conversations/Messages management services 20f, Priority services 20g, Contacts (including User and Authentication) services 20h, Presence/Status service 20i, and Messages/Signals services 20. The aforementioned modules and services of the application 78 are similar or the same as the modules and services having like reference numerals as the Client 12, and therefore are not described in detail herein, except for one notable exception. In various embodiments, the MCMS server application 80 and Store and Stream module 84, including the MCMS database 82, is configured to support many Users in one instance of the application. The one instance may be further configured to support multiple domains, where each domain is defined as a group of Users (i.e., a corporation or other group of Users belonging to a common organization). This architecture allows each application 78 on Server 16 to serve multiple users (or domains), where each user (or domain) is not visible to other Users. This partitioning is referred to as "multi-tenancy".

[0126] The server Store and Steam 84 module performs the functions of Net Receive and Transmit. For the Net Receive function, the module 84 includes a Net Receiver 28d, Data Bufferer 28e, a Data Storer 28f, a Data Quality Manager (DQM) 28g, and a Network Quality Manager 28h. For Transmit functions, the module 84 includes a Data Prioritizer 26f, Packet Optimizer 26g, Data Retriever 26h, Packetizer 26i, Transmitter 26j and an Acknowledger 26k. The aforementioned elements of the Store and Stream module 84 are similar or the same

elements having like reference numerals as the Client 12, and therefore are not described in detail herein.

[0127] Since the Server 16 does not directly interact with Users, the encoding and rendering functions provided in the Store and Stream module 24 of the Clients 12 need not be present. The MCMS application 80, when running on Servers 16, does not interact directly with Users. Consequently, the user interface and user interface API modules and services 20e and 20d are not needed.

[0128] The application 78 on each Server 16 potentially serves multiple tenants, meaning it serves multiple Users of the system 10. The PIMB 85 of the server application 78 is therefore significantly larger and is used to store the media payloads of multiple Users, as opposed to the PIMB 30, which is used to store just the generated or received payloads of only a single User. The main purpose of the Store and Stream module 84 is to receive Messages transmitted by the Clients 12 and transmit Messages to other Clients 12. When a Client 12 transmits a message, the message contains an identifier associated with the target recipient. In response, the Server 16 finds a delivery route to a Client 12 associated with the intended or targeted recipient. As Messages are received, they are stored in the PIMB 85 and transmitted to the next Server 16 (i.e., the net "hop") of the network layer 14 along the path to the intended recipient(s), or to the recipient(s) directly depending on the system configuration. The archive-retriever 88 is responsible for archiving the media payloads stored in the PIMB 85 in archive 89. As the physical space in the PIMB 85 is exhausted, media payloads in the PIMB 85 are moved to the archive 89, which is a mass storage device. In various embodiments, the payloads stored in the PIMB 85 may be archived in accordance with User defined criteria and/or any known replacement algorithm, such as first-in-first-out (FIFO) or least recently used (LRU). It should be noted that only a single Server 16 is illustrated in Figure 1 for simplicity. It should be understood that in actual embodiments, multiple servers or a "server farm" may be used for a network with a large number of Users.

[0129] The terms "persistent" and "infinite" used to describe the PIMB 30 and the PIMB 85 should not be construed literally as absolute terms. A User may wish to indefinitely store some Messages that are considered important. In other situations, such as a casual chat between two friends, the Messages may be deleted after a certain period of time to save space. According to various embodiments of the invention, different retention policies may be used, either set by the system 10 or configured by the User. The use of the word "infinite" refers to the lack of any preset time boundaries enforced by the PIMB. This is contrasted

with current jitter buffer systems, which discard media after it has been rendered. The terms persistent and infinite should therefore be broadly construed to mean that the PIMB 30 and PIMB 85 have no internal limitations on the time ranges and quantities of Messages that can be stored therein.

[0130] There are a number of advantages to archiving the Messages of Conversations in a persistent storage medium. Voice messages and other Media can be organized, indexed, searched, transcribed, translated, and Reviewed as needed. Voice, as well as other Media, therefore becomes an asset that can be managed both by Users and organizations. These Media assets have value to corporations, first responders, police and fire departments, as well as the military.

F. The Vox Protocol and Indexed Media Payloads

[0131] As noted above, the Vox protocol is used by the Store and Stream module 24 to support all facets of payload transmission, storage, and optimization. The Vox packet is a structured message format designed for encapsulation inside a transport packet or transport packets of the underlying technology of the network 18. This arrangement significantly improves the flexibility of the system 10. By embedding the Vox packets into existing transport packets, as opposed to defining a new transport layer for "Voxing" applications, the system 10 takes advantage of current packet based communication networks running over the existing telecommunications infrastructure. A new network infrastructure for handling the Vox packets therefore need not be created to take advantage of all the benefits of the system and method described herein.

[0132] Referring to Figure 4A, the general format structure of a Vox packet 95 is illustrated. The format of the Vox packet 95 includes fields for type, sub-type, length, and payload. The different types of Vox packets include authentication, signaling, media payload, media multiplex (one message), and media multiplex (multiple messages). The sub-type field is used to designate different types of authentication, signaling or media type messages. Possible sub-types for authentication Messages include those necessary for key exchanges and Authentication. Possible sub-types for signaling Messages include registration, routing, message set-up, and network management. Possible sub-types for Media messages include different Codec styles and different payload aggregation techniques. The length field defines the overall length or size of the payload. The payload field contains the actual payload or media of the packet 95.

[0133] Referring to Figure 4B, a diagram illustrating a Vox packet 95 encapsulated in an exemplary protocol used by the network 18 is shown. In this example, the Vox packet 95 is embedded in underlying UDP, IP and Ethernet transport packets 96 respectively. In this manner, the Vox packet 95 can be transported across underlying UDP, IP and Ethernet layers of the network 18. This is a standard protocol encapsulation technique used by packet networks.

[0134] Referring to Figure 4C, a diagram illustrating a media multiplex Vox packet 95 encapsulated in UDP, IP, and Ethernet 97 is illustrated. In this example, the Vox packet 95 includes a Media type field, a Media sub-type field, a length field, a message ID field, a time stamp field, a sequence ID field, and a Media payload field.

[0135] Referring to Figure 4D, the format of an indexed media payload 98 is illustrated. The indexed media payload includes a sub-type field, a length field, a message identifier (ID) field, a time-stamp field, a sequence identifier (ID) field, and field for the Media payload.

[0136] The encapsulation of Vox packets 95 into the transport packets of the underlying network allows the Media, Messages and Conversations to each be defined by a number of attributes.

[0137] When Media is created or otherwise originated on a Device 13, it is typically time-based, meaning it changes in some meaningful way over time. As a person engages in a Conversation for example, their spoken words are strung together into sentences or statements, which vary over time, and the resulting data (streams and packets) will maintain the same variance over time. Similarly video (as opposed to a still photo) as well as GPS or other sensor data will vary over time. Regardless of the type or how it is originated, the Media is segmented and placed into the payloads of a plurality of Vox packets 95. The packets are then continually, stored, transmitted, received, stored and rendered in streams (i.e., streaming media) at the transmitting and receiving Devices 13 respectively. Since each packet 95 is indexed, time-stamped, and given a sequence identifier, the individual packets can be segmented into Messages. By sequentially threading the individual Messages together, Conversations may be constructed.

[0138] One further unique aspect of the system 10 is that the media payloads generated by a Client 12 are stored in multiple locations. Not only are the payloads stored in the PIMB 30 of the generating Device 13, but also in the PIMB 85 of the Server(s) 16 and the PIMB 30 of the receiving Devices 13. This basic feature enables or makes possible much of the Voxing

functionality described above and provides the system 10 with both resilience and operability, even when network conditions are poor or when a Participant of a Conversation is not connected to the network.

G. Interoperability With Underlying Telecommunication Protocols

[0139] The system 10 is intended to run or be layered over a variety of existing communication networks 18, such as the Internet, fixed PSTN type circuit networks, and mobile or cellular phone networks, or a combination thereof. The system 10 is designed around the concept of moving many small units of information (i.e., the Vox packets) between different Clients 12 and Servers 16 in the system 10. While Vox packets may vary in size, depending on their function and payload, they all appear to be the same kind of data to the underlying network layer. In one embodiment, the system 10 has been designed and optimized for IPv4 networks such as the Internet, but other types of networks may be supported as well. For the purposes of this document, the term "IP" should be taken to mean IPv4, IPv6 or any other current or future implementation of the Internet Protocol.

[0140] Referring to Figure 5, a diagram of a Client 12 running on Device 13 and communicating with a Server 16 over a shared IP network 100 is shown. As illustrated, the Client 12 is coupled to the shared IP network 100 through a first Internet service provider A and the Server 16 is coupled to the shared IP network 100 by a second Internet service provider B. During communication, the Vox packets 95 (designed "VP" in the figure) are encapsulated within UDP/IP packets and then interleaved among other IP protocol packets as is well known in the art and transmitted across the shared IP network 100 from the Client 12 to Server 16, or vice versa. As is well known, each lower packet layer encapsulates the entire packet of the layer immediately above it. Packets can also be sent in a similar manner between two Servers 16. Messages are sent from one Client 12 enabled Device 13 to another over a shared IP network 100. At each hop, the Vox packets 95 are embedded in the underlying IP protocol and transmitted, until they reach the target destination.

[0141] The diagram of Figure 5 is merely exemplary, showing only a single Client 12 and Server 16 connected to the network 100 for the sake of illustration. In actual embodiments of the system 10, a large number of Clients 12 and one or more Servers 16 are typically connected to the shared IP network 100. It is also useful to note that the Client 12 and Server 16 do not have exclusive use of the IP network 100. In the example shown, an HTTP client, which is coupled to the network 100 through Internet provider A, can send packets back and

forth with an HTTP server, coupled to the network 100 through a third Internet provider C. The system 10 does not control the manner in which the VPs embedded in the IP packets traverse the network 100. Rather, all packets that traverse and share the network 100 do so in accordance with the standard procedures of the underlying shared IP network 100.

[0142] Referring to Figure 6, a "circuit" based network 104 such as a GSM mobile phone network is illustrated. The circuit network 104 is coupled between Client 12 running on Device 13 and Server 16. Once a circuit is established between the Client 12 and Server 16, the system 10 layers Vox packets (VP1, VP2, VP3, VP4, VP5, etc.) onto the underlying packets used by the network 104 and transmits them across the network 104, creating "virtual Vox" circuit. The Vox Packets sequentially traverse the circuit network 104, typically with spacing or framing data as is well known in the art for transmitting data over a circuit network. In addition, packet construction parameters, such as the payload size and the number of header fields included may be used to exploit the lack of per-packet overhead and to increase speed and/or efficiency of data transfer across the network 104. It should be noted again that for the sake of simplicity, only a single Client 12 and Server 16 are shown connected to the network 104. It should be understood, however, that additional circuits between Clients 12 and Servers 16 as well as other components may be established concurrently through the network 104. The network 104 is therefore not dedicated for the transmission of Vox Packets, but rather may be shared with other types of network traffic.

[0143] Referring to Figure 7, a diagram illustrating communication between a first Client 12A enabled Device 13A associated with a first network A and a second Client 12B enabled Device 13B associated with a second network B is illustrated. The networks A and B further each include gateway Servers 16A and 16B respectively. The Gateway Server pair 16A and 16B facilitate communication between the two networks A and B, allowing the Devices 13A and 13B to communicate with each other. In various embodiments, the networks A and B could each be any type of network. For example, each network A and/or B could be an IP network, a circuit type network, or a wireless or cellular network (i.e., CDMA, GSM, TDMA, etc.). The Servers 16 that straddle the two networks A and B are considered gateway servers because they route traffic or serve as a "gate" between the two networks.

[0144] With the system 10, there are a several basic network interaction considerations to optimize system performance. These considerations include factors such as resolving the underlying address to which the Vox packets 95 are to be sent, the integrity of any sent Vox

packets, and the management of the Maximum Transmission Unit (MTU) of a single Message that may be sent across a given network or combination of networks.

[0145] The address of a target Client 12 needs to be known so that the underlying network delivers the Vox packet 95 to the correct location. With IPv4 networks, the address is typically an IPv4 Address, which is a 32-bit number that uniquely identifies a host within the network. For other networking technologies, the address could be some other type of identifier. IP networks use the Domain Name System (DNS) to resolve human-readable names into IP addresses, and the Address Resolution Protocol (ARP) to resolve IP addresses into physical addresses. Regardless of the underlying networking technology, the system 10 uses one of the above-mentioned or other known addressing schemes for delivery of Vox packets 95 to the correct location.

[0146] As with almost any packet-based communication system, transmitted Vox packets might not be delivered to their addressed location if the underlying network is unable to deliver the packets in which the Vox packets are encapsulated. Most packet networks do not inform transmitters when packets are dropped. Instead they rely on the transmitters and receivers to notice and compensate for any dropped packets. The system 10 is designed to use these receiver receipt report messages to coordinate this packet loss management. If the underlying network is able to inform the sender of lost or dropped packets, the system 10 utilizes this information in its retransmission protocol.

[0147] The management of MTU is the determination of the Maximum Transmission Unit (i.e., the maximum size of a single message) that may be sent across a network. For packet-based networks, the underlying network imposes the MTU. For circuit-switched networks, the MTU may be a tunable parameter for network efficiency and performance. Thus in most cases, the underlying network imposes or determines the maximum size of the Vox packet 95 that may be transmitted efficiently. For example with IP networks, packets may be fragmented if the payload exceeds the MTU, but at a substantial performance penalty. With IP over Ethernet networks, the transmitting device has an MTU of 1518 bytes, as enforced by Ethernet. The largest IP packet must leave room for the Ethernet headers. The largest UDP packet must leave room for both IP and Ethernet headers and the largest Vox protocol that may be generated on Ethernet for example is the Ethernet MTU (1518) – IP header (20) – UDP header (8) = 1490 bytes. Since the Vox protocol will have a header of its own, the actual Vox media payload will be less than 1490 bytes on an Ethernet network. For Gigabit Ethernet, the MTU could be much larger, but would be determined using a similar formula.

[0148] In a purely packet-based network, there are two potential values for MTU, the local link MTU and the path MTU. Determining the local link MTU yields the maximum size for Vox packets to be efficiently sent out to the local network interface. The path MTU yields the maximum size of Vox packet that may be sent intact all the way to the remote node. If a sender is connected via Ethernet, the Vox packet might pass through various other systems with smaller MTUs en-route to the recipient. The smallest MTU on the path to the destination needs to be resolved and known by the sender. In the IP world, there is a standard procedure for discovering the smallest MTU called "Path MTU Discovery". For other kinds of networks, an equivalent procedure may be used. Again, since the system 10 is layered on top of other networks, any of the above MTU algorithms may be used.

H. Operation Flow Diagrams

H.1 Store and Stream

[0149] Referring to Figures 8A through 8F, a series of flow diagrams are provided to illustrate the operation of the store and stream module 24 and 84 on Clients 12 and Servers 16 respectively. Figure 8A shows the sequence of operation for a first Client 12_1 transmitting Messages to a second Client 12_2. Figures 8B and 8C illustrate the operation of the PIMB writer 28 and PIMB Reader 28 on the transmitting Client 12_1. Figures 8D and 8E illustrate the operation of the PIMB Writer 28 and PIMB Reader 26 on the receiving Client 12_2. Figure 8F illustrates a flow diagram of the Store and Steam module 84 on a server 16.

[0150] In Figure 8A, the User of Client 12_1 running on a Device 13_1 originates Media to be transmitted. The Media can be originated at the Device 13 in a number of different ways such the User creating Media by speaking into a microphone or creating video content on their Device 13. Media is also originated by a Device 13 by receiving sensor data, such a GPS information or a temperature reading. Regardless of how the Media is originated, the Media is encoded by the PIMB Writer 28 (box 130), which converts the Media into indexed media payloads and stores them in the PIMB 30 (box 132) on Client 12_1. The PIMB Reader 26 on the Client 12_1 reads the payloads out of the PIMB 30, creates Vox packets, and transmits the packets to the receiving Client 12_2 (box 134) over the network 18. Each Server 16 along the path between the sending Client 12_1 and the receiving Client 12_2 stores the transmitted payloads in the PIMB 85 and transmits the Vox packets to the next hop (box 133). At the receiving Client 12_2, the net receive function of the PIMB Writer 28 converts the Vox packets into indexed media payloads (box 136) and stores the payloads into the PIMB 30 of Client

12_2 (box 138). The rendering module of the PIMB reader 26 on Client 12_2 renders the payload information read from the PIMB 30 into a medium suitable for human consumption, such as voice or video (box 140). Each of these steps are described in more detail below with respect to Figures 10B through 10E.

[0151] In Figure 8B, a sequence of the Encode Receive function performed by the PIMB Writer 28 (step 130 of Figure 8A) is provided in detail. In the initial step 130_1, the User of the Device 13 running the Client 12_1 originates the Media to be transmitted. As noted above, the Media may be derived by speaking into a microphone, using a camera, receiving sensor data, or by some other Media generating component. In the next step 130_2, the Encode Receiver 28a encodes the Media and creates the indexed media payloads (step 130_3), which are then stored in the PIMB 30 (step 132) by the Data storer 28c.

[0152] In Figure 8C, the sequence of the Transmit function performed by the PIMB Reader 26 (step 134 of Figure 8A) on the sending client 12_1 is provided in detail. In decision loop 134_1, the transmit function of the PIMB Reader 26 continuously checks to see if indexed media payloads that are to be transmitted have been written into the PIMB 30 and are available for transmission. If such payloads are available in the PIMB 30, the Data Prioritizer 26f prioritizes the payloads that should be sent first, using the MCMS Participant Attributes information, as illustrated in step 134_2. Information about the highest priority payloads are passed to the Packet Optimizer module 26g which runs the PQM (step 134_3), as described in more detail below with respect to Figures 9A-9C. The appropriate payloads are then retrieved from the PIMB 30 (step 134_4) by the Data Retriever 26h and converted into Vox packets 95 by the Packetizer 26i (step 134_5). The Vox packets 95 are then transmitted (step 134_6) by the Transmitter 26j over the network 18 to the receive Client 12_2, which sends back receipt reports reflecting the properties (loss, jitter, throughput) of the packets that have been received. These receipt reports provide the information necessary for the PQM to calculate the MABR for a given receiver. The aforementioned process is repeated for each transmission loop as indicated by the return arrow from the transmit step to the top of the flow chart.

[0153] In the embodiment described above, the media is encoded, stored in the PIMB 30 and then transmitted over the network in a serial fashion. In an alternative embodiment, the encoded media can be stored in the PIMB 30 and transmitted over the network in parallel, meaning the two functions occur substantially at the same time.

[0154] In Figure 8D, the sequence for the Net Receive function (step 136 of Figure 8A) of the PIMB Writer 28 on the receiving Client 12_2 is illustrated. In the initial step 136_1, the network receiver 28d receives the Vox packets 95 over the network 18. The Data Storer 28f converts the packets into indexed media payloads (step 136_3), which are stored in the PIMB 30 (step 136_4). As the payloads are stored, the Data Quality Manager (DQM) 28g is run. The DQM 28g checks for missing or corrupted packets, ensures the eventually storage of an exact copy of the transmitted data, and the sends receipt reports regarding the conditions of the network to the transmitter. Each of these functions of the DQM 28g are described in more detail below with regard to Figures 9D through 9F.

[0155] In Figure 8E, the sequence for the Render function of the PIMB Reader 26 (box 140 of Figure 8A) on the receive Client 12_2 is illustrated. In the initial step 140_1, the Data Prioritizer 26a prioritizes the indexed media payloads to be rendered as determined by the MCMS application 20 using the MTSD information as well as User status and presence information, including the User's Intentions and Attention status. The prioritized payloads are then read from the PIMB 30 (step 140_2) by the Data Retriever 26b. The PLC/Interpolator 26c performs packet loss compensation and interpolation (step 140_3) on the retrieved payloads, using known packet loss compensation and interpolation algorithms depending on which Codecs are used. In the next step, the Mixer 26d mixes (step 140_4) multiple Messages of a Conversation if two or more Participants have generated Media at the same time within the same Conversation (e.g., both are speaking at the same time). The Renderer 26e renders (step 140_5) the data stream from the Mixer 26d, generating sound, video, or other Media (step 140_6) for the recipient User.

[0156] In Figure 8F, the sequence for a Server 16 to receive Vox packets from the previous hop on the network 18, store, archive and transmit the Vox packets to the next hop is illustrated. In the initial step, the Server 16 performs the Net Receive function of the PIMB writer (similar to Fig. 8D) to store the indexed media payloads of the received data in the PIMB 85 and archive 89 or the Server 16. The server 16 also performs the Transmit function of the PIMB writer (similar to Fig. 8C) to forward the received packets onto the next hop on the network 18. In this manner, a copy of the media generated by the transmit Client 12_1 is received, stored and transmitted at each hop along the path to the receive Client 12_2.

[0157] In the aforementioned embodiment, the writing of received indexed media is stored in the PIMB 91 of the Server 16 and transmitted to the next hop in a serial fashion. In an alternative embodiment, the received indexed media payloads can be stored in the PIMB 91

and transmitted to the next hop substantially at the same time. The storage of Media on the PIMB 30 of both transmitting and receiving Devices 13 allows for the progressive transmission and rendering of Media. On the transmit side, the Media originating on the transmitting device may be progressively transmitted over the network as it is being received. In various embodiments, the encoded Media (regardless of how it is originated) may be progressively transmitted before, after, or at substantially the same time it is stored in the PIMB 30. On the receive side, the incoming Media may also be progressively rendered as it is received over the network, provided the User has opted to Review the Media in the near real-time mode. In various embodiments, the incoming Media may be progressively rendered before, after or substantially at the same time as it is stored in the PIMB 30 of the receiving Device 13. If the received Media is to be Reviewed in the time-shifted mode, then the Media is retrieved from the PIMB 30 (or possibly a PIMB 85 on a Server 16 if replaced on the local PIMB 30) for later Review at a time designated by the User.

[0158] In the context of the present application, the term progressive or progressively is intended to be broadly construed and generally mean the continuous processing of a data stream based on availability of the data. For example, as Media is created or otherwise originated on a Device 13, the progressive encoding, storage, packetization and transmitting of that media is continuous, so long as the Media is available. As a person speaks, that Media is progressive or continuously encoded, stored, packetized and transmitted for the duration of the persons speech. When the person pauses or stops speaking, there is no media to progressively process. When the person resumes speaking again, the progressive processing of the Media resumes. On the receive side, the Media is also progressive processed as the Media is being received (i.e., available). As the Media is received it is continuously stored. It will also be continually rendered as the Media is being received when in the near real-time mode or from storage when in the time-shifted mode. Although the above explanation was provided in the context of voice, it should be understood that all types of Media can be progressively processed in a similar manner. Also the progressive processing of Media does not necessarily have to be progressively processed in time-indexed order. Rather the Media is processed in the order in which it is received. If Media is received out of index order, in one embodiment, the Media is progressively processed in the order it was received and then organized into the indexed sequence in the PIMB 30. In an alternative embodiment, the received Media can be organized into its indexed sequence and then progressively rendered.

H.2 PQM Operation Flow Diagrams

[0159] The PQM 26g relies on a metric called the Maximum Available Bit Rate (MABR), which is a continually computed approximation of actual transmission capacity or bandwidth (i.e., a measure of the capability of the network at a given point in time) between a sending and receiving node pair. As instantaneous network conditions change, the MABR is updated. Regular measurements of network throughput, packet loss, and jitter are considered in computing the MABR. In an alternative embodiment, the MABR may also be manually set or limited based on time of day, type of network, other conditions or parameters.

[0160] The PQM also considers the Intention of the recipient(s) to optimize transmission for time-sensitivity. A transmission is considered time-sensitive if either (i) the Intention of the recipient(s) is to Review the transmission "live" or in the near real-time mode, or (ii) the recipient would like to immediately Review a Message that for some reason is not currently stored on their Device 13 (e.g., the Message was previously stored in the archive 89). The Intention of the recipient can be either inferred by the behavior of the recipient or the recipient may set or otherwise designate their Intention. On the other hand, a transmission is considered to be not time-sensitive if the Intention of the recipient is to Review the Message in the time-shifted mode. The Intention of the recipient to Review the transmission in either the live or time-shifted mode at least partially defines the "timeliness requirements" of the transmission. In various other embodiments, factors such as the urgency or priority of transmissions may also be considered in defining the timeliness requirement of the transmission.

[0161] The nodes in the network path between a sender and a receiving pair also need to be consistent regarding the status of intentions of the recipients. If one target recipient indicates timeliness, meaning they wish to Review the transmission immediately or live, then all the intermediate nodes on the network along the sender-receiver path need to have the same timeliness requirement, regardless of the requirements of other recipients. The timeliness requirement of each of the intermediate nodes is therefore dependent on the receiving nodes the transmission is being sent to. This dependency is sometimes referred to as a "union of requirements" for target nodes in the network transmission path.

[0162] The PQM further considers an Ideal Bit Rate or "IBR" for each scheduled Message payload transmission. For time-sensitive transmissions, the IBR is computed based on the packetization rate needed for substantially real time or live communication (referred to herein

as the Real Time Bit Rate or RTBR). With voice for example, a packetization rate of a packet every 20 milliseconds containing 20 milliseconds of audio data is considered an acceptable IBR for conducting live conversations. The RTBR for such a system in kilobits per second would be the size of 1 second of audio payload data plus the size of all network headers that would be generated for the transmission. For video media or a combination of voice and video, the RTBR will likely be substantially higher than simply voice. For other types of media such as sensor or GPS positioning data, the RTBR will likely be lower than that of voice. For non time-sensitive transmissions, the IBR is set to a Maximum Efficiency Bit Rate (MEBR) to optimize the usage or efficiency of transmissions over the network. The MEBR is calculated by adjusting the packetization rate to its largest possible value for the underlying network. If multiple messages or payloads are to be sent between a sending and receiving pair, then an Aggregate IBR (AIBR) is considered for the transmission.

[0163] The PQM operates by sending data in a series of transmission loops for each sending and receiving pair. The transmission loops for each sending and receiving pair are independent. Any transmission on the network may affect the MABR of other sending-receiving pairs. Accordingly, the MABR is preferably continually computed for all recipients.

[0164] Referring to Figures 9A through 9C, flow charts illustrating the sequence of operation of the PQM for a single sending and receiving pair is illustrated. In Figure 9A, the steps in determining the MABR between the single sending and receiving pair are illustrated. In Figure 9B, a flow chart illustrating the steps for calculating the AIBR for each transmission loop for the single sending and receiving pair are illustrated. In Figure 9C, a sequence for determining the amount of data to transmit between the sending and receiving pair per loop is illustrated. The processes illustrated in the three diagrams run simultaneously and interact with one another, as described in more detail below.

[0165] In Figure 9A, a flow chart 50 for calculating the MABR for the network interface between the sending and receiving pair is shown. In the initial step 50_1, the network interface between the sending and receiving pair is monitored. The sender periodically receives reports, which contain information regarding the status of the network connection at the receiver in step 50_2. The reports include information regarding the current status of data throughput 50_3, packet loss 50_4, and jitter 50_5 as observed by the receiver at the network interface. In step 50_6, the MABR is calculated at the sender based on these observations contained in the reports. By monitoring or observing the data in these reports, the MABR value is continually adjusted based on current network capabilities or conditions between the

sending and receiving pair. As network capabilities become more favorable for data transmission, the MABR will increase. If the network capabilities become less favorable for transmission, the MABR will decrease, potentially all the way to zero for an unusable network. The reports are similar to the packet loss reports generated by nodes in TCP networks, but additionally include throughput and jitter information as well.

[0166] If there are several network interfaces between the sending and receiving pair, an MABR is calculated for each interface for which a receipt report is received. If no traffic has been recently sent on the network, or no receipt reports have been received, the MABR may not reflect current network conditions. However, since receipt reports are generated continually by receivers while data is transmitted, the sender's MABR metrics will quickly converge to a more accurate value.

[0167] Referring to Figure 9B, a flow chart 52 illustrating the steps for calculating the AIBR for a transmission loop is illustrated. In the initial step 52_1, the Messages with Media (by which we mean portions of the time indexed media that belongs to this Message) ready to be transmitted between the sending and receiving pair in the current loop are ascertained. A list of Messages with Media is then built 52_2. For each Message in the list 52_3, the time-sensitivity or timeliness requirement of each Message is considered 52_4. If a particular Message is not time-sensitive, then the IBR is set to the Maximum Efficiency Bit Rate (MEBR) 52_5. On the other hand, if a Message is time-sensitive, then the IBR is set to the Real Time Bit Rate (RTBR) 52_6. In the next step 52_7, the previously computed IBRs for each of the Messages in the list are summed together, resulting in the Aggregate Ideal Bit Rate (AIBR) 52_8 for the transmission loop. As signified by the return arrow 52_9, the above-described process is repeated for each transmission loop between the sending and receiving pair.

[0168] Referring to Figure 9C, a flow chart 54 illustrating the sequence for determining the rate of data to transmit between the sending and receiving pair per transmission loop is illustrated. In the initial step 54_1, the MABR (as calculated in Figure 9A) is compared to the AIBR (as determined in Figure 9B) for the next transmission.

[0169] If the MABR is greater than or equal to the AIBR, then all the Messages identified as ready for transmission in the loop are packetized at the IBR rate 54_2 and transmitted 54_3.

[0170] On the other hand, if the MABR is less than the AIBR, then a series of procedures are applied to so that the PQM meets its goals of the timely delivery of an adequate copy of the

data, the efficient use of available bandwidth, and/or adjustments to the payload content and quality, packet size, and transmission rate to meet current network conditions.

[0171] In the initial step, the Messages in the list are reviewed for time sensitivity 54_4. If there are no time sensitive Messages, then the bit rate is reduced to the MABR 54_5, and the Messages are transmitted 54_3.

[0172] If the list includes time-sensitive Messages, the bit rate allocated for the non time-sensitive Messages is reduced 54_6 until it meets the MABR limits. If reducing the bit rate all the way to zero is insufficient to meet the MABR, then these non time-sensitive Messages are removed from the list of Messages to be transmitted in the loop. If the bit rate has been reduced so that it is less than or equal to the MABR, then the remaining Messages are Packetized and transmitted 54_3.

[0173] If the removal of non time-sensitive Messages was not sufficient to meet MABR, then another procedure involving the use of a lower quality Codec (or Codecs) for the remaining time-sensitive Messages 54_7 is used. An attempt is made to transmit the payload data as fast as possible by sending fewer bits during the transmission loop. In other words, by reducing the quality of the payload, the transmission sends fewer bits in a given period of time. In various embodiments, different Codec or Codecs, each having a different bit rate versus quality tradeoff, may be used. If the use of the lower quality Codec or Codecs is sufficient, meaning the MABR limit is met, then the Messages are transmitted 54_3.

[0174] If the use of lower quality Codec(s) still does not meet the MABR, then the packetization interval of the time-sensitive Messages is increased 54_8. With this procedure, the header-to-payload ratio is increased, which lowers the overall bit rate but introduces latency (i.e., a delay in the delivery of the transmission to the recipient). If this procedure results in the reduction of the AIBR to less than or equal to the MABR, then the transmission 54_3 occurs.

[0175] If after changing the packetization interval the MABR is still not met, then the bit rate may be progressively lowered 54_9 to be within the MABR limit. When the bit rate is lowered in this manner, time-sensitive messages are sent at a rate that is not sufficient to maintain a live conversation. Therefore, the Conversation is forced out of "live". If the network is down or conditions are very poor, it is possible that no data transmission may occur. Again, the aforementioned sequence is repeated for each transmission loop 54_{10} between the sending and receiving pair.

[0176] If there are multiple network interfaces between the sending and receiving pair, the sequence described in relation to Figure 9C is performed for each interface for which receipt reports are available. In various embodiments, the sender may contain logic to distribute the transmission load among the multiple interfaces. In different examples, the payloads can be sent only on one interface, while in other embodiments, some or all of the interfaces may be used.

[0177] The aforementioned description pertains to any sending and receiving pair in the system 10. In most situations, the sending and receiving pair will include a Client 12, enabled Device 13 and Server 16, two Servers 16, a Server 16 and Client 12 enabled Device 13, or even possibly two Clients 12 respectively. If a sending node is transmitting to two (or more) receiving nodes at the same time, the above mentioned sequence as described in relation to Figures 9A-9C occurs concurrently for each receiving-sending pair.

H.3 DQM Operation Flow Diagrams

[0178] The DQM 28g determines if data received at the Client 12 is either corrupted or if there are missing packets. In addition, the DQM 28g of a receiving Client 12 generates of the receipt reports, which are sent back to the transmitting node on the network. The DQM 28g also runs a background process to ensure that an exact copy of transmitted data is eventually received and stored. These functions are described below in Figures 9D through 9F respectively.

[0179] Referring to Figure 9D, a flow diagram illustrating the operation of the DQM 28g for checking for missing and/or corrupted data is illustrated. In the initial step 56_1, the DQM 28g checks for corrupted packets using well-known techniques, such as CRC or similar integrity checking mechanisms. If a packet is corrupted, that packet is treated as missing 56_2. The DQM 28g next ascertains if any packets are missing 56_3. If an out of sequence packet is not received after a predetermined period of time, it is assumed to be missing. The DQM 28g notes any missing or corrupted packets 56_4 in the DNQS 32. On the other hand if no corrupted or missing packets are detected, the DQM 28g determines if the quality of the received data was intentionally degraded by the sender 56_5 for the purpose of saving bandwidth. The degraded quality is noted in the DNQS 32 56_6. Regardless if the quality of the received data is degraded or not, receipt information (e.g., a packet sequence number, time stamp, and the network address of the next node in the network the packet is to be sent)

of the data is stored 56_7 in the DNQS 32. The aforementioned process is continually repeated, as signified by the return arrow to the start of the flow diagram.

[0180] As a result of the process detailed in Figure 9D, information regarding the receipt of non-degraded packets, the deficiency of degraded quality packets, and missing packets, are all stored in the DNQS 32. As Media is received, the DNQS 32 maintains up-to-date information regarding the status of the Media.

[0181] Referring to Figure 9E, a flow diagram illustrating the operation of the receipt report generator function of the DQM 28g is illustrated. In the initial step, the DNQS 32 is periodically scanned 58_1 to determine if there is any Media for which a receipt report needs to be generated 58_2. If the answer is no, then the above scanning process is repeated. On the other hand if Media is identified, then the process determines if the Media is time-sensitive 58_3, meaning either the User intends to Review the Media live or the user would like to immediately Review Media that is not stored on their Device 13.

[0182] If not time-sensitive, then the recipient informs the sender to set the retransmission priority (as defined below) to low 58_4. If time-sensitive, then the amount of packet loss is considered 58_5. If the amount of packet loss is outside a usable quality range, the retransmission priority is set to high 58_6. As noted above, if the amount of packet loss is too large, the recipient may not be enabled to Review the Media upon receipt. If the quality is within an acceptable range, meaning the quality of the transmission is sufficient that it can be understood when rendered, then the priority for the sending of the receipt report is set to low 58_4. Regardless if the recipient is Reviewing upon receipt or not, a receipt report is sent 58_7, the DNQS 32 is updated 58_8 and the Network Quality Manager (NQM) 28h is updated 58_9. The retransmission requests defined in step 58_4 is therefore conditional based on time-sensitivity. The transmission request defined in step 58_6 is conditional on both time-sensitivity and quality.

[0183] The retransmission priority informs the PQM 26g of the sender to properly prioritize the transmission rate for the Media that requires retransmission. For example when the retransmission priority is set to high, then the sending PQM 26g of the sender should send any retransmissions before any new Media. If the priority is low, the PQM 26g should send the retransmitted Media after any new Media.

[0184] The aforementioned process is continuously repeated so that receipt reports are generated as Media is received. If the sender does not receive receipt reports in a timely

manner, the PQM 26g of the sender will reduce the transmission rate, eventually stopping the transmission if no receipt reports are received.

[0185] Referring to Figure 9F, a flow diagram illustrating the sequence for requesting of missing or degraded Media is illustrated. In the initial step 60_1, the DNQS 32 is periodically scanned for missing or degraded Media 60_2. If there is no missing or degraded Media, then the above defined scan is periodically repeated.

[0186] Media is considered missing if an out of sequence packet does not arrive after a predetermined threshold period of time 60_3. If the packet arrives before the threshold, then it is no longer considered missing. On the other hand if the packet does not arrive after the threshold is exceed, then it is deemed missing. With missing packets, a low priority request for retransmission is made 60_4 and the time of the request is noted 60_5 in the DNQS 32. This process is repeated until the missing packet is received. When the missing packet arrives and the corresponding Media is available in the PIMB 30, the missing status of the Media is removed from the DNQS 32. The retransmission request defined in step 60_4 is therefore conditional based on whether the Media is determined to be missing.

[0187] If degraded, the DQM 32 determines if the Media is part of a live Conversation 60_6. If not, a request for a full quality copy of the degraded Media is made 60_7, the full quality Media is designated as missing 60_8 and the request time is noted 60_9, in the DNQS 32. If the Media is part of a live Conversation, then no action is immediately taken in order to preserve network bandwidth. When the Conversation transitions out of the live mode, then the steps 60_7 through 60_9 are performed to ensure that a full quality (i.e. an exact or perfect) copy of the degraded Media is eventually received. When the data becomes available in the PIMB 30 of the recipient Client 12, the degraded status of the associated Media is removed from the DQNS 32. The transmission request defined in step 60_7 is conditional on whether the Media is both degraded and not part of a live conversation.

[0188] The aforementioned process is continually repeated, as signified by the return arrows from 60_5 and 60_9 to the top of the flow diagram at 60_1. By repeating the process outlined in Figure 9F, exact copies of all transmitted Media is eventually stored in the PIMB 30 of the receiving Device 13. In this manner, the storage of exact copies of transmitted Media is guaranteed at the recipient Device 13.

I. Graphical User Interface

[0189] Referring to Figure 10, an exemplary Device 13 running Client application 12 is illustrated. The Device 13 includes a graphical user interface display 110, data entry buttons, keys, or keyboard 112, a microphone 114, and a transducer 116 for converting electrical signals into sound, such as a speaker. The display 110 may also accept input as a touch screen. Further, the display 110 and keyboard 112 may be combined using a touch screen interface. As noted above, the Device 13 may be a variety of different communication tools, such as a desktop computer, laptop or other mobile computers, personal digital assistants, a programmable land-line or cellular phone, or programmable radios, or just about any other type of programmable communication device. The exemplary Device 13 illustrated in the figure is intended to be "generic", in the sense that it is supposed to represent or encompass all of the communication devices listed above. In addition, the term "graphical" user interface should not be construed as limiting. Other types of user interfaces which can be implemented on a Device 13 as well including Audio/DTMF interfaces, Voice User Interfaces (VUI), radio switch interfaces, or a combination thereof, can all be used to implement the various functions described below. For the sake of simplicity, each of these types of methods by which a User may interact with their Device 13 are generically referred to as a "user interface".

[0190] All Devices 13, regardless of their type, preferably have a user interface that enables the user to operate the Device 13 and communicate with other User's in the system 10. Although the user interface can be designed to have virtually an infinite number of different look and feel implementations, there are certain functions and features that all Devices 13 should have in common. These functions and features are listed below.

[0191] The user interface preferably includes one or more of the following status indicators or flags: (i) battery indicator; (ii) connectivity indicator; (iii) clock; (iv) transmitter status; (v) transmission sync status; (vi) Reviewing status; (vii) Priority Messages needing attention; and (viii) missed Messages.

[0192] The user interface preferably includes the following functions, flags and components to conduct and manage a single Conversation: (i) name of a Conversation and/or list of Participants; (ii) Conversation status; (iii) Conversation type; (iv) Conversation duration; (v) time behind the Head of the Conversation; (vi) outstanding Messages; (vii) presence/status of Participants; (viii) meta data with navigation; (ix) Conversation attributes or designators; (x)

Conversation set-up including title, scheduling, Participants, Conversation summary; and (xi) indicators showing which Participants have contributed Messages and which have Listened to or Reviewed messages.

[0193] The user interface also preferably includes, in addition to those listed immediately above, the following functions, flags and components to conduct and manage multiple Conversations: (i) a name/identifier for each Conversation; (ii) live/active or standing/inactive indicator; (iii) Review position, either at Head or Time shifted; (iv) Priority and other attributes; and (v) indicators of what portions of Conversations were missed.

[0194] The user interface also preferably includes, a number of navigation features, such as: (i) DVR style fast back/forward per conversation; (ii) instant messaging style personal message navigation; (iii) Conversation Time indicators; (iv) time scale shifting (i.e. zooming backward and forward through a Message or the Messages of a Conversation); (v) changing Priority of Conversations; (vi) hanging up; and (vii) home.

[0195] The aforementioned functions and features may be implemented in a variety of ways, for example using a touch-screen graphical user interface 110, or other input devices, such as the data entry buttons, keys, or keyboard 112, a mouse, by voice-activated commands, or a combination thereof. Again the functions and features listed above and how they are implemented is not intended to be exhaustive. The various methods and technologies that could be used is so comprehensive, that it is not practical to list or discuss them all herein.

J. Conversations

[0196] The MCMS application 20 supports a number of different types of Conversations, such as a near real time or "live" calls where the delay from when a Participant speaks and the other Participant(s) hear the first Participant is very small, Conversations where Participants exchange voice Messages back and forth with a longer delay between Messages, "live" conference calls involving multiple Users, standing Conference calls at a regularly scheduled times, or configurable structured call types such as a simultaneous briefing, where Participants each leave a Message briefing beforehand for others to Review to before everyone joins the live conference call. Yet another unique attribute of the MCMS application 20 is the ability for Users to transition between the different types of Conversations. For example, the Participants can seamlessly transition from a voice-messaging mode to a live call and back again. Or the Participants of a live conference call can transition to a voice-messaging mode and send updates or action items to each other after the

conference call. While several examples have been noted, it should be understood that the system 10 is extremely flexible and provides numerous options to transition between different types of calls or Conversations and between multiple conversations. By varying the delay between Messages, the Participants effectively flows between the type of Conversation that best suits their needs. The above examples should therefore not be construed as limiting.

[0197] As noted above, Conversations consist of Messages maintained in their original context and sequence. A sent Message either belongs to an existing Conversation or begins a new Conversation. A typical Conversation includes a set of Messages that are organized around a defined subject matter, topic, time, Group or Channel. For example, Conversations may involve a common Group of people such as the members of a club, a company may have a standing Conversation at a fixed time, such as a weekly sales meeting, or friends may have ad-hoc Conversations on various topics, such as making dinner plans.

[0198] Each Conversation is defined by a set of attributes, including a name, a list of Participants, begin and end time, and state including at least pending, active, or terminated. Other Conversation states are possible in other embodiments. A User interacts with the MCMS application 20 on their Devices 13. In preferred embodiments, the interface allows a User to organize Conversations by any of the various attributes.

[0199] The relationship between a Participant and a Conversation also has attributes. These attributes include, but are not limited to, Priority, Status (states of participation in a Conversation). The values of Participant status include active, participation in more than one Conversation at a time, Reviewing a Conversation in a time-shifted mode, Catching Up To Live, passively participating (i.e., not actively Reviewing, but receiving high Priority Messages), standby, or ignoring a Conversation (i.e., declined to participate or record the Conversation).

[0200] From a recipient's perspective, a User may select or define the relative priority of Messages. For example, Messages from a person's boss would typically be given a higher Priority than a social acquaintance. In some embodiments, a recipient has the ability to set their own Priorities. In the implementation of MCMS-C the User selects a subset of their Conversations to be rendered consecutively. The User then sets ordered Priorities for these Conversations. The system uses the priorities set by the user to order the Messages to be rendered. The aforementioned algorithm queues the Messages to be rendered using User Priorities and information concerning Message data available (beyond MTSD).

