UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTOPHER PEARCE, JONATHAN D. ROSENBERG, and
SCOTT A. HENNING

Appeal 2019-006023
Application 14/155,957
Technology Center 2400

Before JAMES R. HUGHES, JOYCE CRAIG, and
MATTHEW J. McNEILL, *Administrative Patent Judges.*

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Claims 1, 3–11, 13–19, and 21–26 are pending, stand rejected, are appealed by Appellant,[1] and are the subject of our decision under 35 U.S.C. § 134(a). *See* Final Act. 1–2; Appeal Br. 10.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The invention generally "relates to hosting real-time communications between clients over a cloud based multimedia system." Spec. ¶ 1. More particularly, the invention stores "event stream information pertaining to communication sessions between clients maintained by a cloud networking platform" and generates a graph "that identifies participants, at respective clients, involved in a real-time communication session, where each participant . . . is represented as a node in the graph." *Id.* ¶ 4.

Claim 1 is reproduced below, and is illustrative of the claimed subject matter:

1.   A method comprising:

storing event stream information pertaining to communication sessions between clients maintained by a cloud networking platform, wherein the event stream information for each client includes information in relation to communication services participated in by clients, the communication services including hosting of real-time communications between two or more clients;

in response to an originator participant requesting to engage in a real-time communication comprising a phone call with one or more invited participants via clients of the participants, the phone call comprising an audio component and/or a video component:

sending to clients of the originator participant and the one or more invited participants rendezvous information that facilitates a connection for each client to the real-time communication;

Reply Brief ("Reply Br.") filed Aug. 10, 2019. We also refer to the Examiner's Final Office Action ("Final Act.") dated Aug. 10, 2018; and Answer ("Ans.") dated June 12, 2019.

generating a graph that identifies the originator and invited participants, at respective clients, associated with the real-time communication session, wherein each participant associated with the real-time communication session is represented as a node in the graph, at least one node includes information about two or more clients registered to a single participant associated with the node, and the generated graph identifies participants in the nodes as any participant that is actively engaged in the real-time communication session, any participant that was invited to join but is not yet actively engaged in the real-time communication session, and any participant that was engaged in but has disengaged from the real-time communication session, wherein the graph is further updated during the real-time communication session based upon changes in information associated with the real-time communication session; and

in response to at least two participants selected from the originator participant and the one or more invited participants requesting to join the real-time communication session, hosting the real-time communication session between the at least two participants via the clients of the at least two participants; and

maintaining, via the cloud networking platform, conversation information between the at least two participants, the conversation information comprising a container providing a history of previous real-time communications between the at least two participants, the previous real-time communications comprising one or more different types of real-time communications via one or more different types of clients of the at least two participants.

Appeal Br. 22–23 (Claims App.).

REFERENCES

The prior art relied upon by the Examiner as evidence is:

Name	Reference	Date
DelHoyo et al. ("DelHoyo")	US 7,010,108 B2	Mar. 7, 2006
Kuhlke et al. ("Kuhlke")	US 2008/0320082 A1	Dec. 25, 2008
Ramanathan et al. ("Ramanathan")	US 2010/0199320 A1	Aug. 5, 2010
Howard et al. ("Howard")	US 2012/0260189 A1	Oct. 11, 2012
Mikan et al. ("Mikan")	US 2013/0259217 A1	Oct. 3, 2013

REJECTIONS[3]

1.   The Examiner rejects claims 1, 3, 5–7, 9–11, 13, 15–17, 19, 21, and 23–25 under 35 U.S.C. § 103 as being unpatentable over DelHoyo, Howard, Mikan, and Ramanathan. *See* Final Act. 3–8.

2.   The Examiner rejects claims 4, 8, 14, 18, 22, and 26 under 35 U.S.C. § 103 as being unpatentable over DelHoyo, Howard, Mikan, Ramanathan, and Kuhlke. *See* Final Act. 8–9.

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[3] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103 renaming 35 U.S.C. § 103's subsections. Because the present application has an effective filing date subsequent to the AIA's effective date for applications, this decision refers to the AIA version of 35 U.S.C. § 103.

