

REPLY UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP ART UNIT 2400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Alex Nerst <i>et al.</i>	§	Docket No.:	47856.103
		§		
Serial No.	13/539,584	§	Examiner:	Wei, Siren
		§		
Filed:	July 2, 2012	§	Art Unit:	2467
		§		
For:	Combining P2P and	§	Conf. No.:	5417
	Server-Based Conferencing	§		

RESPONSE TO FINAL OFFICE ACTION
MAILED ON JANUARY 27, 2015

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

Commissioner:

I. INTRODUCTORY REMARKS

In response to the Final Office Action mailed on January 27, 2015, entry of the following amendments and comments into the record of the above-identified application is respectfully requested. Should any additional fees be required, please charge any such fees to Haynes and Boone LLP Deposit Account No. 08-1394.

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

Remarks/Arguments begin on **page 9** of this paper.

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II. AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of the claims in the application.

1. (Currently Amended) A method for teleconferencing, the method comprising:
measuring channel quality for a plurality of terminals participating in said teleconferencing;
creating ~~at least one~~ a group of terminals, from said plurality of terminals measuring channel quality, according to said channel quality measurements;
selecting a coding scheme adaptive to said channel quality measurements;
communicating conferencing content ~~directly~~ between said group of terminals via peer-to-peer communication and using said selected coding scheme; and
~~communicating~~ sending and receiving, concurrently with said ~~communicating via peer-to-peer~~ communication, said conferencing content [[with]] between at least one terminal from among said group of terminals and one or more other terminals from among said plurality of terminals participating in said teleconferencing [[call]] via at least one network device selected from a group consisting of:
a conferencing-server and a peer-server.
2. (Currently Amended) The method for teleconferencing according to claim 1, wherein said selected one from ~~at least one of~~ said conferencing-server and said peer-server provides conversion for said conferencing content adaptive to said other terminals.
3. (Currently Amended) The method for teleconferencing according to claim 1, wherein said channel quality measurement comprises measuring at least one communication parameter ~~consisting of the list comprising~~ one or more of:
available bandwidth, error rate, BER (bit error rate), packet error rate, packet loss, latency, packet latency, initial delay (delay to first returned packet), inter-packet delay (average delay between packets), maximum packet delay, median packet delay, packet delay for N standard deviations, quality of service, signal to noise ratio, interference, [[and]] or multipath.

4. (Currently Amended) A method for participating in a teleconferencing call, the method comprising:

interrogating for a group of terminals participating in said teleconferencing call and using a common coding scheme;

communicating conferencing content ~~directly~~ with at least one terminal of said group of terminals via ~~direct~~ peer-to-peer communication and using said common coding scheme; and

~~communicating~~ sending and receiving, concurrently with said ~~communicating~~ directly peer-to-peer communication, said conferencing content with one or more other terminals participating in said teleconferencing call outside of said group of terminals via at least one network device selected from a group consisting of:

a conferencing-server and a peer-server.

5. (Currently Amended) The method for participating in a teleconferencing call according to claim 4, wherein said selected one from ~~at least one of~~ said conferencing-server and said peer-server provides conversion for said conferencing content adaptive to said other terminals.

6. (Currently Amended) A method for a teleconferencing call, comprising:

interrogating for terminals participating in said teleconferencing call for a parameter comprising a channel quality of each of said terminals;

managing a database of said terminal parameters;

managing a database of said terminals using at least one coding scheme; [[and]]

suggesting a common coding scheme to a first subset of said terminals that exhibits, in response to ~~[[the]]~~ said interrogating, a common channel quality;

communicating conferencing content among said first subset of said terminals that adopt said suggested common coding scheme via peer-to-peer communication; and

sending and receiving said conferencing content concurrently with at least one terminal from among a second subset of said terminals that utilize a different coding scheme via at least one network device.

7. (Currently Amended) The method for teleconferencing according to claim 6, wherein said interrogation for said channel quality comprises measuring at least one communication parameter ~~consisting of the list~~ comprising one or more of:

available bandwidth, error rate, BER (bit error rate), packet error rate, packet loss, latency, packet latency, initial delay (delay to first returned packet), inter-packet delay (average delay between packets), maximum packet delay, median packet delay, packet delay for N standard deviations, quality of service, signal to noise ratio, interference, ~~[[and]]~~or multipath.