[0201] In other embodiments, such as tactical communications, the recipient may have no or limited ability to set Priorities. For example, a fire fighter may have no ability to lower the Priority of Messages from the fire chief. A sending-User, however, has the ability to send urgent or highly important Messages. By Tagging a Message as urgent or an emergency, the Message is rendered as soon as possible at the recipient(s), overriding any Priority settings of the recipient. Any conflicts among multiple emergency messages are resolved based on a predetermined priority scheme.

K. MCMS Operation

[0202] Referring to Figure 11A, an organizational diagram 1100 grouping the major functions of the MCMS application 20 is illustrated. The major functions include account management 1102, conversation management 1104, aggregate conversation list management 1106, conversation participation 1108, call controls 1110, and contact management 1112. After registering and logging into the system 10, the User may navigate through the user interface of their Device 13 implementing the various management functions, described in detail below. In some embodiments, this functionality will provide a great deal of flexibility. In other embodiments, such as tactical or communication radios, the implementation of the user interface may be constrained with many of the user functionality and options preconfigured to meet the utility of the device. The discussion here is exemplary and is not intended to be an exhaustive explanation of the MCMS functionality, but rather is intended to provide just an overview of some of the MCMS attributes.

K.1 Account Management

[0203] Under the account management function 1102, a registered User may change certain settings and preferences. A User may change their email address, password, name, phone number, phone password, call-in number, default and/or User defined rendering speeds, Tags, gain or volume levels for Reviewing Messages, Catch Up to Live mode, etc. To make these changes, the User enters the appropriate information through the interface 110 of their Device 13. The MCMS application 20 responds by writing the updated preferences into the MCMS database 22.

K.2 Conversation Management

[0204] As illustrated in Figure 11B, conversation management 1104 is a set of functions that allow a User to view their aggregate Conversation lists, create a new Conversation, update the details of a Conversation, delete a Conversation, and close a Conversation. Each of these functions are described below.

[0205] View Conversations 1104a – For each Conversation, the MCMS application 20 may provide the User the one or more of the following attributes: the name of the Conversation, the actual start time, the last activity, Tags, duration, and the list of Participants. For each Participant, the name and/or phone number, status (live, other call, in past, catch-up-mode, offline-reachable, offline-unavailable.)

[0206] Create a Conversation 1104b - A User creates a Conversation through the interface 110 by inputting a Conversation name, a list of Contacts, and an optional scheduled start time. If no start time is designated, it is assumed the start time is immediate. In response, the MCMS application 20 creates a new Conversation in the database 22, associating records for each Participant on the Contacts list. The MCMS application 20 also creates in the database 22 Participant records for each User on the Contact list, allowing the caller to receive the presence information of the others on the Contact list. If the Conversation is scheduled, the MCMS application 20 starts the Conversation at the designated time. Otherwise, the Conversation starts right away.

[0207] Update Conversation Details 1104c - The User may make changes to a Conversation through the user interface 110. For example, Participants may be added or removed. Any change in status of the participants is updated in the MCMS database 22.

[0208] Delete a Conversation 1104d - A User may delete a specific Conversation from their list of Conversations through the interface 110. In response, the MCMS application 20 notes the change in the database 22, and designates the Conversation as deleted.

[0209] Close a Conversation 1104e – A User may elect to terminate or close a Conversation. In one embodiment, only the User that creates a Conversation can elect to terminate that Conversation.

K.3 Aggregate Conversation List Management

[0210] As illustrated in Figure 11C, the aggregate conversation list management 1106 is a set of functions that allow a User to engage in multiple Conversations (i.e., the User's aggregate

conversation list). The aggregate conversation list management functions allow a User, through the interface 110 on their device, to participate in one Conversation "live", while participating in other Conversations in a time-shifted mode.

[0211] Chose Conversation 1106a – Through the interface 110, a User may select one Conversation among the User's aggregate conversation list as current. The Messages of the current Conversation may be rendered in either the "live" or time-shifted modes. The User may switch the current conversation among the aggregate conversation list from time-to-time.

[0212] Switch Conversations Modes1106b – In an optional embodiment, a User may be able to switch from the MCMS, MCMS-C and MCMS-S modes of operation.

K.4 Conversation Participation

[0213] As illustrated in Figure 11D, conversation participation 1108 is a set of functions that allow a User to start a Conversation, receive a notification to join a Conversation, obtain Conversation status information, and hang up on a Conversation.

[0214] Start a Conversation 1108a - After a Conversation has been created, either by the User through the interface 110 or the scheduler in the MCMS application, the status of each Participant is checked. If a Participant is offline, then an effort is made to contact that person. If a Participant is online but engaged in another Conversation, then the MCMS application 20 notifies that Participant. The presence status of all online Participants is updated in the database 22.

[0215] Receive a Notification 1108b – The system may notify a User that their attention has been requested on a Conversation through a graphic display and/or audible notification via the user interface 110.

[0216] Conversation Status 1108c – A user may request the status of a Conversation through the interface 110 of their Device 13. In response, the MCMS application 20 assembles the status information stored in the database 22 and presents the information to the User.

[0217] Conversation Pause 1108d– Through user interface 110, a User may hang up or switch away from an active Conversation. In response, the MCMS application 20 updates the User's participant status for active Conversations in the database 22 and directs the Store and Stream module 24 to remove the User from the Conversation.

K.5 Conversation Controls

[0218] As illustrated in Figure 11E, conversation control 1110 is a set of functions that allow a User to control their participation in a Conversation. These functions allow a User to catch-up-to live, skip to the Head, jump to a past location, pause, play faster and play slower when Reviewing the Messages of a Conversation. Each of these functions is triggered by the User through the interface 110 on the Device 13.

[0219] Catch-up-to-live 1110a - A User may Catch Up To Live in an ongoing Conversation using the "CTL" function. When this function is activated, the MCMS application 20 checks the last point in the Conversation the User has reviewed and directs the Store and Stream module 24 to render the Messages not previously heard, using a faster than normal rendering option designated by the User, and to seamlessly transition to live mode when it reaches the head.

[0220] Jump to Head 1110c – This function enables a User to jump to the Head of a Conversation, skipping over any intervening Messages between the current point of the User in the Conversation and the Head. When implemented, the MCMS application 20 instructs the Store and Stream module to immediately render the Messages at the Head of the Conversation. (If the Head of the Conversation is currently live this is called Jump to Live (JTL).

[0221] Jump to past 1110d – This function enables a User to jump back to a previous Message or point in the Conversation, similar to a rewind or replay function. When implemented, the MCMS application 20 instructs the Store and Stream module 24 to render Media starting from the rewind point.

[0222] Pause 1110e – This function enables the User to pause the Reviewing of the Messages of a Conversation. In response, the Store and Stream module 24 stops the rendering of Messages until another command is issued.

[0223] Play faster 1110f – This function enables a User to render Messages more quickly. In response, the Store and Stream module 24 renders the Messages at a faster rate than normal. The rendering rate may be either specified by the User or the User may select from a number of preset options.

[0224] Play slower 1110g - This function enables a User to render Messages more slowly. In response, the Store and Stream module 24 renders the Messages at a slower rate than normal.

The rendering rate may be either specified by the User or the User may select from a number of preset options.

K.6 Contact Management

[0225] As illustrated in Figure 11F, the system 10 provides the User with a host of functions for managing Contact lists and user Groups. These functions include the adding, editing, deleting Contacts and user Groups. Each of these functions are implemented by a User though the interface of their Device 13. Any revisions or deletions in a User's Contact list or Group list is stored in the MCMS database 22.

[0226] Add a Contact 1112a – This function enables a User to add a new Contact to their contact list. The new Contact can be either a registered User or an external contact. Typically the name, phone number(s), type of number (cell, office, home, computer, etc.), email address and other personal information are provided for each contact record.

[0227] Edit a Contact 1112b – This function enables a User to edit or update an existing contact record.

[0228] Delete a Contact 1112c – This function enables a User to remove or delete an existing contact record.

[0229] Search for a Contact 1112d – This function enables a User to search for a specific Contact in their contact list. The search may be conducted using a number of criteria, such as name, phone number, most recently called, most frequently called, Group, etc.

[0230] Get a Participant list 1112e – This function enables a User to search and retrieve a list of Participants of a Conversation by a number of different search criteria, including for example by name, most recent outgoing calls, most recent incoming calls, most frequently called, etc.

[0231] Authorize a caller to review status 1112f – This function enables a first User to authorize other Users to view the first User's status. Non-authorized Users may not view the status of the first User.

[0232] Create a Group of Contacts 1112g – This function enables a User to associate a number of Contacts into a Group. When a User defines a Group, the list of Contacts in that Group are stored in the MCMS database 22.

[0233] Edit a Contact Group 1112h – This function enables a User to edit a Group, or update the contact information for a member of the Group.

[0234] Delete a Contact Group 1112i – This function enables a User to delete a Group.

L. MCMS Operation

L.1 MCMS-C

[0235] As noted above, the MCMS-C operation is similar to MCMS, with the added feature of enabling Users to manage and participate in multiple conversations consecutively through a hierarchical system of Priorities and the time-shifting of Messages, which are automatically managed by the system. Implementing the MCMS-C functionality includes three basic processes. As illustrated in Figure 12A, the first process involves defining a set of Conversations for consecutive rendering. Once the list is defined, a hierarchical set of Priorities and other factors are applied to the indexed media payloads associated with the set of Conversations. The indexed media payloads are then sequenced into a sequencing order. By rendering the media in the sequence order, the Messages of the set of Conversations are consecutively rendered.

[0236] Referring to Figure 12A, a flow chart illustrating the steps for defining the list of Conversations to render consecutively is shown. In the initial step 1202, the User's aggregate list of Conversations is defined. Either the User or pre-configuration data (step 1204) is next used to select the Conversations among the aggregate list for consecutive rendering (step 1206). With a tactical communication system for example, typically pre-configuration data is used to impose the Conversations to be consecutively rendered. With non-tactical applications, the User is typically given a higher degree of flexibility to select the Conversations for consecutive rendering.

[0237] Referring to Figure 12B, a flow chart illustrating the steps for defining hierarchical set of priorities for rendering the Messages of consecutive Conversations is illustrated. In the initial step (1208), a set of priority rules are defined and applied to the list of Conversations to be rendered consecutively (1206). In various embodiments, the set of priority rules may range from a rigid, hierarchical communication protocol to a highly flexible communication protocol. For example in a tactical communication system where a rigid hierarchy is often desirable, the set of priority rules will preferably impose a specific order in which concurrent Messages are rendered. For example with a first-responder tactical system, Messages from a fire chief may be given the highest priority. The next level of priority may be given to fire fighters inside a burning building. At the next level, priority may be given to fire fighters outside the building, etc. By defining a rigid priority, the current Messages of those

supervising the efforts to fight the fire, or those in harm's way, are rendered ahead of those performing a less critical role. With non-tactical communications, a User may be given a great deal of flexibility to define their own priority scheme to meet personal needs. A sales executive may for example define a priority scheme listing consecutive Conversations with clients from the most important to the least important. Or a User may prioritize consecutive Messages among family and friends. Regardless of the scheme used, a priority list for consecutive Conversations is defined (step 1210) in this process.

[0238] Referring to Figure 12C, a flow diagram illustrating the construction of a queue of Messages received from the various consecutive Conversations is illustrated. In the initial step, the availability of non-rendered indexed media payloads of Messages (i.e., media streams) is continually detected (step 1212) for each of the Conversations to be consecutively rendered. The priority hierarchy is applied to the available indexed media payload streams (step 1214). Based at least partially on the priority hierarchy, and possible other parameters as mentioned below, the available indexed media payloads are arranged into a sequence order (step 1216). The indexed media payloads are then continuously rendered in the sequence order (step 1218). By continuously repeating the above-described process, the Messages of multiple Conversations are consecutively rendered.

[0239] In one embodiment, the sequencing order is based either partly or fully on the priority hierarchy. In alternative embodiments, other parameters in addition to the hierarchy and availability may be considered as well. For example, the sequence order may be defined using one or more parameters such as the switching costs associated with interrupting a currently rendered stream of indexed media payloads with the indexed media payloads of a higher priority Conversation, the quality of the available streams of indexed media payloads, the relative time the indexed media payloads were received, a shuffling order, or from input of a controller of the system.

[0240] Typically when conflicts between the Messages of different Conversations occur, the indexed media payloads first in sequence order are rendered while the rendering of other available indexed media payloads are paused or delayed. When there no conflicts, indexed media payloads are immediately rendered as they become available.

[0241] In yet another embodiment, the Messages of the consecutively rendered Conversations may be optionally reviewed in a time-shifted mode. If the User of the first communication device generated any Media associated with the consecutively rendered

Conversations, that media is indexed and stored in the PIMB 30 of the Device as well as the PIMB(s) 85 of the Servers 16 on the network. Thus when a Conversation is reviewed in the time shifted mode, the User has the option of reviewing just the incoming Messages associated with the Conversation, or both the incoming Messages as well as the Media created by the first User associated with the Conversation in time index order.

L.2 MCMS-S Operation

[0242] In the MCMS-S or simultaneous mode, a User of a Client 12 enabled Device 13 may define a set of Conversations for simultaneous rendering. Once the set of Conversations is defined, the indexed media payload streams associated with the set of Conversations are simultaneously rendered on the Device 13, regardless if they overlap or not. In alternative embodiments, the User may optionally render the received indexed media payloads from the set of media streams separately. The indexed media payloads of the simultaneous Conversations may also be optionally rendered in near real-time or in the time-shifted mode.

L.3 MCMS, MCMS-C and MCMS-S Examples

[0243] In Figures 13A through 13D, a series of diagrams illustrating the attributes of a Conversation and the operation of MCMS, MCMS-C and MSMS-S is illustrated.

[0244] In Figure 13A, a time diagram illustrating the sequence of rendering the indexed media payloads of the Messages of a Conversation labeled "A" between a User "X" and two other users, designated "Y" and "Z". In this example, Media is generated by user Y during the time intervals designated by t1, t5, 56, t7 and t9. Media is generated by user Z during the time intervals designated t3, t6 and t9 through t10.

[0245] The rendering sequence at the Device 13 of User X is illustrated at the bottom of the figure. During intervals t1, t5, and t7, Media derived only from Y is rendered. During intervals t3 and t10, only Media derived from Z is rendered. In intervals t6 and t9, Media from both Y and Z is rendered. In intervals t2, t4 and t8, nothing is being rendered because neither users Y or Z are generating Media during these periods. It should be noted that intervals tl through t10 are not intended to mean fixed time intervals, but rather, just periods of time when Media is being generated.

[0246] The diagram of Figure 13A is useful in illustrating the attributes of Conversations. When one user is generating Media (either Y or Z), that Media is received at the Device 13 of X and is available for rendering. When both users X and Y are generating Media, both Media streams are received at Device 13 of X and is available for Mixing. When neither user X or Y

is generating Media, no Media is received at Device 13 of X. As noted above, User X has the option of Reviewing the Media generated during Conversation A in either the near real-time or time-shifted modes. Also the User X has the option of Reviewing the Media in the Mixed format as illustrated, or to separately Reviewing the Media from Y and Z in the time-shifted mode.

[0247] Figure 13B illustrates the operation of MCMS. In this example, the User is Participating in three Conversations, designated A, B and C. For Conversations A, B, and C, the User either generates or receives Messages designated (A1, A2, A3, and A4), (B1, B2 and B3) and (C1and C2) respectively. The timing and duration of each Message is indicated by the starting point along the time-line. It is useful to note that in this example, all of the Messages overlap in time to some degree, except Message B2.

[0248] With the MCMS application, the User selects one Conversation as current. For the selected Conversation, the User may Review incoming Messages and generate Messages which are transmitted to the other Participants of the Conversation. In this example, the User selects in order Conversation B, C and A as current respectively. The Message sequence is therefore initially B1, B2, and B3, followed by C1 and C2, and then finally A1 through A4. Again, while a particular Conversation is selected as current, the User may transition between the near real-time and the time-shifted modes and back again. The final rendering as illustrated in the diagram is not intended to correspond in timing of the received Messages as illustrated in the top portion of the diagram. Rather the lower portion of the diagram is intended to show only the rendering order of the Messages, based on Conversation order selected by the User.

[0249] The example of Figure 13B is thus useful in illustrating the attributes of the MCMS application. A User selects one Conversation as current. The other Conversations are paused. The User may also transition the current Conversation among all the Conversations at any time.

[0250] Referring to Figure 13C, a diagram illustrating the operation of MCMS-C is illustrated. In this example, the User is Participating in two consecutive Conversations, A and B. With Conversation A, three Messages are received A1, A2, and A3. With Conversation B, three Messages are received B1, B2 and B3. It is useful to note that with this example, Message B1 conflicts with Messages A1. Also Conversation A has a higher priority that Conversation B.

[0251] During the consecutive rendering of the two Conversations, the higher priority Messages A1 and A2 are first rendered in near real-time, as represented by the vertical dashed lines in the figure. Since there is a relatively large time gap between Messages A2 and A3, this space is filled by time shifting and rendering Messages B1 and B2. When A3 arrives, it is rendered in near real-time, while Message B3 is rendered only after the higher priority Message A3 is rendered. By time-shifting rendering of the lower priority Messages between the higher Priority Messages, consecutive multiple conversations can be managed. It should be noted that in this simple example, priority is the only parameter used to determine the consecutive order for rendering. As noted above, a number of other parameters may be used as well.

[0252] Referring to Figure 13D, a diagram illustrating MCMS-S is illustrated. In this example, a User is engaged in three simultaneous Conversations, A, B and C. The Messages A1, A2 and A3, B1, B2 and B3, and C1 and C2 are received for each Conversation A, B and C are shown in the diagram respectively. With the MCMS-S, the incoming Messages are rendered at a recipients Device 13 as they are received. The rendering sequence of the Messages of the three Conversations A, B and C, as illustrated in the lower portion of the diagram, are therefore the same as when the Messages were received. In this manner, multiple Conversations may be simultaneously rendered.

[0253] In the aforementioned examples, several variations of the MCMS application were described, including MSMS-C and MCMS-S. Regardless of the specific type of MCMS application used, they all share several common characteristics. In each case, the Conversations are defined by a threaded sequence or organization of Messages. The Messages are segmented from a stream of Media, with each Message given a sequence identifier and indexed by the time the Media was created. Depending on the variation of the MCMS application, Messages can be rendered in accordance with one or more rendering options. The rendering options include, in one form or another, the filtering, grouping overlapping and/or serialization of Messages, using anywhere from zero to a plurality of different attributes. In this manner, multiple Conversations, each including a string of Messages, can be conducted on a single Client 12 enabled Device 13. Lastly, each of the variations of MCMS may handle the receipt of interrupt Messages in the same way. When an interrupt Message is received, it typically takes precedent over and is rendered before other Messages belonging to other Conversations.

M. Client and Server Hardware

[0254] Referring to Figure 14A, a block diagram 140 illustrating the hardware of a Device 13 used for storing and executing the Client application 12 is shown. The hardware includes a CPU 142, main memory 144 and mass storage 146. As is well known in the art, the Client application 12 is loaded and stored in main memory144 and mass storage 146 and executed by the CPU 142.

[0255] Referring to Figure 14B, a block diagram 150 illustrating the hardware of a Server 16 used for storing and executing the server application 78 is shown. The hardware includes a CPU 152, main memory 154, mass storage 156, and the archive 89. As is well known in the art, the server application 78 is loaded and stored in main memory 154 and mass storage 156 and executed by the CPU 152. As noted above, indexed media payloads of one or more Users are stored in the archive 89.

[0256] Although many of the components and processes are described above in the singular for convenience, it will be appreciated by one of skill in the art that multiple components and repeated processes can also be used to practice the techniques of the system and method described herein. Further, while the invention has been particularly shown and described with reference to specific embodiments thereof, it will be understood by those skilled in the art that changes in the form and details of the disclosed embodiments may be made without departing from the spirit or scope of the invention. For example, embodiments of the invention may be employed with a variety of components and should not be restricted to the ones mentioned above. It is therefore intended that the invention be interpreted to include all variations and equivalents that fall within the true spirit and scope of the invention.

CLAIMS

What is claimed is:

1. A live video messaging system implemented on a communication network, comprising:

a node on the communication network, the node arranged to:

(a) perform a lookup of an identifier associated with a live video message when the identifier is received over the communication network from a first client communication device, the identifier identifying an intended recipient of the live video message, the lookup resulting in an IP address associated with a second client communication device on the communication network associated with the intended recipient of the live video message;

(b) persistently store video media of the live video message as the video media is received at the node from the first client communication device;

(c) route the video media of the live video message to the second client communication device using the IP address, the routing enabling the video media to be rendered live at the second client communication device as the video media is transmitted by the first client communication device and received, stored and routed by the node on the communication network,

wherein the routing of the video media of the live video message supports live video messaging between the first client communication device and the second client communication device without first establishing an end-to-end connection over the communication network between the first and second client communication devices.

TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

ABSTRACT

A telecommunication and multimedia management apparatus and method that supports voice and other media communications and that enables users to: (i) participate in multiple conversation modes, including live phone calls, conference calls, instant voice messaging or tactical communications; (ii) review the messages of conversations in either a live mode or a time-shifted mode and to seamlessly transition back and forth between the two modes; (iii) participate in multiple conversations either concurrently or simultaneously; (iv) archive the messages of conversations for later review or processing; and (v) persistently store media either created or received on the communication devices of users. The latter feature enables users to generate or review media when either disconnected from the network or network conditions are poor and to optimize the delivery of media over the network based on network conditions and the intention of the users participating in conversations.

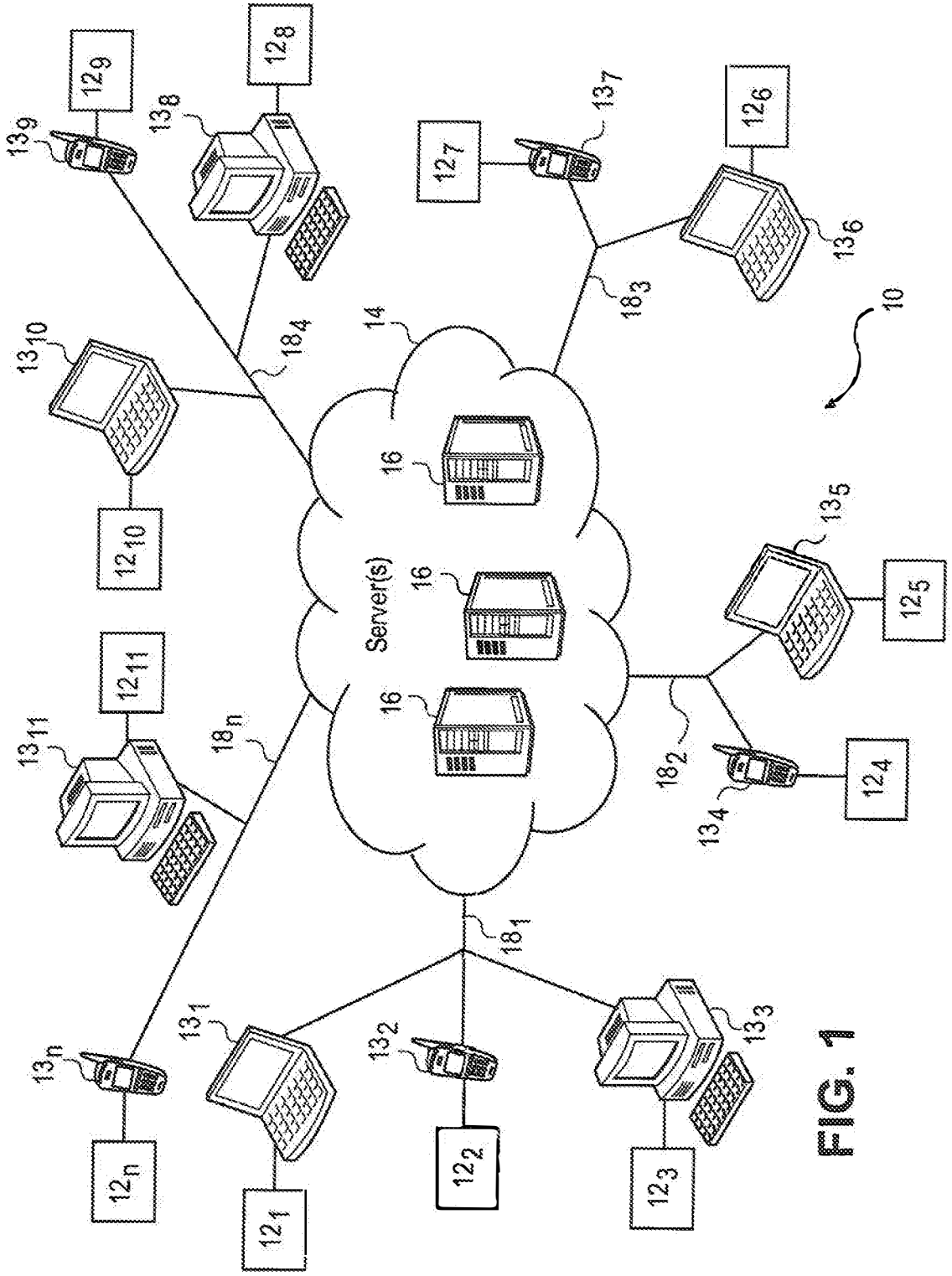

Server(s)
16
16
16
14
10
18_1
18_2
18_3
18_4
18_n
12_1
12_2
12_3
12_4
12_5
12_6
12_7
12_8
12_9
12_{10}
12_{11}
12_n
13_1
13_2
13_3
13_4
13_5
13_6
13_7
13_8
13_9
13_{10}
13_{11}
13_n

FIG. 1

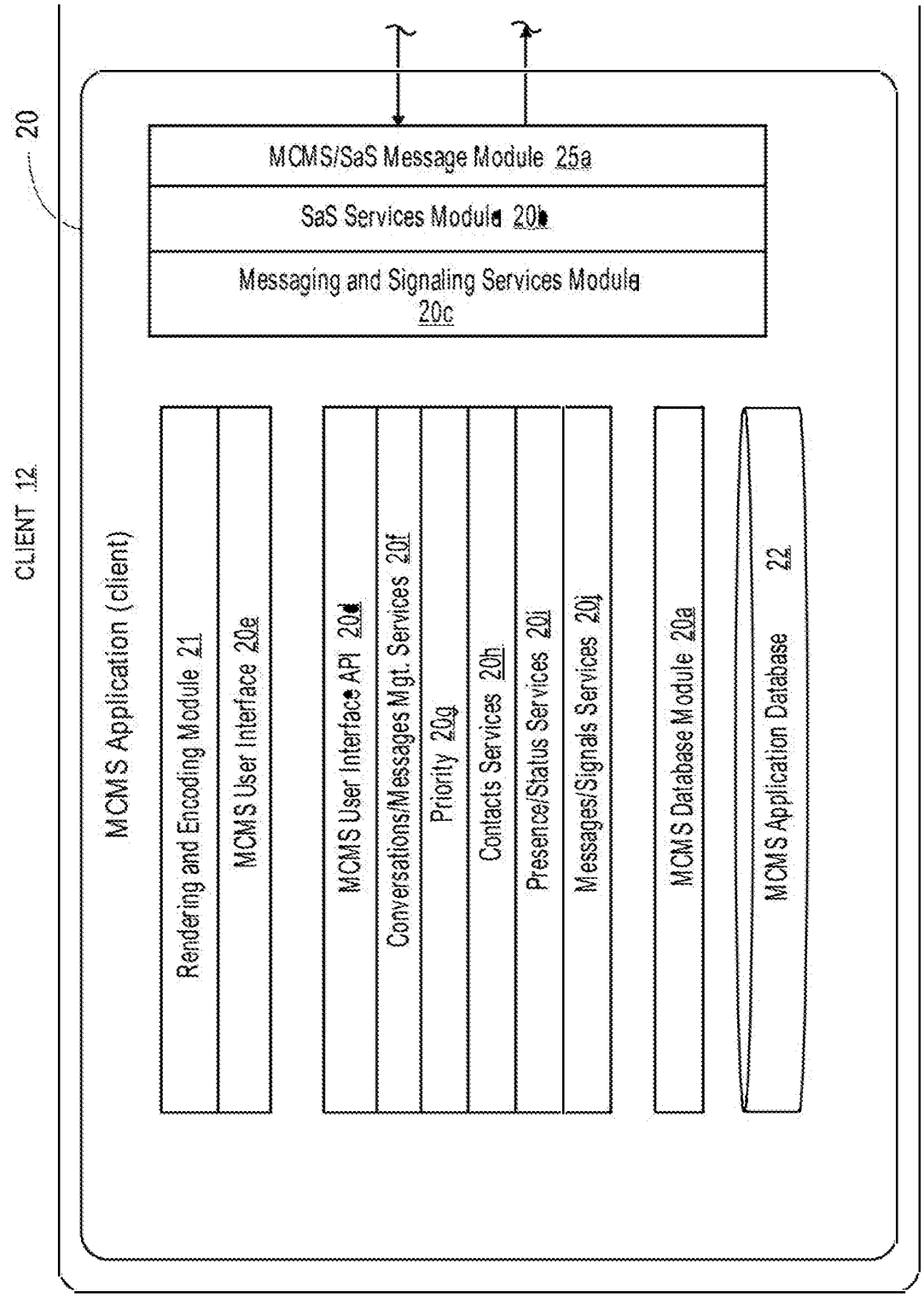


FIG. 2A

FIG. 2A | FIG. 2B

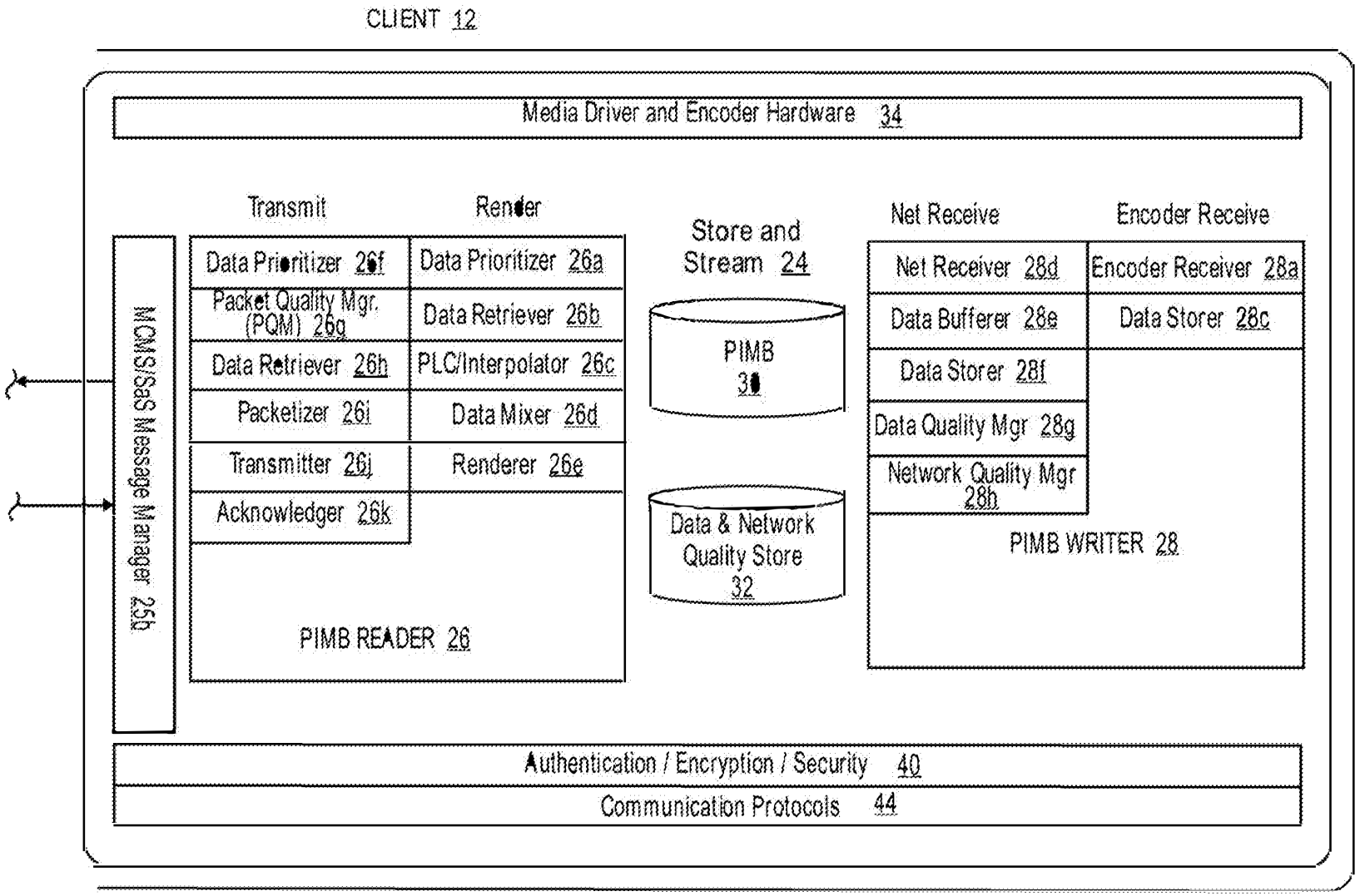


FIG. 2B

FIG. 2A	FIG. 2B

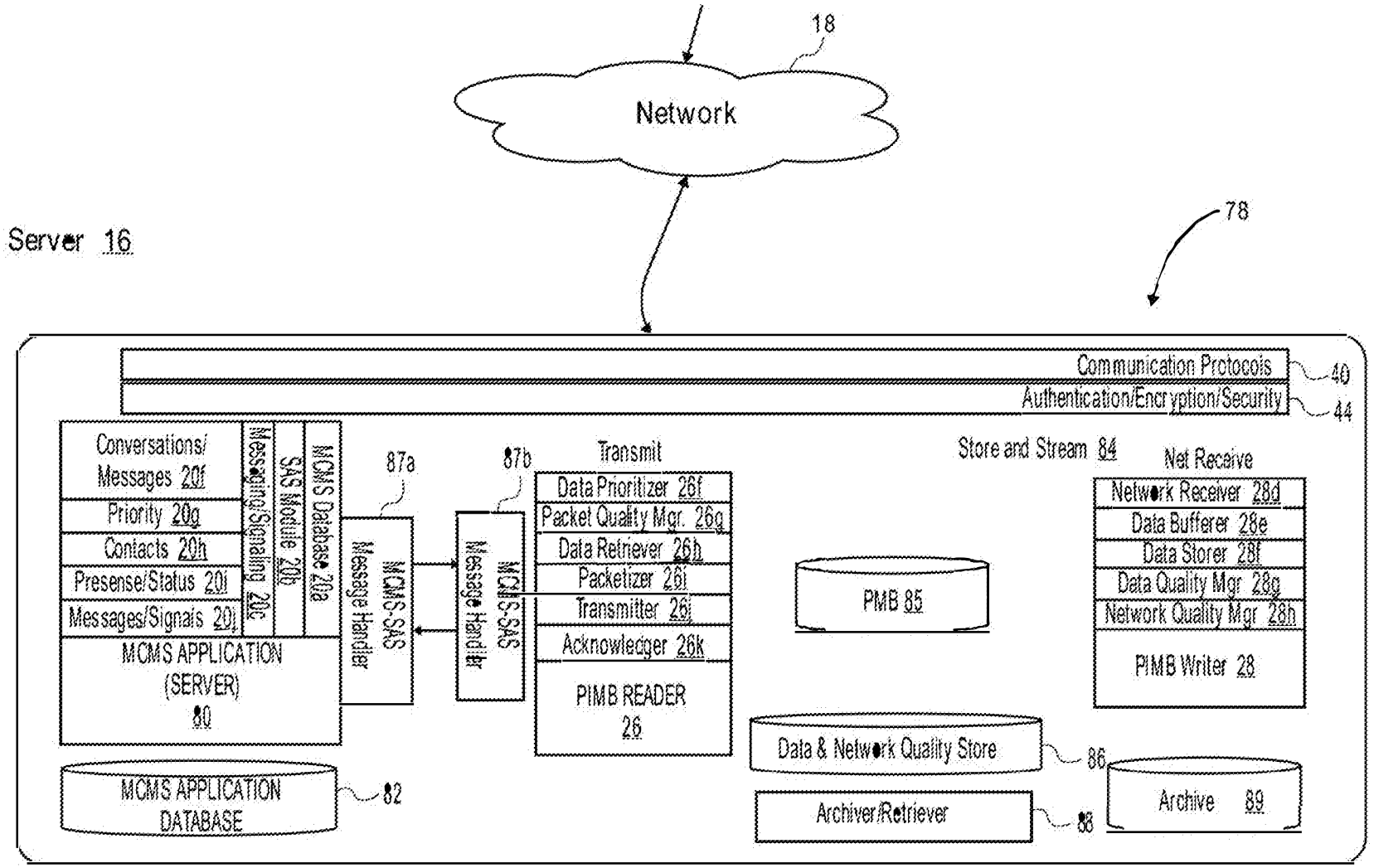

18
Network
Server 16
78
Communication Protocols
40
Authentication/Encryption/Security
44
Conversations/ Messages 20f
Priority 20g
Contacts 20h
Presense/Status 20i
Messages/Signals 20j
Messaging/Signaling 20c
SAS Module 20b
MCMS Database 20a
MCMS APPLICATION (SERVER) 80
87a
Message Handler
MCMS-SAS
87b
Message Handler
MCMS-SAS
Transmit
Data Prioritizer 26f
Packet Quality Mgr. 26g
Data Retriever 26h
Packetizer 26i
Transmitter 26j
Acknowledger 26k
PIMB READER 26
Store and Stream 84
Net Receive
Network Receiver 28d
Data Bufferer 28e
Data Storer 28f
Data Quality Mgr 28g
Network Quality Mgr 28h
PIMB Writer 28
PMB 85
MCMS APPLICATION DATABASE
82
Data & Network Quality Store
86
Archiver/Retriever
88
Archive 89

FIG. 3

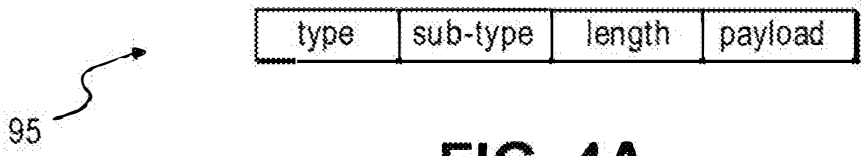


FIG. 4A

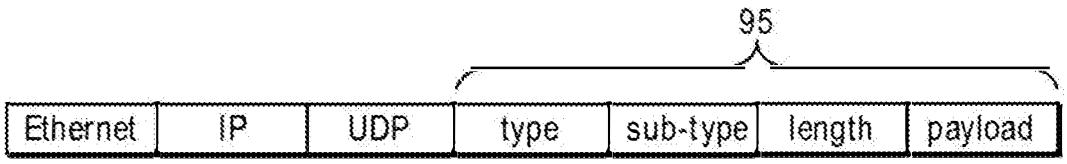


FIG. 4B

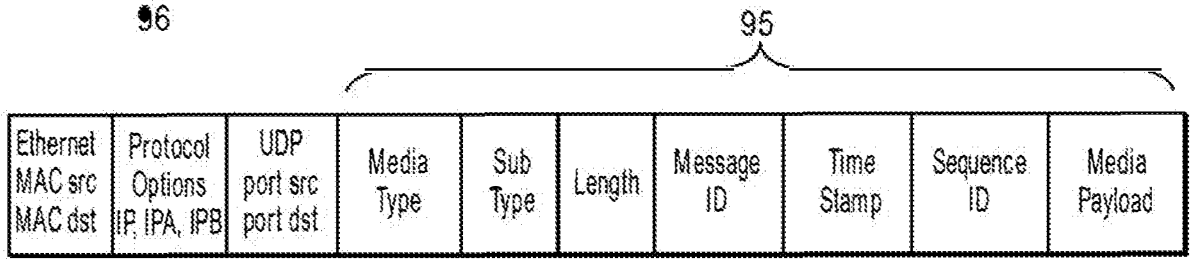


FIG. 4C

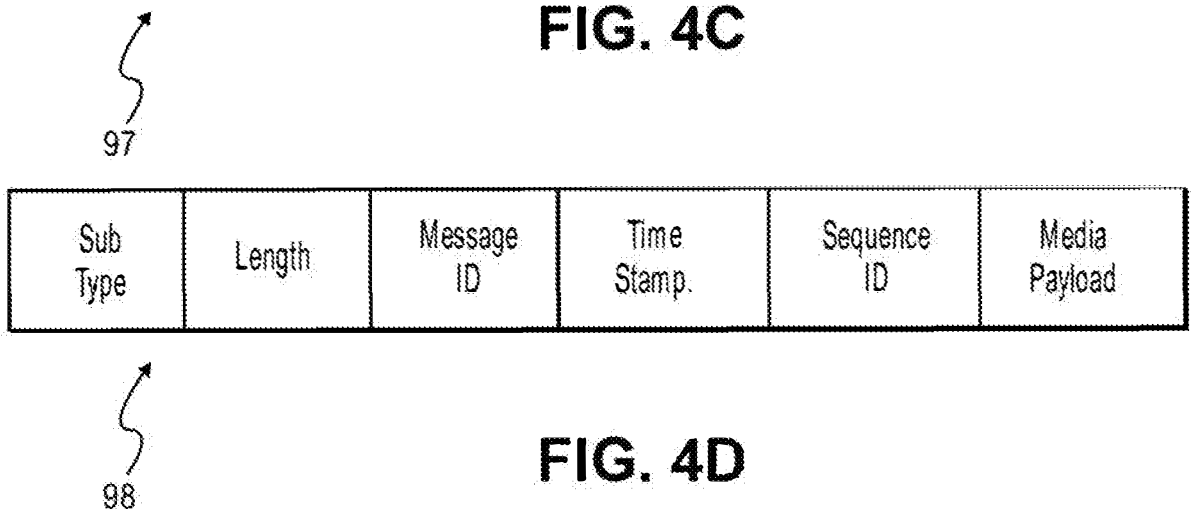


FIG. 4D

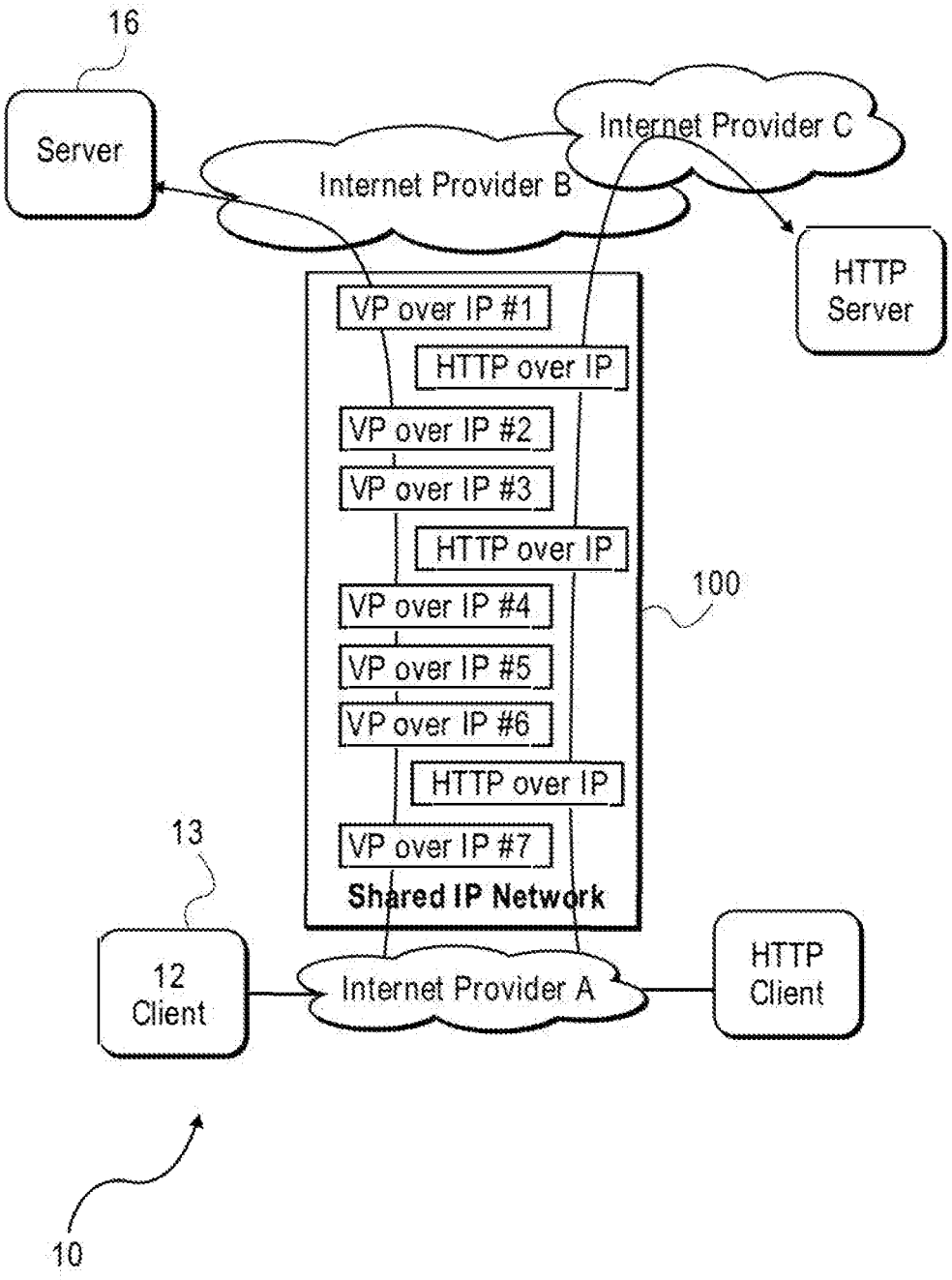

16
Server
Internet Provider C
Internet Provider B
HTTP Server
VP over IP #1
HTTP over IP
VP over IP #2
VP over IP #3
HTTP over IP
100
VP over IP #4
VP over IP #5
VP over IP #6
HTTP over IP
VP over IP #7
Shared IP Network
13
12 Client
Internet Provider A
HTTP Client
10