ANALYSIS

*Obviousness Rejections of Claims 1, 3, 5–7, 9–11, 13,
15–17, 19, 21, and 23–25*

The Examiner rejects independent claim 1 as being obvious in view of DelHoyo, Howard, Mikan, and Ramanathan. *See* Final Act. 3–8. Appellant contends the Examiner's combination fails to teach the claim 1 limitation of "maintaining, via the cloud networking platform, conversation information between the at least two participants." Appeal Br. 11–13. Appellant also contends the combination fails to teach the claim 1 limitation of "generating a graph," specifically,

> the generated graph identifies participants in the nodes as any participant that is actively engaged in the real-time communication session, any participant that was invited to join but is not yet actively engaged in the real-time communication session, and any participant that was engaged in but has disengaged from the real-time communication session, wherein the graph is further updated during the real-time communication session based upon changes in information associated with the real-time communication session.

Id. at 14–18. Appellant further contends the combination fails to teach the claim 1 limitations of "sending to clients of the originator participant and the one or more invited participants rendezvous information that facilitates a connection for each client to the real-time communication" and "hosting the real-time communication session between the at least two participants via the clients of the at least two participants." *Id.* at 19.

We concur with the findings and conclusions reached by the Examiner, and we provide the following analysis for emphasis. With respect to Appellant's first contention of error, Appellant argues that "[t]here is no motivational or predictable reasons to provide the feature of maintaining

conversation information to the system and techniques described by DelHoyo" because "DelHoyo is concerned with the 'back end' or physical infrastructure associated with establishing a video conference" and does not have "any interest or concern in monitoring, maintaining and/or controlling any features associated with the video conference." Appeal Br. 12; *see also* Reply Br. 2–3. Accordingly, Appellant argues that "[i]t is unclear how any teaching by Howard would be applied to the teachings of DelHoyo." Appeal Br. 13.

DelHoyo, however, is not solely concerned with "the 'back end.'" *See* Appeal Br. at 12–13; Reply Br. 2. DelHoyo relates to "scheduling telecommunication conferencing having audio and video presentation" (DelHoyo, 1:5–7), where "the system data supplied includes specific information about the conference, which the user enters at the time of scheduling" (*id.* at 3:59–61), including "Persons in Conference" (*id.* at 4:13–14. Moreover, as part of the process of "allocat[ing] the most efficient route between endpoints" (*id.* at 4:60–61), DelHoyo "determines whether each room and person included in the conference is available at the specified date and time" (*id.* at 5:53–55) and "indicates that the persons, rooms, devices, ports, and channels associated with the conference are reserved for the conference's scheduled time" (*id.* at 12:62–64). In short, DelHoyo determines and maintains information about video conference participants or the persons on a scheduled conference.

Howard "enable[s] a user **104** to initiate communication with a contact from within a contact card or panel of a user interface **107**," for example, "via a conversation history **117** displayed within the contact panel." Howard ¶ 10. "The conversation history **117** spans a plurality of

communication or transport modes **114** or channels and represents a unified, aggregated set of communication items corresponding to a running conversation between the user **104** and one or more of the contacts." *Id.*

We see no error in the Examiner's combination of Howard with DelHoyo. Howard's teachings of providing a user interface for initiating a communication with a contact (Howard ¶ 10) and selecting a transport mode for the communication (*id.* ¶ 25) provide a self-evident motivation for combining Howard with DelHoyo. That is, Howard teaches another useful way to initiate a conversation in a communication system. *See* Final Act. 5 ("The motivation would have been to provide [a] conversation for users."). Thus, the combination of Howard with DelHoyo would have been an obvious undertaking of applying a known communication system technique to improve DelHoyo's conferencing system. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) ("[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill"). Moreover, Appellant has not specifically explained why—given DelHoyo's storage of participant information (information on persons who participate in scheduled conferences) (*see* DelHoyo, 12:62–64)—presenting a conversation history in DelHoyo's system would have been "uniquely challenging or difficult for one of ordinary skill in the art" at the time of Appellant's invention. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)).