8. (Currently Amended) A ~~network~~terminal device comprising:

a communication module operative to enable said ~~network~~terminal device to communicate in a communication network;

a peer communication module operative to enable said ~~network~~terminal device to participate as a peer in a peer-to-peer network, said peer-to-peer network operating in said communication network;

a module for measuring channel quality of said ~~network~~terminal device in said communication network;

a module for selecting at least one coding scheme adaptive to said channel quality;

a module for interrogating for a group of terminals participating in a conferencing call and using a common coding scheme compatible with at least one of said selected at least one coding scheme;

a module for participating in ~~[[a]]~~said conference call with a plurality of other terminals comprising said group of terminals and at least one other group using a different coding scheme, concurrently communicating conferencing content to at least one terminal from among said group of terminals and one or more terminals from among said at least one other group using at least two conferencing technologies selected from a group consisting of:

conferencing-server-based conferencing, peer-server based conferencing where said peer-server represents said network device to said peer-to-peer network, and peer-to-peer conferencing.

9. (Currently Amended) The ~~network~~terminal device according to claim 8, wherein said module for participating in said conference call is operative to:

communicate said conferencing content directly with said group of terminals using said common coding scheme via peer-to-peer conferencing using said selected coding scheme; and
communicate concurrently said conferencing content with other terminals of said at least one other group participating in said conferencing call using one or more other conferencing technologies.

10. (Currently Amended) The ~~network~~terminal device according to claim 9, wherein said communicating conferencing content with said other terminals of said at least one other group participating in said conferencing call comprises communicating said conferencing content via at least one network device selected from a group consisting of:

a conferencing-server and a peer-server.

11. (Currently Amended) The ~~network~~terminal device according to claim 10 wherein at least one of said conferencing-server and said peer-server provides conversion for said conferencing content adaptive to said other terminals of said at least one other group.

12. (Currently Amended) The ~~network~~terminal device according to claim 8, wherein said measuring channel quality comprises measuring at least one communication parameter ~~consisting of the list comprising~~ one or more of:

available bandwidth, error rate, BER (bit error rate), packet error rate, packet loss, latency, packet latency, initial delay (delay to first returned packet), inter-packet delay (average delay between packets), maximum packet delay, median packet delay, packet delay for N standard deviations, quality of service, signal to noise ratio, interference, ~~[[and]]~~or multipath.

13. (Currently Amended) A computer program product, stored on a non-transitory computer-readable medium, comprising instructions operative to cause a programmable processor of a ~~network~~terminal device to perform a teleconferencing process comprising:

measuring channel quality for a plurality of terminals participating in said teleconferencing;

creating ~~at least one~~ a group of terminals, from said plurality of terminals measuring channel quality, according to said channel quality measurements;

selecting a coding scheme adaptive to said channel quality measurements;
communicating conferencing content ~~directly~~ between said group of terminals via peer-to-peer communication and using said selected coding scheme; and
~~communicating~~sending and receiving, concurrently with said ~~communicating~~ via peer-to-peer communication, said conferencing content [[with]]between at least one terminal from among said group of terminals and one or more other terminals from among said plurality of terminals participating in said teleconferencing [[call]] via at least one network device selected from a group consisting of:
a conferencing-server and a peer-server.

14. (Currently Amended) A computer program product, stored on a non-transitory computer-readable medium, comprising instructions operative to cause a programmable processor of a ~~network~~terminal device to perform a teleconferencing process comprising:

interrogating for a group of terminals participating in said teleconferencing [[call]]process and using a common coding scheme;
communicating conferencing content ~~directly~~ with at least one terminal of said group of terminals via ~~direct~~ peer-to-peer communication and using said common coding scheme; and
~~communicating~~sending and receiving, concurrently with said ~~communicating~~ directly peer-to-peer communication, said conferencing content with one or more other terminals participating in said teleconferencing [[call]]process outside of said group of terminals via at least one network device selected from a group consisting of:
a conferencing-server and a peer-server.

15. (Currently Amended) A computer program product, stored on a non-transitory computer-readable medium, comprising instructions operative to cause a programmable processor of a ~~network~~terminal device to perform a teleconferencing process comprising:

interrogating for terminals participating in said teleconferencing process for a parameter comprising a channel quality of each of said terminals
managing a database of said terminal parameters;
managing a database of said terminals using at least one coding scheme; [[and]]

suggesting a common coding scheme to a first subset of said terminals that exhibits, in response to [[the]]said interrogating, a common channel quality;

communicating conferencing content among said first subset of said terminals that adopt said suggested common coding scheme via peer-to-peer communication; and

sending and receiving said conferencing content concurrently with at least one terminal from among a second subset of said terminals that utilize a different coding scheme via at least one network device.