FIG. 5

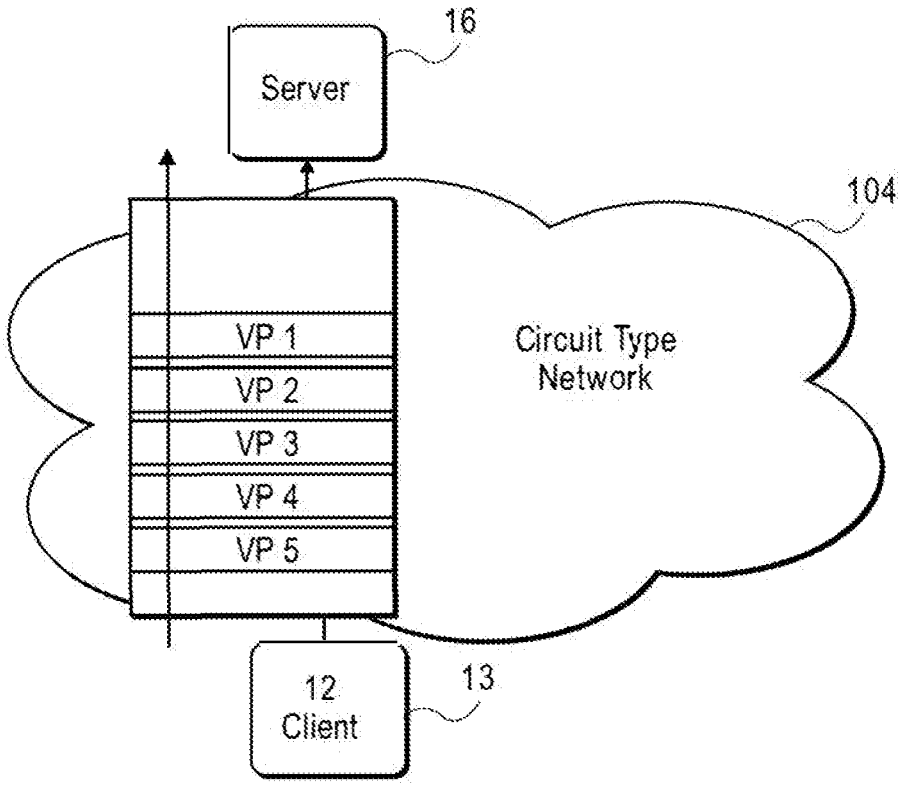

16
Server
104
VP 1
VP 2
VP 3
VP 4
VP 5
Circuit Type
Network
12
Client
13

FIG. 6

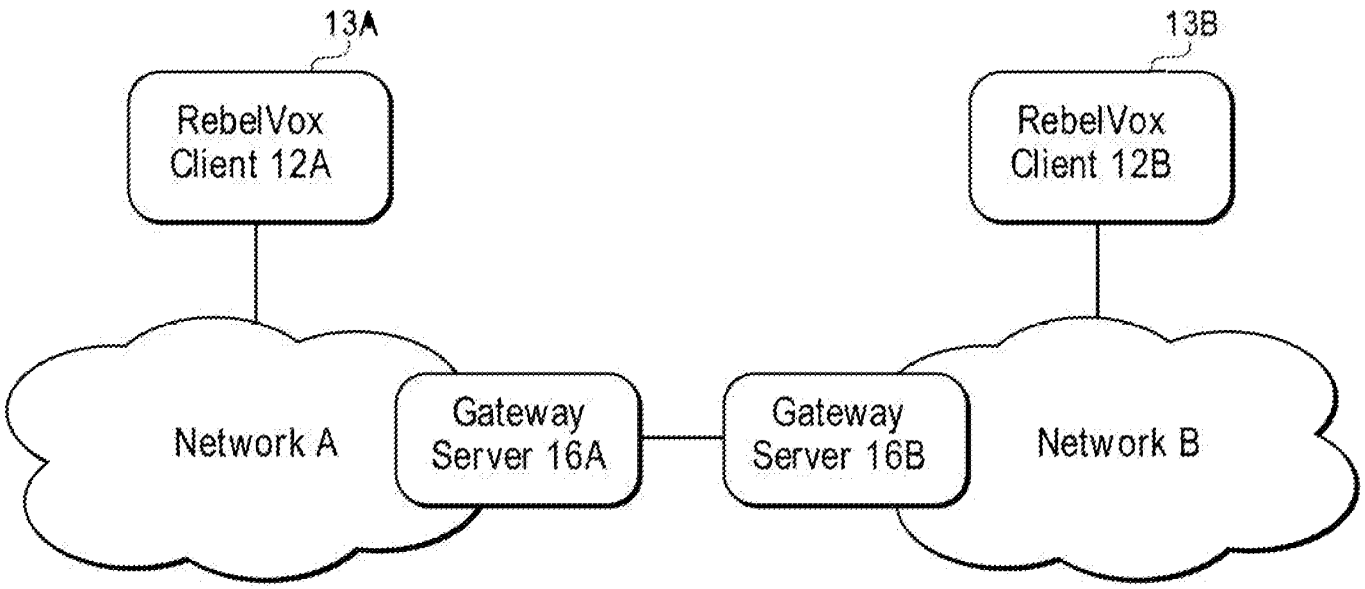

13A
RebelVox
Client 12A
13B
RebelVox
Client 12B
Network A
Gateway
Server 16A
Gateway
Server 16B
Network B

FIG. 7

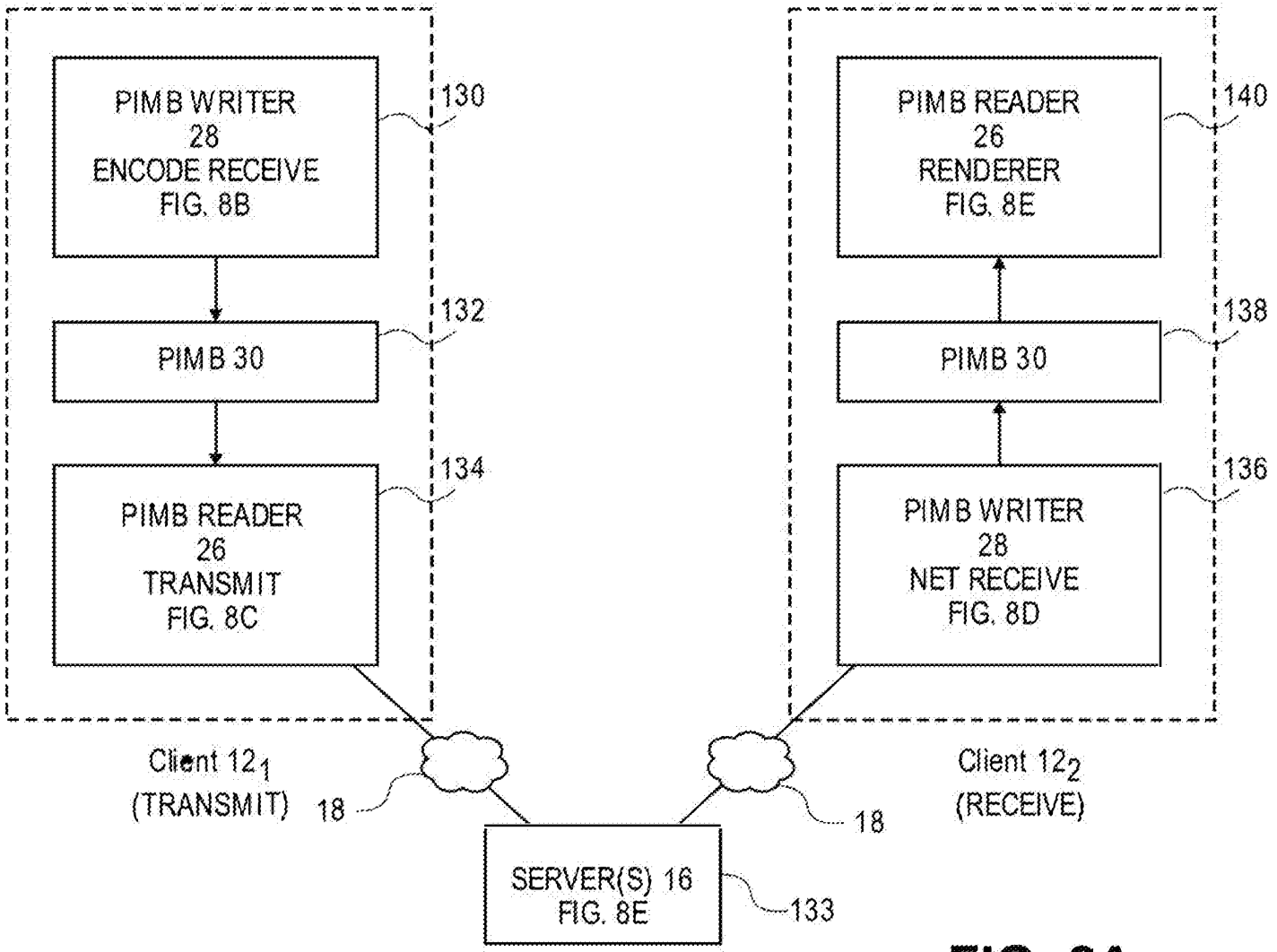

PIMB WRITER
28
ENCODE RECEIVE
FIG. 8B
130
PIMB 30
132
PIMB READER
26
TRANSMIT
FIG. 8C
134
Client 12$_1$
(TRANSMIT)
18
PIMB READER
26
RENDERER
FIG. 8E
140
PIMB 30
138
PIMB WRITER
28
NET RECEIVE
FIG. 8D
136
Client 12$_2$
(RECEIVE)
18
SERVER(S) 16
FIG. 8E
133

FIG. 8A

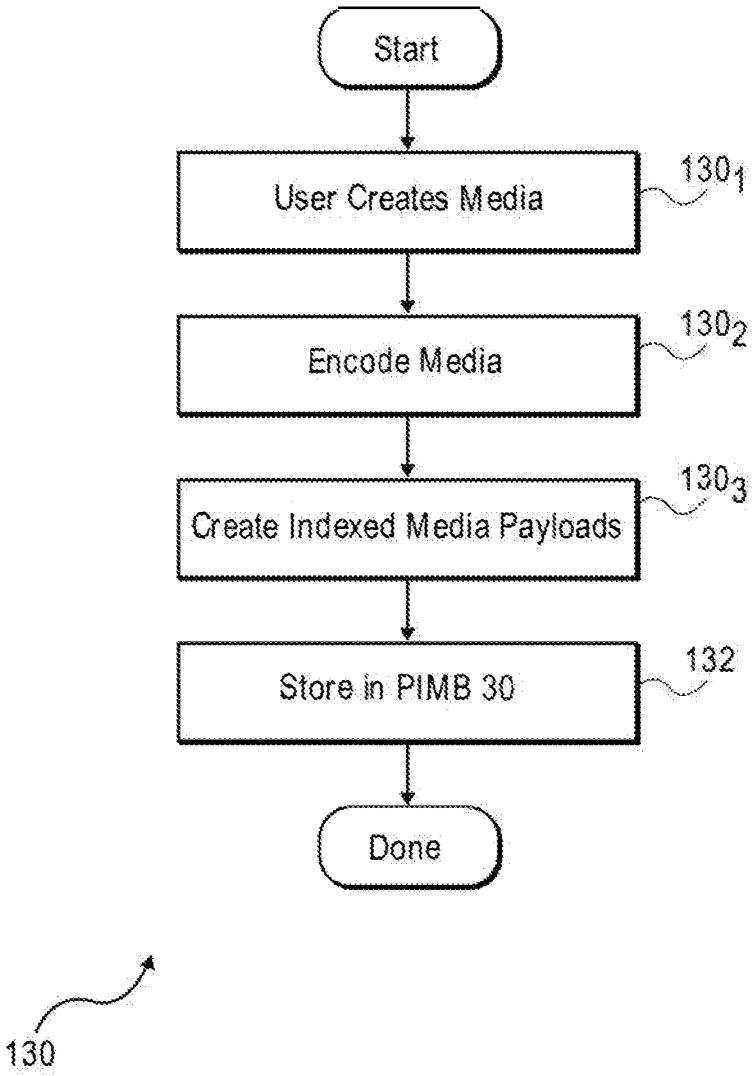

Start
User Creates Media
130_1
Encode Media
130_2
Create Indexed Media Payloads
130_3
Store in PIMB 30
132
Done
130

FIG. 8B

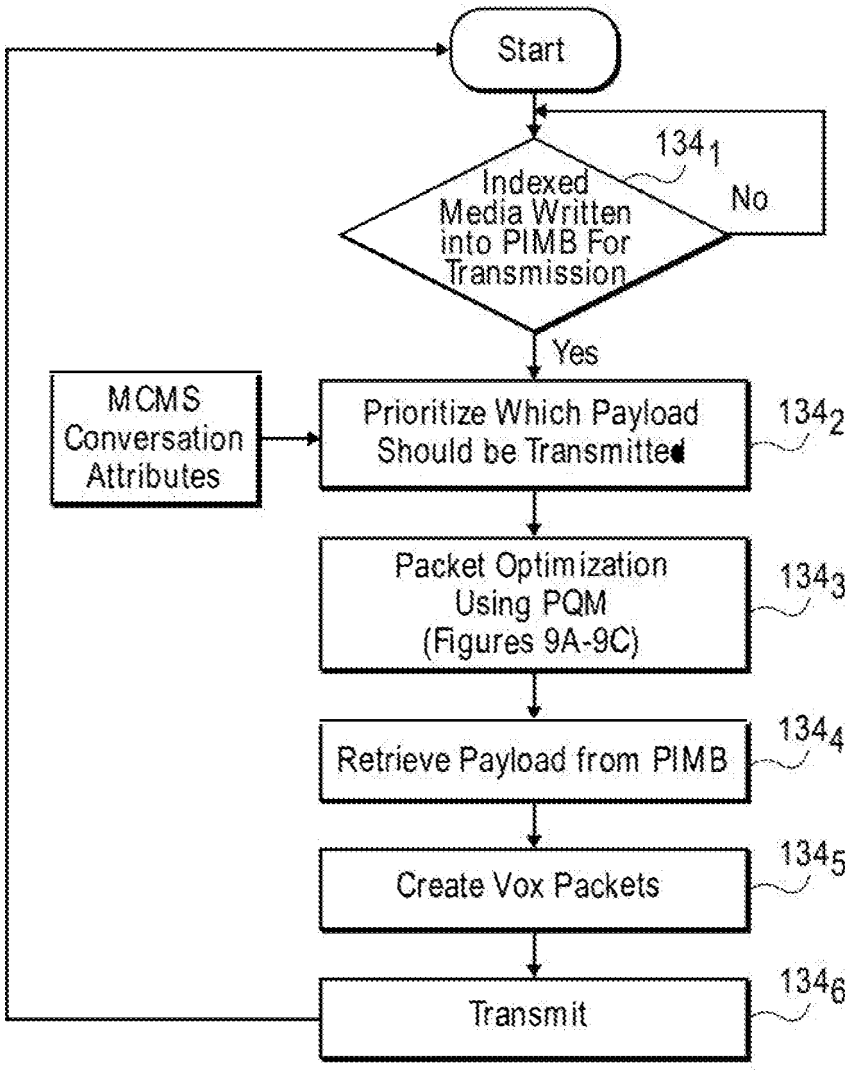

Start
1341
Indexed Media Written into PIMB For Transmission
No
Yes
MCMS Conversation Attributes
Prioritize Which Payload Should be Transmitted
1342
Packet Optimization Using PQM (Figures 9A-9C)
1343
Retrieve Payload from PIMB
1344
Create Vox Packets
1345
Transmit
1346

FIG. 8C

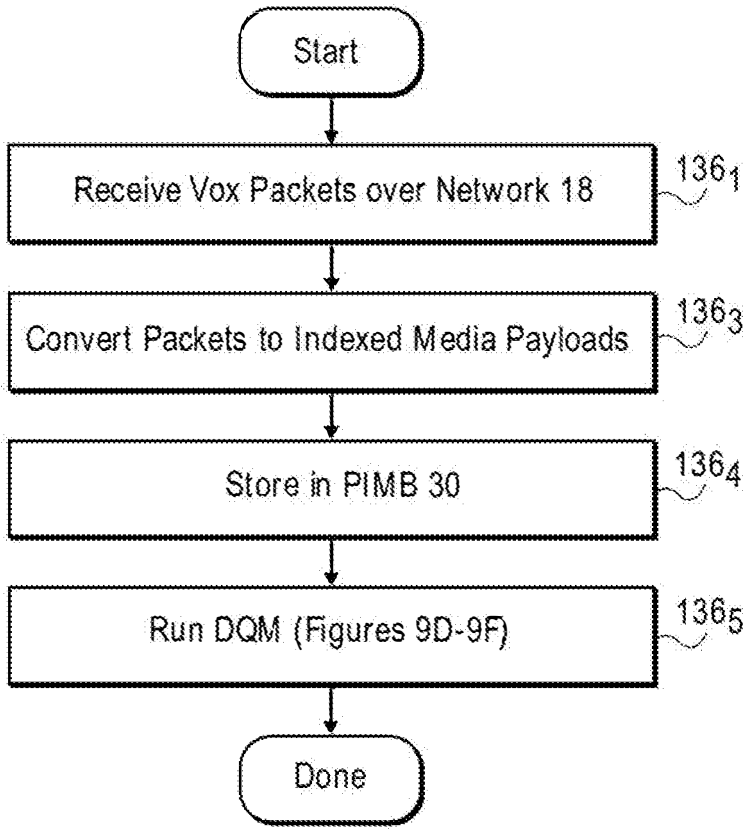

Start
Receive Vox Packets over Network 18
136_1
Convert Packets to Indexed Media Payloads
136_3
Store in PIMB 30
136_4
Run DQM (Figures 9D-9F)
136_5
Done

FIG. 8D

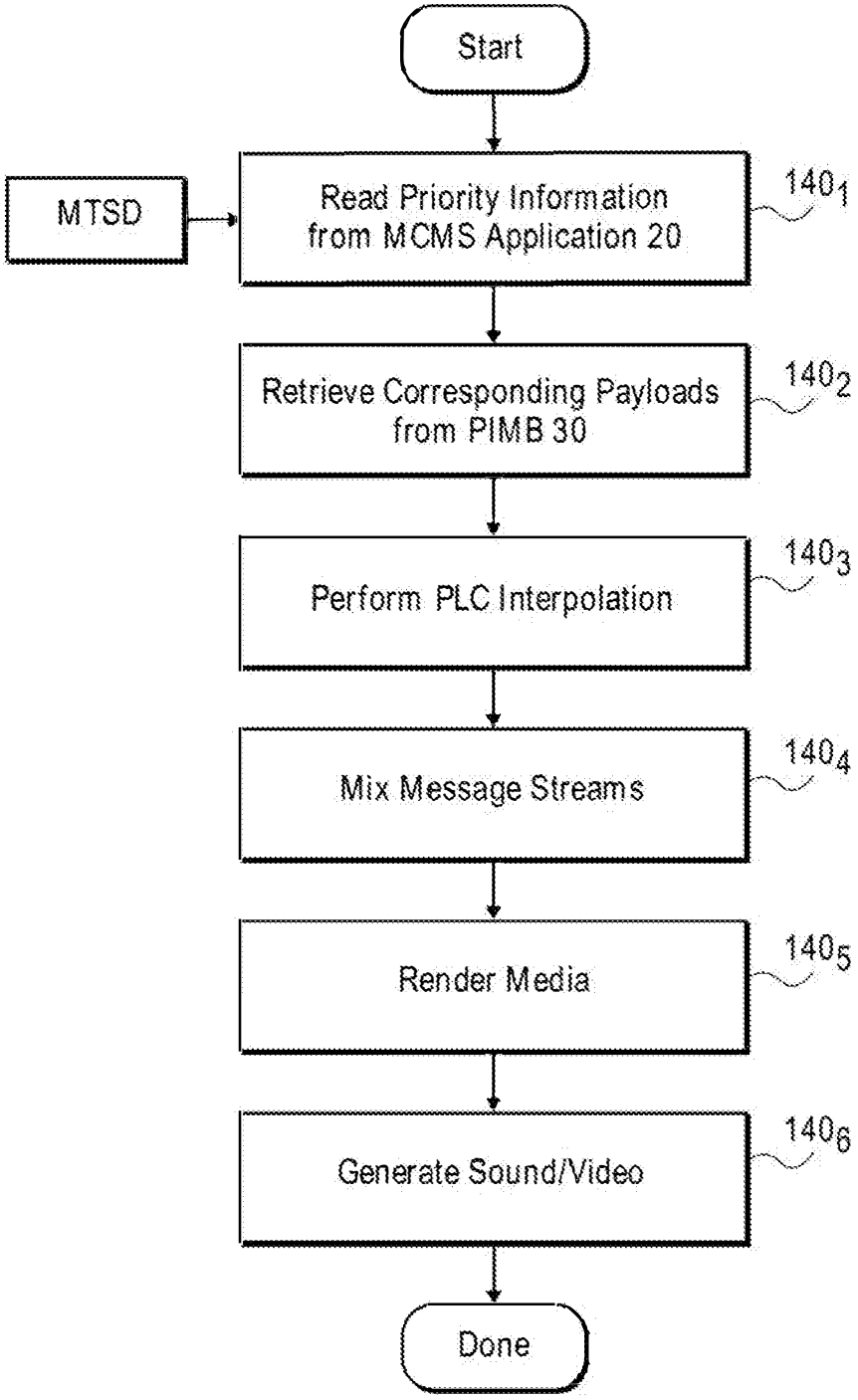

Start
MTSD
Read Priority Information from MCMS Application 20
140_1
Retrieve Corresponding Payloads from PIMB 30
140_2
Perform PLC Interpolation
140_3
Mix Message Streams
140_4
Render Media
140_5
Generate Sound/Video
140_6
Done

FIG. 8E

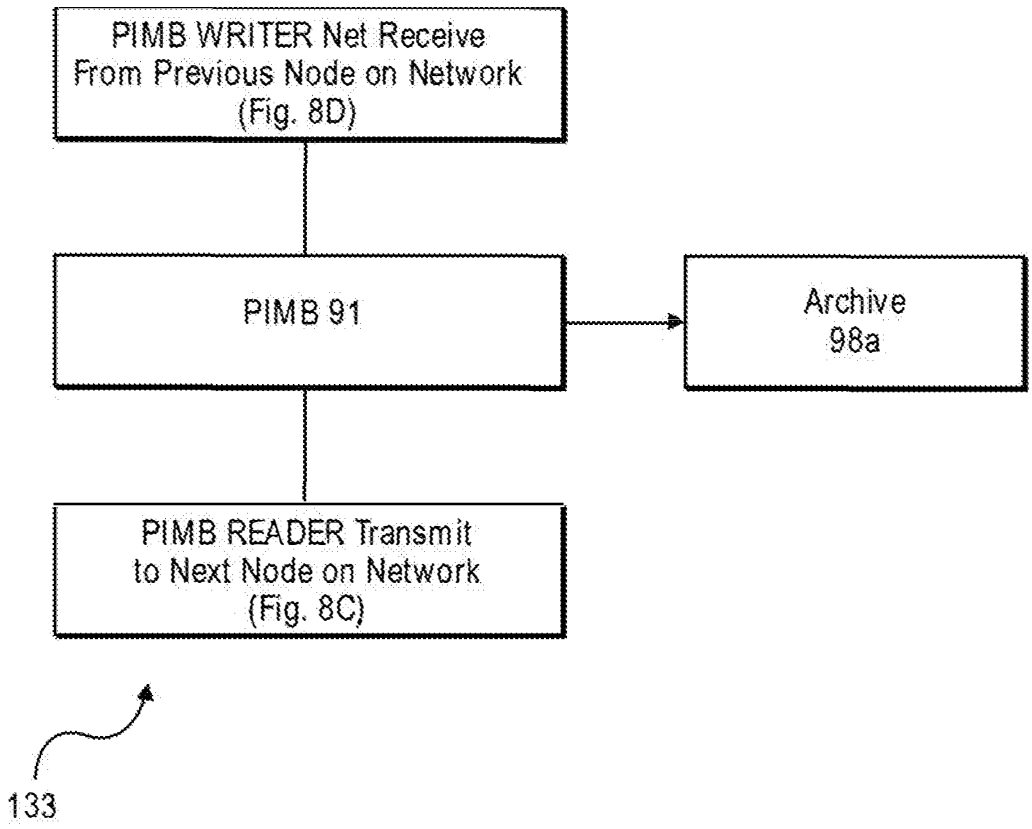

PIMB WRITER Net Receive
From Previous Node on Network
(Fig. 8D)
PIMB 91
Archive
98a
PIMB READER Transmit
to Next Node on Network
(Fig. 8C)
133

FIG. 8F

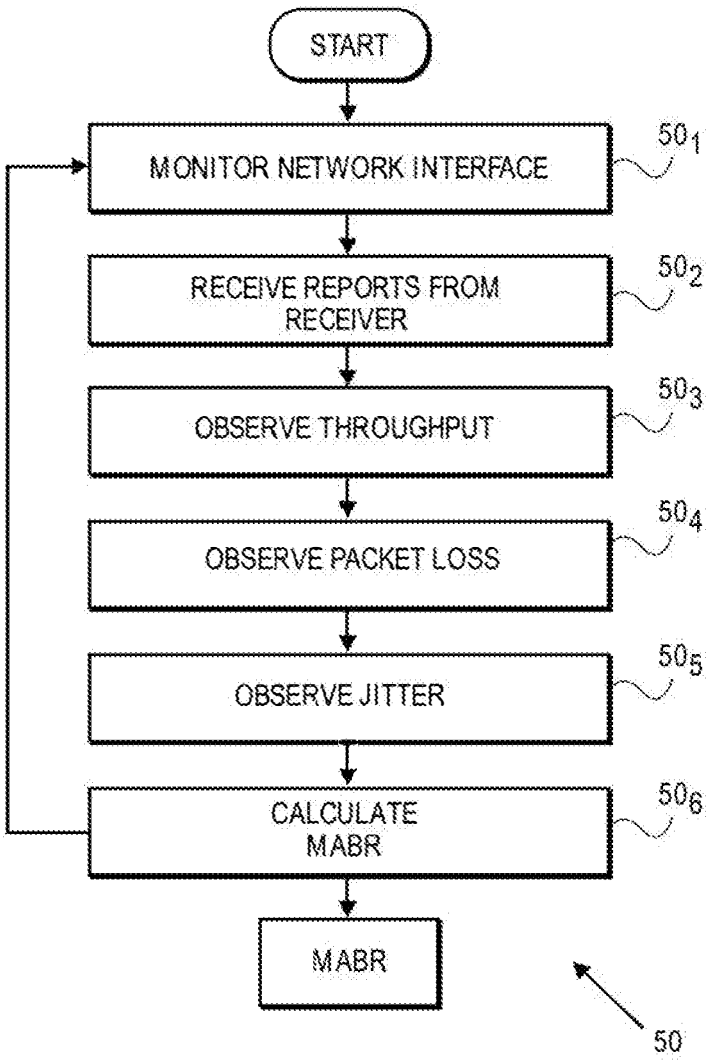

START
MONITOR NETWORK INTERFACE
501
RECEIVE REPORTS FROM RECEIVER
502
OBSERVE THROUGHPUT
503
OBSERVE PACKET LOSS
504
OBSERVE JITTER
505
CALCULATE MABR
506
MABR
50

FIG. 9A

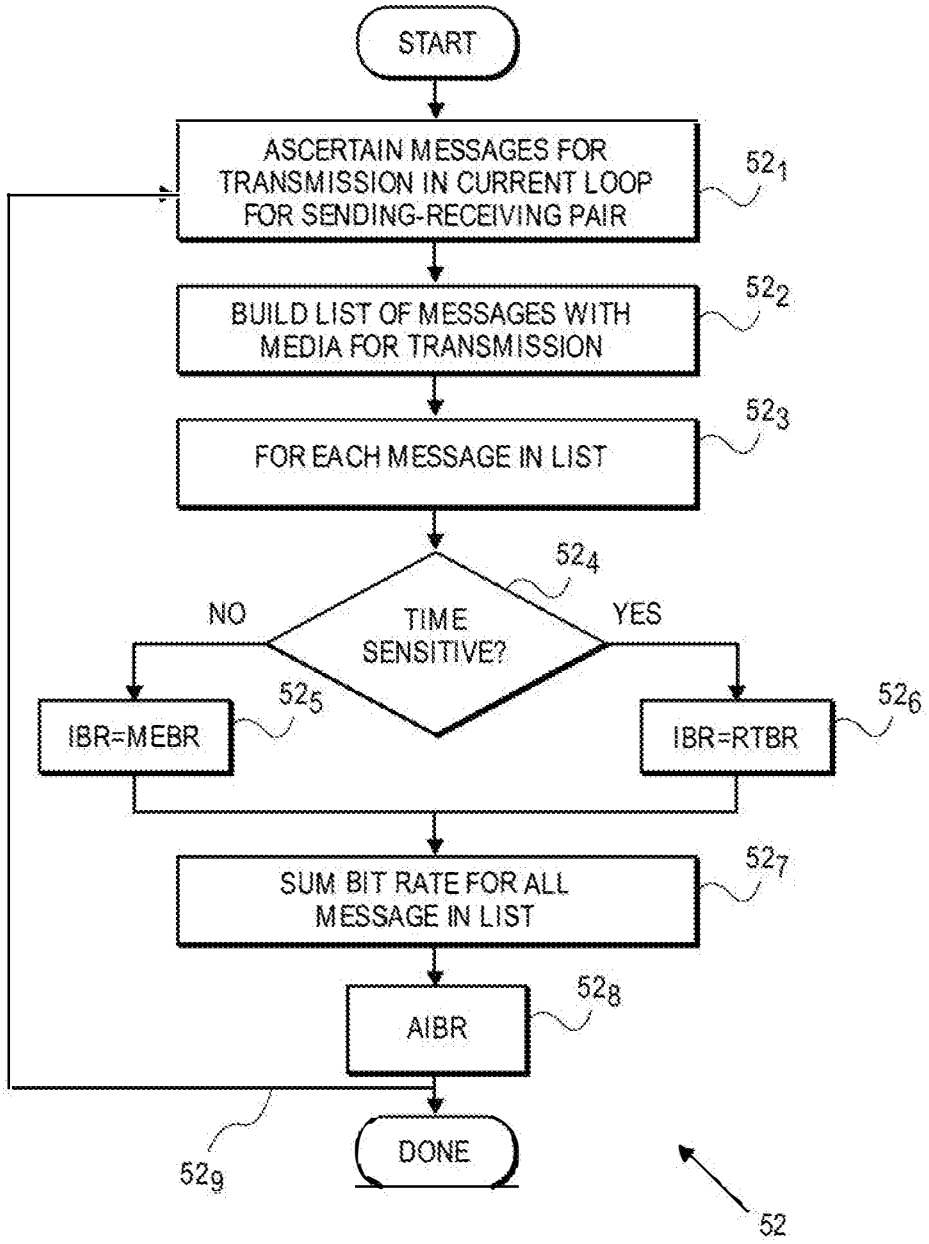

START
ASCERTAIN MESSAGES FOR TRANSMISSION IN CURRENT LOOP FOR SENDING-RECEIVING PAIR
52₁
BUILD LIST OF MESSAGES WITH MEDIA FOR TRANSMISSION
52₂
FOR EACH MESSAGE IN LIST
52₃
52₄
TIME SENSITIVE?
NO
YES
IBR=MEBR
52₅
IBR=RTBR
52₆
SUM BIT RATE FOR ALL MESSAGE IN LIST
52₇
AIBR
52₈
DONE
52₉
52

FIG. 9B

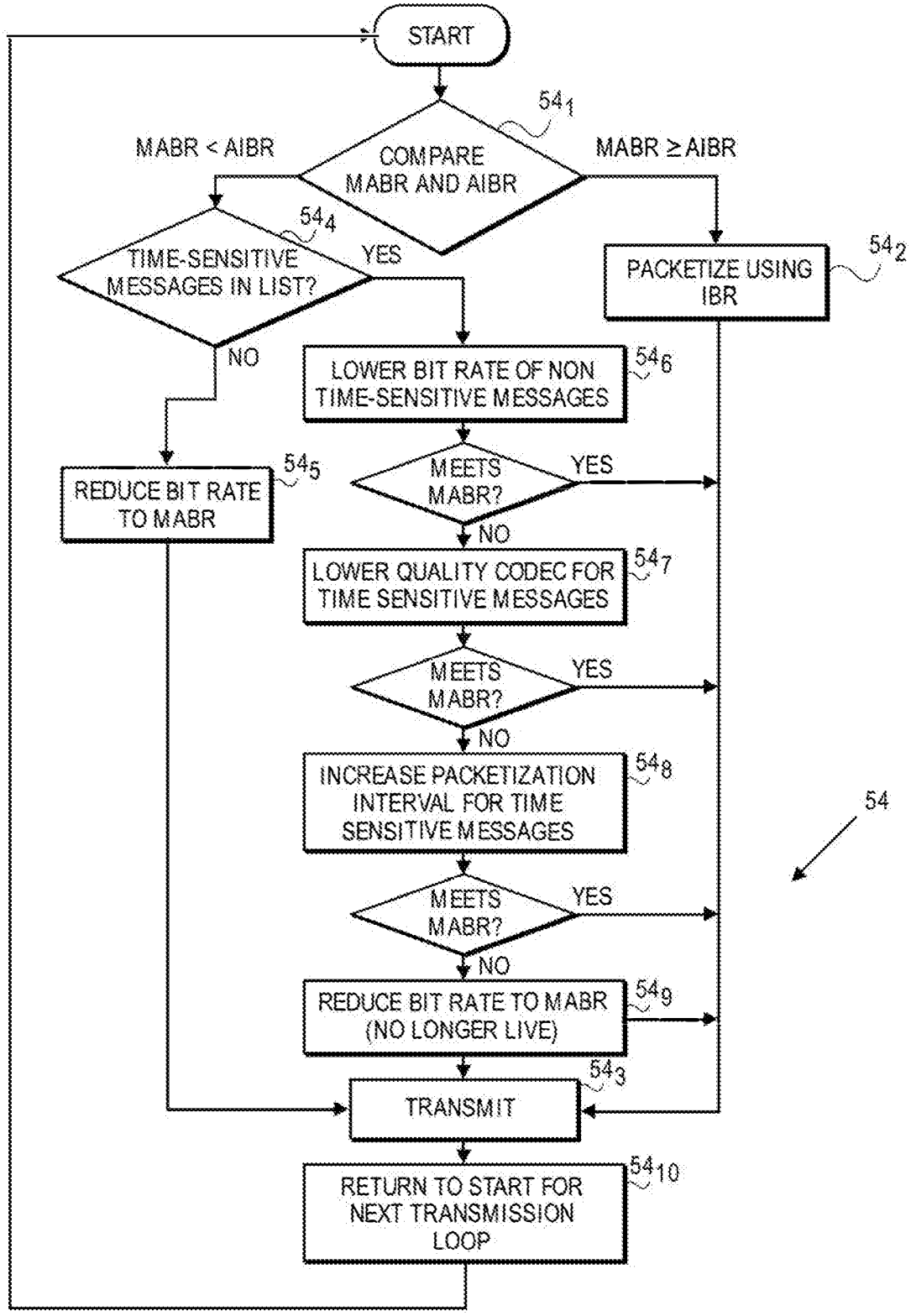

START
COMPARE MABR AND AIBR
54_1
MABR < AIBR
MABR ≥ AIBR
TIME-SENSITIVE MESSAGES IN LIST?
54_4
YES
NO
PACKETIZE USING IBR
54_2
LOWER BIT RATE OF NON TIME-SENSITIVE MESSAGES
54_6
REDUCE BIT RATE TO MABR
54_5
MEETS MABR?
YES
NO
LOWER QUALITY CODEC FOR TIME SENSITIVE MESSAGES
54_7
MEETS MABR?
YES
NO
INCREASE PACKETIZATION INTERVAL FOR TIME SENSITIVE MESSAGES
54_8
MEETS MABR?
YES
NO
REDUCE BIT RATE TO MABR (NO LONGER LIVE)
54_9
TRANSMIT
54_3
RETURN TO START FOR NEXT TRANSMISSION LOOP
54_{10}
54

FIG. 9C

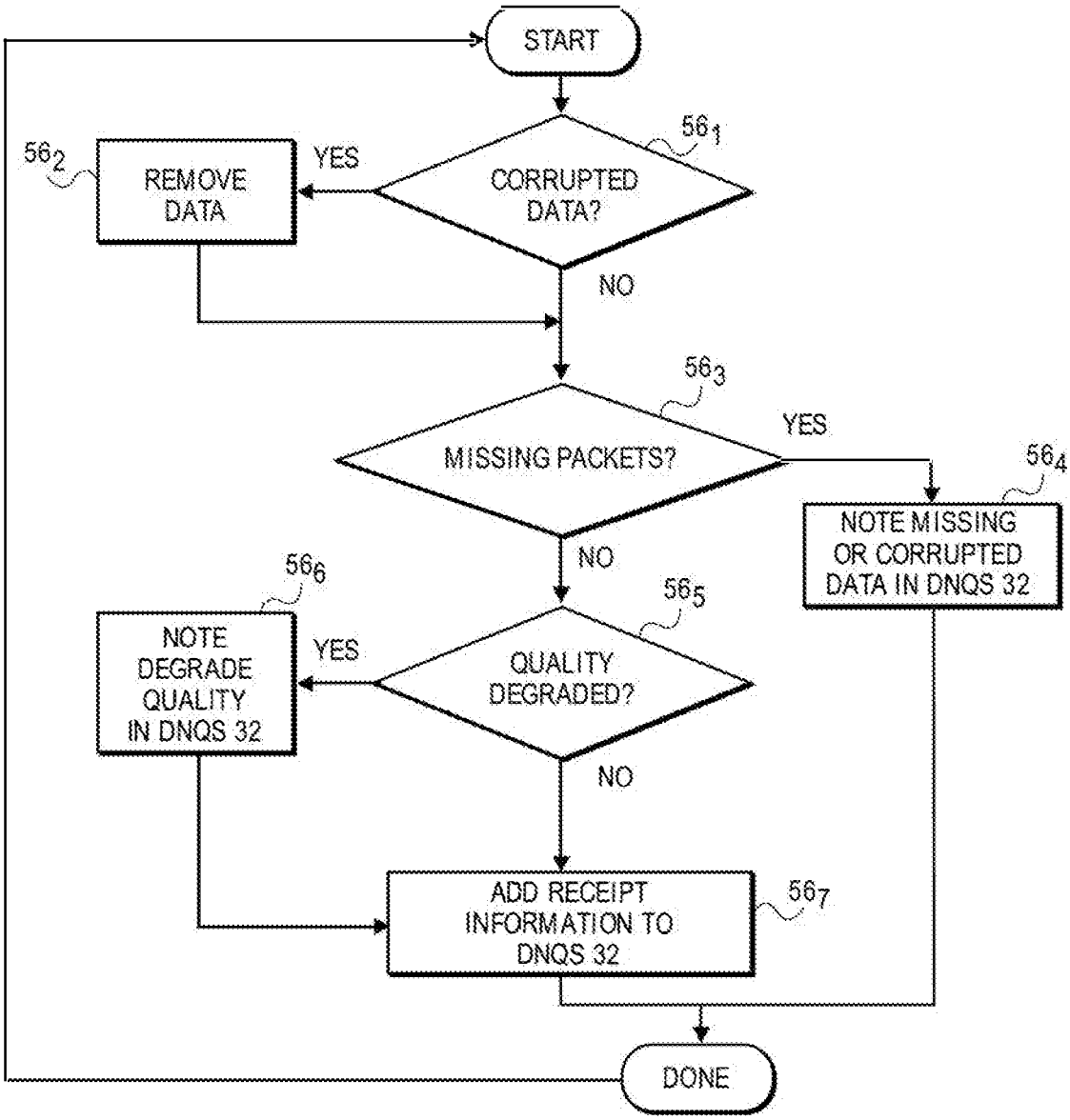

START
56_1
CORRUPTED DATA?
YES
56_2
REMOVE DATA
NO
56_3
MISSING PACKETS?
YES
56_4
NOTE MISSING OR CORRUPTED DATA IN DNQS 32
NO
56_5
QUALITY DEGRADED?
YES
56_6
NOTE DEGRADE QUALITY IN DNQS 32
NO
56_7
ADD RECEIPT INFORMATION TO DNQS 32
DONE