With respect to Appellant's second contention, Appellant argues that "[a]t best, the graph described by DelHoyo is a model of the

hardware/software architecture to be used for the scheduled videoconference, and . . . does not provide a 'snapshot' at any given time of an ongoing communication session." Appeal. Br. 14; *see also* Reply Br. 4. Appellant also argues that DelHoyo's model is "not associated with individual participants and their status in relation to a real-time communication session (e.g., actively engage, invited but not yet engaged, or previously engaged but currently disengaged)." Appeal Br. at 15. Appellant further argues "[t]here is no disclosure by Mikan that the status management includes an identification of a participant that was invited to join in a real-time communication session but is not yet actively engaging in the session." *Id.* at 17. Finally, Appellant argues that "it is not clear how it would have been obvious to modify the teachings of a network model as described by DelHoyo . . . based upon teachings of Mikan . . . since Mikan . . . relate[s] to features associated with an ongoing communication session and not the configuration of a system architecture to connect devices to a video conference." *Id.*; *see also* Reply Br. 4–5.

DelHoyo teaches a network model that "is a virtual representation of the user's real-world videoconferencing network and includes: all endpoints and devices in the network." DelHoyo, 4:26–29. Appellant's argument that DelHoyo fails to teach "a 'snapshot' at any given time of an ongoing communication session" (Appeal Br. 14) is unavailing because the Examiner relies on Mikan for providing the updated statuses of conference participants, i.e., "wherein the graph is further updated during the real-time communication session based upon changes in information associated with the real-time communication session," as recited in claim 1. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (one cannot show non-

obviousness by attacking references individually where the rejections are based on combinations of references).

Mikan relates "to managing the status of participants of a tele-networking meeting." Mikan ¶ 2. Specifically, Mikan teaches that "[e]ach participant may be assigned one or a plurality of statuses," including "active, mute, unmute, standby, listen only, subconference, disconnect, or any other term representative of or used to denote a participant's status or level of participation in a tele-networking meeting." *Id.* ¶ 35. Mikan further teaches that "display **214** may also display the status of the participants." *Id.* ¶ 41. We agree with the Examiner that Mikan's displayed statuses active, standby, and disconnect at least suggest the claim 1 limitations of "actively engaged," "invited to join but is not yet actively engaged," and "was engaged in but has disengaged," respectively. *See* Final Act. 5. In particular, one of ordinary skill in the art would have understood Mikan's standby status to mean a participant waiting to join a conference, which at least suggests the claim 1 limitation of "invited to join but is not yet actively engaged."

We see no error in the Examiner's combination of Mikan with DelHoyo and Howard. As discussed above with respect to Appellant's first contention, DelHoyo determines and maintains information on persons scheduled for conferences (*see* DelHoyo 3:59–61, 4:13–14, 5:53–55, 12:62–64), and is not only interested in "the hardware/software architecture to be used for the scheduled videoconference" (*see* Appeal Br.). It would have been an obvious modification to apply Mikan's display of the statuses of conference participants to DelHoyo's network model of a videoconferencing network, particularly where DelHoyo already has available information regarding the participants to a conference. *See KSR*, 550 U.S. at 417 ("[I]f a

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technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill"). In particular, one of ordinary skill in the art would have wanted "to enable users to know and control the activity status of the participants." Final Act. 6. Further, Appellant has not shown that it would have been "uniquely challenging or difficult for one of ordinary skill in the art" to combine the references in this way at the time of Appellant's invention. *Leapfrog*, 485 F.3d at 1162.

With respect to Appellant's third contention, we are not persuaded that the combination of DelHoyo, Howard, Mikan, and Ramanathan fails to teach the claim 1 limitations of "sending to clients of the originator participant and the one or more invited participants rendezvous information that facilitates a connection for each client to the real-time communication" and "in response to at least two participants selected from the originator participant and the one or more invited participants requesting to join the real-time communication session, hosting the real-time communication session between the at least two participants via the clients of the at least two participants."