16. (New) The method for participating in a teleconference call according to claim 4, further comprising:

selecting, in response to a change in said channel quality measurements, a second coding scheme that is different from said common coding scheme;

leaving said group of terminals in response to said change; and

joining a second group of terminals, wherein said second group of terminals communicates said conferencing content via said peer-to-peer communication using said second coding scheme.

17. (New) The method for participating in a teleconference call according to claim 16, further comprising:

sending and receiving, after said leaving, said conferencing content with said group of terminals via said at least one network device concurrently with communicating said conferencing content with at least one terminal of said second group of terminals via said peer-to-peer communication.

18. (New) The method for participating in a teleconference call according to claim 4, wherein said sending and receiving with said one or more other terminals comprises:

sending and receiving said conferencing content with said one or more other terminals participating in said teleconferencing as part of a second group of terminals using a separate coding scheme from said common coding scheme,

wherein said separate coding scheme is based on different channel quality measurements for said second group of terminals.

19. (New) The method for teleconferencing according to claim 6, further comprising:
receiving said conferencing content from said at least one network device after said at least one network device transcodes said conferencing content from said different coding scheme to said common coding scheme.
20. (New) The method for teleconferencing according to claim 1, wherein said communicating comprises at least one terminal from among said group of terminals with at least one other terminal from among said group of terminals via said peer-to-peer communication.

III. REMARKS

Claims 1-20 are currently pending. Claims 1-15 have been amended. Claims 16-20 are newly added. In view of the foregoing amendments and the remarks that follow, Applicants respectfully request reconsideration of the rejection.

Applicants' Record under M.P.E.P. § 713.04 of Interview with the Examiner

Applicants' attorney appreciates the Examiners' time and consideration in conducting the telephone interview on March 20, 2015. Applicants respectfully submit the following record of the telephone interview under M.P.E.P. § 713.04.

The following persons participated in the interview: Examiner Siren Wei, Examiner Robert Scheibel, and Applicants' Attorney, Adam Fowles (Reg# 65,005). The Examiners and Applicant's attorney discussed proposed amendments to the independent claims, e.g. "~~communicating~~sending and receiving, concurrently with said ~~communicating~~ via peer-to-peer communication, said conferencing content [[with]]between at least one terminal from among said group of terminals and one or more other terminals from among said plurality of terminals participating in said teleconferencing [[call]] via at least one network device selected from a group consisting of: a conferencing-server and a peer-server."

It was agreed that the proposed amendments would overcome the current rejection, but that further search and consideration by the Examiner would be required. Accordingly, Applicants present the foregoing amendments and following remarks.

Rejections under 35 U.S.C. § 103

Claims 1-3 and 13

Claims 1-3 and 13 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Ratasuk *et al.* (US 2007/0258540) in view of Kwon *et al.* (US 2009/0016232), and in view of Setton *et al.* (US 2010/0287238). Applicants respectfully traverse.

As agreed during the interview, the combination of Ratasuk, Kwon, and Setton fails to teach or suggest all of the features of amended independent claim 1, for example at least "*sending and receiving, concurrently with said peer-to-peer communication, said conferencing content between at least one terminal from among said group of terminals and one or more other terminals from among said plurality of terminals participating in said teleconferencing via at*

least one network device selected from a group consisting of: a conferencing-server and a peer-server.”

The Final Office Action acknowledges that Ratasuk and Kwon fail to teach or suggest at least the above-noted features (before or after amendment). The Final Office Action instead turns to Setton. However, Setton fails to teach or suggest **both** sending **and** receiving to/from each terminal.

Setton “limit[s] the active sources to only those peers who generate content, are sufficiently constraint burdened, or who opt to be included as an active source ... [to] drastically limit the number of hops a packet needs to go through before reaching any of the peers ... [so as to] limit the delay required to transmit content through the peer-to-peer network.” (Setton, ¶ [0019].) Setton’s “active sources 102” in a “first portion” are “those peers which generate content” or that are otherwise registered to be part of the active sources 102. (Setton, ¶ [0016].)

Setton includes other participants in a “second portion” of “relay/receivers 104,” which are “those peers who do not generate content.” (Setton, ¶ [0018].) The “relay/receivers 104 use a tree-based video multicast protocol.” *Id.* Setton describes video multicasting in terms of content delivery networks which “relay **a one-way stream.**” (Setton, ¶ [0006] (emphasis added).) These relay/receivers 104 in the second portion are “listeners ... [that] can tolerate a higher delay, on the order of a few seconds ...” (Setton, ¶ [0028].)