FIG. 9D

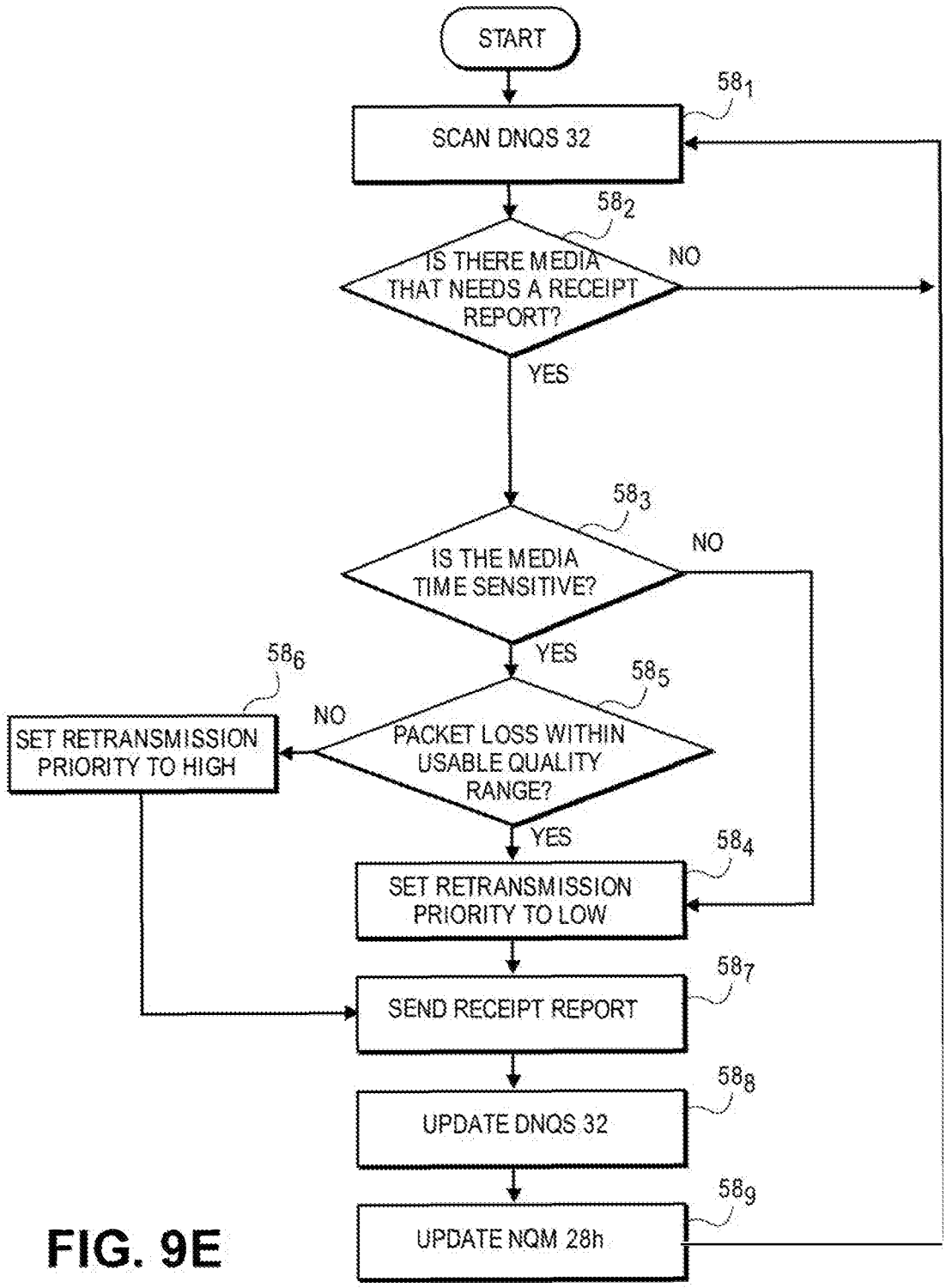

START
SCAN DNQS 32
581
IS THERE MEDIA THAT NEEDS A RECEIPT REPORT?
582
NO
YES
IS THE MEDIA TIME SENSITIVE?
583
NO
YES
PACKET LOSS WITHIN USABLE QUALITY RANGE?
585
NO
YES
SET RETRANSMISSION PRIORITY TO HIGH
586
SET RETRANSMISSION PRIORITY TO LOW
584
SEND RECEIPT REPORT
587
UPDATE DNQS 32
588
UPDATE NQM 28h
589

FIG. 9E

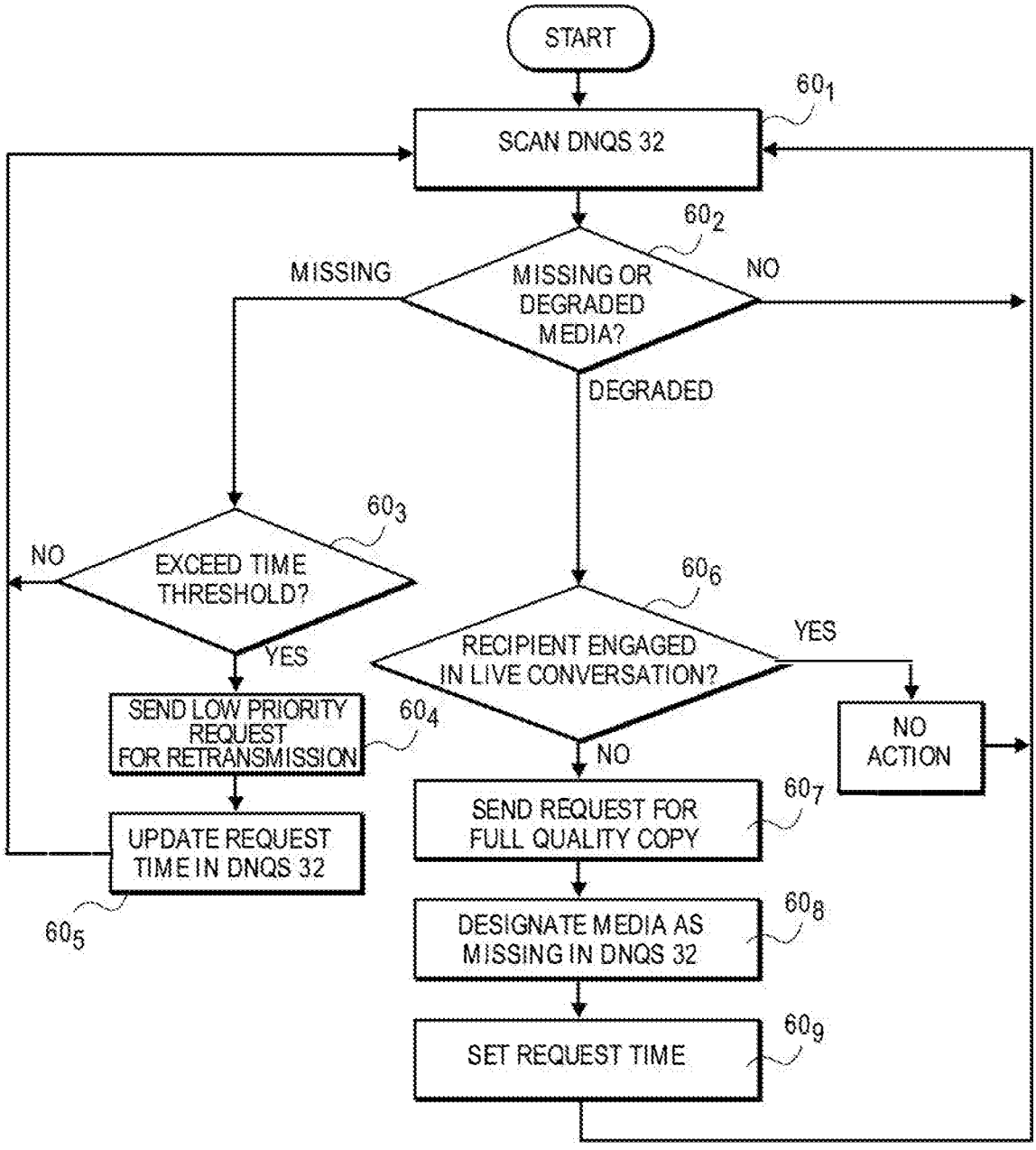

START
SCAN DNQS 32
60₁
MISSING OR DEGRADED MEDIA?
60₂
MISSING
NO
DEGRADED
EXCEED TIME THRESHOLD?
60₃
NO
YES
SEND LOW PRIORITY REQUEST FOR RETRANSMISSION
60₄
UPDATE REQUEST TIME IN DNQS 32
60₅
RECIPIENT ENGAGED IN LIVE CONVERSATION?
60₆
YES
NO
NO ACTION
SEND REQUEST FOR FULL QUALITY COPY
60₇
DESIGNATE MEDIA AS MISSING IN DNQS 32
60₈
SET REQUEST TIME
60₉

FIG. 9F

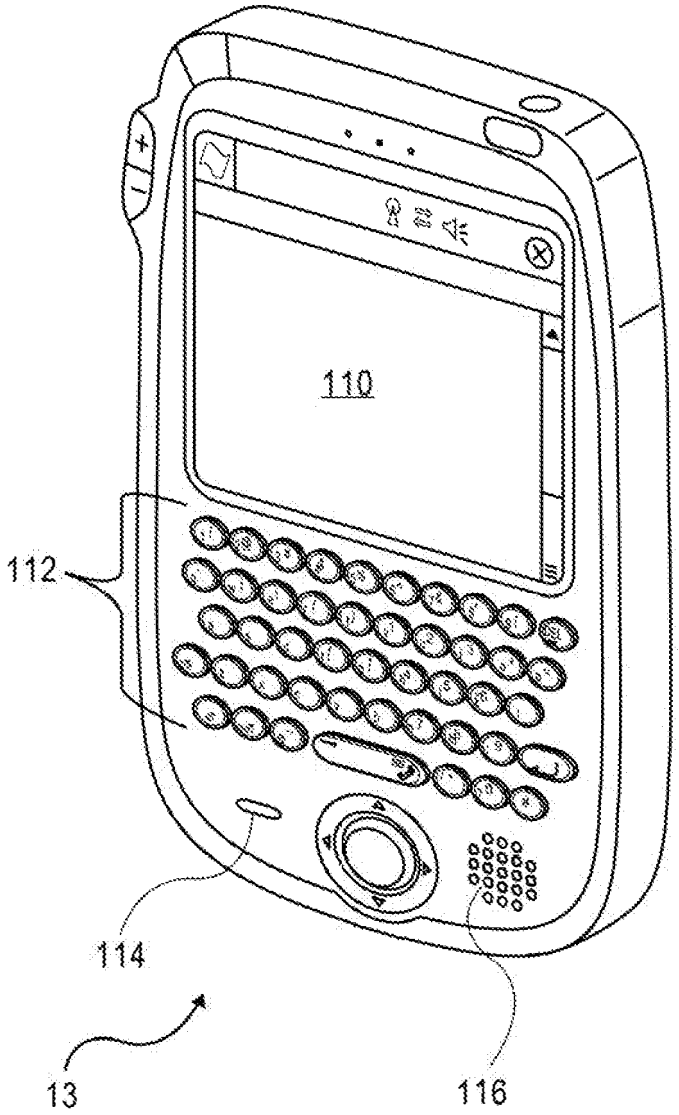


FIG. 10

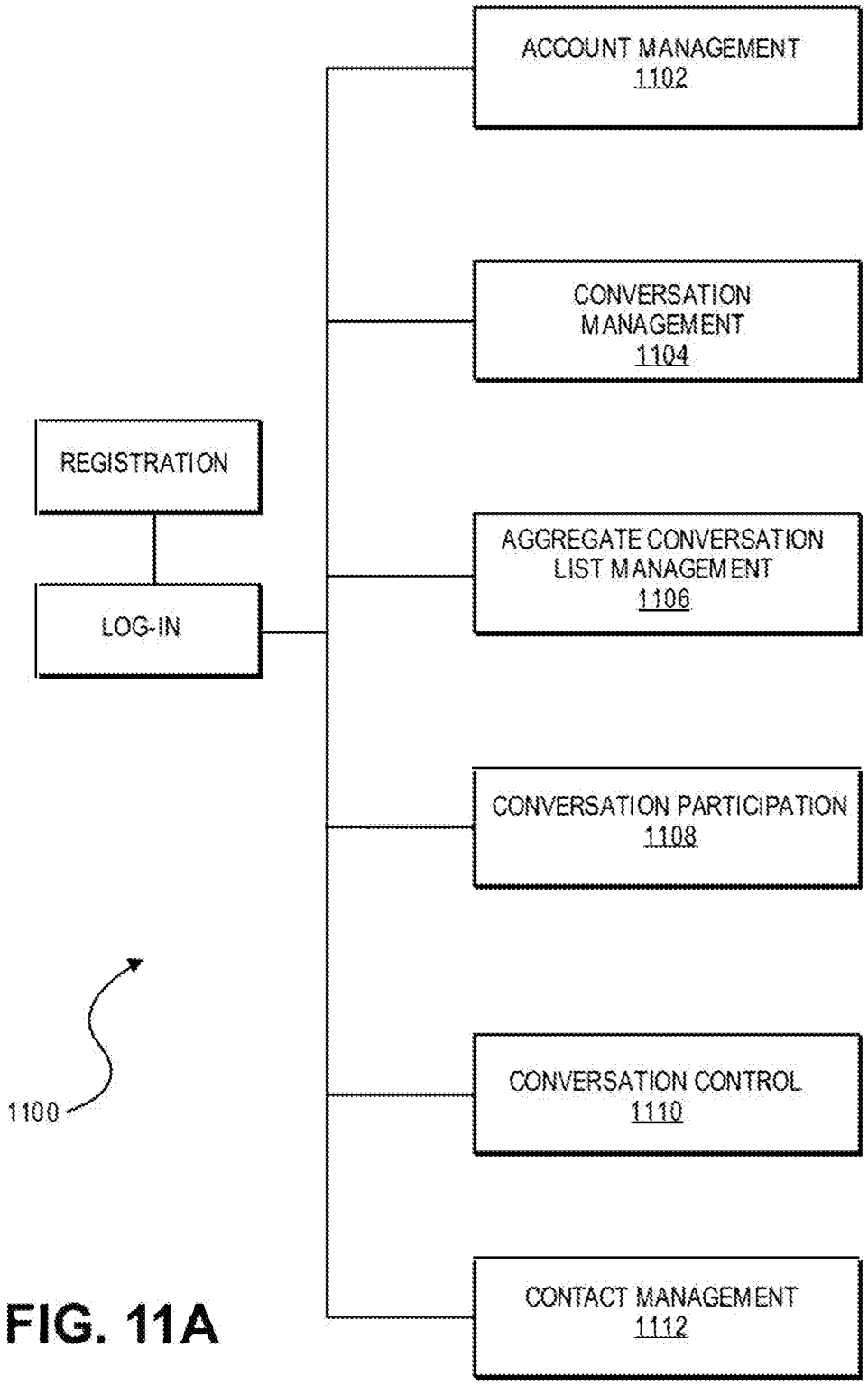

ACCOUNT MANAGEMENT
1102
CONVERSATION MANAGEMENT
1104
REGISTRATION
AGGREGATE CONVERSATION LIST MANAGEMENT
1106
LOG-IN
CONVERSATION PARTICIPATION
1108
1100
CONVERSATION CONTROL
1110
CONTACT MANAGEMENT
1112

FIG. 11A

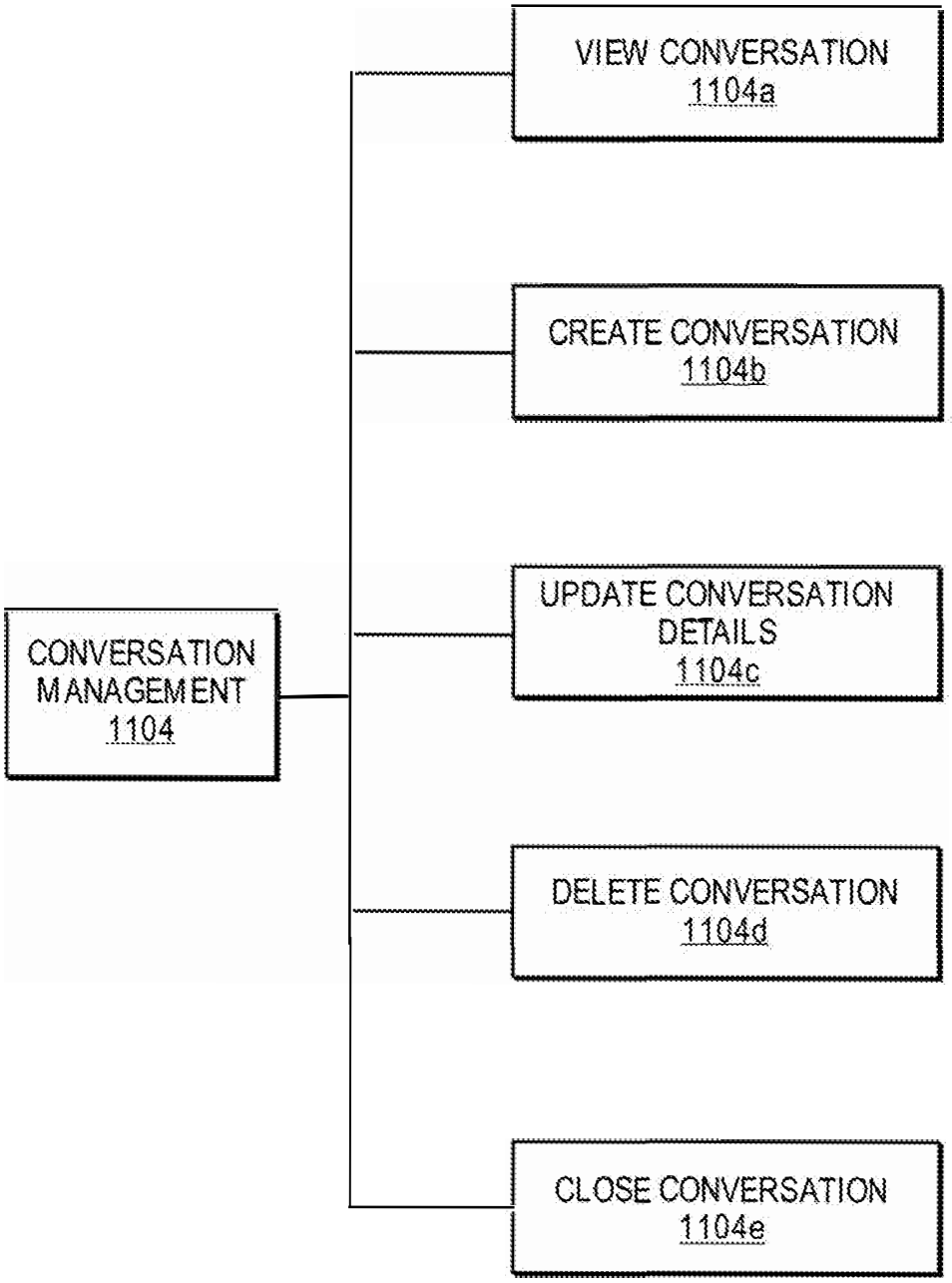

CONVERSATION MANAGEMENT
1104
VIEW CONVERSATION
1104a
CREATE CONVERSATION
1104b
UPDATE CONVERSATION DETAILS
1104c
DELETE CONVERSATION
1104d
CLOSE CONVERSATION
1104e

FIG. 11B

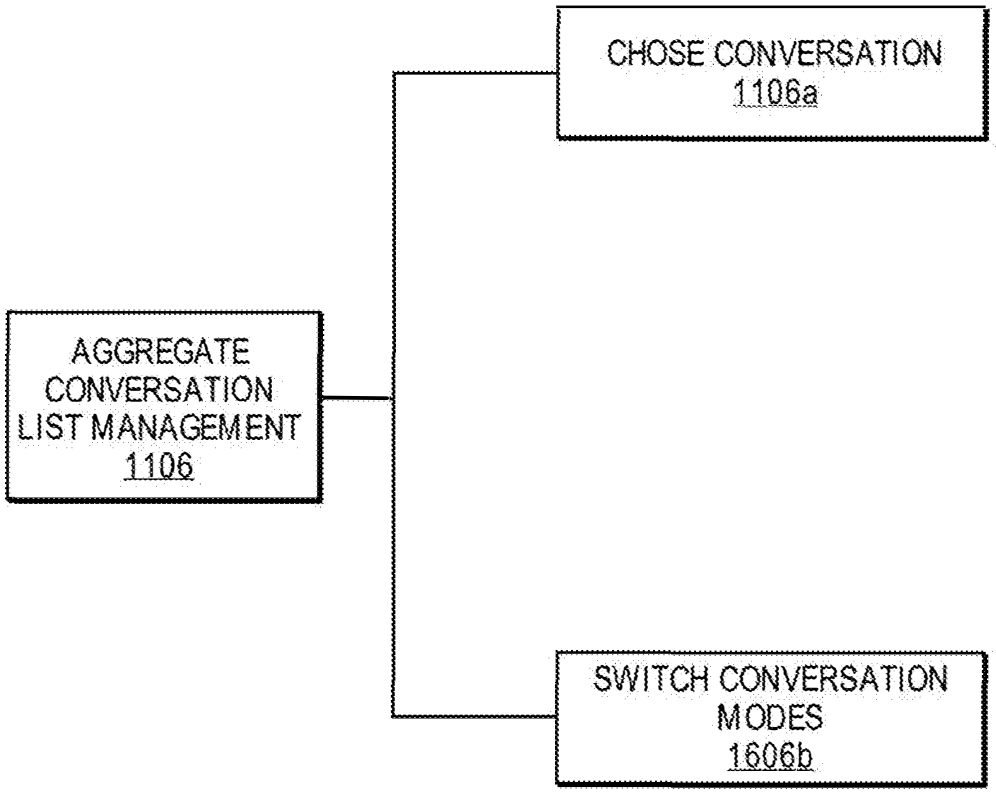

AGGREGATE CONVERSATION LIST MANAGEMENT 1106
CHOSE CONVERSATION 1106a
SWITCH CONVERSATION MODES 1606b

FIG. 11C

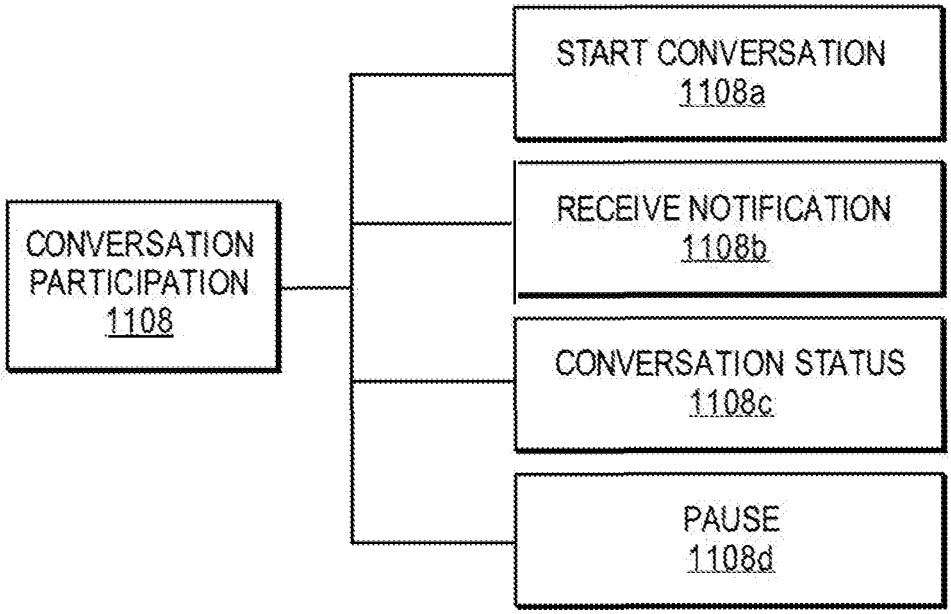


FIG. 11D

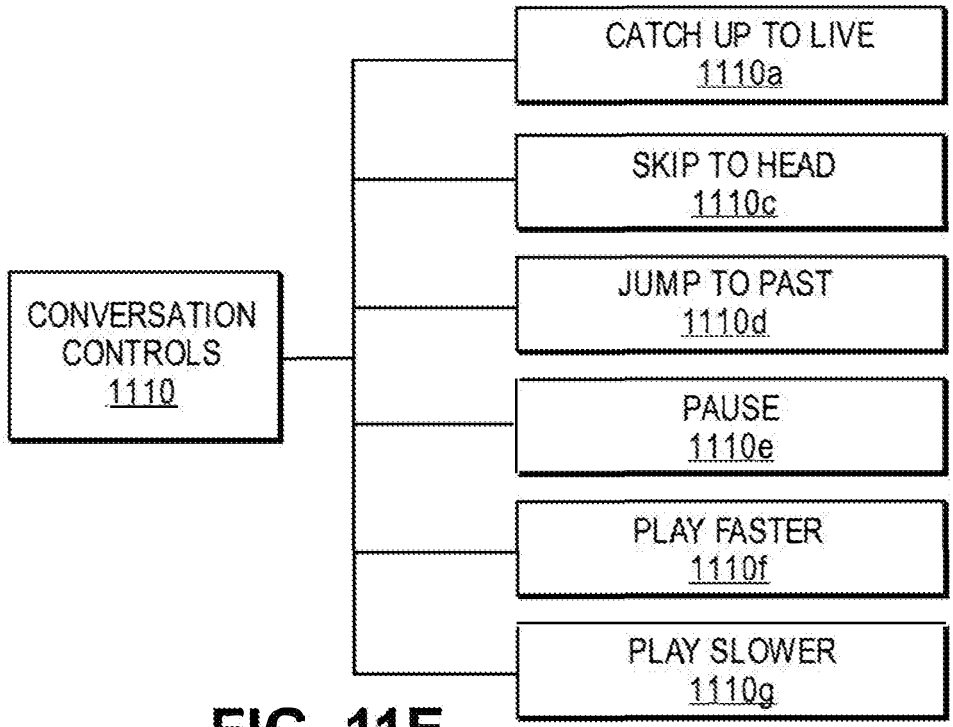


FIG. 11E

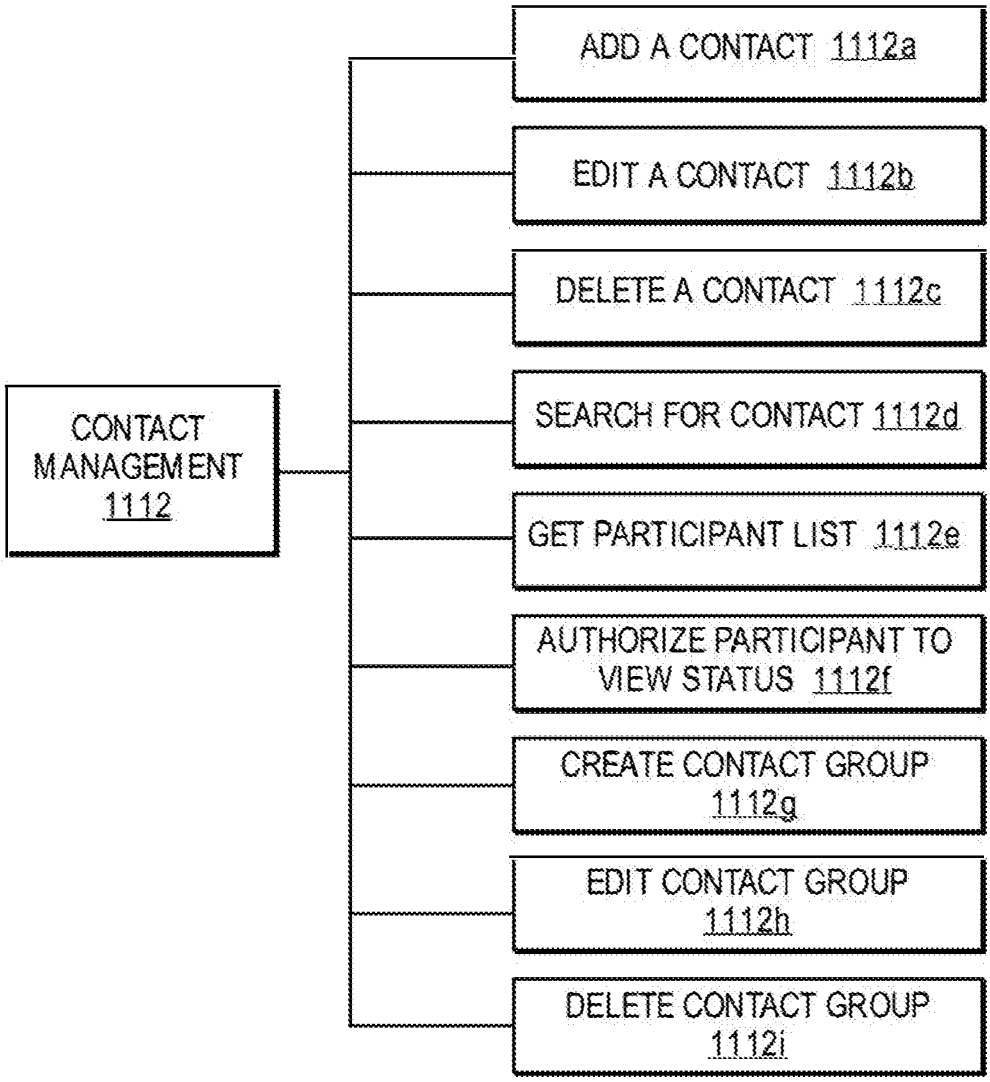

CONTACT MANAGEMENT 1112
ADD A CONTACT 1112a
EDIT A CONTACT 1112b
DELETE A CONTACT 1112c
SEARCH FOR CONTACT 1112d
GET PARTICIPANT LIST 1112e
AUTHORIZE PARTICIPANT TO VIEW STATUS 1112f
CREATE CONTACT GROUP 1112g
EDIT CONTACT GROUP 1112h
DELETE CONTACT GROUP 1112i

FIG. 11F

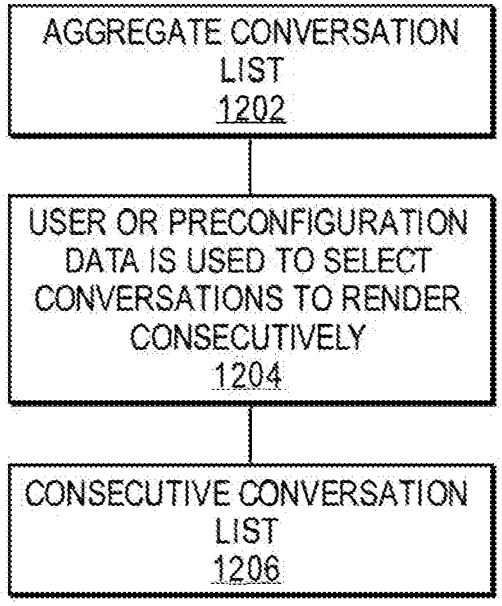


FIG. 12A

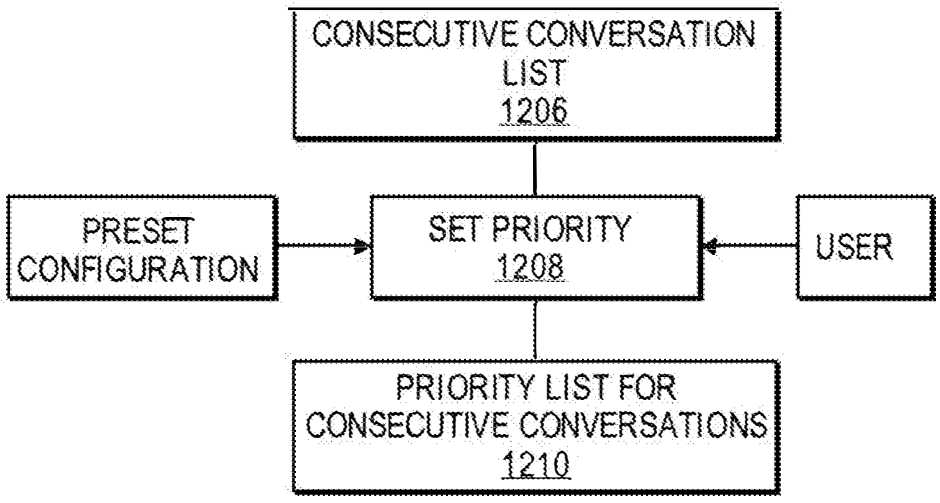
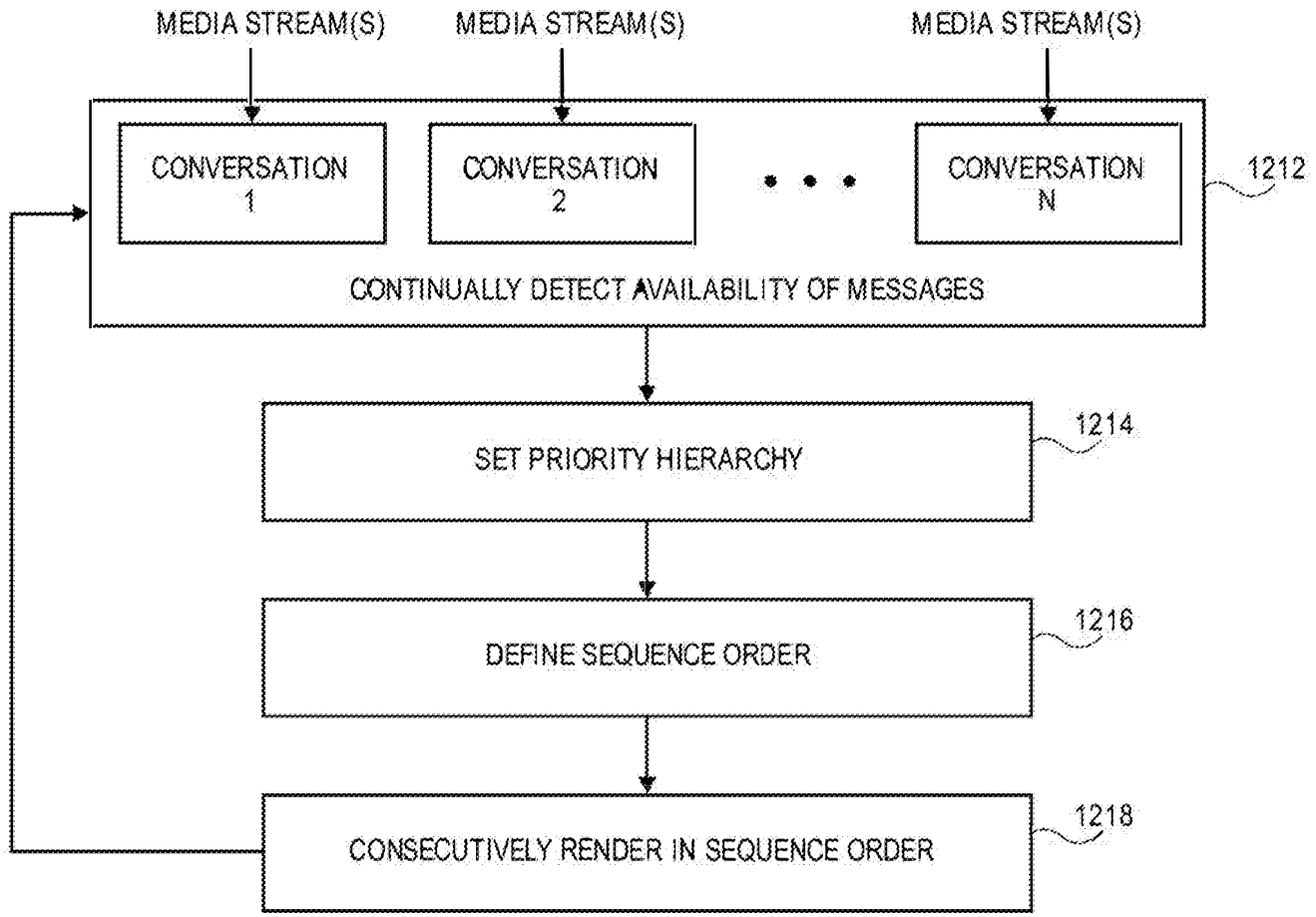


FIG. 12B


MEDIA STREAM(S)
MEDIA STREAM(S)
MEDIA STREAM(S)
CONVERSATION 1
CONVERSATION 2
CONVERSATION N
1212
CONTINUALLY DETECT AVAILABILITY OF MESSAGES
SET PRIORITY HIERARCHY
1214
DEFINE SEQUENCE ORDER
1216
CONSECUTIVELY RENDER IN SEQUENCE ORDER
1218

100

FIG. 12C

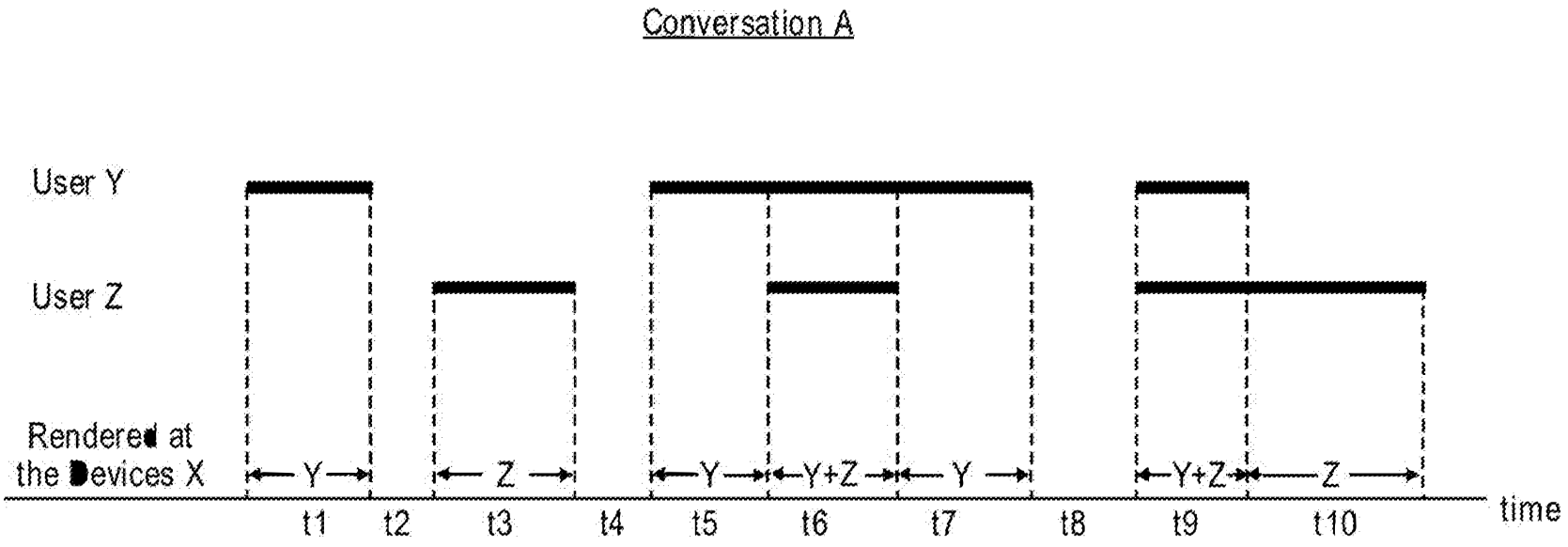

Conversation A
User Y
User Z
Rendered at the Devices X
Y
Z
Y
Y+Z
Y
Y+Z
Z
t1
t2
t3
t4
t5
t6
t7
t8
t9
t10
time

FIG. 13A

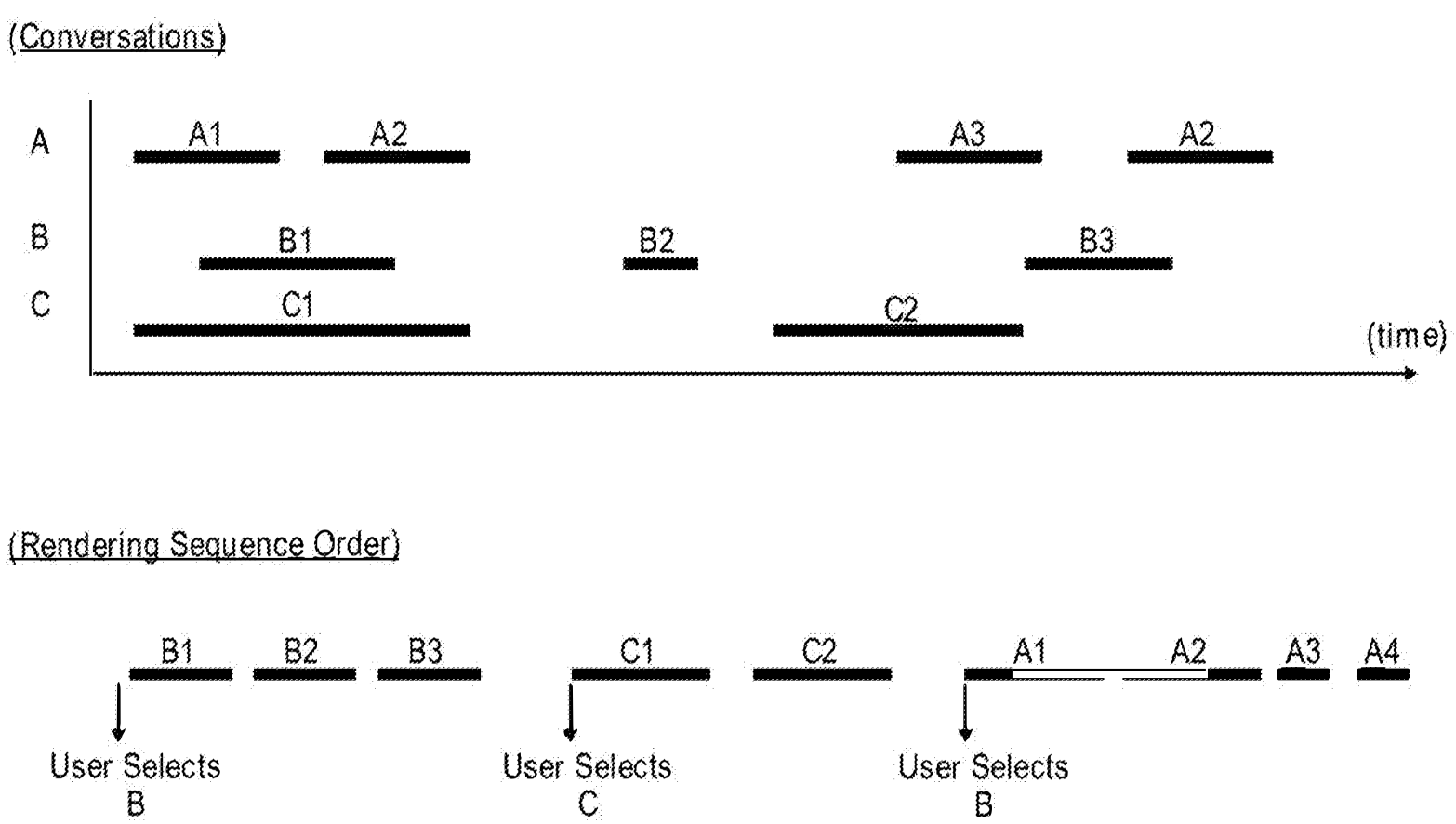

(Conversations)
A
B
C
A1
A2
A3
A2
B1
B2
B3
C1
C2
(time)
102
(Rendering Sequence Order)
B1
B2
B3
C1
C2
A1
A2
A3
A4
User Selects B
User Selects C
User Selects B