DelHoyo teaches that "[o]nce the device and endpoint information has been set up properly, the automated schedule and control system is capable of automatically starting all the devices in the conference." DelHoyo, 28:34–37. Specifically, "[a]fter creating the conference shell, the automated schedule and control system automatically invites all rooms designated as Dial-out to the conference using special SNMP commands, including the correct zone prefix order and dial plan numbers." *Id.* at 28:61–65. That is,

DelHoyo teaches using certain commands for sending the necessary information for connecting to the conference (i.e., "sending . . . rendezvous information"), and actually starting a conference (i.e., "hosting the real-time communication session"). Further, as discussed above, Howard in combination with DelHoyo teaches that a user (i.e., "originator participant") can initiate a conference. Accordingly, we find that the collective teachings of at least DelHoyo and Howard teach the disputed limitations in Appellant's third contention.

Thus, Appellant does not persuade us of error in the Examiner's obviousness rejection of independent claim 1. Accordingly, we affirm the Examiner's obviousness rejection of independent claim 1, as well as independent claims 11 and 19, and dependent claims 3, 5–7, 9, 10, 13, 15–17, 21, and 23–25, not separately argued with particularity. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Obviousness Rejections of Claims 4, 8, 14, 18, 22, and 26

The Examiner rejects dependent claim 4 as being obvious in view of DelHoyo, Howard, Mikan, Ramanathan, and Kuhlke. *See* Final Act. 8–9. Appellant contends that "Kuhlke describes techniques for monitoring participant attention level to a presenter in a meeting conference," but that "[t]here is no reasonable basis for alleging that such features of Kuhlke could be added to the network model described by DelHoyo." Appeal Br. 21; *see also* Reply Br. 6.

Claim 4 recites "updating the information for the graph in response to one of the addition of a new participant to the real-time communication session, a change of an active participant to an inactive participant in the real-time communication session, or a change of an inactive participant to an

active participant in the real-time communication session." Kuhlke teaches, in a web-based media conference, "receiv[ing] presence monitoring information 94 from the presence server 14, including . . . whether the participant reconnects with the conference call." Kuhlke ¶ 39. We find Kuhlke's presence monitoring feature, such as identifying a participant who reconnects to a conference, at least suggests the claimed updating of information, including "a change of an inactive participant to an active participant." Moreover, one of ordinary skill in the art would have understood Kuhlke's presence monitoring feature to be combinable with the DelHoyo-Howard-Mikan-Ramanathan system, particularly where Mikan teaches displaying conference participant status. *See* Mikan ¶¶ 35, 41. That is, in view of Kuhlke, one would have also been motivated to update the display of a conference participant's status, for example, when the participant reconnected, for the straightforward reason "to enable users to know the activity status of the participants." Final Act. 9. Appellant does not specifically explain why the desire of conference participants to know the updated statuses of other participants is an insufficient motivation to combine Kuhlke with the other references. *See* Appeal Br. 20–21.

Thus, Appellant does not persuade us of error in the Examiner's obviousness rejection of dependent claim 4. Accordingly, we affirm the Examiner's obviousness rejection of dependent claim 4, as well as dependent claims 8, 14, 18, 22, and 26 not separately argued with particularity. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

For the reasons discussed above, we conclude that claims 1, 3–11, 13–19, and 21–26 are obvious in view of the cited prior art. We therefore affirm the Examiner's rejections of claims 1, 3–11, 13–19, and 21–26.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1, 3, 5–7, 9–11, 13, 15–17, 19, 21, 23–25	103	DelHoyo, Howard, Mikan, Ramanathan	1, 3, 5–7, 9–11, 13, 15–17, 19, 21, 23–25	
4, 8, 14, 18, 22, 26	103	DelHoyo, Howard, Mikan, Ramanathan, Kuhlke	4, 8, 14, 18, 22, 26	
Overall Outcome			1, 3–11, 13–19, 21–26	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

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