In other words, the relay/receivers 104 in the second portion are **unable** to send content **back to** any devices in the first group of active sources 102, while claim 1 as amended recites that the concurrent sending and receiving is with respect to both types of communication (peer-to-peer and via at least one network device). As a result, Setton cannot teach or suggest all of the features recited in amended independent claim 1. Claims 2-3 depend from independent claim 1, and are therefore patentable at least based on their dependence on independent claim 1, further in view of their own respective features. Independent claim 13 is patentable for the same reasons as those given above with respect to independent claim 1.

Claims 4-12 and 14-15

Claims 4-5 and 14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Kim *et al.* (US 2011/0038266) in view of Ratasuk, Kwon, and Setton. Claims 6-7, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ratasuk in view of Kim *et al.*

(US 2006/0281462, "Kim '06"), further in view of Kwon. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Cai *et al.* (US 2008/0232301), further in view of Setton. Claims 9-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Cai, Setton, and Kwon. Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Cai and Setton, further in view of Cai *et al.* (US 2007/0117579, "Cai '579"). Applicants respectfully traverse these rejections.

Independent claims 4, 6, 8, 14, and 15 recite analogous distinguishing features to those discussed above with respect to independent claim 1. Any combination of Kim, Kim '06, Cai, and/or Cai '579 does not overcome the above-noted deficiencies of Ratasuk, Kwon, and Setton. Thus, independent claims 4, 6, 8, 14, and 15 are patentable over any combination of Ratasuk, Kwon, Setton, Kim, Kim '06, Cai, and Cai '579. Further, claim 5 depends from independent claim 4, claim 7 depends from independent claim 6, and claims 9-12 depend from independent claim 8, and are therefore patentable based on their dependence on their respective independent claims, further in view of their own features.

Accordingly, withdrawal of the 35 U.S.C. § 103 rejections is respectfully requested.

New Claims 16-20

Applicants respectfully request entry of new claims 16-20 with this amendment. Support for new claims 16-17 may be found, for example, at least at p. 15, ¶ 5, p. 21, ¶ 2 – p. 22, ¶ 2, and p. 23, ¶ 1. Claims 16 and 17 depend from independent claim 4 and are therefore allowable at least based on their dependency to independent claim 4, further in view of their own features.

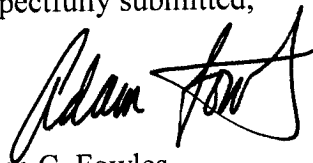
Support for new claim 18 may be found, for example, at least at p. 20, ¶¶ 1-5. Support for new claims 19 and 20 may be found, for example, at p. 15, ¶ 4, p. 17, ¶ 3 – p. 18, ¶ 1, and p. 20, ¶¶ 1-5. Claims 18-20 depend from independent claim 6 and are therefore allowable at least based on their dependency to independent claim 6, further in view of their own features.

IV. CONCLUSION

Based on the foregoing remarks, it is respectfully submitted that all of the pending claims are fully allowable, and favorable reconsideration of this application is therefore respectfully requested. If the Examiner believes that examination of the present application may be advanced in any way by a telephone conference, the Examiner is invited to telephone the undersigned attorney at (972)739-8674.

The Commissioner is hereby authorized to charge any additional fee required by this paper, or to credit any overpayment, to Deposit Account No. 08-1394 of Haynes and Boone, LLP.

Respectfully submitted,



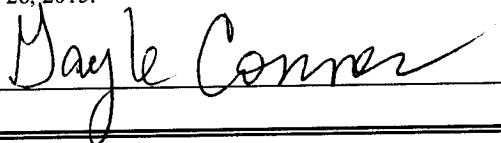
Adam C. Fowles
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Dated: March 26, 2015

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Application Number:	13539584
International Application Number:	
Confirmation Number:	5417
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First Named Inventor/Applicant Name:	ALEX NERST
Customer Number:	106874
Filer:	Adam Carl Fowles/Gayle Conner
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		47856-103-Response-to-1-27-15-Final-Office-Action.pdf	758196 b30b5e7697a604266ab5e9c4773ccf37fba5df61	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response After Final Action	1	1
	Claims	2	8
	Applicant Arguments/Remarks Made in an Amendment	9	12

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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.