FIG. 13B

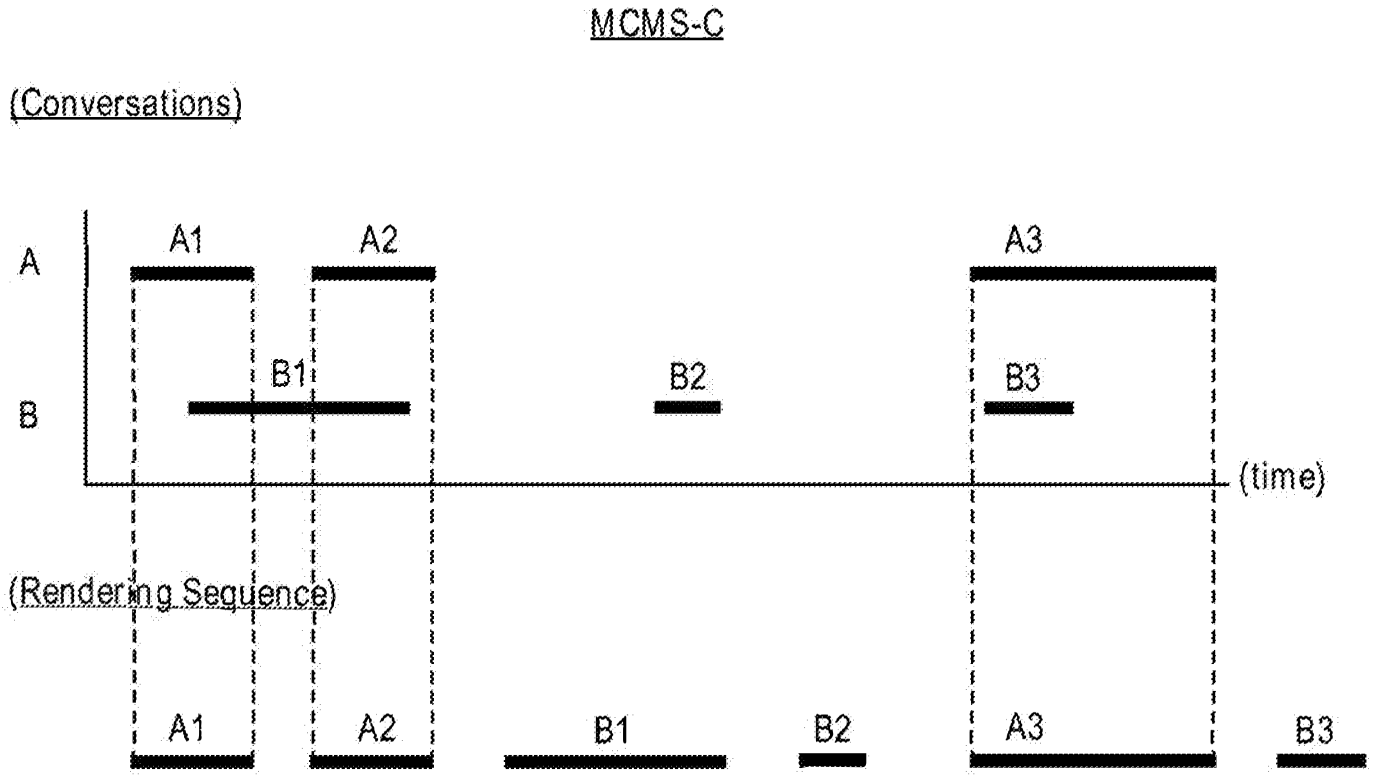

MCMS-C
(Conversations)
A
B
A1
A2
A3
B1
B2
B3
(time)
(Rendering Sequence)
A1
A2
B1
B2
A3
B3

FIG. 13C

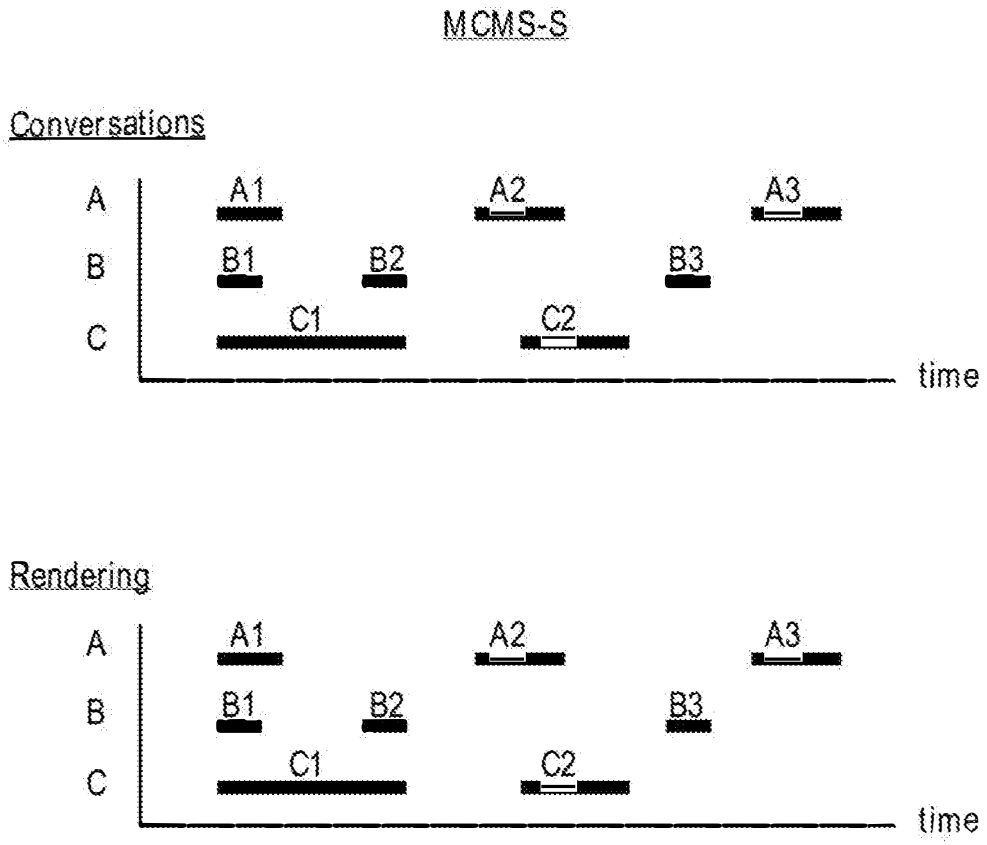

MCMS-S
Conversations
A
B
C
A1
A2
A3
B1
B2
B3
C1
C2
time
Rendering
A
B
C
A1
A2
A3
B1
B2
B3
C1
C2
time

FIG. 13D

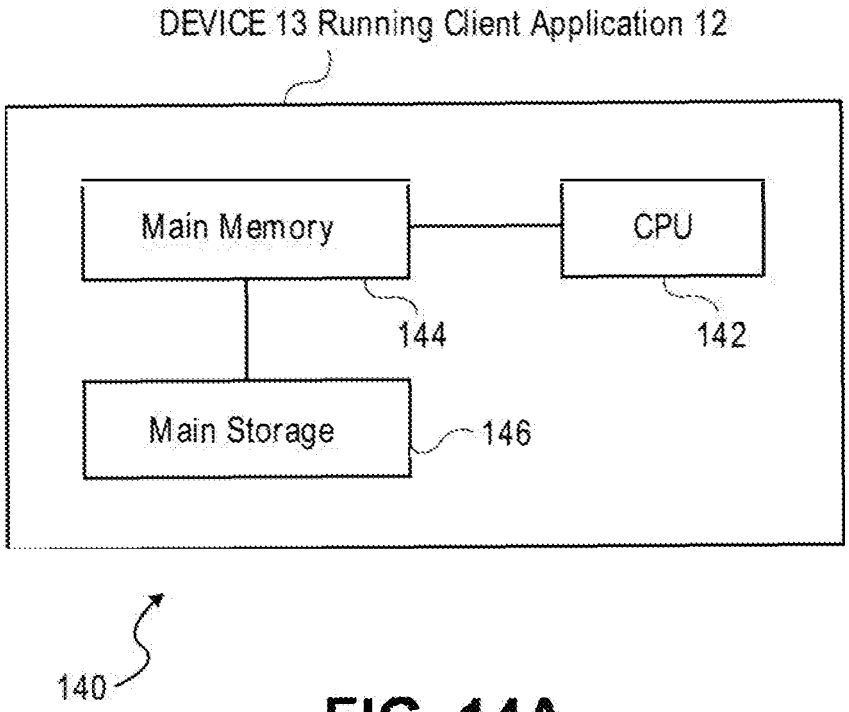


FIG. 14A

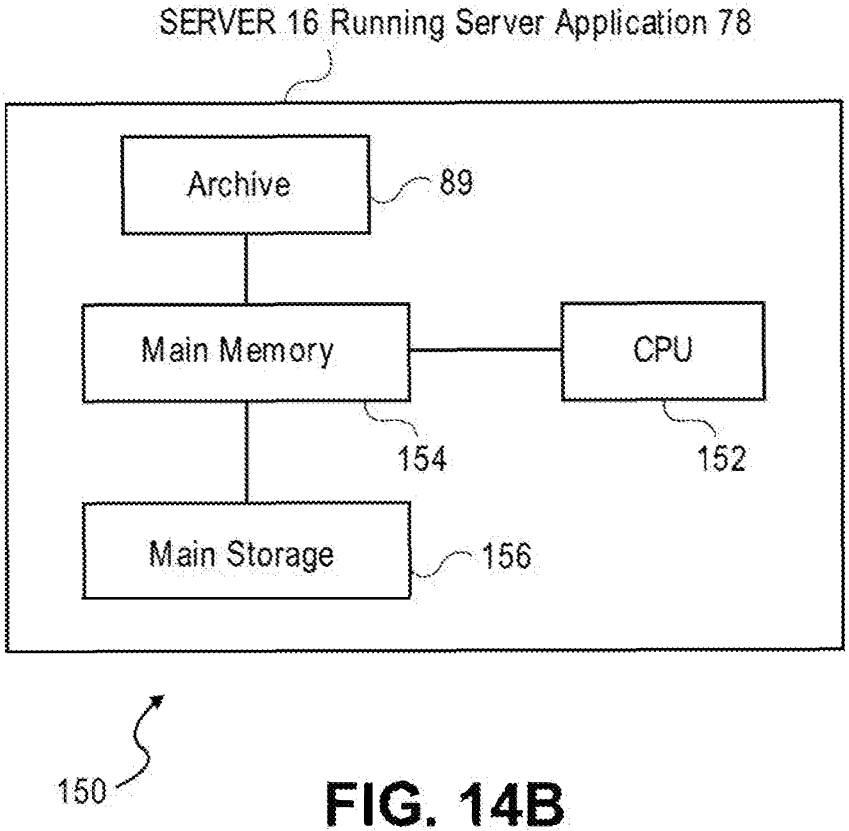


FIG. 14B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: Unassigned	Examiner: Unassigned
Filed: Herewith	Group: Unassigned
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: Unassigned

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I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on May 2, 2017.

Signed: /Cara Romero/
Cara Romero

INFORMATION DISCLOSURE STATEMENT
37 CFR §§1.56 AND 1.97(b)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The reference(s) listed in the attached PTO Form 1449 may be material to examination of the above-identified patent application. Applicants submit a list of the identified reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application. The above-identified application is a Continuation of prior application U.S. Patent Application No. 15/231,240. This prior application is being relied upon for an earlier filing date under 35 U.S.C. § 120. Because the listed reference(s) were either cited by the PTO, or submitted to the PTO in the prior application, under 37 CFR § 1.98(d) Applicants submit that copies need not be provided.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the identified reference(s) indeed constitute prior art.

This Information Disclosure Statement is: (i) filed within three (3) months of the filing date of the above-referenced application. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined

that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

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Examiner	Date Considered

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Examiner	Date Considered

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	Application No.:	Unassigned
Information Disclosure Statement By Applicant	Applicant	KATIS et al.
	Filing Date	Herewith
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Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

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	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

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Attorney Docket Number	REBLP003C14	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	33	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
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Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	76743		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	15231240	2016-08-08

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15231240	Continuation of	14799528	2015-07-14	9456087	2016-09-27
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14799528	Continuation of	14198043	2014-03-05	9154628	2015-10-06
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14198043	Continuation of	13555034	2012-07-20	8705714	2014-04-22
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13555034	Continuation of	12037256	2008-02-26	8243894	2012-08-14
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12037256	Continuation of	12028400	2008-02-08	8180029	2012-05-15
Prior Application Status	Expired				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12028400	Claims benefit of provisional	60937552	2007-06-28		
Prior Application Status	Expired				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12028400	Claims benefit of provisional	60999619	2007-10-19		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.					Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

PTO/AIA/14 (11-15)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

PTO/AIA/14 (11-15)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Voxer IP LLC		
Mailing Address Information For Applicant:			
Address 1	760 Market Street, Suite 500		
Address 2			
City	San Francisco	**State/Province**	CA
Country	US	Postal Code	94102
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Steve D Beyer/			Date (YYYY-MM-DD)	2017-05-02
First Name	Steve	Last Name	Beyer	Registration Number	31234

Additional Signature may be generated within this form by selecting the Add button. Add

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	REBLP003C14
	Application Number	
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the PatentCooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	Steve D. Beyer/Cara Romero
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	70	70
UTILITY SEARCH FEE	2111	1	300	300
UTILITY EXAMINATION FEE	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**730**

Electronic Acknowledgement Receipt

EFS ID:	29088573
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	Steve D. Beyer/Cara Romero
Filer Authorized By:	Steve D. Beyer
Attorney Docket Number:	REBLP003C14
Receipt Date:	02-MAY-2017
Filing Date:	
Time Stamp:	12:31:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$730
RAM confirmation Number	050217INTEFSW00010936504481
Deposit Account	504481
Authorized User	Cara Romero

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	REBLP003C14_Transmittal_POA_by_Applicant.pdf	475232 05d7af65e0c0359f228943045365796ac51c47c3	no	2
Warnings:					
Information:					
2	Power of Attorney	USPTO_General_POA_Applicant_2014_signed.pdf	337092 034bfa4b9918cb0d299aa898f13075d1d347e3a7	no	1
Warnings:					
Information:					
3	Oath or Declaration filed	REBLP003C_Declarations_Signed.pdf	1304984 a9cf38b19b6a278745de7c355ec744eff01be979	no	4
Warnings:					
Information:					
4		REBLP003C14_Application_FINAL.pdf	400696 d5b29019c940cc35abef4e02f29b0c39c234f505	yes	65

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Specification	1	63
Claims	64	64
Abstract	65	65

Warnings:					
Information:					
5	Drawings-only black and white line drawings	REBLP003C14_FIGS.pdf	3070001 6a13d914895f98b907028e57726c2e8af3d08be8	no	33

Warnings:					
Information:					
6	Transmittal Letter	REBLP003C14_IDS.pdf	23364 039cabd813c3842ddab2071ac3d76438f81f2b54	no	2
Warnings:					
Information:					
7	Information Disclosure Statement (IDS) Form (SB08)	REBLP003C14_1449.pdf	234065 5d596a8fa1f54d89a4d2efa58afe573ad0c72dfe	no	29
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
8	Application Data Sheet	REBLP003C14_ADS.pdf	1823896 68586b78aaaadef128bb4ab07defb62523f89c33	no	10
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	34644 09f097429567662cfe279eeec5329675e923ce4d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	7703974		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/584,224

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	1 minus 20 =	*	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/584,224	05/02/2017	2656	730	REBLP003C14	1	1

CONFIRMATION NO. 2563

FILING RECEIPT

76743
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

OC000000091215889

Date Mailed: 05/10/2017

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Thomas E. KATIS, Jackson, WY;
James J. PANTTAJA, San Francisco, CA;
Mary G. PANTTAJA, San Francisco, CA;
Matthew J. RANNEY, Oakland, CA;

Applicant(s)

Voxer IP LLC, San Francisco, CA;

Power of Attorney: The patent practitioners associated with Customer Number 76743

Domestic Priority data as claimed by applicant

This application is a CON of 15/231,240 08/08/2016
which is a CON of 14/799,528 07/14/2015 PAT 9456087
which is a CON of 14/198,043 03/05/2014 PAT 9154628
which is a CON of 13/555,034 07/20/2012 PAT 8705714
which is a CON of 12/037,256 02/26/2008 PAT 8243894
which is a CON of 12/028,400 02/08/2008 PAT 8180029
which claims benefit of 60/937,552 06/28/2007
and claims benefit of 60/999,619 10/19/2007

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/08/2017
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/584,224**
Projected Publication Date: 08/17/2017
Non-Publication Request: No
Early Publication Request: No
**** SMALL ENTITY ****
Title

TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

Preliminary Class

379

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative,

this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure Statement By Applicant	Applicant	KATIS et al.
	Filing Date	May 2, 2017
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2003/0172116	09/11/03	Curry et al.			03/10/02
	2.	2007/0207782	09/06/07	Tran			03/06/06
	3.	2009/0006609	01/01/09	Lindberg et al.			06/29/07
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt

EFS ID:	29276783
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Cara Romero
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	22-MAY-2017
Filing Date:	02-MAY-2017
Time Stamp:	16:56:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	REBLP003C14_IDS.pdf	23051 1bcf339d4b13c2686d155069895a9d84810 40e7f	no	2

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	REBLP003C14_1449.pdf	22865 73c2477f68b8c39aa86daa909ab4b481d5e1ccb4	no	1

Warnings:
Information:
This is not an USPTO supplied IDS fillable form

Total Files Size (in bytes):	45916

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: Unassigned
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION

I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on May 22, 2017.

Signed: /Cara Romero/
Cara Romero

INFORMATION DISCLOSURE STATEMENT
37 CFR §§1.56 AND 1.97(b)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The reference(s) identified in the attached PTO Form 1449 (copies of non-U.S. references are attached) may be material to examination of the above-identified patent application. Applicants identify the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the identified reference(s) indeed constitute prior art.

This Information Disclosure Statement is: (i) filed within three (3) months of the filing date of the above-referenced application, (ii) believed to be filed before the mailing date of a first Office Action on the merits, or (iii) believed to be filed before the mailing of a first Office Action after the filing of a Request for Continued Examination under §1.114. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure

Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,

/James W. Rose/
James W. Rose
Registration No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14

CONFIRMATION NO. 2563

76743
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

PUBLICATION NOTICE

OC000000093533758

Title:TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

Publication No.US-2017-0237695-A1
Publication Date:08/17/2017

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

76743 7590 12/18/2017
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

EXAMINER
RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
2656	

NOTIFICATION DATE	DELIVERY MODE
12/18/2017	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOmail@beyerlaw.com

Office Action Summary	Application No. 15/584,224	Applicant(s) KATIS ET AL.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5-2-17*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date *5-2-17; 5-22-17*.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. ____.

4) ☐ Other: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) -

706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

3. Claim 1 is rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 9,674,122. Although the claims at issue are not identical, they are not patentably distinct from each other because claim 1 of the current application is a broadened obvious variation of claim 1 of U.S. Patent No. 9,674,122.

4. Claim 1 rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 9,608,947. Although the claims at issue are not identical, they are not patentably distinct from each other because claim 1 of the current application is a broadened obvious variation of claim 1 of U.S. Patent No. 9,608,947.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C 102(b) as being anticipated by Enete et al. (US 2003/0208543A1, hereinafter Enete).

Regarding claim 1, Enete discloses: A live video messaging system implemented on a communication network, comprising: a node (600, fig. 6) on the communication network (160, fig. 1; paragraph: 0060), the node arranged to:

(a) perform a lookup of an identifier associated with a live video message when the identifier is received over the communication network from a first client communication device, the identifier identifying an intended recipient of the live video message, the lookup resulting in an IP address associated with a second client communication device on the communication network associated with the intended recipient of the live video message (fig. 6; paragraph: 0081);

(b) persistently store video media of the live video message as the video media is received at the node from the first client communication device (paragraph: 0084);

(c) route the video media of the live video message to the second client communication device using the IP address, the routing enabling the video media to be rendered live at the second client communication device as the video media is transmitted by the first client communication device and received, stored and routed by the node on the communication network (paragraphs: 0082-0083),

wherein the routing of the video media of the live video message supports live video messaging between the first client communication device and the second client communication device without first establishing an end-to-end connection over the communication network between the first and second client communication devices (paragraphs: 0085; 0087-0088).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

--(2005/0086311A1) to Enete et al. discloses regulating self-disclosure for video messanger which teaches: Regulating a level of self-disclosure in an instant messaging communications session includes enabling user selection on a first instant messaging participant system of an instant messaging communications mode from at least a first available mode and a second available mode. The first available mode discloses a different amount of information about a first instant messaging participant than the second available mode. Creation of a message clip is enabled on the first instant messaging participant system according to the selected communications mode and delivery of the message clip is enabled from the first instant messaging participant system to a second instant messaging participant system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELUR RAMAKRISHNAIAH whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MELUR RAMAKRISHNAIAH/
Primary Examiner, Art Unit 2656

Notice of References Cited	Application/Control No. 15/584,224	Applicant(s)/Patent Under Reexamination KATIS ET AL.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2003/0208543 A1	11-2003	Enete, Noel	H04L12/1822	709/206
*	B	US-2005/0086311 A1	04-2005	Enete, Noel	H04L51/04	709/206
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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WEST Search History for Application 15584224

Creation Date: 2017082907:32

Prior Art Searches

Query	DB	Hits	Op.	Plur.	Thes.	Date
(live near1 video near1 message) same (server) and @ad<20070628	PGPB, USPT	1	●R	YES		08-29-2017
(video near1 message) same (server and Ip near1 address and rece$ and transmit$) and @ad<20070628	PGPB, USPT	9	●R	YES		08-29-2017

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CONFIRMATION NO. 2563

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/584,224	05/02/2017 RULE	379	2656	REBLP003C14

APPLICANTS

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INVENTORS

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**** CONTINUING DATA ***************************

This application is a CON of 15/231,240 08/08/2016 PAT 9674122
which is a CON of 14/799,528 07/14/2015 PAT 9456087
which is a CON of 14/198,043 03/05/2014 PAT 9154628
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which claims benefit of 60/937,552 06/28/2007
and claims benefit of 60/999,619 10/19/2007

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
05/08/2017

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☐ No		WY	33	1	1
Verified and Acknowledged	/MELUR RAMAKRISHNAIAH/ Examiner's Signature	Initials				

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TITLE

TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

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730	No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	Herewith
	Group	Unassigned
(Use Several Sheets if Necessary)		Page 28 of 29

	546.	European Office Action dated November 11, 2010 from European Application No. 08756317.7.
	547.	European Office Action dated November 18, 2010 from European Application No. 08747806.1.
	548.	European Office Action dated April 13, 2012 from European Application No. 09804087.6.
	549.	Canadian Office Action dated March 12, 2014 from Canadian Application No. 2,837,950.
	550.	Canadian Office Action dated November 18, 2013 from Canadian Application No. 2,682,184.
	551.	Canadian Office Action dated January 26, 2015 from Canadian Application No. 2,692,976.
	552.	Canadian Office Action dated August 19, 2015 from Canadian Application No. 2,691,814.
	553.	Canadian Office Action dated January 26, 2015 from Canadian Application No. 2,692,928.
	554.	Canadian Office Action dated November 13, 2014 from Canadian Application No. 2,746,734.
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	556.	Korean Office Action dated September 5, 2013 from Korean Application No. 10-2009-7020536 .
	557.	Korean Office Action dated September 5, 2013 from Korean Application No. 10-2010-7001879 .
	558.	Korean Office Action dated August 8, 2014 from Korean Application No. 10-2013-7011111.

Examiner	/MELUR RAMAKRISHNAIAH/	Date Considered	08/29/2017

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	Unassigned
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	Herewith
	Group	Unassigned
(Use Several Sheets if Necessary)		Page 29 of 29

	559.	Korean Office Action dated February 9, 2015 from Korean Application No. 10-2011-7019515.
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	561.	Korean Office Action dated October 18, 2013 from Korean Application No. 10-2009-7026979.
	562.	Korean Office Action dated March 13, 2014 from Korean Application No. 10-2013-7011235.
	563.	Korean Office Action dated September 19, 2014 from Korean Application No. 10-2013-7011235.
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	565.	J. Bellamy: "Digital Telephony, 2nd Edition", In: "Digital Telephony, 2nd Edition", January 1, 1991, John Wiley & Sons, New York, US, XP055264025, pages 547 and 561.
	566.	ITU-T Recommendation, T.140, "Series T: Terminals for Telematic Services Protocol for Multimedia Application Text Conversation", February 1998.
	567.	Shinsuke Suzuki, "Searching for the Path to a Destination IP Address – Connection Between Routing Control and Neighborhood Searches", Nikkei NETWORK, Nikkei Business Publications, Inc. October 22, 2000, Vol. 7, pp. 165-169.

Examiner	/MELUR RAMAKRISHNAIAH/	Date Considered	08/29/2017

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

CPC- SEARCHED		
Symbol	Date	Examiner
H04L 51/10, 51/04, 65/4015, 65/403, 12/1831, 51/22, 51/16, 61/2503, 65/1083, 67/24, 51/26, 65/604	8-29-17	mrk
H04N 7/15, 7/147,	8-29-17	mrk
H04M 3/5307, 11/00, 1/64	9-29-17	mrk

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
379/93.01		9-29-17	mrk
348	14.01, 14.02, 14.12	9-29-17	mrk
709	204, 205, 217, 218, 227	8-29-17	mrk

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
WEST database	8-29-17	mrk

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/29/2017								
	1	✓								

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	May 2, 2017
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2003/0172116	09/11/03	Curry et al.			03/10/02
	2.	2007/0207782	09/06/07	Tran			03/06/06
	3.	2009/0006609	01/01/09	Lindberg et al.			06/29/07
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	

Examiner	/MELUR RAMAKRISHNAIAH/	Date Considered	08/29/2017

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	15584224
Filing Date	02-May-2017
First Named Inventor	Thomas KATIS
Attorney Docket Number	REBLP003C14
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Voxer IP LLC	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

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9608947

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

◉ Small Entity

○ Micro Entity

○ Regular Undiscounted

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

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 34239

○ A sole inventor

○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

○ A joint inventor; all of whom are signing this request

Signature	/James W. Rose/
Name	James W. Rose

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Cara Hedin
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**160**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 15584224

Filing Date: 02-May-2017

Applicant/Patent under Reexamination: KATIS

Electronic Terminal Disclaimer filed on March 14, 2018

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	32050047
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Cara Hedin
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	14-MAR-2018
Filing Date:	02-MAY-2017
Time Stamp:	15:01:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$160
RAM confirmation Number	031518INTEFSW00001305504481
Deposit Account	504481
Authorized User	Cara Romero

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	33623 90b107baa3f3f35ae2b056c075adb96281d b6235	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30330 3b8e635fe0882eb5339743da44bdaf7cf9d7 b19f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	63953		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on March 14, 2018.

Signed: /Cara Hedin/
Cara Hedin

AMENDMENT A

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the Office Action dated December 18, 2017, please amend the above-identified patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 12 of this paper.

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (New) A video communication method performed over a network, comprising:

receiving an identifier identifying a recipient of a video communication, the identifier received over the network from a mobile communication device;

using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving the video communication over the network from the mobile communication device;

storing the video communication; and

delivering portions of the video communication to the second communication device over the network using the delivery location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the mobile communication device,

wherein the video communication is received from the mobile communication device without first establishing an end-to-end connection over the network between the mobile and second communication devices.

3. (New) The video communication method of claim 2, further comprising providing an application to the mobile communication device, the application enabling the mobile communication device to:

(i) identify the recipient of the video communication;

(ii) communicate the identifier identifying the recipient; and

(iii) stream the video communication over the network.

4. (New) The video communication method of claim 3, wherein the provided application further enables the mobile communication device to start streaming of the video

communication over the network before the delivery location for the second communication device is known.

5. (New) The video communication method of claim 3, wherein the provided application further enables the mobile communication device to start streaming of the video communication over the network regardless of whether the second communication device is available or not available on the network.

6. (New) The video communication method of claim 3, wherein the provided application further enables the mobile communication device to start streaming of the video communication over the network independent of whether or not the delivery location associated with the second communication device is ascertained.

7. (New) The video communication method of claim 3, wherein the provided application further enables the mobile communication device to locally store the video communication on the mobile communication device.

8. (New) The video communication method of claim 3, wherein the provided application further enables the mobile communication device to define the recipient or a group of recipients for receipt of the video communication.

9. (New) The video communication method of claim 2, further comprising accessing the video communication out of storage and delivering the accessed video communication to the second communication device for review in a time-shifted mode.

10. (New) The video communication method of claim 2, wherein the video communication has a plurality of identifiers associated therewith, the plurality of identifiers identifying a plurality of recipients, the plurality of identifiers used to deliver the video communication to a plurality of second communication devices associated with the plurality of recipients respectively.

11. (New) The video communication method of claim 2, further comprising providing a notification at the second communication device notifying the recipient of the video communication.

12. (New) The video communication method of claim 2, further comprising delivering the video communication to the second communication device out of storage if the second communication device is not available on the network when the video communication is sent by the mobile communication device.

13. (New) The video communication method of claim 2, further comprising simultaneously storing and delivering the portions of the video communication to the second communication device while the video communication is created and streamed by the mobile communication device.

14. (New) The video communication method of claim 2, wherein the identifier is resolved into an IP address that defines the delivery location for the second communication device on the network.

15. (New) The video communication method of claim 3, wherein the provided application further enables the mobile communication device to at least partially render a second video communication in either:

a first mode while portions of the second video communication are received over the network while the second video communication is being sent by a remote communication device; or

a second mode by rendering the second video communication accessed from storage after the second video communication was sent.

16. (New) The video communication method of claim 2, wherein using the identifier to ascertain a delivery location on the network for a second communication device associated

with the recipient further comprises resolving the identifier into an IP address associated with the second communication device.

17. (New) The video communication method of claim 2, wherein the delivery location is an IP address on the network and the IP address is used to notify and deliver the video communication to the second communication device.

18. (New) The video communication method of claim 2, further comprising maintaining a video services system, including one or more servers on the network, for performing the video communication method.

19. (New) The video communication method of claim 2, further comprising trans-coding the video communication received over the network from the mobile communication device.

20. (New) The video communication method of claim 2, further comprising encrypting the video communication received over the network from the mobile communication device.

21. (New) A method for video communication, comprising:

receiving, over a network, identifier information for a recipient of a video communication from a mobile communication device;

ascertaining a location on the network for a second communication device from the identifier information; and

delivering portions of the video communication over the network to the second communication device, using the ascertained location, so that the video communication can be at least partially rendered at the second communication device,

wherein the delivery occurs (i) without first establishing an end-to-end connection over the network between the mobile communication device and the second communication device and (ii) while the video communication is transmitted by the mobile communication device.

22. (New) The method of claim 21, further comprising arranging for an application to be available for downloading to the second communication device, the application configured to include a rendering function that enables the recipient to at least partially render the video communication on the second communication device in a first mode while the video

communication is transmitted by the mobile communication device and delivered over the network.

23. (New) The method of claim 22, wherein the application is further configured to at least partially render the video communication in the first mode after receiving an input from the recipient in response to a notification.

24. (New) The method of claim 21, further comprising arranging for an application to be available for downloading
onto the mobile communication device, the application enabling the mobile communication device to start transmission of the video communication:

independently of the location associated with the second communication device being ascertained; and

regardless of whether or not the second communication device is connected to or not connected to the network .

25. (New) The method of claim 21, wherein the location is an IP addresses for the second communication device on the network.

26. (New) The method of claim 21, further comprising delivering the video communication to the second communication device out of storage for review in a time-shifted mode.

27. (New) The method of claim 21, wherein the location is specified by an IP address on the network, the IP address used for locating and delivering the video communication to the second communication device.

28. (New) The method of claim 21, further comprising maintaining one or more servers on the network for receiving the identifier information, ascertaining the location, receiving the video communication and delivering the video communication to the second communication device.

29. (New) The video communication method of claim 21, further comprising trans-coding the video communication.

30. (New) The video communication method of claim 21, further comprising encrypting the video communication.

31. (New) A video communication method, comprising:

receiving an identifier associated with a video communication transmitted by a mobile communication device over a network, the identifier identifying a recipient of the video communication;

ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network;

receiving the video communication from the mobile communication device independently of the location for the second communication device being ascertained;

storing the video communication; and

delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the mobile communication device,

wherein receiving the video communication from the mobile communication device occurs without having to first establish an end-to-end connection over the network between the mobile and the second communication device.

32. (New) The video communication method of claim 31, further comprising delivering the video communication out of storage to the second communication device.

33. (New) The video communication method of claim 31, further comprising arranging for the mobile communication device to run an application, the application enabling the mobile communication device to:

(i) identify the recipient;

(ii) communicate the identifier identifying the recipient over the network;

(iii) create the video communication; and

(iv) transmit the video communication over the network while the video communication is created.

34. (New) The video communication method of claim 33, wherein the application enables the mobile communication device to start transmission of the video communication over the network before the location for the second communication devices is ascertained.

35. (New) The video communication method of claim 31, further comprising notifying the recipient of the video communication.

36. (New) The video communication method of claim 33, wherein the application further enables the mobile communication device to start transmission of the video communication over the network regardless of whether the second communication device is available or not available on the network.

37. (New) The video communication method of claim 33, wherein the application further enables the mobile communication device to locally store the video communication on the mobile communication device.

38. (New) The video communication method of claim 33, wherein the application enables, at the mobile communication device, an ability to define the recipient or a group of recipients for receipt of the video communication.

39. (New) The video communication method of claim 33, wherein the application further enables the mobile communication device to:

at least partially render a second video communication while portions of the second video communication are delivered over the network to the mobile communication device while the second communication is sent by a remote communication device; and

render the second video communication out of storage in a time-shifted mode.

40. (New) The video communication method of claim 31, further comprising:

receiving a plurality of identifiers associated with the video communication; and

ascertaining a plurality of locations associated with a plurality of second communication devices associated with a plurality of recipients respectively.

41. (New) The video communication method of claim 31, wherein the portions of the video communication is delivered over the network while:

the video communication is transmitted by the mobile communication device;

the video communication is delivered to the location on the network using an IP address associated with the second communication device, the IP addressed ascertained from the identifier; and

the video communication is at least partially rendered on the second communication device.

42. (New) The video communication method of claim 31, further comprising delivering the video communication to the recipient out of storage.

43. (New) The video communication method of claim 31, wherein the location is an IP address for the second communication device, the IP address used for identifying and delivering the video communication to the second communication device when connected to the network.

44. (New) The video communication method of claim 31, further comprising configuring and maintaining a plurality of servers on the network, the plurality of servers cooperating to receive the identifier associated with the video communication, ascertain the location on the network for the second communication device, receive the video communication from the

mobile communication device, store the video communication and deliver the video communication over the network to the second communication device.

45. (New) The video communication method of claim 31, further comprising trans-coding the video communication after receiving the video communication.

46. (New) The video communication method of method 31, further comprising encrypting the video communication after receiving the video communication.

47. (New) The video communication method of claim 2, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

48. (New) The method for video communication of claim 21, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

49. (New) The video communication method of claim 31, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

50. (New) The video communication method of claim 2, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the mobile communication device or (b) in a time-shifted mode.

51. (New) The method of claim 21, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the mobile communication device or (b) in a time-shifted mode.

52. (New) The video communication method of claim 31, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the mobile communication device or (b) in a time-shifted mode.

REMARKS

In response to the Office Action dated December 18, 2017, the Applicant has filed a Terminal Disclaimer concurrent herewith, cancelled claim 1 without prejudice and added new claims 2 through 52.

The Enete Reference

The Enete reference is directed to an instant communication (IM) video service. With Enete, all video communication is synchronous, meaning an end-to-end network connection or session between the parties must first be established before any video communication may begin. See for example:

1. Paragraph [0008], which recites that one or more "***channels***" are required between the "***sender and the recipient***" for video communication to take place.

2. In paragraph [0062], Enete states that a direct connection (i.e., a socket) between the sender 802(a) and the recipient 802(b) is established via the host 800. Specifically, paragraph [0062] recites in pertinent part:

> [0062] *After being authorized, the sender 602a and the recipient 602b can communicate over a direct (i.e., socket) connection established through the host 604. The sender 602a and the recipient 602b use the connection to communicate with the host 604 and with each other.*

3. In Fig. 8, Enete shows a user interface for establishing an IM video session on a sending device. The user interface shows a start VM (Video Communication) button 818 and instructions that recite "***To establish a Video Communication connection press the start MM button***." See paragraph [0070]. (Note, it is assumed "MM" as it appears in the figure is a typographical error and "VM" for Voice Communication was intended.)

4. Fig. 9 shows a user interface on a receiving in response to an invitation to join a video IM session. See paragraph [0074], which explains that a recipient is required to select a "Connect" button 918 to join a video communication session in response to the invite sent by the sender. If the "connect button 918 is selected, then a session is established between the two devices.

5. Paragraph [0075], which describes the user interface of Fig. 9, recites:

> [0075] *When presented with the connect request, the recipient 602b may ignore the connect request, accept the connect request, or cancel the instant communication session. If the recipient 602b accepts the connect request (step 644), for example, by clicking the connect button 818, the host 604 establishes a video communication session (step 646) that allows the sender 602a to communicate with the recipient 602b using video communication.*

6. In Figs 10A-10C and paragraphs [0077] through [0079], Enete illustrates and describes how video communications are sent by the sending device during an IM session. Specifically:

- In paragraph [0077], Enete specifically describes how a video communication is first recorded.
- Then, in paragraph [0078], Enete describes how the recorded communication can be previewed.
- In paragraph [0079], the reference explains that the selection of a Send button 1030 (See Fig. 10C) is required for the transmission of a recorded communications.

7. Finally, in paragraph [0089], Enete explains how connections/channels are first established prior to any exchange of video communications during a session. In particular, Enete explains that when Connect buttons are selected by both parties, the sending and receiving devices exchange their IP addresses, resulting in the creation of an end-to-end channel. Specifically, paragraph [0089] recites:

> [0089] *In one implementation, an active video communication session uses three communication channels: a Generic Signaling Interface (GSI) channel, a Control channel, and a Video channel. The GSI channel is used by the video session to establish the initial connection. During this connection, the local IP addresses are exchanged. After the initial connection phase is done, the GSI channel is no longer used. By using the GSI channel, the exchange of local IP addresses is only done when both users authorize such an exchange by, for example, clicking on the Connect button 918. These actions protect users from having their local IP address automatically obtained without their consen*t.

In summary with Enete, video communications are exchanged over pre-established synchronous channels/connections using known IP addresses of the sender and recipient and (ii) transmitted out of storage only after recording and a Send button is selected.

The Rejection

The claims of the present invention are directed to video communication where (1) a recipient can review portions of the video **while the video is transmitted by the sender** and (2) **without first establishing an end-to-end connection** between sending and receiving devices. In contrast, Enete explicitly requires and/or teaches that an end-to-end connection (e.g., a "channel", "socket connection") first be established. For at least this reason, it is respectfully submitted that none of the claims are anticipated by or obvious in view of Enete.

Conclusion

The Applicant submits that the present application is now in a condition for allowance. Early notice to this effect is requested.

Should the Examiner believe that a telephone conference would expedite the prosecution of this application, he is encouraged to contact the undersigned at the telephone number set out below.

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/

James W. Rose
Reg. No. 34,239

P.O. Box 151887
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Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Cara Hedin
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	31	50	1550
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1550**

Electronic Acknowledgement Receipt

EFS ID:	32049485
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Cara Hedin
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	14-MAR-2018
Filing Date:	02-MAY-2017
Time Stamp:	14:58:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1550
RAM confirmation Number	031518INTEFSW00001251504481
Deposit Account	504481
Authorized User	Cara Romero

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	REBLP003C14_Amendment_A_Transmittal.pdf	21525 51eb06f61292f53cf50db0593a6e4701b0798d75	no	1
Warnings:					
Information:					
2		REBLP003C14_Amendment_A_FINAL.pdf	82076 febe2ef5904b12cdfe7709d7561fe1bdec1f2b96	yes	14

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	11
Applicant Arguments/Remarks Made in an Amendment	12	14

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30120 6f574d02f662033ba42a30d990304907ba325ef6	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	133721		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on March 14, 2018.

Signed: /Cara Hedin/
Cara Hedin

AMENDMENT A TRANSMITTAL

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims After Amendment		Highest Previously Paid For	Present Extra	Small Entity Rate Fee	Large Entity Rate Fee
Total Claims	51	MINUS	20	31	x 50 = $1,550.00	x 100 = $0.00
Independent Claims	03	MINUS	03	00	x 230 = $0.00	x 460 = $0.00
Multiple Dependent Claim Present and Fee Not Previously Paid						
				Total	$1,550.00	$0.00

☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-4481.

☒ Please charge the required fees, or any additional fees required to facilitate filing the enclosed response, to Deposit Account No. 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on March 22, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

SUPPLEMENTAL AMENDMENT A

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

Please amend the above-identified patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 14 of this paper.

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Currently Amended) A video communication method performed over a network, comprising:

receiving an identifier identifying a recipient of a video communication, the identifier received over the network from a ~~**mobile**~~ **sending** communication device;

using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving the video communication over the network from the ~~**mobile**~~ **sending** communication device;

storing the video communication; and

delivering portions of the video communication to the second communication device over the network using the delivery location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the ~~**mobile**~~ **sending** communication device,

wherein the video communication is received from the ~~**mobile**~~ **sending** communication device without first establishing an end-to-end connection over the network between the ~~**mobile**~~ **sending** and second communication devices.

3. (Currently Amended) The video communication method of claim 2, further comprising ~~**providing**~~ **arranging to provide** an application to the ~~**mobile**~~ **sending** communication device, the application enabling the ~~**mobile**~~ **sending** communication device to:

(i) identify the recipient of the video communication;

(ii) communicate the identifier identifying the recipient; and

(iii) stream the video communication over the network.

4. (Currently Amended) The video communication method of claim 3, wherein the provided application further enables the ~~**mobile**~~ **sending** communication device to start streaming of the video communication over the network before the delivery location for the second communication device is known.

5. (Currently Amended) The video communication method of claim 3, wherein the provided application further enables the ~~**mobile**~~ **sending** communication device to start streaming of the video communication over the network regardless of whether the second communication device is available or not available on the network.

6. (Currently Amended) The video communication method of claim 3, wherein the provided application further enables the ~~**mobile**~~ **sending** communication device to start streaming of the video communication over the network independent of whether or not the delivery location associated with the second communication device is ascertained.

7. (Currently Amended) The video communication method of claim 3, wherein the provided application further enables the ~~**mobile**~~ **sending** communication device to locally store the video communication on the ~~**mobile**~~ **sending** communication device.

8. (Currently Amended) The video communication method of claim 3, wherein the provided application further enables the ~~**mobile**~~ **sending** communication device to define the recipient or a group of recipients for receipt of the video communication.

9. (Previously Presented) The video communication method of claim 2, further comprising accessing the video communication out of storage and delivering the accessed video communication to the second communication device for review in a time-shifted mode.

10. (Previously Presented) The video communication method of claim 2, wherein the video communication has a plurality of identifiers associated therewith, the plurality of identifiers identifying a plurality of recipients, the plurality of identifiers used to deliver the video

communication to a plurality of second communication devices associated with the plurality of recipients respectively.

11. (Previously Presented) The video communication method of claim 2, further comprising providing a notification at the second communication device notifying the recipient of the video communication.

12. (Currently Amended) The video communication method of claim 2, further comprising delivering the video communication to the second communication device out of storage if the second communication device is not available on the network when the video communication is sent by the ~~**mobile**~~ **sending** communication device.

13. (Currently Amended) The video communication method of claim 2, further comprising simultaneously storing and delivering the portions of the video communication to the second communication device while the video communication is created and streamed by the ~~**mobile**~~ **sending** communication device.

14. (Previously Presented) The video communication method of claim 2, wherein the identifier is resolved into an IP address that defines the delivery location for the second communication device on the network.

15. (Currently Amended) The video communication method of claim 3, wherein the provided application further enables the ~~**mobile**~~ **sending** communication device to at least partially render a second video communication in either:

a first mode while portions of the second video communication are received over the network while the second video communication is being sent by a remote communication device; or

a second mode by rendering the second video communication accessed from storage after the second video communication was sent.

16. (Previously Presented) The video communication method of claim 2, wherein using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient further comprises resolving the identifier into an IP address associated with the second communication device.

17. (Previously Presented) The video communication method of claim 2, wherein the delivery location is an IP address on the network and the IP address is used to notify and deliver the video communication to the second communication device.

18. (Previously Presented) The video communication method of claim 2, further comprising maintaining a video services system, including one or more servers on the network, for performing the video communication method.

19. (Currently Amended) The video communication method of claim 2, further comprising trans-coding the video communication received over the network from the ~~**mobile**~~ **sending** communication device.

20. (Currently Amended) The video communication method of claim 2, further comprising encrypting the video communication received over the network from the ~~**mobile**~~ **sending** communication device.

21. (Currently Amended) A method for video communication, comprising:

receiving, over a network, identifier information for a recipient of a video communication from a ~~**mobile**~~ **sending** communication device;

ascertaining a location on the network for a second communication device from the identifier information; and

delivering portions of the video communication over the network to the second communication device, using the ascertained location, so that the video communication can be at least partially rendered at the second communication device,

wherein the delivery occurs (i) without first establishing an end-to-end connection over the network between the ~~**mobile**~~ **sending** communication device and the second communication device and (ii) while the video communication is transmitted by the ~~**mobile**~~ **sending** communication device.

22. (Currently Amended) The method of claim 21, further comprising arranging for an application to be available for downloading to the second communication device, the application configured to include a rendering function that enables the recipient to at least partially render the video communication on the second communication device in a first mode while the video communication is transmitted by the ~~**mobile**~~ **sending** communication device and delivered over the network.

23. (Previously Presented) The method of claim 22, wherein the application is further configured to at least partially render the video communication in the first mode after receiving an input from the recipient in response to a notification.

24. (Currently Amended) The method of claim 21, further comprising arranging for an application to be available for downloading onto the ~~**mobile**~~ **sending** communication device, the application enabling the ~~**mobile**~~ **sending** communication device to start transmission of the video communication:

independently of the location associated with the second communication device being ascertained; and

regardless of whether or not the second communication device is connected to or not connected to the network.

25. (Previously Presented) The method of claim 21, wherein the location is an IP addresses for the second communication device on the network.

26. (Previously Presented) The method of claim 21, further comprising delivering the video communication to the second communication device out of storage for review in a time-shifted mode.

27. (Previously Presented) The method of claim 21, wherein the location is specified by an IP address on the network, the IP address used for locating and delivering the video communication to the second communication device.

28. (Previously Presented) The method of claim 21, further comprising maintaining one or more servers on the network for receiving the identifier information**,** ascertaining the location, receiving the video communication and delivering the video communication to the second communication device.

29. (Previously Presented) The video communication method of claim 21, further comprising trans-coding the video communication.

30. (Previously Presented) The video communication method of claim 21, further comprising encrypting the video communication.

31. (Currently Amended) A video communication method, comprising:

receiving an identifier associated with a video communication transmitted by a ~~**mobile**~~ **sending** communication device over a network, the identifier identifying a recipient of the video communication;

ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network;

receiving the video communication from the ~~**mobile**~~ **sending** communication device independently of the location for the second communication device being ascertained;

storing the video communication; and

delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the ~~**mobile**~~ **sending** communication device,

wherein receiving the video communication from the ~~**mobile**~~ **sending** communication device occurs without having to first establish an end-to-end connection over the network between the ~~**mobile**~~ **sending** and the second communication device.

32. (Previously Presented) The video communication method of claim 31, further comprising delivering the video communication out of storage to the second communication device.

33. (Currently Amended) The video communication method of claim 31, further comprising arranging for the **~~mobile~~ sending** communication device to run an application, the application enabling the **~~mobile~~ sending** communication device to:

(i) identify the recipient;

(ii) communicate the identifier identifying the recipient over the network;

(iii) create the video communication; and

(iv) transmit the video communication over the network while the video communication is created.

34. (Currently Amended) The video communication method of claim 33, wherein the application enables the **~~mobile~~ sending** communication device to start transmission of the video communication over the network before the location for the second communication devices is ascertained.

35. (Previously Presented) The video communication method of claim 31, further comprising notifying the recipient of the video communication.

36. (Currently Amended) The video communication method of claim 33, wherein the application further enables the **~~mobile~~ sending** communication device to start transmission of the video communication over the network regardless of whether the second communication device is available or not available on the network.

37. (Currently Amended) The video communication method of claim 33, wherein the application further enables the **~~mobile~~ sending** communication device to locally store the video communication on the **~~mobile~~ sending** communication device.

38. (Currently Amended) The video communication method of claim 33, wherein the application enables, at the **~~mobile~~ sending** communication device, an ability to define the recipient or a group of recipients for receipt of the video communication.

39. (Currently Amended) The video communication method of claim 33, wherein the application further enables the **~~mobile~~ sending** communication device to:

at least partially render a second video communication while portions of the second video communication are delivered over the network to the **~~mobile~~ sending** communication device while the second communication is sent by a remote communication device; and

render the second video communication out of storage in a time-shifted mode.

40. (Previously Presented) The video communication method of claim 31, further comprising:

receiving a plurality of identifiers associated with the video communication; and

ascertaining a plurality of locations associated with a plurality of second communication devices associated with a plurality of recipients respectively.

41. (Currently Amended) The video communication method of claim 31, wherein the portions of the video communication is delivered over the network while:

the video communication is transmitted by the **~~mobile~~ sending** communication device;

the video communication is delivered to the location on the network using an IP address associated with the second communication device, the IP addressed ascertained from the identifier; and

the video communication is at least partially rendered on the second communication device.

42. (Previously Presented) The video communication method of claim 31, further comprising delivering the video communication to the recipient out of storage.

43. (Previously Presented) The video communication method of claim 31, wherein the location is an IP address for the second communication device, the IP address used for

identifying and delivering the video communication to the second communication device when connected to the network.

44. (Currently Amended) The video communication method of claim 31, further comprising configuring and maintaining a plurality of servers on the network, the plurality of servers cooperating to receive the identifier associated with the video communication, ascertain the location on the network for the second communication device, receive the video communication from the ~~**mobile**~~ **sending** communication device, store the video communication and deliver the video communication over the network to the second communication device.

45. (Previously Presented) The video communication method of claim 31, further comprising trans-coding the video communication after receiving the video communication.

46. (Previously Presented) The video communication method of method 31, further comprising encrypting the video communication after receiving the video communication.

47. (Previously Presented) The video communication method of claim 2, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

48. (Previously Presented) The method for video communication of claim 21, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

49. (Previously Presented) The video communication method of claim 31, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

50. (Currently Amended) The video communication method of claim 2, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the ~~**mobile**~~ **sending** communication device or (b) in a time-shifted mode.

51. (Currently Amended) The method of claim 21, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the ~~**mobile**~~ **sending** communication device or (b) in a time-shifted mode.

52. (Currently Amended) The video communication method of claim 31, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the ~~**mobile**~~ **sending** communication device or (b) in a time-shifted mode.

53. (New) A video communication method, comprising:

arranging to provide an application to a sending communication device, the application enabling the sending communication device to:

(a) identify a recipient of a video communication;

(b) communicate the identifier identifying the recipient to a video communication system maintained on a network; and

(c) stream the video communication over the network to the video communication system;

receiving at the video communication system the identifier identifying the recipient of the video communication;

using, within the video communication system, the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving, at the video communication system, the video communication over the network from the sending communication device;

storing the video communication in a location accessible by the video communication system;

using the delivery location to deliver portions of the video communication over the network from the video communication system to the second communication device, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is streamed by the sending communication device,

wherein the video communication is received by the video communication system from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices.

54. (New) The video communication method of claim 53, wherein the application further enables the sending communication device to start streaming of the video communication over the network:

(d) before the delivery location for the second communication device is known;

(e) regardless of whether the second communication device is available or not available on the network; and

(f) independent of whether or not the delivery location associated with the second communication device is ascertained.

55. (New) The video communication method of claim 53, further comprising arranging to provide the application to second communication device, the application enabling the second communication device to:

render the delivered portions of the video communication while the video communication is streamed by the sending communication device; and

render the video communication in a time-shifted mode sometime after the video communication was streamed.

REMARKS

A number of claims have been amended to recite sending communication device instead of mobile communication device. In addition, new claims 53-55 have been added.

It is respectfully submitted that all the claims are allowable for the reasons articulated in the previously submitted Amendment A.

Conclusion

The Applicant submits that the present application is now in a condition for allowance. Early notice to this effect is requested.

Should the Examiner believe that a telephone conference would expedite the prosecution of this application, he is encouraged to contact the undersigned at the telephone number set out below.

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
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Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	3	50	150
INDEPENDENT CLAIMS IN EXCESS OF 3	2201	1	230	230
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**380**

Electronic Acknowledgement Receipt

EFS ID:	32132529
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Theresa Reyes
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	22-MAR-2018
Filing Date:	02-MAY-2017
Time Stamp:	17:10:34
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$380
RAM confirmation Number	032318INTEFSW00004105504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	REBLP003C14_Supplemental_Amendment_A_Transmittal.pdf	21785 dfada5345ea1170bf9602c9ec11bb022607d9231	no	1
Warnings:					
Information:					
2		REBLP003C14_Supplemental_Amendment_A.pdf	69825 925ea0beb3d76ce472617eea72609a92348c9398	yes	14

Multipart Description/PDF files in .zip description

Document Description	Start	End
Supplemental Response or Supplemental Amendment	1	1
Claims	2	13
Applicant Arguments/Remarks Made in an Amendment	14	14

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	31741 cb63ef8da5394a0b8e32965c5dfe84be3b3a541c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	123351		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on March 22, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

SUPPLEMENTAL AMENDMENT A TRANSMITTAL

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims After Amendment		Highest Previously Paid For	Present Extra	Small Entity Rate Fee	Large Entity Rate Fee
Total Claims	54	MINUS	51	3	3x 50 = $150.00	x 100 = $0.00
Independent Claims	04	MINUS	03	1	1x 230 = $230.00	x 460 = $0.00
Multiple Dependent Claim Present and Fee Not Previously Paid						
				Total	$380.00	$0.00

☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-4481.

☒ Please charge the required fees, or any additional fees required to facilitate filing the enclosed response, to Deposit Account No. 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
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P. O. Box 51887
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650-842-1300

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

76743 7590 04/20/2018
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EXAMINER
RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
2656	

NOTIFICATION DATE	DELIVERY MODE
04/20/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOmail@beyerlaw.com

Office Action Summary	Application No. 15/584,224	Applicant(s) KATIS ET AL.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3-14-18/3-20-18*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *2-55* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *2-55* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date ____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 21, 31, 53 are rejected under 35 U.S.C 102(b) as being anticipated by Caras et al. (US 2015/0350270, hereinafter Caras).

Regarding claim 2, Caras discloses: A video communication method performed over a network, comprising: receiving an identifier identifying a recipient of a video communication (paragraph: 0096; 0020), the identifier received over the network from a sending communication device; using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient; receiving the video communication over the network from the sending communication device; storing the video communication (fig. 2); and delivering portions of the video communication to the second communication device over the network using the delivery location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device, wherein the video communication is received from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices (abstract; paragraphs: 0038-0040; 0045-0046 and claim 1)

Regarding claim 21, Caras discloses: A method for video communication, comprising: receiving, over a network (fig. 1), identifier information for a recipient of a video communication from a sending communication device (paragraphs: 0096; 0020); ascertaining a location on the network for a second communication device from the identifier information; and delivering portions of the video communication over the network to the second communication device, using the ascertained location, so that the video communication can be at least partially rendered at the second communication device, wherein the delivery occurs (i) without first establishing an end-to-end connection over the network between the sending communication device and the second communication device and (ii) while the video communication is transmitted by the sending communication device (abstract; paragraphs: 0038-0040; 0045-0046 and claim 1).

Regarding claim 31, Caras discloses: A video communication method, comprising: receiving an identifier associated with a video communication transmitted by a sending communication device over a network (paragraphs: 0096;0030), the identifier identifying a recipient of the video communication; ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network; receiving the video communication from the sending communication device (figs. 1-2) independently of the location for the second communication device being ascertained; storing the video communication; and delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device, wherein receiving the video communication from the sending communication device occurs without having to first establish an end-to-end connection over the network between the sending and the second communication device (abstract; paragraphs: 0038-0040; 0045-0046 and claim 1).

Regarding claim 53, Caras discloses: A video communication method, comprising: arranging to provide an application to a sending communication device (paragraph: 0040), the application enabling the sending communication device to: (a) identify a recipient of a video communication; (b) communicate the identifier identifying the recipient to a video communication system maintained on a network (paragraphs: 0096; 0020); and (c) stream the video communication over the network to the video communication system; receiving at the video communication system the identifier identifying the recipient of the video communication; using, within the video communication system, the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient (fig. 2); receiving, at the video communication system, the video communication over the network from the sending communication device; storing the video communication in a location accessible by the video communication system (fig. 2); using the delivery location to deliver portions of the video communication over the network from the video communication system to the second communication device, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is streamed by the sending communication device, wherein the video communication is received by the video communication system from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices (abstract; paragraphs: 0038-0040; 0045-0046 and claim 1).

Regarding claims 3-20, Caras further discloses: further comprising arranging to provide an application to the sending communication device, the application enabling the sending communication device to: (i) identify the recipient of the video communication; (ii) communicate the identifier identifying the recipient; and (iii) stream the video communication over the network (paragraph: 0040), wherein the provided application further enables the sending communication device to start streaming of the video communication over the network before

the delivery location for the second communication device is known (paragraph: 0038), wherein the provided application further enables the sending communication device to start streaming of the video communication over the network regardless of whether the second communication device is available or not available on the network (paragraph: 0040); wherein the provided application further enables the sending communication device to start streaming of the video communication over the network independent of whether or not the delivery location associated with the second communication device is ascertained (see fig. 2, video message 250 being transmitted to the server 206a); wherein the provided application further enables the sending communication device to locally store the video communication on the sending communication device (paragraph [0038] discloses: **Message 250 may be recorded live using camera 105 while transmitting or message 250 may be previously recorded and stored in local storage 101);** wherein the provided application further enables the sending communication device to define the recipient or a group of recipients for receipt of the video communication (paragraph: 0090); further comprising accessing the video communication out of storage and delivering the accessed video communication to the second communication device (100R, fig. 2) for review in a time-shifted mode (fig. 2; paragraph: 0038); wherein the video communication has a plurality of identifiers associated therewith, the plurality of identifiers identifying a plurality of recipients, the plurality of identifiers used to deliver the video communication to a plurality of second communication devices associated with the plurality of recipients respectively (paragraphs: 0040; 0090); further comprising providing a notification at the second communication device notifying the recipient of the video communication (paragraph: 0047); further comprising delivering the video communication to the second communication device out of storage if the second communication device is not available on the network when the video communication is sent by the sending communication device (fig. 2); further comprising simultaneously storing and delivering the portions of the video communication to the second communication device while the video communication is created and

streamed by the sending communication device (abstract); wherein the identifier is resolved into an IP address (reads on URI) that defines the delivery location for the second communication device on the network (paragraph: 0041); wherein the provided application further enables the sending communication device to at least partially render a second video communication in either: a first mode while portions of the second video communication are received over the network while the second video communication is being sent by a remote communication device; or a second mode by rendering the second video communication accessed from storage after the second video communication was sent (abstract); wherein using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient further comprises resolving the identifier into an IP address (reads on URI) associated with the second communication device (paragraph: 0041); wherein the delivery location is an IP address on the network and the IP address is used to notify and deliver the video communication to the second communication device (paragraph: 0041); further comprising maintaining a video services system, including one or more servers on the network, for performing the video communication method (fig. 2); further comprising trans-coding the video communication received over the network from the sending communication device (see encoder 202, fig. 2; paragraph: 00037);

Claim Rejections - 35 USC § 103

4. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5, Claim 20 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Caras in view of Woodworth et al. (US 2008/0062246A1, hereinafter Woodworth).

Caras differs from claim 20 in that he does not specifically disclose: further comprising encrypting the video communication received over the network from the sending communication device.

However, Woodworth discloses the following: further comprising encrypting the video communication received over the network from the -sending communication device (paragraph: 0053).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the Caras' system to provide for the following: further comprising encrypting the video communication received over the network from the sending communication device as this would provide well known means for secure video communication as taught by Woodworth.

Other dependent claims 22-30, 32-52, 54-55 recite well known elements which is well known in the art and hence rejected.

Response to Arguments

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELUR RAMAKRISHNAIAH whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MELUR RAMAKRISHNAIAH/
Primary Examiner, Art Unit 2656

Notice of References Cited	Application/Control No. 15/584,224	Applicant(s)/Patent Under Reexamination KATIS ET AL.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2015/0350270 A1	12-2015	CARAS; Jonathan	H04L51/10	709/203
*	B	US-2008/0062246 A1	03-2008	Woodworth; Brian R.	H04L51/24	348/14.01
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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	P					
	Q					
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	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

WEST Search History for Application 15584224

Creation Date: 2018041516:21

Prior Art Searches

Query	DB	Hits	Op.	Plur.	Thes.	Date
(live near1 video near1 message) same (server) and @ad<20070628	PGPB, USPT	1	●R	YES		08-29-2017
(video near1 message) same (server and Ip near1 address and rece$ and transmit$) and @ad<20070628	PGPB, USPT	9	●R	YES		08-29-2017
(video near1 messages) same (recipient near1 identifier and deliver$) and @ad<20170628	PGPB, USPT	31	●R	YES		04-15-2018
(video near1 message) same (recipient near1 identifier and deliver$)and @ad<20170502	PGPB, USPT	31	●R	YES		04-15-2018

UNITED STATES PATENT AND TRADEMARK OFFICE

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BIB DATA SHEET

CONFIRMATION NO. 2563

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/584,224	05/02/2017	379	2656	REBLP003C14

APPLICANTS

Voxer IP LLC, San Francisco, CA;

INVENTORS

Thomas E. KATIS, Jackson, WY;
James J. PANTTAJA, San Francisco, CA;
Mary G. PANTTAJA, San Francisco, CA;
Matthew J. RANNEY, Oakland, CA;

**** CONTINUING DATA ***************************

This application is a CON of 15/231,240 08/08/2016 PAT 9674122
which is a CON of 14/799,528 07/14/2015 PAT 9456087
which is a CON of 14/198,043 03/05/2014 PAT 9154628
which is a CON of 13/555,034 07/20/2012 PAT 8705714
which is a CON of 12/037,256 02/26/2008 PAT 8243894
which is a CON of 12/028,400 02/08/2008 PAT 8180029
which claims benefit of 60/937,552 06/28/2007
and claims benefit of 60/999,619 10/19/2007

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
05/08/2017

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /MELUR RAMAKRISHNAIAH/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		WY	33	1	1

ADDRESS

BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887
UNITED STATES

TITLE

TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

FILING FEE RECEIVED		
2660	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/29/2017	04/15/2018							
	1	✓	-							
	2		✓							
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	35		✓							
	36		✓							

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/29/2017	04/15/2018							
	37		✓							
	38		✓							
	39		✓							
	40		✓							
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	54		✓							
	55		✓							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

CPC- SEARCHED		
Symbol	Date	Examiner
H04L 51/10, 51/04, 65/4015, 65/403, 12/1831, 51/22, 51/16, 61/2503, 65/1083, 67/24, 51/26, 65/604	8-29-17	mrk
H04N 7/15, 7/147,	8-29-17	mrk
H04M 3/5307, 11/00, 1/64	9-29-17	mrk

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
379/93.01		9-29-17	mrk
348	14.01, 14.02, 14.12	9-29-17	mrk
709	204, 205, 217, 218, 227	8-29-17	mrk
WEST database		4-16-18	mrk

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
WEST database	8-29-17	mrk
WEST database	4-15-18	mrk

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**
All classes & subclasses listed in the searched area.		4-15-18	mrk

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on April 25, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

AMENDMENT B

Mail Stop After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

Please amend the above-identified patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 14 of this paper.

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Previously Presented) A video communication method performed over a network, comprising:

receiving an identifier identifying a recipient of a video communication, the identifier received over the network from a sending communication device;

using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving the video communication over the network from the sending communication device;

storing the video communication; and

delivering portions of the video communication to the second communication device over the network using the delivery location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device,

wherein the video communication is received from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices.

3. (Previously Presented) The video communication method of claim 2, further comprising arranging to provide an application to the sending communication device, the application enabling the sending communication device to:

(i) identify the recipient of the video communication;

(ii) communicate the identifier identifying the recipient; and

(iii) stream the video communication over the network.

4. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to start streaming of the video communication over the network before the delivery location for the second communication device is known.

5. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to start streaming of the video communication over the network regardless of whether the second communication device is available or not available on the network.

6. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to start streaming of the video communication over the network independent of whether or not the delivery location associated with the second communication device is ascertained.

7. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to locally store the video communication on the sending communication device.

8. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to define the recipient or a group of recipients for receipt of the video communication.

9. (Previously Presented) The video communication method of claim 2, further comprising accessing the video communication out of storage and delivering the accessed video communication to the second communication device for review in a time-shifted mode.

10. (Previously Presented) The video communication method of claim 2, wherein the video communication has a plurality of identifiers associated therewith, the plurality of identifiers identifying a plurality of recipients, the plurality of identifiers used to deliver the video

communication to a plurality of second communication devices associated with the plurality of recipients respectively.

11. (Previously Presented) The video communication method of claim 2, further comprising providing a notification at the second communication device notifying the recipient of the video communication.

12. (Previously Presented) The video communication method of claim 2, further comprising delivering the video communication to the second communication device out of storage if the second communication device is not available on the network when the video communication is sent by the sending communication device.

13. (Previously Presented) The video communication method of claim 2, further comprising simultaneously storing and delivering the portions of the video communication to the second communication device while the video communication is created and streamed by the sending communication device.

14. (Previously Presented) The video communication method of claim 2, wherein the identifier is resolved into an IP address that defines the delivery location for the second communication device on the network.

15. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to at least partially render a second video communication in either:

a first mode while portions of the second video communication are received over the network while the second video communication is being sent by a remote communication device; or

a second mode by rendering the second video communication accessed from storage after the second video communication was sent.

16. (Previously Presented) The video communication method of claim 2, wherein using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient further comprises resolving the identifier into an IP address associated with the second communication device.

17. (Previously Presented) The video communication method of claim 2, wherein the delivery location is an IP address on the network and the IP address is used to notify and deliver the video communication to the second communication device.

18. (Previously Presented) The video communication method of claim 2, further comprising maintaining a video services system, including one or more servers on the network, for performing the video communication method.

19. (Previously Presented) The video communication method of claim 2, further comprising trans-coding the video communication received over the network from the sending communication device.

20. (Previously Presented) The video communication method of claim 2, further comprising encrypting the video communication received over the network from the sending communication device.

21. (Previously Presented) A method for video communication, comprising:

receiving, over a network, identifier information for a recipient of a video communication from a sending communication device;

ascertaining a location on the network for a second communication device from the identifier information; and

delivering portions of the video communication over the network to the second communication device, using the ascertained location, so that the video communication can be at least partially rendered at the second communication device,

wherein the delivery occurs (i) without first establishing an end-to-end connection over the network between the sending communication device and the second communication device and (ii) while the video communication is transmitted by the sending communication device.

22. (Previously Presented) The method of claim 21, further comprising arranging for an application to be available for downloading to the second communication device, the application configured to include a rendering function that enables the recipient to at least partially render the video communication on the second communication device in a first mode while the video communication is transmitted by the sending communication device and delivered over the network.

23. (Previously Presented) The method of claim 22, wherein the application is further configured to at least partially render the video communication in the first mode after receiving an input from the recipient in response to a notification.

24. (Previously Presented) The method of claim 21, further comprising arranging for an application to be available for downloading onto the sending communication device, the application enabling the sending communication device to start transmission of the video communication:

independently of the location associated with the second communication device being ascertained; and

regardless of whether or not the second communication device is connected to or not connected to the network .

25. (Previously Presented) The method of claim 21, wherein the location is an IP addresses for the second communication device on the network.

26. (Previously Presented) The method of claim 21, further comprising delivering the video communication to the second communication device out of storage for review in a time-shifted mode.

27. (Previously Presented) The method of claim 21, wherein the location is specified by an IP address on the network, the IP address used for locating and delivering the video communication to the second communication device.

28. (Previously Presented) The method of claim 21, further comprising maintaining one or more servers on the network for receiving the identifier information, ascertaining the location,

receiving the video communication and delivering the video communication to the second communication device.

29. (Previously Presented) The video communication method of claim 21, further comprising trans-coding the video communication.

30. (Previously Presented) The video communication method of claim 21, further comprising encrypting the video communication.

31. (Previously Presented) A video communication method, comprising:

receiving an identifier associated with a video communication transmitted by a sending communication device over a network, the identifier identifying a recipient of the video communication;

ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network;

receiving the video communication from the sending communication device independently of the location for the second communication device being ascertained;

storing the video communication; and

delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device,

wherein receiving the video communication from the sending communication device occurs without having to first establish an end-to-end connection over the network between the sending and the second communication device.

32. (Previously Presented) The video communication method of claim 31, further comprising delivering the video communication out of storage to the second communication device.

33. (Previously Presented) The video communication method of claim 31, further comprising arranging for the sending communication device to run an application, the application enabling the sending communication device to:

(i) identify the recipient;

(ii) communicate the identifier identifying the recipient over the network;

(iii) create the video communication; and

(iv) transmit the video communication over the network while the video communication is created.

34. (Previously Presented) The video communication method of claim 33, wherein the application enables the sending communication device to start transmission of the video communication over the network before the location for the second communication devices is ascertained.

35. (Previously Presented) The video communication method of claim 31, further comprising notifying the recipient of the video communication.

36. (Previously Presented) The video communication method of claim 33, wherein the application further enables the sending communication device to start transmission of the video communication over the network regardless of whether the second communication device is available or not available on the network.

37. (Previously Presented) The video communication method of claim 33, wherein the application further enables the sending communication device to locally store the video communication on the sending communication device.

38. (Previously Presented) The video communication method of claim 33, wherein the application enables, at the sending communication device, an ability to define the recipient or a group of recipients for receipt of the video communication.

39. (Previously Presented) The video communication method of claim 33, wherein the application further enables the sending communication device to:

at least partially render a second video communication while portions of the second video communication are delivered over the network to the sending communication device while the second communication is sent by a remote communication device; and

render the second video communication out of storage in a time-shifted mode.

40. (Previously Presented) The video communication method of claim 31, further comprising:

receiving a plurality of identifiers associated with the video communication; and

ascertaining a plurality of locations associated with a plurality of second communication devices associated with a plurality of recipients respectively.

41. (Previously Presented) The video communication method of claim 31, wherein the portions of the video communication is delivered over the network while:

the video communication is transmitted by the sending communication device;

the video communication is delivered to the location on the network using an IP address associated with the second communication device, the IP addressed ascertained from the identifier; and

the video communication is at least partially rendered on the second communication device.

42. (Previously Presented) The video communication method of claim 31, further comprising delivering the video communication to the recipient out of storage.

43. (Previously Presented) The video communication method of claim 31, wherein the location is an IP address for the second communication device, the IP address used for identifying and delivering the video communication to the second communication device when connected to the network.

44. (Previously Presented) The video communication method of claim 31, further comprising configuring and maintaining a plurality of servers on the network, the plurality of servers cooperating to receive the identifier associated with the video communication, ascertain the location on the network for the second communication device, receive the video communication from the sending communication device, store the video communication and deliver the video communication over the network to the second communication device.

45. (Previously Presented) The video communication method of claim 31, further comprising trans-coding the video communication after receiving the video communication.

46. (Previously Presented) The video communication method of method 31, further comprising encrypting the video communication after receiving the video communication.

47. (Previously Presented) The video communication method of claim 2, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

48. (Previously Presented) The method for video communication of claim 21, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

49. (Previously Presented) The video communication method of claim 31, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

50. (Previously Presented) The video communication method of claim 2, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode.

51. (Previously Presented) The method of claim 21, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode.

52. (Previously Presented) The video communication method of claim 31, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode.

53. (Previously Presented) A video communication method, comprising:

arranging to provide an application to a sending communication device, the application enabling the sending communication device to:

(a) identify a recipient of a video communication;

(b) communicate the identifier identifying the recipient to a video communication system maintained on a network; and

(c) stream the video communication over the network to the video communication system;

receiving at the video communication system the identifier identifying the recipient of the video communication;

using, within the video communication system, the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving, at the video communication system, the video communication over the network from the sending communication device;

storing the video communication in a location accessible by the video communication system;

using the delivery location to deliver portions of the video communication over the network from the video communication system to the second communication device, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is streamed by the sending communication device,

wherein the video communication is received by the video communication system from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices.

54. (Previously Presented) The video communication method of claim 53, wherein the application further enables the sending communication device to start streaming of the video communication over the network:

(d) before the delivery location for the second communication device is known;

(e) regardless of whether the second communication device is available or not available on the network; and

(f) independent of whether or not the delivery location associated with the second communication device is ascertained.

55. (Previously Presented) The video communication method of claim 53, further comprising arranging to provide the application to second communication device, the application enabling the second communication device to:

render the delivered portions of the video communication while the video communication is streamed by the sending communication device; and

render the video communication in a time-shifted mode sometime after the video communication was streamed.

REMARKS

In the final Action dated April 20, 2018, the Office rejected claims 2-21, 31, 53, under 35 USC 102(b) as allegedly anticipated by Caras in US Pub. 2015/0350270 and rejected claims 20, 22-30, 32-52, and 54-55 under 35 USC 103 as allegedly obvious over Caras and Woodworth (US Pub. 2008/0062246).

The 35 USC 102 Rejection

The subject application is a continuation application in a chain of continuation applications claiming priority to US application Serial No. 12/028,400 (now USP 8,180,029 filed February 26, 2008 and provisional applications Serial Nos. 60/937,552, filed June 28, 2007 and 60/999,619, filed on October 19, 2007.

The Caras reference has a 371(c)(1)(2) filing date in the United States of June 26, 2015, based on a PCT filing date of December 24, 2013 and a foreign priority date in Great Britain of December 28, 2012, all of which are well after the priority date of the claims of the subject application. The Caras reference is therefore **not** prior art with respect to the present application.

The 35 USC 102 rejection of claims 2-21, 31, 53 as anticipated by Caras is improper. It is respectfully requested that the 35 USC 102 rejection now be withdrawn.

The 35 USC 103 Rejection

As noted above, the Caras reference is not prior art to the claims of the subject application.

Woodworth is directed to a video messaging service where messages are recorded, stored and then delivered to a recipient out of storage. See for instance paragraphs [0014], [0034], [0045]-[0048] with respect to Fig. 5, paragraph [0050] with respect to Fig. 6, and paragraph [0052] with respect to Fig. 7. In each of these embodiments, a caller places a call to an intended recipient, the recipient does not answer, the sender elects to record a video message, and the recorded video message is sent to the recipient either:

(a) from the callers device to the recipients device upon request (Fig. 5);
(b) by a video messaging server to the recipient's device upon request (Fig. 6); or
(c) directly from the sender's device out of storage to the recipient's device (Fig. 7).

With Woodworth, all video messages are recorded, stored and then forwarded to the recipient out of storage. Woodworth therefore fails to suggest, let alone teach, the present

invention as claimed. The Caras reference is not prior art. The 35 USC rejection based on the proposed combination of Caras and Woodworth is therefore improper. It is requested that the rejection of claims 20, 22-30, 32-52, and 54-55 now be withdrawn.

In addition, it is noted that the use of the term "real-time" in paragraph [0049] of Woodworth does not somehow mean that portions of a video is being consumed by a recipient at the same time the video is being transmitted by the sender. On the contrary, in the context of paragraph [0049], it is clear the term "real-time" simply means that video frames are delivered to the recipient at the same rate they are retrieved from storage, as opposed to sending discrete portions of the video message, which allows for buffering, masking network congestion delays. The teaching of paragraph [0049] is therefore not remotely the same as recited in the claims of the present application.

Conclusion

The Applicant submits that the present application is now in a condition for allowance. Early notice to this effect is requested.

Should the Examiner believe that a telephone conference would expedite the prosecution of this application, he is encouraged to contact the undersigned at the telephone number set out below.

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on April 25, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

INFORMATION DISCLOSURE STATEMENT AFTER FINAL ACTION OR NOTICE OF ALLOWANCE (37 CFR §§ 1.56 AND 1.97(d))

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The reference(s) identified in the attached PTO Form 1449, (copies of non-U.S. references are attached), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

This Information Disclosure Statement is being filed after the mailing date of final action under §1.113 or a notice of allowance under §1.311, but before or with payment of the issue fee.

Accompanying this Information Disclosure Statement is the fee set forth in 37 CFR 1.17(p).

The Commissioner is hereby authorized to charge Deposit Account 50-4481 for $120.00 in payment of the Information Disclosure Statement Fee. If it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
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650-842-1300

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure Statement By Applicant	Applicant	KATIS et al.
	Filing Date	May 2, 2017
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	15/923,287		Katis et al.			3/16/2018
	2.	15/923,869		Katis et al.			3/16/2018
	3.	2018/0013704	1/11/18	Katis et al.			9/20/17
	4.	2017/0272489	9/21/17	Katis et al.			6/6/17
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	
	18.	

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
		Total in USD ($)		**120**

Electronic Acknowledgement Receipt

EFS ID:	32439033
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Theresa Reyes
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	25-APR-2018
Filing Date:	02-MAY-2017
Time Stamp:	12:57:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$120
RAM confirmation Number	042518INTEFSW00011056504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	REBLP003C14_Amendment_B_Transmittal.pdf	21547 78cd2d772547b665eb08e13b7dcb33a862763f94	no	1
Warnings:					
Information:					
2		REBLP003C14_Amendment_B.pdf	73137 81b348b4bad2ea10d24b7b81fcc11a4b45c86bf0	yes	14

Multipart Description/PDF files in .zip description

Document Description	Start	End
Response After Final Action	1	1
Claims	2	12
Applicant Arguments/Remarks Made in an Amendment	13	14

Warnings:					
Information:					
3	Transmittal Letter	REBLP003C14_IDS_After_FOA.pdf	23586 1b7712d747563c70176ecffdffaa49bf21a7196f	no	2
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Form (SB08)	REBLP003C14_1449_04_25_2018.pdf	22792 7d15ec6285cff23dcd821f2204f1b5e33c05be44	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					

5	Fee Worksheet (SB06)	fee-info.pdf	30226 97e7b14ab1c389a642a491408494a29268e74050	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	171288

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION

I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on April 25, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

AMENDMENT B TRANSMITTAL

Mail Stop After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims After Amendment		Highest Previously Paid For	Present Extra	Small Entity Rate Fee	Large Entity Rate Fee
Total Claims	54	MINUS	54	0	x 50 = $0.00	x 100 = $0.00
Independent Claims	04	MINUS	04	0	x 230 = $0.00	x 460 = $0.00
Multiple Dependent Claim Present and Fee Not Previously Paid						
				Total	$0.00	$0.00

☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-4481.

☒ Please charge the required fees, or any additional fees required to facilitate filing the enclosed response, to Deposit Account No. 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/584,224	Filing Date 05/02/2017	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $40 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $210 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	04/25/2018	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 54	Minus	** 54	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 4	= 0		x $230 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	SLIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	juliet mcmillan
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Form 1449 (Modified)	Atty Docket No.	REBL **P003C14**
	Application No.:	15/584,224
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	05/02/17
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2004/0179092	09/16/04	LaPoint			03/12/04
	2.	2006/0080704	04/13/06	Le Huerou et al.			10/07/05
	3.	7,180,944	02/20/07	Lin et al.			07/08/04
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	
	18.	

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
		Total in USD ($)		**120**

Electronic Acknowledgement Receipt

EFS ID:	32590973
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose
Filer Authorized By:	
Attorney Docket Number:	REBLP003C14
Receipt Date:	10-MAY-2018
Filing Date:	02-MAY-2017
Time Stamp:	17:12:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$120
RAM confirmation Number	051118INTEFSW00003748504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	IDS_After_Final_05_10_2018.pdf	23579 2bfb99c859e5458ec8bc18ba7c695d3b6540c149	no	2
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	1449_05_10_2018.pdf	22993 cb1ba58d2f7680a91544e56c46467866595e5ba0	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30226 196f306267167ba99cc5e2709e9bf324515b31d4	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	76798		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on May 10, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

INFORMATION DISCLOSURE STATEMENT AFTER FINAL ACTION OR NOTICE OF ALLOWANCE (37 CFR §§ 1.56 AND 1.97(d))

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The reference(s) identified in the attached PTO Form 1449, (copies of non-U.S. references are attached), may be material to examination of the above-identified patent application. Applicants submit the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

This Information Disclosure Statement is being filed after the mailing date of final action under §1.113 or a notice of allowance under §1.311, but before or with payment of the issue fee.

Accompanying this Information Disclosure Statement is the fee set forth in 37 CFR 1.17(p).

The Commissioner is hereby authorized to charge Deposit Account 50-4481 for $120.00 in payment of the Information Disclosure Statement Fee. If it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

76743 7590 05/23/2018
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

EXAMINER
RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
2656	

NOTIFICATION DATE	DELIVERY MODE
05/23/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOmail@beyerlaw.com

Office Action Summary	Application No. 15/584,224	Applicant(s) KATIS ET AL.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4-25-18*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *2-55* is/are pending in the application.

5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6)☐ Claim(s) ____ is/are allowed.

7)☒ Claim(s) *2-55* is/are rejected.

8)☐ Claim(s) ____ is/are objected to.

9)☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on ____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. ____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date *4-25-18; 5-10-18.*

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ .

4) ☐ Other: ____.

1. The present application is being examined under the pre-AIA first to invent provisions.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) -

706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

3. Claims 2-55 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-29 of copending Application No. 15/923,287 (reference application). Although the claims at issue are not identical, they are not patentably distinct from each other because for example claim 2 of the current application is an obvious variation of claim 16 of copending Application No. 15/923,287

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 2, 21, 31, 53 are rejected under 35 U.S.C 102(a) as being anticipated by Le Huerou et al. (US2006/0080704A1, hereinafter Le Huerou).

Regarding claim 2, Le Huerou discloses: A video communication method performed over a network, comprising: receiving an identifier identifying a recipient of a video communication, the identifier received over the network from a sending communication device; using the identifier to ascertain a delivery location on the network for a second communication device (TVS, fig. 1) associated with the recipient; receiving the video communication over the network from the sending communication device (fig. 1); storing the video communication (MEMI/MEMT; fig. 3) and delivering portions of the video communication to the second communication device (TVS, fig. 1) over the network using the delivery location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device, wherein the video communication is received from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices (figs. 1-3; abstract; paragraphs: 0011; 0015; 0029; 0035; 0037-0040; 0044; 048; claim 1).

Regarding claim 21, Le Huerou discloses: A method for video communication, comprising: receiving, over a network (fig. 1), identifier information for a recipient of a video communication from a sending communication device; ascertaining a location on the network for a second communication device (TVS, fig. 1) from the identifier information; and delivering portions of the video communication over the network to the second communication device, using the ascertained location, so that the video communication can be at least partially rendered at the second communication

device, wherein the delivery occurs (i) without first establishing an end-to-end connection over the network between the sending communication device and the second communication device and (ii) while the video communication is transmitted by the sending communication device (figs. 1-3; abstract; paragraphs: 0011; 0015; 0029; 0035; 0037-0040; 0044; 048; claim 1).

Regarding claim 31, Le Huerou discloses: A video communication method, comprising: receiving an identifier associated with a video communication transmitted by a sending communication device over a network (fig. 1), the identifier identifying a recipient (TVS, fig. 1) of the video communication ; ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network; receiving the video communication from the sending communication device independently of the location for the second communication device being ascertained; storing the video communication (MEMI/MEMT, fig. 3); and delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device, wherein receiving the video communication from the sending communication device occurs without having to first establish an end-to-end connection over the network between the sending and the second communication device (figs. 1-3; abstract; paragraphs: 0011; 0015; 0029; 0035; 0037-0040; 0044; 048; claim 1).

Regarding claim 53, Le Huerou discloses: A video communication method, comprising: arranging to provide an application to a sending communication device (paragraph: 0036), the application enabling the sending communication device to: (a) identify a recipient of a video communication (paragraph: 0037); (b) communicate the identifier identifying the recipient to a video communication system maintained on a network (paragraph: 0038); and (c) stream the video communication over the network to the video communication system; receiving

at the video communication system the identifier identifying the recipient of the video communication; using, within the video communication system, the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient; receiving, at the video communication system, the video communication over the network from the sending communication device (fig. 1); storing the video communication in a location accessible by the video communication system (MEMI/MEMT, fig. 3); using the delivery location to deliver portions of the video communication over the network from the video communication system to the second communication device, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is streamed by the sending communication device, wherein the video communication is received by the video communication system from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices (figs. 1-3; abstract; paragraphs: 0011; 0015; 0029; 0035; 0037-0040; 0044; 048; claim 1).

Regarding claims 3-18, 40, 50, Le Huerou further discloses: further comprising -arranging to provide an application to the sending communication device, the application enabling the sending communication device to: (i) identify the recipient of the video communication; (ii) communicate the identifier identifying the recipient; and (iii) stream the video communication over the network (paragraphs: 003-0039); wherein the provided application further enables the sending communication device to start streaming of the video communication over the network before the delivery location for the second communication device is known (paragraphs: 0038-0039); wherein the provided application further enables the sending communication device to start streaming of the video communication over the network regardless of whether the second communication device is available or not available on the network (paragraph: paragraphs: 0012-0013); wherein the provided application further enables the sending communication device to start streaming of the video

communication over the network independent of whether or not the delivery location associated with the second communication device is ascertained (paragraph: 0015); wherein the provided application further enables the sending communication device to locally store the video communication on the sending communication device (paragraph: 0054); wherein the provided application further enables the sending communication device to define the recipient or a group of recipients for receipt of the video communication (paragraph: 0037); further comprising accessing the video communication out of storage and delivering the accessed video communication to the second communication device for review in a time-shifted mode (paragraph: 0022); wherein the video communication has a plurality of identifiers associated therewith, the plurality of identifiers identifying a plurality of recipients, the plurality of identifiers used to deliver the video communication to a plurality of second communication devices associated with the plurality of recipients respectively (paragraph: 0015); further comprising providing a notification at the second communication device notifying the recipient of the video communication (paragraph: 0016; 0046); further comprising delivering the video communication to the second communication device out of storage if the second communication device is not available on the network when the video communication is sent by the sending communication device (paragraph: 0044); further comprising simultaneously storing and delivering the portions of the video communication to the second communication device while the video communication is created and streamed by the sending communication device (paragraph: 0048); wherein the identifier is resolved into an IP address (reads on URL) that defines the delivery location for the second communication device on the network (paragraph: 0015); wherein the provided application further enables the sending communication device to at least partially render a second video communication in either: a first mode while portions of the second video communication are received over the network while the second video communication is being sent by a remote communication device; or a second mode by rendering the second video communication accessed from storage after

the second video communication was sent (paragraph: 0048); wherein using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient further comprises resolving the identifier into an IP address associated with the second communication device (paragraph: 0015); wherein the delivery location is an IP address on the network and the IP address is used to notify and deliver the video communication to the second communication device (paragraph: 0016); further comprising maintaining a video services system, including one or more servers (IPF/TPF, fig. 3) on the network, for performing the video communication method (paragraph: 0053); wherein the portions of the video communication delivered to the second communication device are packets containing media payloads (fig. 3; paragraph [0053] discloses transmission through internet which means packet transmission); further comprising: delivering the portions of the video communication to multiple second communication devices; and enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode (paragraph [0015] discloses group of recipients).

Claim Rejections - 35 USC § 103

6. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 19 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Le Huerou in view of Lin et al. (US PAT: 7,180,944, hereinafter Lin).

Le Heuerou differs from claim 19 in that he does not specifically disclose: further comprising trans-coding the video communication received over the network

from the sending communication device.

However, Lin discloses: further comprising trans-coding the video communication received over the network (col. 1 lines 7-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Le Huerou's system to provide for the following: further comprising trans-coding the video communication received over the network as this arrangement would facilitate communications between different systems needing format conversion as taught by Lin.

8. Claim 20 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Le Huerou in view of LaPoint (US2004/0179092A1).

Le Huerou differs from claim 20 in that he does not specifically disclose: further comprising encrypting the video communication received over the network from the sending communication device.

However, LaPoint videoconferencing communication system which teaches: further comprising encrypting the video communication received over the network from the sending communication device (claim 26).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Le Huerou's system to provide for the following: further comprising encrypting the video communication received over the network from the sending communication device as this arrangement would facilitate to protect contents of video communications from others eavesdropping as taught by Lapoint.

Other dependent claims 22-30, 32-49, 51-52, 54-55 recite well known elements which is well known in the art and hence rejected.

Response to Arguments

In light of applicant's arguments about the applied reference

(US2015/0350270) being not a prior art, Finality of the office action is withdrawn and new rejection of claims has been made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELUR RAMAKRISHNAIAH whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MELUR RAMAKRISHNAIAH/
Primary Examiner, Art Unit 2656

Notice of References Cited	Application/Control No. 15/584,224	Applicant(s)/Patent Under Reexamination KATIS ET AL.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2006/0080704 A1	04-2006	Le Huerou; Emmanuel	H04N7/173	725/34
*	B	US-7,180,944 B2	02-2007	Lin; Chia-Wen	H04N19/159	375/240.16
*	C	US-2004/0179092 A1	09-2004	LaPoint, Donald A.	H04L29/06	348/14.08
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FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

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	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 2563

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/584,224	05/02/2017 RULE	379	2656	REBLP003C14

APPLICANTS

Voxer IP LLC, San Francisco, CA;

INVENTORS

Thomas E. KATIS, Jackson, WY;
James J. PANTTAJA, San Francisco, CA;
Mary G. PANTTAJA, San Francisco, CA;
Matthew J. RANNEY, Oakland, CA;

**** CONTINUING DATA ***************************

This application is a CON of 15/231,240 08/08/2016 PAT 9674122
which is a CON of 14/799,528 07/14/2015 PAT 9456087
which is a CON of 14/198,043 03/05/2014 PAT 9154628
which is a CON of 13/555,034 07/20/2012 PAT 8705714
which is a CON of 12/037,256 02/26/2008 PAT 8243894
which is a CON of 12/028,400 02/08/2008 PAT 8180029
which claims benefit of 60/937,552 06/28/2007
and claims benefit of 60/999,619 10/19/2007

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
05/08/2017

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☐ No		WY	33	1	1
Verified and Acknowledged	/MELUR RAMAKRISHNAIAH/ Examiner's Signature	Initials				

ADDRESS

BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887
UNITED STATES

TITLE

TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

FILING FEE RECEIVED	FEES: Authority has been given in Paper	
2660	No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/29/2017	04/15/2018	05/15/2018						
	1	✓	-	-						
	2		✓	✓						
	3		✓	✓						
	4		✓	✓						
	5		✓	✓						
	6		✓	✓						
	7		✓	✓						
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	9		✓	✓						
	10		✓	✓						
	11		✓	✓						
	12		✓	✓						
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	34		✓	✓						
	35		✓	✓						
	36		✓	✓						

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	15584224	KATIS ET AL.
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CLAIM		DATE								
Final	Original	08/29/2017	04/15/2018	05/15/2018						
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	38		✓	✓						
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	41		✓	✓						
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	51		✓	✓						
	52		✓	✓						
	53		✓	✓						
	54		✓	✓						
	55		✓	✓						

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	May 2, 2017
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	15/923,287		Katis et al.			3/16/2018
	2.	15/923,869		Katis et al.			3/16/2018
	3.	2018/0013704	1/11/18	Katis et al.			9/20/17
	4.	2017/0272489	9/21/17	Katis et al.			6/6/17
	5.						
	6.						
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	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	
	18.	

Examiner	Date Considered
/MELUR RAMAKRISHNAIAH/	05/15/2018

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

WEST Search History for Application 15584224

Creation Date: 2018051510:23

Prior Art Searches

Query	DB	Hits	Op.	Plur.	Thes.	Date
(live near1 video near1 message) same (server) and @ad<20070628	PGPB, USPT	1	●R	YES		08-29-2017
(video near1 message) same (server and Ip near1 address and rece$ and transmit$) and @ad<20070628	PGPB, USPT	9	●R	YES		08-29-2017
(video near1 messages) same (recipient near1 identifier and deliver$) and @ad<20170628	PGPB, USPT	31	●R	YES		04-15-2018
(video near1 message) same (recipient near1 identifier and deliver$)and @ad<20170502	PGPB, USPT	31	●R	YES		04-15-2018
(recipient near1 identifier) same (video near1 message) and @ad<20070628	PGPB, USPT	2	●R	YES		05-15-2018
(video near1 message and sender) same (server and recipients) and @ad<20070628	PGPB, USPT	48	●R	YES		05-15-2018

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15584224	KATIS ET AL.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

CPC- SEARCHED

Symbol	Date	Examiner
H04L 51/10, 51/04, 65/4015, 65/403, 12/1831, 51/22, 51/16, 61/2503, 65/1083, 67/24, 51/26, 65/604	8-29-17	mrk
H04N 7/15, 7/147,	8-29-17	mrk
H04M 3/5307, 11/00, 1/64	9-29-17	mrk

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
379/93.01		9-29-17	mrk
348	14.01, 14.02, 14.12	9-29-17	mrk
709	204, 205, 217, 218, 227	8-29-17	mrk
WEST database		4-16-18	mrk
Search updated		5-15-18	mrk

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES

Search Notes	Date	Examiner
WEST database	8-29-17	mrk
WEST database	4-15-18	mrk
WEST database	5-15-18	mrk

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
All classes & subclasses listed in the searched area.		4-15-18	mrk

Form 1449 (Modified)	Atty Docket No.	REBL **P003C14**
	Application No.:	15/584,224
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	05/02/17
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2004/0179092	09/16/04	LaPoint			03/12/04
	2.	2006/0080704	04/13/06	Le Huerou et al.			10/07/05
	3.	7,180,944	02/20/07	Lin et al.			07/08/04
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	
	18.	

Examiner/MELUR RAMAKRISHNAIAH/	Date Considered 05/15/2018

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure Statement By Applicant	Applicant	KATIS et al.
	Filing Date	May 2, 2017
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	US2008/0091804 A1	04/17/08	Swanburg; Scott Allen			10/11/06
	2.	US2006/0221174 A1	10/05/06	Yang; Chin-Tien			04/04/05
	3.	US2008/0288989 A1	11/20/08	Zheng; Yu "Brian"			05/14/07
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	
	18.	

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
		Total in USD ($)		**120**

Electronic Acknowledgement Receipt

EFS ID:	32817828
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose
Filer Authorized By:	
Attorney Docket Number:	REBLP003C14
Receipt Date:	06-JUN-2018
Filing Date:	02-MAY-2017
Time Stamp:	18:01:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$120
RAM confirmation Number	060718INTEFSW00004688504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	REBLP003C14_IDS_06_06_2018.pdf	24136 27517097822b6dcb21755130a12e9626b9d65dcc	no	2
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	REBLP003C14_1449_06_06_2018.pdf	23616 1bb2dc8f7da35ef1aa855ce3f7d93e85eee32cfc	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30227 8b914c6ac5f3bf0b03e623fa68aadff7a8f8ea83	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	77979		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on June 6, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

INFORMATION DISCLOSURE STATEMENT BEFORE FINAL ACTION OR NOTICE OF ALLOWANCE (37 CFR §§ 1.56 AND 1.97(c))

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The reference(s) identified in the attached PTO Form 1449, (copies of non-U.S. references are attached), may be material to examination of the above-identified patent application. Applicants identify the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

This Information Disclosure Statement is being filed after the mailing date of the first Office Action on the merits, or after three months from the filing date of this application, whichever event occurred last, but it is believed before the mailing date of either: (i) a final action under §1.113 or (ii) a notice of allowance under §1.311, whichever occurs first.

Accompanying this Information Disclosure Statement is the fee set forth in 37 CFR 1.17(p).

The Commissioner is hereby authorized to charge Deposit Account 50-4481 (Order No. REBLP003C14) for $120.00 in payment of the Information Disclosure Statement Fee. If it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure Statement By Applicant	Applicant	Thomas E. KATIS et al.
	Filing Date	05-02-2017
	Group	2563
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	8,027,276	09/27/11	Nierhaus			04/14/04
	2.	7,636,327	12/22/09	Doran			07/29/03
	3.	7,613,773	11/03/09	Watt			12/31/03
	4.	8,296,366	10/23/12	Huai			05/27/04
	5.	8,094,647	01/10/12	Elliott et al.			06/14/01
	6.	7,483,899	01/27/09	Berry et al.			01/11/05
	7.	7,426,191	09/16/08	Salesky et al.			03/21/05
	8.	6,792,085	09/14/04	Rigaldies et al.			09/10/99
	9.	6,690,654	02/10/04	Elliott et al.			10/01/98
	10.	6,411,685	06/25/02	O'Neal			01/29/99
	11.	2009/0124238	05/14/09	Wilson			10/08/08
	12.	2007/0271331	11/22/07	Muth			05/17/07
	13.	2001/0038610	11/08/01	Decker et at.			04/10/01

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	An Interactive and Cooperative VideoRecording on-demand System over Mbone, pgs. 1-6

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
		Total in USD ($)		**120**

Electronic Acknowledgement Receipt

EFS ID:	32948721
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose
Filer Authorized By:	
Attorney Docket Number:	REBLP003C14
Receipt Date:	20-JUN-2018
Filing Date:	02-MAY-2017
Time Stamp:	16:15:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$120
RAM confirmation Number	062118INTEFSW00002999504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	REBLP003C14_IDS_06_20_2018.pdf	24108 1237710c3763c310b4e915ee095fe784635f 8cab	no	2
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	1449_06_20_2018.pdf	24096 52d88572e7fab993a9426a7a392e662d4cb eddff	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Non Patent Literature	An_Interactive_and_Cooperative_VideoRecording_on_demand_System_over_Mbone.pdf	116535 e3582c5206ee9ba4e159b147b042b8a9d0 070efc	no	6
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Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30226 1cf6f7620dae8c97f98062142a8fad29ae0da c6c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	194965		

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Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

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Signed: /Theresa M. Reyes/
Theresa M. Reyes

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The reference(s) identified in the attached PTO Form 1449, (copies of non-U.S. references are attached), may be material to examination of the above-identified patent application. Applicants identify the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

This Information Disclosure Statement is being filed after the mailing date of the first Office Action on the merits, or after three months from the filing date of this application, whichever event occurred last, but it is believed before the mailing date of either: (i) a final action under §1.113 or (ii) a notice of allowance under §1.311, whichever occurs first.

Accompanying this Information Disclosure Statement is the fee set forth in 37 CFR 1.17(p).

The Commissioner is hereby authorized to charge Deposit Account 50-4481 (Order No. REBLP003C14) for $120.00 in payment of the Information Disclosure Statement Fee. If it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on July 31, 2018.

Signed: /Cara Hedin/
Cara Hedin

AMENDMENT C

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the Office Action dated May 23, 2018, please amend the above-identified patent application as follows:

Amendments to the Claims are reflected in the listing of claims, which begin on page 2 of this paper.

Remarks/Arguments begin on page 17 of this paper.

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Previously Presented) A video communication method performed over a network, comprising:

receiving an identifier identifying a recipient of a video communication, the identifier received over the network from a sending communication device;

using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving the video communication over the network from the sending communication device;

storing the video communication; and

delivering portions of the video communication to the second communication device over the network using the delivery location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device,

wherein the video communication is received from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices.

3. (Previously Presented) The video communication method of claim 2, further comprising arranging to provide an application to the sending communication device, the application enabling the sending communication device to:

(i) identify the recipient of the video communication;

(ii) communicate the identifier identifying the recipient; and

(iii) stream the video communication over the network.

4. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to start streaming of the video communication over the network before the delivery location for the second communication device is known.

5. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to start streaming of the video communication over the network regardless of whether the second communication device is available or not available on the network.

6. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to start streaming of the video communication over the network independent of whether or not the delivery location associated with the second communication device is ascertained.

7. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to locally store the video communication on the sending communication device.

8. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to define the recipient or a group of recipients for receipt of the video communication.

9. (Previously Presented) The video communication method of claim 2, further comprising accessing the video communication out of storage and delivering the accessed video communication to the second communication device for review in a time-shifted mode.

10. (Previously Presented) The video communication method of claim 2, wherein the video communication has a plurality of identifiers associated therewith, the plurality of identifiers identifying a plurality of recipients, the plurality of identifiers used to deliver the video

communication to a plurality of second communication devices associated with the plurality of recipients respectively.

11. (Previously Presented) The video communication method of claim 2, further comprising providing a notification at the second communication device notifying the recipient of the video communication.

12. (Previously Presented) The video communication method of claim 2, further comprising delivering the video communication to the second communication device out of storage if the second communication device is not available on the network when the video communication is sent by the sending communication device.

13. (Previously Presented) The video communication method of claim 2, further comprising simultaneously storing and delivering the portions of the video communication to the second communication device while the video communication is created and streamed by the sending communication device.

14. (Previously Presented) The video communication method of claim 2, wherein the identifier is resolved into an IP address that defines the delivery location for the second communication device on the network.

15. (Previously Presented) The video communication method of claim 3, wherein the provided application further enables the sending communication device to at least partially render a second video communication in either:

a first mode while portions of the second video communication are received over the network while the second video communication is being sent by a remote communication device; or

a second mode by rendering the second video communication accessed from storage after the second video communication was sent.

16. (Previously Presented) The video communication method of claim 2, wherein using the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient further comprises resolving the identifier into an IP address associated with the second communication device.

17. (Previously Presented) The video communication method of claim 2, wherein the delivery location is an IP address on the network and the IP address is used to notify and deliver the video communication to the second communication device.

18. (Previously Presented) The video communication method of claim 2, further comprising maintaining a video services system, including one or more servers on the network, for performing the video communication method.

19. (Previously Presented) The video communication method of claim 2, further comprising trans-coding the video communication received over the network from the sending communication device.

20. (Previously Presented) The video communication method of claim 2, further comprising encrypting the video communication received over the network from the sending communication device.

21. (Previously Presented) A method for video communication, comprising:

receiving, over a network, identifier information for a recipient of a video communication from a sending communication device;

ascertaining a location on the network for a second communication device from the identifier information; and

delivering portions of the video communication over the network to the second communication device, using the ascertained location, so that the video communication can be at least partially rendered at the second communication device,

wherein the delivery occurs (i) without first establishing an end-to-end connection over the network between the sending communication device and the second communication device and (ii) while the video communication is transmitted by the sending communication device.

22. (Previously Presented) The method of claim 21, further comprising arranging for an application to be available for downloading to the second communication device, the application configured to include a rendering function that enables the recipient to at least partially render the video communication on the second communication device in a first mode while the video communication is transmitted by the sending communication device and delivered over the network.

23. (Previously Presented) The method of claim 22, wherein the application is further configured to at least partially render the video communication in the first mode after receiving an input from the recipient in response to a notification.

24. (Previously Presented) The method of claim 21, further comprising arranging for an application to be available for downloading onto the sending communication device, the application enabling the sending communication device to start transmission of the video communication:

independently of the location associated with the second communication device being ascertained; and

regardless of whether or not the second communication device is connected to or not connected to the network .

25. (Previously Presented) The method of claim 21, wherein the location is an IP addresses for the second communication device on the network.

26. (Previously Presented) The method of claim 21, further comprising delivering the video communication to the second communication device out of storage for review in a time-shifted mode.

27. (Previously Presented) The method of claim 21, wherein the location is specified by an IP address on the network, the IP address used for locating and delivering the video communication to the second communication device.

28. (Previously Presented) The method of claim 21, further comprising maintaining one or more servers on the network for receiving the identifier information, ascertaining the location,

receiving the video communication and delivering the video communication to the second communication device.

29. (Previously Presented) The video communication method of claim 21, further comprising trans-coding the video communication.

30. (Previously Presented) The video communication method of claim 21, further comprising encrypting the video communication.

31. (Previously Presented) A video communication method, comprising:

receiving an identifier associated with a video communication transmitted by a sending communication device over a network, the identifier identifying a recipient of the video communication;

ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network;

receiving the video communication from the sending communication device independently of the location for the second communication device being ascertained;

storing the video communication; and

delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device,

wherein receiving the video communication from the sending communication device occurs without having to first establish an end-to-end connection over the network between the sending and the second communication device.

32. (Previously Presented) The video communication method of claim 31, further comprising delivering the video communication out of storage to the second communication device.

33. (Previously Presented) The video communication method of claim 31, further comprising arranging for the sending communication device to run an application, the application enabling the sending communication device to:

(i) identify the recipient;

(ii) communicate the identifier identifying the recipient over the network;

(iii) create the video communication; and

(iv) transmit the video communication over the network while the video communication is created.

34. (Previously Presented) The video communication method of claim 33, wherein the application enables the sending communication device to start transmission of the video communication over the network before the location for the second communication devices is ascertained.

35. (Previously Presented) The video communication method of claim 31, further comprising notifying the recipient of the video communication.

36. (Previously Presented) The video communication method of claim 33, wherein the application further enables the sending communication device to start transmission of the video communication over the network regardless of whether the second communication device is available or not available on the network.

37. (Previously Presented) The video communication method of claim 33, wherein the application further enables the sending communication device to locally store the video communication on the sending communication device.

38. (Previously Presented) The video communication method of claim 33, wherein the application enables, at the sending communication device, an ability to define the recipient or a group of recipients for receipt of the video communication.

39. (Previously Presented) The video communication method of claim 33, wherein the application further enables the sending communication device to:

at least partially render a second video communication while portions of the second video communication are delivered over the network to the sending communication device while the second communication is sent by a remote communication device; and

render the second video communication out of storage in a time-shifted mode.

40. (Previously Presented) The video communication method of claim 31, further comprising:

receiving a plurality of identifiers associated with the video communication; and

ascertaining a plurality of locations associated with a plurality of second communication devices associated with a plurality of recipients respectively.

41. (Previously Presented) The video communication method of claim 31, wherein the portions of the video communication is delivered over the network while:

the video communication is transmitted by the sending communication device;

the video communication is delivered to the location on the network using an IP address associated with the second communication device, the IP addressed ascertained from the identifier; and

the video communication is at least partially rendered on the second communication device.

42. (Previously Presented) The video communication method of claim 31, further comprising delivering the video communication to the recipient out of storage.

43. (Previously Presented) The video communication method of claim 31, wherein the location is an IP address for the second communication device, the IP address used for identifying and delivering the video communication to the second communication device when connected to the network.

44. (Previously Presented) The video communication method of claim 31, further comprising configuring and maintaining a plurality of servers on the network, the plurality of servers cooperating to receive the identifier associated with the video communication, ascertain the location on the network for the second communication device, receive the video communication from the sending communication device, store the video communication and deliver the video communication over the network to the second communication device.

45. (Previously Presented) The video communication method of claim 31, further comprising trans-coding the video communication after receiving the video communication.

46. (Previously Presented) The video communication method of method 31, further comprising encrypting the video communication after receiving the video communication.

47. (Previously Presented) The video communication method of claim 2, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

48. (Previously Presented) The method for video communication of claim 21, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

49. (Previously Presented) The video communication method of claim 31, wherein the portions of the video communication delivered to the second communication device are packets containing media payloads.

50. (Previously Presented) The video communication method of claim 2, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode.

51. (Previously Presented) The method of claim 21, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode.

52. (Previously Presented) The video communication method of claim 31, further comprising:

delivering the portions of the video communication to multiple second communication devices; and

enabling each of the multiple second communication devices to render the portions of the video communication either (a) as the portions are received over the network while the video communication is being sent by the sending communication device or (b) in a time-shifted mode.

53. (Previously Presented) A video communication method, comprising:

arranging to provide an application to a sending communication device, the application enabling the sending communication device to:

(a) identify a recipient of a video communication;

(b) communicate the identifier identifying the recipient to a video communication system maintained on a network; and

(c) stream the video communication over the network to the video communication system;

receiving at the video communication system the identifier identifying the recipient of the video communication;

using, within the video communication system, the identifier to ascertain a delivery location on the network for a second communication device associated with the recipient;

receiving, at the video communication system, the video communication over the network from the sending communication device;

storing the video communication in a location accessible by the video communication system;

using the delivery location to deliver portions of the video communication over the network from the video communication system to the second communication device, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is streamed by the sending communication device,

wherein the video communication is received by the video communication system from the sending communication device without first establishing an end-to-end connection over the network between the sending and second communication devices.

54. (Previously Presented) The video communication method of claim 53, wherein the application further enables the sending communication device to start streaming of the video communication over the network:

(d) before the delivery location for the second communication device is known;

(e) regardless of whether the second communication device is available or not available on the network; and

(f) independent of whether or not the delivery location associated with the second communication device is ascertained.

55. (Previously Presented) The video communication method of claim 53, further comprising arranging to provide the application to second communication device, the application enabling the second communication device to:

render the delivered portions of the video communication while the video communication is streamed by the sending communication device; and

render the video communication in a time-shifted mode sometime after the video communication was streamed.

56. (New) A video communication method performed by a video service infrastructure located on a network, the method comprising:

receiving identifier information from a first communication device, the identifier information identifying one or more recipients of a video communication;

receiving a transmission of the video communication from the first communication device;

storing the video communication in storage accessible by the video communication infrastructure, the storage of the video communication occurring regardless of the availability or lack of availability of one or more second communication devices on the network, the one or more second communication devices associated with the one or more recipients respectively;

ascertaining, in response to receipt of the identifier information, one or more location(s) on the network for the one or more second communication device(s) associated with the one or more recipients respectively, the ascertaining of the one or more locations occurring while the receiving and storing of the video communication is occurring; and

delivering portions of the video communication to the one or more second communication devices at their ascertained locations respectively, the delivery enabling the video communication to be at least partially rendered while the video communication is transmitted by the first communication device and without having to first establish an end-to-end connection over the network between the first communication device and any of the one or more second communication devices respectively.

57. (New) The video communication method of claim 56, wherein the portions of the video communication delivered to the one or more second communication devices are packets containing media payloads that are:

received at the video service infrastructure as the packets are streamed by the first communication device;

stored in the storage as the streamed packets are received at the video service infrastructure; and

delivered to the one or more second communication devices as the streamed packets are received and stored.

58. (New) The video communication method of claim 56, further comprising configuring the video communication infrastructure to include a plurality of servers that are collectively configured to:

receive the identifier information;

receive the transmission of the video communication;

store the video communication;

ascertain the one or more locations; and

deliver the portions of the video communication to the one or more second communication devices.

59. (New) The video communication method of claim 56, further comprising configuring the video communication infrastructure to support the at least partial rendering of the video communication by the one or more second communication devices as the video communication is created by the first communication device.

60. (New) The video communication method of claim 56, further comprising arranging for the first communication device to stream the video communication to the video communication infrastructure:

(a) as the video communication is created;

(b) without having to first establish an end-to-end connection over the network with any of the one or more second communication devices;

(c) regardless of whether any of the one or more second communication devices are available or not available on the network; and

(d) regardless of whether any of the one or more locations on the network for the one or more second communication devices can be ascertained.

61. (New) The video communication system of claim 56, further comprising providing a notice of the video communication to the one or more second communication devices respectively.

62. (New) The video communication method of claim 56, further configuring the video communication infrastructure to deliver the stored video communication to one or more of the second communication devices for review in a time-shifted mode.

63. (New) The video communication method of claim 56, wherein the multiplicity of locations are unique IP address(es) used to identify and locate the one or more second communication devices on the network respectively.

64. (New) The video communication method of claim 56, further comprising configuring the video communication infrastructure to encrypt the video communication.

65. (New) The video communication method of claim 56, further comprising configuring the video communication infrastructure to trans-code the video communication.

66. (New) The video communication method of claim 56, further comprising providing an application for execution on the first communication device, the application configured to enable the first communication device to:

identify the one or more recipients;

transmit the identifier information to the video communication infrastructure; and

stream the video communication to the video communication infrastructure while the video communication is created,

wherein the application is arranged to (a) transmit the identifier information independent of the video communication and (b) stream the video communication to the video communication infrastructure without having to first establish the end-to-end connection over the network between the first communication device and any of the one or more second communication devices.

67. (New) The video communication method of claim 56, further comprising arranging to provide an application on each of the one or more second communication devices, the application providing rendering options to:

at least partially render the video communication while the video communication is transmitted by the first communication device; and

render the video communication in a time-shifted mode.

REMARKS

In the Action dated May 23, 2018, the Office provisionally rejected claims 2-55 on the grounds of statutory double patenting in view of certain claims in co-pending, commonly assigned US Application 15/923,287. In addition, claims 2, 21, 31 and 53 were rejected under 35 USC 102 as anticipated by Le Huerou in USP 2006/0080704. The remainder of the claims were rejected under 35 USC 103 as obvious over Le Huerou in various combinations with other tertiary references.

Double Patenting

Although the Applicant does not agree with the double-patenting rejections, terminal disclaimers have been filed concurrent herewith in order to expedite prosecution. By filing the terminal disclaimers, no admission is made with regard to the merits of the rejections or the alleged obviousness of the claims. The Applicant reserves the right to address these issues in the future.

The Le HUEROU REFERENCE

Le Huerou is directed to a video messaging system where, in successive steps, a video is created and transmitted to a recipient by:

(a). Creating a digital video (a set of digital data images) using a camera that is connected to a Video Creation Means VMCM (See CAM, Fig. 1). The VMCM is created in the form of a text message (e.g., a video message called Vmds). See paragraph [0037];

(b). The VMCM also receives a "Fid" data that identifies an intended recipient of the digital video. See paragraph [0043], Figs 1 and 2;

(c). Storing the video in a memory MEMV (Fig. 2) that is maintained in the VMCM. See paragraphs [0044], [0049];

(d). If the stored video is "***preselected***", it is provided as an input stream Str to a decompression module DCMP (Fig. 2). See paragraph [0050];

(e). The DCMP, in response, generates (a) a compressed output stream Cst and (b) an extracted file Efvi containing a "***first***" image extracted from the input stream Str. The first image precedes any other image included in the input stream Str. See paragraph [0050];

(f). The compressed video Cst, along with the image file Efvi, then replaces the original digital video created by the camera in the memory MEMV as a file called Vmf or "Video message final". See paragraph [0051];

(g). A Processing and Interface means (PRIM) is illustrated in Fig. 3. The PRIM includes a Transmission Platform (IPF) and a Reception Platform (TPF). A Transmission Means (TRM) is provided between the IPF and TPF. See paragraph [0053];

(h). An Interface Module (IPM) of the IPF generates a data request signal Drqs that is provided to the buffer (BUFV) of the VMCM. See paragraph [0054];

(i). In response, the BUFV provides a video stream Vmds, which is derived from the Vmf file, to the IPF. See paragraphs [0051] and [0052];

(j). Within the IPF, the video stream Vmds is stored in MEMI. See paragraph [0054].

(k). The PRIM is also responsible for generating a digital Alert signal (Als), which contains the first image contained in the Efvi file. See paragraph [0045];

(l). The Als signal is sent to the receiver of the intended recipient. An Alert Transmission Module TALM generates an alert signal for the recipient in response to receipt of the Als signal. In response, the recipient may elect to review the video immediate, at a later time after a delay, or archive or delete the video message. See paragraphs [0046] and [0058];

(m). If the recipient wishes to watch the video, a broadcast message Brqs is generated by the TPF and transmitted to the IPF. See paragraph [0058];

(n). In reply to the Brqs signal, the IPF sends the video message Vmds stored in MEMI to the TPF. See paragraph [0055];

(o). At the TPF, a memory space MEMT stores the video message Vmds. See paragraph [0056]; and

(p). Finally, a Broadcast Module (TBRDS), provided at the TPF, enables the recipient to render the video message Vmds. As depicted in Fig. 3, the Broadcast Module (TBRDS) retrieves the compressed video stream Cst and plays the video data Vds. See paragraph [0058].

With the Le Huerou before a video a video message can be rendered, it is successively ***stored*** (e.g., in one location following the other) in at least the following locations before it can be rendered by the intended recipient:

1. In the MEMV of the VMCM in a non-compressed format;
2. In the MEMV in a compressed format;
3. In the MEMI of the IPF; and
4. The MEMT of the TPF.

Since a video message is successively stored in at least four locations before it can be rendered, under no circumstance does Le Huerou teach the rendering of the video message, partially or otherwise, by a recipient while the video communication is transmitted by a sender (i.e., the device containing the camera "CAM" of Fig. 1).

It is further noted in paragraph [0015], Le Huerou describes different delivery mechanism, including as an "attached file" or by way of "hypertext link", which specifies a location of the video data. Either of these delivery methods are consistent with a store and forward delivery protocol, not a real-time protocol.

Le Huerou specifically defines the video message as a "text message", as previously noted in paragraph [0037]. It is well understood that "text messages" rely on a store and forward protocol for transmission and delivery. At the sending device, the text message is addressed,

composed and stored. When complete, the sender the message is transmitted out of storage to a server on the network. At the server, the text is stored and then the address is used forward the message to the recipient out of storage. When the message is received, the recipient is typically notified, and in response, the text may be accessed and reviewed on the recipient's device when convenient. Text messages are therefore not transmitted while being created.

The 35 USC 102 Rejection

Claim 2 recites the rendering of a video message at least partially ... **while the video communication is transmitted by the first communication device**. In contrast with Le Huerou, video messages, which the reference defines as a "text message", are delivered using a store and forward protocol. As such, Le Huerou's video messages are always rendered out of storage. Under no circumstance can a video message in Le Huerou be rendered by a recipient, partially or otherwise, while being transmitted. It is therefore respectfully submitted that the 35 USC 102 rejection of claims 2, 21, 31 and 53 now be withdrawn.

Dependent Claims

A number of rejected dependent claims are allowable for at least based on their dependency on one of the independent claims. It is respectfully submitted that their rejections now be withdrawn.

For the record, the Applicant disagrees with the rejection of the dependent claims. For the sake of brevity, however, the merit of each dependent claim is not addressed herein, but the Applicant reserves the right to do so in the future.

Conclusion

The Applicant submits that the present application is now in a condition for allowance. Early notice to this effect is requested.

Should the Examiner believe that a telephone conference would expedite the prosecution of this application, he is encouraged to contact the undersigned at the telephone number set out below.

Respectfully submitted,
BEYER LAW GROUP LLP

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Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Cara Hedin
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	12	50	600
INDEPENDENT CLAIMS IN EXCESS OF 3	2201	1	230	230
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**830**

Electronic Acknowledgement Receipt

EFS ID:	33329816
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Cara Hedin
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	31-JUL-2018
Filing Date:	02-MAY-2017
Time Stamp:	16:25:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$830
RAM confirmation Number	080118INTEFSW00003619504481
Deposit Account	504481
Authorized User	Cara Romero

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	REBLP003C14_Amendment_C_Transmittal.pdf	21618 1b4c4173c1ec42e9619a2fa5178b2712a0972c3b	no	1
Warnings:					
Information:					
2		REBLP003C14_Amendment_C_Final.pdf	96590 f2c633c400896316b51a4068b8081ddff7557965	yes	19

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	16
Applicant Arguments/Remarks Made in an Amendment	17	19

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	31857 2551bfdb17b30bbe2ea753e4f71646347e3d8d84	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	150065		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on July 31, 2018.

Signed: /Cara Hedin/
Cara Hedin

AMENDMENT C TRANSMITTAL

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims After Amendment		Highest Previously Paid For	Present Extra	Small Entity Rate Fee	Large Entity Rate Fee
Total Claims	66	MINUS	54	12	x 50 = $600.00	x 100 = $0.00
Independent Claims	05	MINUS	04	01	x 230 = $230.00	x 460 = $0.00
Multiple Dependent Claim Present and Fee Not Previously Paid						
				Total	$830.00	$0.00

☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-4481.

☒ Please charge the required fees, or any additional fees required to facilitate filing the enclosed response, to Deposit Account No. 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/25 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION**
Application Number	15584224
Filing Date	02-May-2017
First Named Inventor	Thomas KATIS
Attorney Docket Number	REBLP003C14
Title of Invention	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Voxer IP LLC	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

15923287 filed on 03/16/2018

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○	I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

◉ Small Entity

○ Micro Entity

○ Regular Undiscounted

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

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 34239

○ A sole inventor

○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

○ A joint inventor; all of whom are signing this request

Signature	/James W. Rose/
Name	James W. Rose

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Cara Hedin
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**160**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 15584224

Filing Date: 02-May-2017

Applicant/Patent under Reexamination: KATIS

Electronic Terminal Disclaimer filed on July 31, 2018

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	33329893
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Cara Hedin
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	31-JUL-2018
Filing Date:	02-MAY-2017
Time Stamp:	16:26:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$160
RAM confirmation Number	080118INTEFSW00003635504481
Deposit Account	504481
Authorized User	Cara Romero

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	34112 d4d04e1f6b332878a5db9e8db3b2c94ffff612de	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30328 2cb5f4eb374e7c987e0468612ecaba0f13d4bbf8	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	64440		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/584,224	Filing Date 05/02/2017	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $40 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $210 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	07/31/2018	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 66	Minus	** 54	= 12		x $50 =	600
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 4	= 1		x $230 =	230
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	830

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	Tracey M Young
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure	Applicant	Thomas E. KATIS et al.
Statement By Applicant	Filing Date	05-02-2017
	Group	2563
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	7,113,767	09/26/06	Väänänen			08/20/01
	2.	20080178251	07/24/08	Shin			03/30/07
	3.	9,762,861	09/12/17	Kalaboukis			12/05/06
	4.	8,045,682	10/25/11	Jönsson			06/30/06
	5.	7,996,553	08/09/11	Keller et al.			10/23/03
	6.	20080163312	07/03/08	Faust et al.			12/28/06
	7.	20070288574	12/13/07	Koster			06/09/06
	8.	7,899,045	03/01/11	Shankara			06/09/06

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
		Katis et al., U.S. Application No. 15/937,361, filed on March 27, 2018.
		Katis et al., U.S. Application No. 15/710,627, filed on September 20, 2017.
		Katis et al., U.S. Application No. 15/615,406, filed on June 6, 2017.
		Office Action in U.S. dated May 7, 2018 from U.S. Application No.15/923,287.
		Office Action in U.S. dated June 4, 2018 from U.S. Application No. 15/937,361.
		Office Action in U.S. dated August 10, 2018 from U.S. Application No. 15/923,869.

Examiner	Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
		Total in USD ($)		**120**

Electronic Acknowledgement Receipt

EFS ID:	33518012
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose
Filer Authorized By:	
Attorney Docket Number:	REBLP003C14
Receipt Date:	23-AUG-2018
Filing Date:	02-MAY-2017
Time Stamp:	15:34:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$120
RAM confirmation Number	082418INTEFSW00002320504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	REBLP003C14_IDS_08_23_2018.pdf	24099 c4b26651d0632a7bd20f26c5106d77fc15d9c462	no	2
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	REBLP003C14_1449_08_23_2018.pdf	24102 d0ebd50f2d37b35953bcba90f3d7ece8cdeaf371	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30229 5f31ca83d241ff5186d5f84404a58cd1a3c55421	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	78430		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on August 23, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

INFORMATION DISCLOSURE STATEMENT BEFORE FINAL ACTION OR NOTICE OF ALLOWANCE (37 CFR §§ 1.56 AND 1.97(c))

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The reference(s) identified in the attached PTO Form 1449, (copies of non-U.S. references are attached), may be material to examination of the above-identified patent application. Applicants identify the reference(s) in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make the identified reference(s) of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that the reference(s) indeed constitutes prior art.

This Information Disclosure Statement is being filed after the mailing date of the first Office Action on the merits, or after three months from the filing date of this application, whichever event occurred last, but it is believed before the mailing date of either: (i) a final action under §1.113 or (ii) a notice of allowance under §1.311, whichever occurs first.

Accompanying this Information Disclosure Statement is the fee set forth in 37 CFR 1.17(p).

The Commissioner is hereby authorized to charge Deposit Account 50-4481 (Order No. REBLP003C14) for $120.00 in payment of the Information Disclosure Statement Fee. If it is determined that any additional fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-4481 (Order No. REBLP003C14).

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

76743 7590 10/11/2018
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

EXAMINER
RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
2656	

DATE MAILED: 10/11/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

TITLE OF INVENTION: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$500	$0.00	$0.00	$500	01/11/2019

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

76743 7590 10/11/2018
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

TITLE OF INVENTION: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$500	$0.00	$0.00	$500	01/11/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
RAMAKRISHNAIAH, MELUR	2656	379-093010

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

76743 7590 10/11/2018

BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

EXAMINER	
RAMAKRISHNAIAH, MELUR	
ART UNIT	PAPER NUMBER
2656	

DATE MAILED: 10/11/2018

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/584,224	Applicant(s) KATIS et al.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	AIA Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 7-31-18.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are See Continuation Sheet . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file areply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☑ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 6-6-18; 6-20-18; 8-23-18.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MELUR RAMAKRISHNAIAH/
Primary Examiner, Art Unit 2656

Continuation of 3. The allowed claim(s) is/are: 2-67 (now renumberd 1-66)

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: This invention pertains to telecommunications, and more particularly, to a telecommunication and multimedia management method and apparatus that enables users to review the messages of conversations in either a live mode or a time-shifted mode and to transition the conversation back and forth between the two modes, participate in multiple conversations and to archive the messages of conversations for later review or processing.

In light of applicant's arguments regarding rejection of claims 2-55, Claims 2-55 are allowed. Newly added independent claim 56 recites claim limitations similar to allowed independent claims.

3. Claims 2-67 (now renumbered as 1-66) are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

--(2008/0091804A1) to Swanburg et al. discloses media delivery intelligent group list management which teaches: A system for delivering content from one user to a plurality of other users across a network is disclosed. A user transmits content and a list of users to a network server. The network server determines what devices each target user is presently operating. The network server may convert the content into a format compatible with a target user's device. The network server then transmits the formatted content to each target user

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELUR RAMAKRISHNAIAH whose telephone number is (571)272-8098. The examiner can normally be reached on Flexible.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Curtis Kuntz can be reached on 28098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MELUR RAMAKRISHNAIAH/
Primary Examiner, Art Unit 2656

Notice of References Cited	Application/Control No. 15/584,224	Applicant(s)/Patent Under Reexamination KATIS et al.	
	Examiner MELUR RAMAKRISHNAIAH	Art Unit 2656	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20080091804-A1	04-2008	Swanburg; Scott Allen	H04L51/066	709/223
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

CPC - Searched*		
Symbol	Date	Examiner
H04L 51/10, 51/04, 65/4015, 65/403, 12/1831, 51/22, 51/16, 61/2503, 65/1083, 67/24, 51/26, 65/604	8-29-17	mrk
H04N 7/15, 7/147,	8-29-17	mrk
H04M 3/5307, 11/00, 1/64	9-29-17	mrk

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
379/93.01		9-29-17	mrk
348	14.01, 14.02, 14.12	9-29-17	mrk
709	204, 205, 217, 218, 227	8-29-17	mrk
WEST database		4-16-18	mrk
Search updated		5-15-18	mrk
Search updated		09/09/2018	mrk

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
WEST database	8-29-17	mrk
WEST database	4-15-18	mrk
WEST database	5-15-18	mrk
WEST database	09/09/2018	mrk

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
All classes & subclasses listed in the searched area.		09/09/2018	mrk

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	Art Unit
	MELUR RAMAKRISHNAIAH	2656

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/05/2018	09/09/2018							
	1	-	-							
1	2	✓	=							
2	3	✓	=							
3	4	✓	=							
4	5	✓	=							
5	6	✓	=							
6	7	✓	=							
7	8	✓	=							
9	9	✓	=							
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39	37	✓	=							
40	38	✓	=							
41	39	✓	=							
43	40	✓	=							
44	41	✓	=							
45	42	✓	=							

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	**Art Unit**
	MELUR RAMAKRISHNAIAH	2656

CLAIM		DATE								
Final	Original	05/05/2018	09/09/2018							
46	43	✓	=							
47	44	✓	=							
48	45	✓	=							
49	46	✓	=							
20	47	✓	=							
32	48	✓	=							
50	49	✓	=							
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62	63		=							
63	64		=							
64	65		=							
65	66		=							
66	67		=							

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	**Art Unit**
	MELUR RAMAKRISHNAIAH	2656

CPC							
Symbol						**Type**	**Version**
H04L	/	51	/	10		F	2013-01-01
H04W	/	4	/	12		I	2013-01-01
H04L	/	12	/	1831		I	2013-01-01
H04L	/	51	/	04		I	2013-01-01
H04L	/	51	/	22		I	2013-01-01
H04L	/	51	/	26		I	2013-01-01
H04L	/	65	/	1083		I	2013-01-01
H04L	/	65	/	4015		I	2013-01-01
H04L	/	65	/	403		I	2013-01-01
H04L	/	65	/	604		I	2013-01-01
H04L	/	51	/	16		I	2013-01-01
G06F	/	15	/	16		I	2013-01-01
H04M	/	11	/	00		I	2013-01-01
H04M	/	1	/	64		I	2013-01-01
H04M	/	3	/	53		I	2013-01-01
H04M	/	3	/	5307		I	2013-01-01
H04L	/	61	/	2503		I	2013-01-01
H04N	/	7	/	147		I	2013-01-01
H04N	/	7	/	15		I	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	66	
/MELUR RAMAKRISHNAIAH/ Primary Examiner.Art Unit 2656	09 September 2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	52	1

U.S. Patent and Trademark Office — Part of Paper No.: 20180909

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	**Art Unit**
	MELUR RAMAKRISHNAIAH	2656

INTERNATIONAL CLASSIFICATION				
CLAIMED				
H04N	/	7	/	15
H04M	/	11	/	00

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
379	93.01

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					
379	93.03	88.22	88.25			
348	14.01	14.12				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	66	
/MELUR RAMAKRISHNAIAH/ Primary Examiner.Art Unit 2656	09 September 2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	52	1

U.S. Patent and Trademark Office — Part of Paper No.: 20180909

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/584,224	KATIS et al.
	Examiner	**Art Unit**
	MELUR RAMAKRISHNAIAH	2656

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	10	10	18	19	29	28	39	37	49	46	54	55	63	64
1	2	11	11	19	20	30	29	40	38	20	47	55	56	64	65
2	3	12	12	22	21	31	30	41	39	32	48	56	57	65	66
3	4	13	13	23	22	34	31	43	40	50	49	57	58	66	67
4	5	14	14	24	23	35	32	44	41	21	50	58	59		
5	6	8	15	25	24	36	33	45	42	33	51	59	60		
6	7	15	16	26	25	37	34	46	43	51	52	60	61		
7	8	16	17	27	26	42	35	47	44	52	53	61	62		
9	9	17	18	28	27	38	36	48	45	53	54	62	63		

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	66	
/MELUR RAMAKRISHNAIAH/ Primary Examiner.Art Unit 2656	09 September 2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	52	1

U.S. Patent and Trademark Office — Part of Paper No.: 20180909

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	May 2, 2017
	Group	2656
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	US2008/0091804 A1	04/17/08	Swanburg; Scott Allen			10/11/06
	2.	US2006/0221174 A1	10/05/06	Yang; Chin-Tien			04/04/05
	3.	US2008/0288989 A1	11/20/08	Zheng; Yu "Brian"			05/14/07
	4.						
	5.						
	6.						
	7.						
	8.						
	9.						
	10.						
	11.						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
	12.							
	13.							

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	
	15.	
	16.	
	17.	
	18.	

Examiner	Date Considered
/MELUR RAMAKRISHNAIAH/	09/09/2018

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 2563

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/584,224	05/02/2017	379	2656	REBLP003C14

APPLICANTS

Voxer IP LLC, San Francisco, CA;

INVENTORS

Thomas E. KATIS, Jackson, WY;
James J. PANTTAJA, San Francisco, CA;
Mary G. PANTTAJA, San Francisco, CA;
Matthew J. RANNEY, Oakland, CA;

**** CONTINUING DATA ***************************

This application is a CON of 15/231,240 08/08/2016 PAT 9674122
which is a CON of 14/799,528 07/14/2015 PAT 9456087
which is a CON of 14/198,043 03/05/2014 PAT 9154628
which is a CON of 13/555,034 07/20/2012 PAT 8705714
which is a CON of 12/037,256 02/26/2008 PAT 8243894
which is a CON of 12/028,400 02/08/2008 PAT 8180029
which claims benefit of 60/937,552 06/28/2007
and claims benefit of 60/999,619 10/19/2007

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
05/08/2017

Foreign Priority claimed ❑ Yes ☑ No 35 USC 119(a-d) conditions met ❑ Yes ❑ No Verified and Acknowledged /MELUR RAMAKRISHNAIAH/ Examiner's Signature	❑ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		WY	33	1	1

ADDRESS

BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887
UNITED STATES

TITLE

TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

FILING FEE RECEIVED		
3490	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	❑ All Fees ❑ 1.16 Fees (Filing) ❑ 1.17 Fees (Processing Ext. of time) ❑ 1.18 Fees (Issue) ❑ Other _____ ❑ Credit

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure Statement By Applicant	Applicant	Thomas E. KATIS et al.
	Filing Date	05-02-2017
	Group	2563
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	8,027,276	09/27/11	Nierhaus			04/14/04
	2.	7,636,327	12/22/09	Doran			07/29/03
	3.	7,613,773	11/03/09	Watt			12/31/03
	4.	8,296,366	10/23/12	Huai			05/27/04
	5.	8,094,647	01/10/12	Elliott et al.			06/14/01
	6.	7,483,899	01/27/09	Berry et al.			01/11/05
	7.	7,426,191	09/16/08	Salesky et al.			03/21/05
	8.	6,792,085	09/14/04	Rigaldies et al.			09/10/99
	9.	6,690,654	02/10/04	Elliott et al.			10/01/98
	10.	6,411,685	06/25/02	O'Neal			01/29/99
	11.	2009/0124238	05/14/09	Wilson			10/08/08
	12.	2007/0271331	11/22/07	Muth			05/17/07
	13.	2001/0038610	11/08/01	Decker et at.			04/10/01

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
	14.	An Interactive and Cooperative VideoRecording on-demand System over Mbone, pgs. 1-6

Examiner	/MELUR RAMAKRISHNAIAH/	Date Considered	09/09/2018

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

WEST Search History for Application 15584224

Creation Date: 2018090909:01

Prior Art Searches

Query	DB	Hits	Op.	Plur.	Thes.	Date
(live near1 video near1 message) same (server) and @ad<20070628	PGPB, USPT	1	OR	YES		08-29-2017
(video near1 message) same (server and Ip near1 address and rece$ and transmit$) and @ad<20070628	PGPB, USPT	9	OR	YES		08-29-2017
(video near1 messages) same (recipient near1 identifier and deliver$) and @ad<20170628	PGPB, USPT	31	OR	YES		04-15-2018
(video near1 message) same (recipient near1 identifier and deliver$)and @ad<20170502	PGPB, USPT	31	OR	YES		04-15-2018
(recipient near1 identifier) same (video near1 message) and @ad<20070628	PGPB, USPT	2	OR	YES		05-15-2018
(video near1 message and sender) same (server and recipients) and @ad<20070628	PGPB, USPT	48	OR	YES		05-15-2018
(video near1 communication) same (recipients and stream$ and server) and @ad<20070628	PGPB, USPT	13	OR	YES		09-09-2018
(video near1 communication) same (recipients and stream$ and identifiers) and @ad<20070628	PGPB, USPT	2	OR	YES		09-09-2018

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	15/584,224
Information Disclosure	Applicant	Thomas E. KATIS et al.
Statement By Applicant	Filing Date	05-02-2017
	Group	2563
(Use Several Sheets if Necessary)		Page 1 of 1

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	7,113,767	09/26/06	Väänänen			08/20/01
	2.	20080178251	07/24/08	Shin			03/30/07
	3.	9,762,861	09/12/17	Kalaboukis			12/05/06
	4.	8,045,682	10/25/11	Jönsson			06/30/06
	5.	7,996,553	08/09/11	Keller et al.			10/23/03
	6.	20080163312	07/03/08	Faust et al.			12/28/06
	7.	20070288574	12/13/07	Koster			06/09/06
	8.	7,899,045	03/01/11	Shankara			06/09/06

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No

Other Documents

Examiner Initial	No.	Author, Title, Place (e.g. Journal) of Publication, Date
		Katis et al., U.S. Application No. 15/937,361, filed on March 27, 2018.
		Katis et al., U.S. Application No. 15/710,627, filed on September 20, 2017.
		Katis et al., U.S. Application No. 15/615,406, filed on June 6, 2017.
		Office Action in U.S. dated May 7, 2018 from U.S. Application No.15/923,287.
		Office Action in U.S. dated June 4, 2018 from U.S. Application No. 15/937,361.
		Office Action in U.S. dated August 10, 2018 from U.S. Application No. 15/923,869.

Examiner	/MELUR RAMAKRISHNAIAH/	Date Considered	09/09/2018

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: KATIS et al.	Attorney Docket No.: REBLP003C14
Application No.: 15/584,224	Examiner: RAMAKRISHNAIAH, MELUR
Filed: May 2, 2017	Group: 2656
Title: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS	Confirmation No.: 2563

CERTIFICATE OF EFS-WEB TRANSMISSION
I hereby certify that this correspondence is being transmitted electronically through EFS-WEB to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on October 12, 2018.

Signed: /Theresa M. Reyes/
Theresa M. Reyes

Comments on Statement of Reasons for Allowance

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the statements for the reasons for allowance provided in the Notice of Allowance dated October 11, 2018, the Applicant would like to state the subject application pertains to a video communication method where (1) portions of a video communication sent to a second communication device over the network can be at least partially rendered at the second communication device while the video communication is transmitted by a sending communication device and (2) the video communication is received from the sending communication device without first establishing an end-to-end connection over the network between the sending and the second communication devices. The Applicant respectfully submits that the claims of the subject application are novel as characterized herein as well as for those reasons provided by the Office in the Notice of Allowance.

Respectfully submitted,
BEYER LAW GROUP LLP

/James W. Rose/
James W. Rose
Reg. No. 34,239

P. O. Box 51887
Palo Alto, CA 94303-1887
650-842-1300

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

76743 7590 10/11/2018
BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	2563

TITLE OF INVENTION: TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$500	$0.00	$0.00	$500	01/11/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
RAMAKRISHNAIAH, MELUR	2656	379-093010

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Beyer Law Group LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: VOXER IP LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): SAN FRANCISCO, CALIFORNIA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☒ Advance Order - # of Copies 3

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 504481 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /James W. Rose/ Date October 12, 2018

Typed or printed name James W. Rose Registration No. 34,239

Electronic Patent Application Fee Transmittal

Application Number:	15584224
Filing Date:	02-May-2017
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Filer:	James W. Rose/Theresa Reyes
Attorney Docket Number:	REBLP003C14

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	500	500

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**500**

Electronic Acknowledgement Receipt

EFS ID:	33999726
Application Number:	15584224
International Application Number:	
Confirmation Number:	2563
Title of Invention:	TELECOMMUNICATION AND MULTIMEDIA MANAGEMENT METHOD AND APPARATUS
First Named Inventor/Applicant Name:	Thomas E. KATIS
Customer Number:	76743
Filer:	James W. Rose/Theresa Reyes
Filer Authorized By:	James W. Rose
Attorney Docket Number:	REBLP003C14
Receipt Date:	12-OCT-2018
Filing Date:	02-MAY-2017
Time Stamp:	17:26:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$500
RAM confirmation Number	101518INTEFSW00004682504481
Deposit Account	504481
Authorized User	Theresa Reyes

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	REBLP003C14_Comments_on_Allowance.pdf	20794 ba3a710742a0eccce3a009eba3a3a59943e13afc	no	1
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	REBLP003C14_Issue_Fee_Transmittal.pdf	87185 fa90b14fbfc26cbb7a001cce9a5acd88d3119abf	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30098 2fb9367d494092136e2f54e53c7940e8340240d9	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	138077		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Form 1449 (Modified)	Atty Docket No.	REBLP003C14
	Application No.:	Unassigned
Information Disclosure	Applicant	KATIS et al.
Statement By Applicant	Filing Date	Herewith
	Group	Unassigned
(Use Several Sheets if Necessary)		Page 6 of 29

	153.	2008/0123623	05/29/08	Kurganov et al.			06/25/04
	154.	2008/0123628	05/29/08	Everard			11/27/06
	155.	2008/0134054	06/05/08	Clark et al.			11/30/06
	156.	2008/0147910	06/19/08	Hibbard et al.			09/29/06
	157.	2008/0155032	06/26/08	Toeroe			12/21/06
	158.	2008/0165707	07/10/08	Baird et al.			01/04/07
	159.	2008/0165791	~~10/26/10~~	DeGrazia 07/2008			01/09/07
	160.	2008/0168173	07/10/08	Munje et al.			01/04/07
	161.	2008/0189295	08/07/08	Khedouri et al.			12/27/07
	162.	2008/0205444	08/28/08	Campbell et al.			02/28/07
	163.	2008/0231684	09/25/08	Underwood et al.			03/23/07
	164.	2008/0256255	10/16/08	Mordovskoi et al.			04/02/08
	165.	2008/0267377	10/30/08	Siegrist			04/30/07
	166.	2008/0273077	11/06/08	Cowherd			05/02/07
	167.	2009/0003544	01/01/09	Katis et al.			03/05/08
	168.	2009/0003545	01/01/09	Katis et al.			04/14/08
	169.	2009/0003547	01/01/09	Katis et al.			05/16/08
	170.	2009/0003560	01/01/09	Katis et al.			03/19/08
	171.	2009/0003563	01/01/09	Katis et al.			04/18/08
	172.	2009/0037541	02/05/09	Wilson			08/03/07
	173.	2009/0049140	02/19/09	Stoddard et al.			08/17/07
	174.	2009/0063698	03/05/09	Xu et al.			09/04/07
	175.	2009/0103689	04/23/09	Katis et al.			10/17/08
	176.	2009/0175425	07/09/09	Lee			01/03/08
	177.	2010/0005168	01/07/10	Williams et al.			06/30/09
	178.	2010/0030864	02/04/10	Petry et al.			10/12/09
	179.	2010/0046535	02/25/10	Bugenhagen et al.			10/14/09
	180.	2010/0199133	08/05/10	Katis et al.			09/02/09
	181.	2010/0255818	10/07/10	Bozionek et al.			05/14/10
	182.	2010/0279663	11/04/10	Wang et al.			05/01/09
	183.	2011/0010459	01/13/11	Stokking et al.			12/22/08

Change(s) applied to document, /P.P./ 10/23/2018

Examiner	/MELUR RAMAKRISHNAIAH/	Date Considered	08/29/2017

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.R/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/584,224	11/27/2018	10142270	REBLP003C14	2563

76743 7590 11/07/2018

BEYER LAW GROUP LLP / VOXER IP
P. O. Box 51887
Palo Alto, CA 94303-1887

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Voxer IP LLC, San Francisco, CA;
Thomas E. KATIS, Jackson, WY;
James J. PANTTAJA, San Francisco, CA;
Mary G. PANTTAJA, San Francisco, CA;
Matthew J. RANNEY, Oakland, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Texas, Waco Division on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:20-cv-00011	1/7/2020	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
Voxer, Inc. and Voxer IP LLC	Facebook, Inc. and Instagram LLC

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,180,030	5/15/2012	Voxer IP LLC
2	9,634,969	4/25/2017	Voxer IP LLC
3	10,109,028	10/23/2018	Voxer IP LLC
4	10,142,270	11/27/2018	Voxer IP LLC
5	10,511,557	12/17/2019	Voxer IP LLC

In the above---entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
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In the above---entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1---Upon initiation of action, mail this copy to Director Copy 3---Upon termination of action, mail this copy to Director
Copy 2---Upon filing document adding patent(s), mail this copy to Director Copy 4---Case file copy

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Texas, Waco Division on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:20-cv-00011	1/7/2020	Western District of Texas, Waco Division

PLAINTIFF	DEFENDANT
Voxer, Inc. and Voxer IP LLC	Facebook, Inc. and Instagram LLC

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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT
6/22/2020 Order Closing/Transferring Case

CLERK	(BY) DEPUTY CLERK	DATE
JEANNETTE J. CLACK		10/16/2020

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Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

Trials@uspto.gov
571-272-7822

Paper 16
Date: May 7, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FACEBOOK, INC. AND INSTAGRAM, LLC,
Petitioner,

v.

VOXER IP LLC,
Patent Owner.

IPR2021-00115
Patent 10,142,270 B2

Before LYNNE E. PETTIGREW, MICHELLE N. ANKENBRAND, and IFTIKHAR AHMED, *Administrative Patent Judges.*

AHMED, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Facebook, Inc. and Instagram LLC ("Petitioner") requested an *inter partes* review of claims 34, 36–38, 40, 41, 43, 44, 47--49, 51, and 55 (the "challenged claims") of U.S. Patent No. 10,142,270 B2 (Ex. 1001, "the '270 patent"). Paper 1 ("Petition" or "Pet."). Voxer IP LLC ("Patent Owner") filed a Preliminary Response. Paper 15 ("Prelim. Resp.").

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless it is determined that there is a reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition. Based on the information presented in the Petition and the supporting evidence, we are not persuaded that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the remaining challenged claims. Accordingly, we do not institute an *inter partes* review of the challenged claims as set forth in the Petition.

II. BACKGROUND

A. Related Proceedings

The parties identify the following related litigation: *Voxer, Inc. and Voxer IP LLC v. Facebook, Inc. and Instagram LLC*, No. 1:20-cv-00655 (W.D. Tex.). Pet. 1; Paper 9, 1. The parties also identify the following related matters: IPR2021-00112 and IPR2021-00113, concerning U.S. Patent No. 10,511,557 B2, and IPR2021-00114 concerning U.S. Patent No. 8,180,030 B2. Pet. 1; Paper 9, 1.

B. The '270 Patent (Ex. 1001)

The '270 patent, titled "Telecommunication and Multimedia Management Method and Apparatus," was filed May 2, 2017, and claims the benefit of U.S. Provisional Patent Application Nos. 60/937,552, filed June

28, 2007; and 60/999,619, filed October 19, 2007. Ex. 1001, codes (22), (54), (60), (63).

The '270 patent relates to

> a telecommunication and multimedia management method and apparatus that enables users to review the messages of conversations in either a live mode or a time-shifted mode and to transition the conversation back and forth between the two modes, participate in multiple conversations and to archive the messages of conversations for later review or processing.

Id. at 1:28–35. The '270 patent explains that "[u]sers can engage in conversations by sending messages to designated recipients." *Id.* at 4:15–16. "Users are empowered to conduct communications in either: (i) a near-synchronous or 'live' conversation, providing a user experience similar to a standard full duplex phone call; or (ii) in a series of back and forth time-delayed transmissions (i.e., time-shifted mode)," and that "users engaged in a conversation can seamlessly transition from the live mode to the time-shifted mode and back again." *Id.* at 4:23–29. This "makes it possible for users to engage in multiple conversations, at the same time, by prioritizing and shifting between the two modes for each conversation." *Id.* at 4:29–32.

The '270 patent further explains that "the conversation consists of a series of discrete recorded messages, which are recorded in a number of locations, which may include the encoding device of the sender, (e.g. a phone or computer), servers on multiple transmission hops across the network, and the receiver's rendering device." *Id.* at 4:40–45.

Figure 1 of the '270 patent is reproduced below.

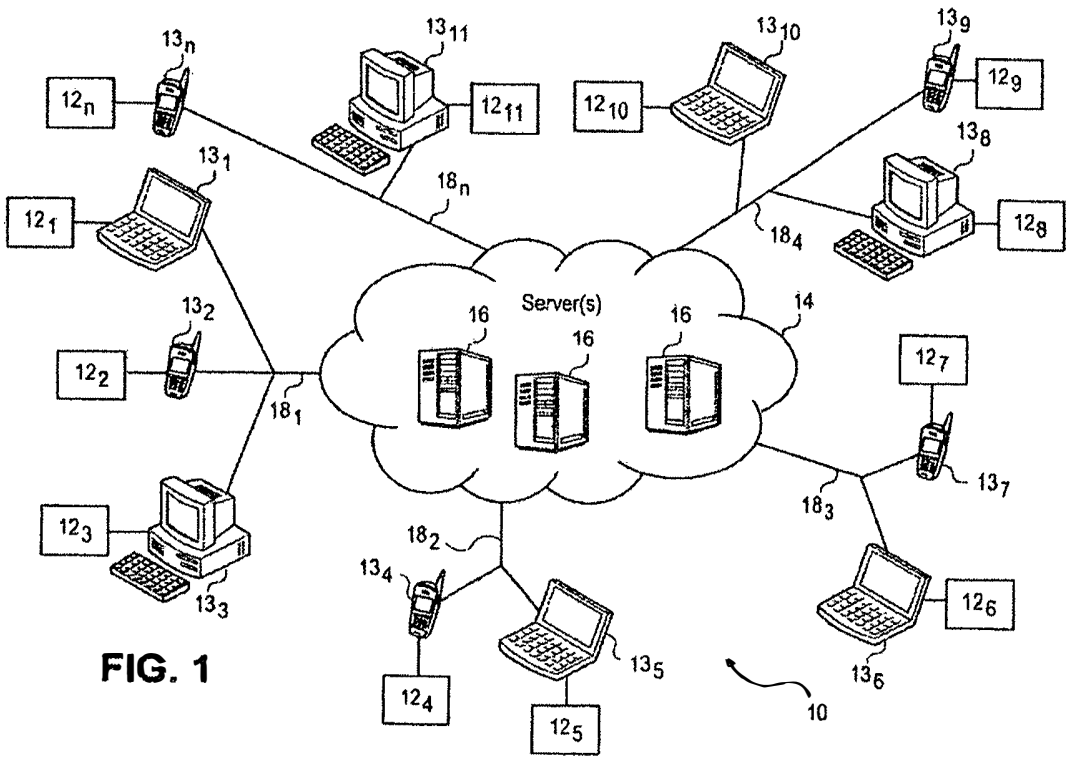


FIG. 1

Figure 1 diagrams the system architecture of the '270 patent's communication and media management system. *Id.* at 5:36–37. The '270 patent explains that

> system 10 includes a plurality of Clients 12_1 through 12_n running on Devices 13_1 through 13_n respectively. Devices 13 communicate with one another over a communication services network 14, including one or more Servers 16. One or more networks 18_1 through 18_n is provided to couple the plurality of Devices 13_1 through 13_n to the communication services network 14.

Id. at 11:50–58.

> When a Client 12 transmits a message, the message contains an identifier associated with the target recipient. In response, the Server 16 finds a delivery route to a [different] Client 12 associated with the intended or targeted recipient. As messages are received, they are stored in the [Persistent Infinite Message Buffer] 85 and transmitted to the next Server 16 (i.e., the net

> "hop") of the network layer 14 along the path to the intended recipient(s), or to the recipient(s) directly depending on the system configuration.

Id. at 22:41–49.

The system further employs adaptive jitter buffers that dynamically change their size to optimize either quality or speed. *Id.* at 9:65–10:8. They can either improve quality by storing data "to allow a reasonably sized buffer of media to arrive" before rendering the media or render it "before all the packets are received, trading off quality for currency." *Id.* at 10:3–8. The '270 patent explains that rendering is "[d]elivering a [m]edia stream to a [u]ser in a form suitable for [u]ser consumption (e.g., voice, text, graphic display, video, or a combination thereof)." *Id.* at 9:52–54.

The system permits "enabling users to participate in conversations without waiting for a connection to be established with another participant or the network." *Id.* at 6:41–43. This "allows users to begin conversations, participate in conversations, and review previously received time-shifted messages of conversations even when there is no network available, when the network is of poor quality, or other participants are unavailable." *Id.* at 6:43–48.

C. Challenged Claims

Petitioner challenges claims 34, 36–38, 40, 41, 43, 44, 47–49, 51, and 55, of which claims 34 and 55 are independent. Claim 34 is reproduced below.

> 34. A video communication method, comprising:
> [a] receiving an identifier associated with a video communication transmitted by a sending communication device over a network, the identifier identifying a recipient of the video communication;

[b] ascertaining, in response to receipt of the identifier, a location on the network for a second communication device associated with the recipient and connected to the network;

[c] receiving the video communication from the sending communication device independently of the location for the second communication device being ascertained;

[d] storing the video communication; and

[e] delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device,

[f] wherein receiving the video communication from the sending communication device occurs without having to first establish an end-to-end connection over the network between the sending and the second communication device.

Ex. 1001, 47:23–47 (Petitioner's identification of limitations added).

D. The Asserted Grounds

Petitioner asserts the following grounds of unpatentability, relying on the declaration testimony of Dr. Samrat Bhattacharjee (Ex. 1005):

Claim(s) Challenged	35 U.S.C. §[1]	Reference(s)/Basis
34, 36–38, 40, 43, 44, 47, 55	103(a)	Mangal[2]
34, 36–38, 40, 41, 43, 44, 47, 49, 51, 55	103(a)	Mangal, Atarius[3]
48	103(a)	Mangal, Kalaboukis[4]
48	103(a)	Mangal, Atarius, Kalaboukis

Pet. 3.

III. ANALYSIS

A. Principles of Law

"In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics,*

[1] Because the '270 patent issued from a patent application that claims priority to an application filed before March 16, 2013, patentability is governed by the version of 35 U.S.C. § 103 preceding the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, 125 Stat. 284 (2011).
[2] U.S. Patent No. 6,865,398 B2, issued March 8, 2005 (Ex. 1002, "Mangal").
[3] International Patent Application No. WO 2006/121550 A2, published November 16, 2006 (Ex. 1003, "Atarius").
[4] U.S. Patent No. 9,762,861 B2, issued September 12, 2017 (Ex. 1004, "Kalaboukis").

Inc., 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

As set forth in 35 U.S.C. § 103(a),

> [a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). An obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). However, Petitioner cannot satisfy its burden of proving obviousness by employing "mere conclusory statements." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, Petitioner must articulate a reason why a person of ordinary skill in the art would have combined the prior art references. *In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

B. Level of Ordinary Skill in the Art

We review Petitioner's asserted obviousness grounds in view of the understanding of a person of ordinary skill in the art at the time of the invention. *Graham*, 383 U.S. at 17.

Petitioner contends that a person of ordinary skill in the art "would have had at least a bachelor's degree in computer science, computer engineering, or an equivalent degree, and 2-3 years of professional experience with distributed multimedia systems," and "would have had a working knowledge of computer networking and distributed systems generally, and multimedia communication systems, specifically." Pet. 4 (citing Ex. 1005 ¶¶ 41–46).

Patent Owner contends that a person of ordinary skill in the art:

> would have at least (1) a Bachelor's degree in electrical or computer engineering or a related course of study with at least two years of work experience in industry in the areas of computer networking, multimedia processing, or a related area of work or (2) a Master's degree in electrical or computer engineering or a related course of study, with at least one year of experience in industry in the areas of computer networking, multimedia processing, or a related area of work.

Prelim. Resp. 10.

Patent Owner contends that its "description of the level of ordinary skill in the art is essentially the same as that of the Petitioner." *Id.* We view Patent Owner's proposal as consistent with Petitioner's proposal, and the parties therefore agree as to the substance of the proposed level of ordinary skill in the art. We adopt Petitioner's proposed level of ordinary skill as set forth by its declarant Dr. Bhattacharjee because it is consistent with the problems identified and solutions provided in the '270 patent and the prior art. We also agree with the parties that more work experience could compensate for less formal education, and vice versa. *Id.*; Pet. 4.

C. Claim Construction

In this *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil

action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2020). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art at the time of the invention. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). In construing claims in accordance with their ordinary and customary meaning, we take into account the specification and prosecution history. *Phillips*, 415 F.3d at 1315–17.

The parties contend the challenged claims should be construed according to their "plain meaning." Pet. 8; Prelim. Resp. 12. Because only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy, we do not expressly construe any claim term. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

D. Asserted Obviousness over Mangal

Petitioner contends that claims 34, 36–38, 40, 43, 44, 47, and 55 are unpatentable over Mangal. Pet. 9–47. For the reasons discussed below, we conclude that Petitioner has not demonstrated a reasonable likelihood it would prevail in showing that claims 34, 36–38, 40, 43, 44, 47, and 55 are unpatentable on this asserted ground.

1. Overview Mangal (Ex. 1002)

Mangal is titled, "Method and system for selectively reducing call-setup latency through management of paging frequency and buffering of user speech in a wireless mobile station." Ex. 1002, code (54). Mangal relates to "initiating real-time media sessions," and "is particularly useful to reduce latency in the initiation of 'instant connect' or 'push to talk' (PTT)

sessions between data-capable mobile stations, such as 3G mobile stations." *Id.* at 1:11–16.

Figure 1, reproduced below, is a block diagram illustrating a wireless communication system of Mangal.

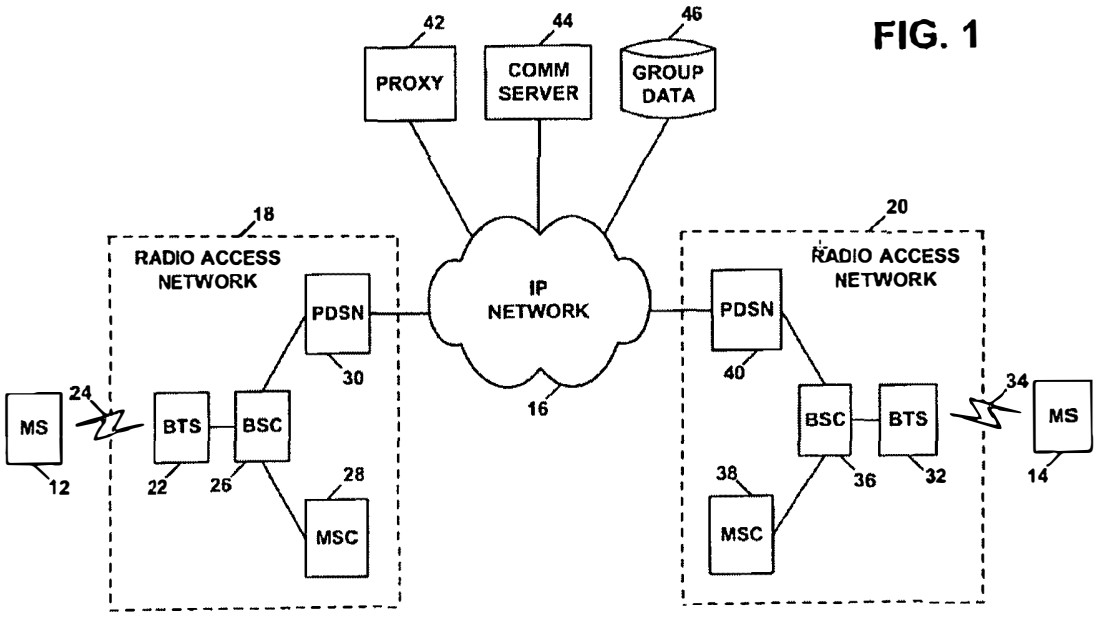


Figure 1 shows wireless communication system 10, including mobile stations 12 and 14, IP network 16, and radio access networks 18 and 20 which include base transceiver stations (BTS) 22 and 32, respectively. *Id.* at 6:9–11, 6:46–62. The mobile stations are linked by a radio access network with the IP network. *Id.*

Mangal explains that when a user invokes a PTT session and begins to speak at one mobile station MS 12, the mobile station buffers the speech while it works with PTT server 44 to establish a PTT session and a traffic channel with destination mobile station MS 14. *Id.* at 12:20–43 ("MS 12 may continue to buffer the user's speech until a transmission path exists over which MS 12 can send the buffered speech along its way.") (referring to Figure 5), 7:17–20.

Alternatively, "the buffering process may be carried out at the PTT server instead of or in addition to buffering at MS 12." *Id.* at 12:59–62.

Figure 6 of Mangal is reproduced below.

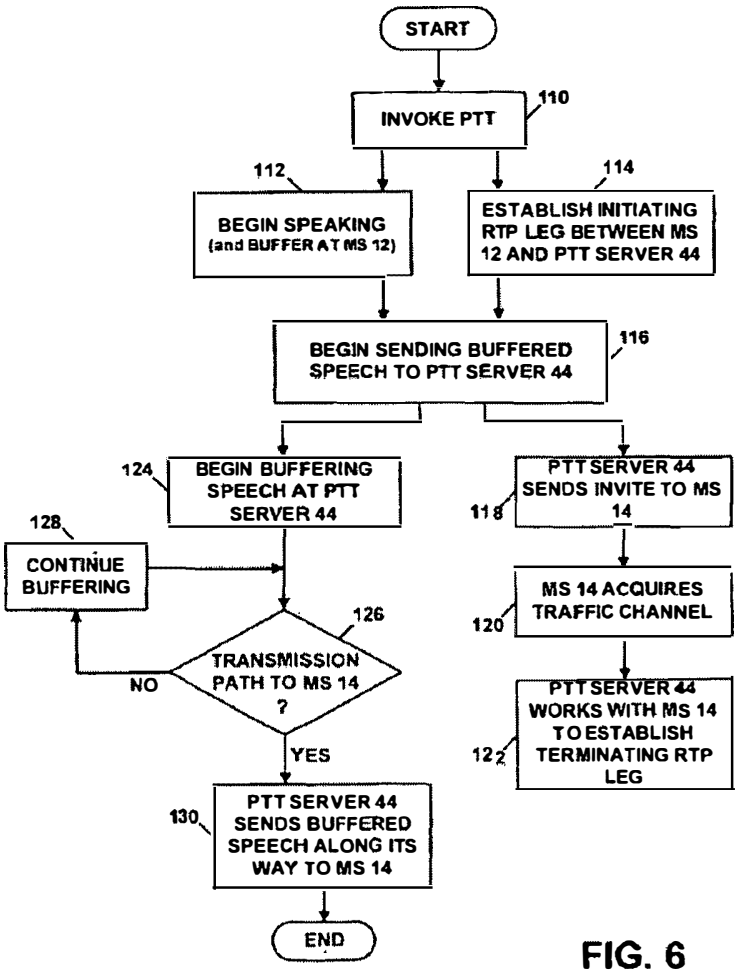


FIG. 6

Figure 6 is a flow chart depicting functions that can be carried out in buffering media at the PTT server. *Id.* at 6:22–24. Mangal explains that "PTT server 44 may buffer the initiating user's speech signal until a transmission path exists over which PTT server 44 can send the buffered speech signal," and "in response to establishment of the RTP [Real Time Protocol] leg between the PTT server and MS 14, the PTT server may begin

transmitting the buffered speech signal along its way to MS 14, as shown at block 130." *Id.* at 13:19–31.

2. Obviousness of Claims 34, 36–38, 40, 43, 44, 47, and 55

Patent Owner argues that Mangal fails to teach or suggest limitation 34[e] of independent claim 34 and, for the same reasons, limitation 55[e] of independent claim 55.[5] Prelim. Resp. 29–32. We, therefore, begin our discussion with the parties' arguments on limitation 34[e].

a) delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device

(1) The Petition

Petitioner asserts that Mangal discloses all aspects of this limitation. Pet. 21 (citing Ex. 1005 ¶¶ 81–89). Petitioner asserts that Mangal's Figure 6 shows server 44, which may be a *Push to View* server, delivering a communication, which may be *real-time video*, received from sending communication device (MS 12) to a second communication device (MS 14). *Id.* (citing Ex. 1002, 2: 36–54, 14:4–14, Fig. 6; Ex. 1005 ¶ 82). Petitioner further asserts that a person of ordinary skill in the art "would have understood that the second communication device would render (display) the received video communication, among other reasons, because Mangal

[5] Claim limitation 55[e] recites "delivering portions of the video communication to the one or more second communication devices at their ascertained locations respectively, *the delivery enabling the video communication to be at least partially rendered while the video communication is transmitted by the first communication device*." Ex. 1001, 50:26–32 (emphasis added); Pet. 47.

discloses establishing 'real-time communication sessions,' and real-time video communications are intended to be rendered in real-time." *Id.* at 23–24 (citing Ex. 1001, 9:52–54; Ex. 1002, code (57), 9:7–11, 2:51–54, 8:6–8; Ex. 1005 ¶¶ 85, 86).

Petitioner also asserts that because Mangal discloses the sending device transmitting RTP packets comprising a video communication as the communication is being created, it also teaches RTP packets comprising a portion of the video communication may be received and rendered at the second communication device as the sender is continuing to transmit the video communication. *Id.* at 24 (citing Ex. 1002, 2:36-46, 11:64–12:13, 12:65–13:38; Ex. 1005 ¶¶ 51–53, 61, 68, 87). Petitioner cites to Mangal's Figure 6 as disclosing packets progressively transmitted in real-time to the second communication device such that rendering may occur as the sending communication device is transmitting the video communication. *Id.* at 24–25 (citing Ex. 1002, 12:9–13, 13:19–38, Figs. 4, 6; Ex. 1005 ¶ 88).

Petitioner further asserts that given Mangal's objective of minimizing latency, a person of ordinary skill in the art would have appreciated that the second communication device would commonly render portions of the real-time video communication before the sender's transmission was complete. *Id.* at 25 (citing Ex. 1005 ¶ 89). Petitioner asserts that Mangal's system allows for providing a five-second time delay between when the sender begins to create media and when the second communication device begins to receive the media, and if a video communication were to last more than five seconds, rendering would occur while the video communication is transmitted by the sending communication device. *Id.* (citing Ex. 1002, 4:51–55, 5:11–19, 14:14–65, Fig. 7; Ex. 1005 ¶ 89).

(2) Patent Owner's Preliminary Response

In its Preliminary Response, Patent Owner asserts that Mangal fails to disclose simultaneous rendering and transmission as claimed. Prelim. Resp. 29–30. Patent Owner asserts that Mangal is directed almost exclusively to "push to talk" (PTT) voice communication and Mangal's disclosure of video is limited to a single paragraph noting that video may also be buffered, and disclosure that Mangal's mobile device could include a video camera and a video display. *Id.* at 30 (citing Ex. 1002, 1:13–16, 2:36–42, 2:51–54, 14:4–13). For instance, Patent Owner argues, there is simply no disclosure in Mangal that video data could be sent in a format that allows for a partial rendering or of any application-layer network protocol that could carry video data. *Id.* at 30–31. Patent Owner asserts that Petitioner's arguments based on Mangal's teachings of SIP (Session Initiation Protocol) and RTP, which Mangal uses exclusively for voice communications, fail to demonstrate that Mangal teaches or suggests the use of these protocols with video, which is "an entirely different media type with its own particular constraints and requirements." *Id.* at 31–32 (citing Pet. 9–12, 16–20).

Moreover, Patent Owner asserts, "there is simply no statement in Mangal that video may be rendered as it is transmitted," and Mangal's disclosure does not enable even delivering the video to a recipient device, let alone simultaneously rendering that video on the recipient device. *Id.* at 32 (citing *In re Kumar*, 418 F.3d 1361, 1368–69 (Fed. Cir. 2005)).

(3) Analysis

On the record before us, we are not persuaded that Petitioner has shown sufficiently that Mangal teaches or suggests "delivering portions of the video communication over the network to the second communication

device" and "enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device," both of which the language of claim 34 requires. For the claimed delivery of video communications, Petitioner relies on Mangal's mention of a "Push to View (PTV) server" and the fact that Mangal's mobile stations may include a camera and video display. Pet. 21 (citing Ex. 1002, 2:36–54, 14:4–14; Ex-1005 ¶ 82). Although Mangal mentions these features, Mangal does not specifically disclose, as Petitioner suggests, real-time video communications between MS 12 and MS 14. *Id.*; Ex. 1005 ¶ 82.

We agree with Patent Owner that Mangal is directed to audio chat applications, and more specifically to reducing call setup latency in push-to-talk (PTT) communications. *See* Ex. 1002, 1:13–16 ("The invention is particularly useful to reduce latency in the initiation of 'instant connect' or *'push to talk' (PTT)* sessions between data-capable mobile stations, such as 3G mobile stations for instance."), 5:51–52 ("Ideally, a *PTT communication system* should simulate instant *2-way radio* communication."), code (54) ("Method and system for selectively reducing call-setup latency through management of paging frequency and *buffering of user speech* in a wireless mobile station") (emphasis added). There is no basis in Mangal to conclude that its system would support instant connect video sessions between mobile devices in the same manner as push to talk sessions. Mangal's mention of a Push to View server in passing is nothing more than speculative. *See id.* at 14:10–11 ("*perhaps* a Push to View (PTV) server") (emphasis added). Petitioner offers no support that such a server or a push to view protocol existed at time of the '270 patent's invention—Dr. Bhattacharjee's

declaration is noticeably silent on this point. *See* 1005 ¶ 82. Likewise, when viewed in context of its entire disclosure, we are not persuaded that Mangal's discussion of *real time* media/communications suggests that Mangal's system could support transmission of *live video* messages between mobile stations over a network. *See* Pet. 9, 21, 23–24. On this record, Petitioner has not shown persuasively that Mangal's disclosure is sufficient to teach or suggest video communications, as claimed.

Moreover, we agree with Patent Owner that Mangal fails to disclose enabling video communication to be *partially rendered at the second communication device* while the video communication is transmitted by the sending communication device. For the claimed simultaneous rendering and transmission of the video communication, Petitioner relies on Mangal's disclosure of its *sending* device transmitting RTP packets comprising a video communication as the communication is being created. Pet. 24 (citing Ex. 1002, 2:36–46, 11:64–12:1; Ex. 1005 ¶¶ 51–53, 61, 68, 87). In view of that disclosure, Petitioner concludes that these same RTP packets may be received and rendered at the second communication device as the sender is continuing to transmit them. *Id.* (citing Ex. 1002, 11:64–12:13, 12:65–13:38; Ex. 1005 ¶ 87). We find no support in Mangal for Petitioner's conclusion. For example, the Figure 6 embodiment that Petitioner relies on (*id.* at 24–25) merely discloses that "in response to establishment of the RTP leg between the PTT server and MS 14, the PTT server *may begin* transmitting the buffered speech signal along its way to MS 14, as shown at block 130." Ex. 1002, 13:27–31 (emphasis added); *id.* at Fig. 6 (reproduced above, depicting a flow chart that ends at block 130). Mangal says nothing about the manner in which that speech signal is rendered at MS 14.

Petitioner further argues that given Mangal's objective of minimizing call setup latency, a person of ordinary skill in the art would have appreciated that the recipient device would commonly render portions of the video before the sender's transmission was complete. *Id.* at 25 (citing Ex. 1002, 4:51–55, 5:11–19, 14:14–65, Fig. 7; Ex. 1005 ¶ 89). Although we agree with Petitioner on Mangal's stated goal, Mangal's system seeks to achieve that goal by allowing for buffering of the speech signal *before* it is transmitted to the recipient mobile station. Ex. 1002, 12:32–34, 12:59–62. We are therefore not persuaded that an ordinarily skilled artisan would have understood Mangal's teaching as Petitioner proposes when Mangal is silent about rendering of the received speech signal at the recipient mobile station.

For at least these reasons, based on the record before us, Petitioner has not shown sufficiently that Mangal teaches or suggests "delivering portions of the video communication over the network to the second communication device using the location, the delivery enabling the video communication to be at least partially rendered at the second communication device while the video communication is transmitted by the sending communication device," as recited in claim 34.

As discussed above, independent claim 55 recites limitation 55[e] similar to limitation 34[e], requiring both the delivery of *video* communications, as well as *simultaneous* rendering and transmission of the video communication. Ex. 1001, 50:26–32. Petitioner relies on the same analysis presented for claim limitation 34[e]. Pet. 47. Further, challenged claims 36–38, 40, 43, 44, and 47 depend from claim 34.

Therefore, we conclude the information presented does not demonstrate a reasonable likelihood that Petitioner would prevail in

establishing that claims 34, 36–38, 40, 43, 44, 47, and 55 of the '270 patent are unpatentable under 35 U.S.C. § 103(a) for obviousness over Mangal.

E. Remaining Obviousness Grounds

Petitioner challenges claims 34, 36–38, 40, 41, 43, 44, 47, 49, 51, and 55 by adding the teachings of Atarius to the teachings of Mangal discussed above, and challenges claim 48 by adding the teachings of Kalaboukis to the teachings of Mangal discussed above as well as to the combination of Mangal and Atarius. Pet. 48–71. Petitioner relies on Atarius for teaching the "storing" limitation of independent claims 34 and 55, as well as for teaching limitations of dependent claims 41, 49, and 51. *Id.* at 48–64. For disputed limitations 34[e] and 55[e] of independent claims 34 and 55, Petitioner relies solely on the analysis presented in Ground 1, based on the teachings of Mangal alone. *Id.* at 55, 64. Similarly, Petitioner relies on Kalaboukis only for teaching limitations of dependent claim 48, not for teaching the subject matter of independent claims 34 and 55. *Id.* at 65–71. Thus, for the same reasons discussed above, the information presented does not demonstrate a reasonable likelihood that Petitioner would prevail in showing that claims 34, 36–38, 40, 41, 43, 44, 47–49, 51, and 55 are unpatentable as obvious over the asserted combinations of references.

IV. CONCLUSION

After considering the parties' evidence and arguments, we determine that the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that at least one of claims 34, 36–38, 40, 41, 43, 44, 47–49, 51, and 55 of the '270 patent is unpatentable on any ground asserted in the Petition.

V. ORDER

Accordingly, it is

ORDERED that the Petition is *denied*; and

FURTHER ORDERED that no *inter partes* review is instituted.

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ACKNOWLEDGEMENT OF LOSS OF ENTITLEMENT TO ENTITY STATUS DISCOUNT

APPLICATION #	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET #	REQUEST ID
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14	156405

The entity status change request below filed through Patent Center on 02/01/2024 has been accepted.

Certifications

APPLICANT CHANGING TO REGULAR UNDISCOUNTED FEE STATUS

Signature

I certify, in accordance with 37 CFR 1.4(d)(4), that I am one of the signatories making the entity status change.

Signature	Name	Registration #
/James W Rose/	James Rose	34239

PTO/AIA/318 (07-13)
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Control Number(s)	90019,212
Filing Date(s)	May 18, 2023
First Named Inventor	Thomas E. KATIS
Title	[illegible]
Patent Number	10,142,270
Examiner Name	MARK ALAN SAGER
Attorney Docket No(s)	1870002REEX

I. **Power of Attorney**. This form may be used to change the Power of Attorney in a reexamination or supplemental examination proceeding (or multiple proceedings where merged). This form may also be used to change the Power of Attorney in the patent file; in such a case, a copy of this form will be placed in both the patent file and the reexamination or supplemental examination proceeding.

A. Revocation of Previous Power of Attorney. I hereby revoke all previous patent owner powers of attorney, if any, given:

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B. Designation of Power of Attorney.

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☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) to prosecute the proceeding(s)/patent identified above and selected in section I(A), and to transact all business in the United States Patent and Trademark Office connected therewith: 62008

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III. Authorization for Power of Attorney and (if selected) Change of Correspondence Address

I am the:
☐ Inventor, having ownership of the patent being reexamined.
OR
■ Patent owner.
Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____

Signature of Inventor or Patent Owner	/Irv Remedios/	Date	Apr. 16, 2024
Name	Irv Remedios	Telephone	415 987 3400
Title and Company	CEO of Voxer IP LLC		

NOTE: Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14

CONFIRMATION NO. 2563

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POWER OF ATTORNEY NOTICE

OC000000071622701

Date Mailed: 04/26/2024

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/24/2024.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/pflewis/

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/584,224	05/02/2017	Thomas E. KATIS	REBLP003C14

CONFIRMATION NO. 2563

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POA ACCEPTANCE LETTER

OC000000071622832

Date Mailed: 04/26/2024

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/24/2024.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/pflewis/