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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ZHIBIN WU, VINCENT D. PARK, and JUNYI LI, CHESTER

Appeal 2018-002312
Application 13/954,764
Technology Center 2400


MORGAN, Administrative Patent Judge.

DECISION ON APPEAL

STATEMENT OF THE CASE

Introduction

This is an appeal under 35 U.S.C. § 134(a) from the Examiner’s Final Rejection of claims 1–36. Claims 37–59 are canceled. Appeal Br. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

1 Appellant is the applicant, Qualcomm Incorporated, identified in the Appeal Brief as the real party in interest. Appeal Br. 2.
Invention

The Specification discloses management of a multimedia broadcast multicast service (MBMS) that includes the use of a peer discovery signal that includes an identifier of the MBMS. Abstract.

Illustrative Claim (key limitations emphasized)

1. A method for managing a multimedia broadcast multicast service (MBMS), comprising:
   receiving content of an MBMS while operating in a coverage area of a base station;
   sensing a transition to operate outside the coverage area of the base station; and
   broadcasting a peer discovery signal to request a relay of the content of the MBMS, the peer discovery signal comprising an identifier of the MBMS.

Rejections

First Grounds:


Second Grounds:


The Examiner alternatively rejects claims 7, 18, and 29 under 35 U.S.C. § 103 as being unpatentable over HTC, Oprescu-Surcobe, and WiMAX. Final Act. 9.

FIRST GROUNDS

Findings and Contentions

3GPP discloses a nine-step process for user equipment to receive a broadcast on a downlink via a ProSe UE-to-Network (user equipment to network) relay. This process is illustrated in 3GPP Figure 6.3.11.2.2–1, reproduced below:
3GPP Figure 6.3.11.2.2–1 is a sequence or event diagram variation depicting different devices or entities, distributed horizontally, with steps for message exchanges or interactions among the device distributed vertically such that earlier messages or interactions are depicted above later messages or interactions. The devices included in this diagram include user equipment (UE) and a ProSe UE-to-Network (UE-to-NW) relay. 3GPP 154. In steps one (“Discovery Procedure”) and two (“Direct connection establishment (IP address allocated)”), the user equipment “establishes a connection to the ProSe UE-to-Network Relay.” Id. Starting from step six (“Activate MBMS Service (TMGI, . . .)”), the user equipment identifies the TMGI (temporary
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mobile group identifier) “corresponding to the eMBMS service . . . signaling to the ProSe UE-to-Network Relay . . . the TMGIs of the services [the user equipment] wants to start receiving.” Id. at 154–55.

In rejection claim 1 as obvious, the Examiner finds that the message sent in step 6 of this process—the Activate MBMS Service step—is a broadcast peer discovery signal comprising an identifier of the MBMS. Final Act. 3. The Examiner proffers that “the term ‘peer discovery signal’ is just a peer signal sent from the UE to the relay node . . . and therefore the 3GPP’s ‘activate MBMS service’ signal reads on the claimed ‘a peer discovery signal’ since both signals’ functionality are the same.” Ans. 14.

Appellant contends the Examiner erred “because 3GPP sends the ‘Activate MBMS Service’ message after its discovery procedure has ended, [thus] 3GPP fails to disclose or suggest broadcasting ‘a peer discovery signal’” comprising an identifier of the MBMS as recited in claim 1. Appeal Br. 11.

Analysis

We agree with Appellant the Examiner erred. Broadcasting a peer discovery signal as claimed and illustrated in the Specification does not include all peer communications as suggested by the Examiner. See Ans. 14. Rather, the claimed broadcasting of a peer discovery signal represents broadcasting a signal prior to the establishment of direct peer-to-peer communications. See Spec. ¶¶ 52–53, Fig. 3. Appellant correctly notes the Activate MBMS Service step of 3GPP occurs after the discovery procedure. Appeal Br. 11; see also 3GPP 354–55. The user equipment and the ProSe UE-to-Network relay are directly connected before the Activate MBMS Service step, thus obviating the need to broadcast a peer discovery signal to
establish the connection. See 3GPP 354–55. The Examiner’s findings, therefore, do not show that sending the Activate MBMS Service message of 3GPP teaches or suggests broadcasting a peer discovery signal containing the TMGI information of the Activate MBMS Service message. Moreover, the Examiner does not present persuasive findings showing that it would have been obvious to modify the Discovery Procedure step of 3GPP to include an identifier of the MBMS in a broadcast peer discovery signal in the manner claimed.

Accordingly, we do not sustain the Examiner’s 35 U.S.C. § 103 rejection, based on 3GPP, of claim 1, and claims 2–6, 8–17, 19–28, and 30–36, which contain the same or similar recitations. The Examiner also does not show that WiMAX cures the noted deficiency of 3GPP. Therefore, we also do not sustain the Examiner’s 35 U.S.C. § 103(a) rejection, based on the combination of 3GPP and WiMAX, of claims 7, 18, and 29.

SECOND GROUNDS
Findings and Contentions

In alternatively rejecting claim 1 as being obvious over HTC and Oprescu-Surcobe, the Examiner finds that the HTC relay discovery function teaches or suggests broadcasting a peer discovery signal. Final Act. 6 (citing HTC 1). The Examiner relies on inclusion of a TMGI (which includes an MBMS Service ID) in RRCConnectionRequest message 412 in Oprescu-Surcobe to teach or suggest use of a TMGI. Final Act. 6 (citing Oprescu-Surcobe ¶ 46). The Examiner concludes “it would have been obvious to . . . one [of] ordinary skill in the art . . . to use the teaching of Oprescu in[] the method/apparatus of HTC for the purpose of at least
identifying the correct MBMS for relaying.” Final Act. 6–7; see also Ans. 19.

Appellant contends the Examiner erred because Oprescu-Surcobe “does not indicate that ‘request [412]’ is a signal that is broadcast, sent, or otherwise communicated for peer discovery. Rather, Oprescu’s ‘request [412] for an LTE [long term evolution] connection’ is to set up an LTE connection for an upcoming new MBMS media transmission from one UE to another UE.” Appeal Br. 16 ([412] alterations in original) (citing Oprescu-Surcobe ¶¶ 50, 53, 54).

Analysis

We agree with Appellant, the Examiner’s findings do not show that the combination of HTC and Oprescu-Surcobe teaches or suggests broadcasting a peer discovery signal comprising an identifier of the MBMS. The Examiner relies on HTC to teach or suggest broadcasting a peer discovery signal and on the contents of Oprescu-Surcobe’s RRCConnectionRequest message 412 to teach or suggest a message comprising an identifier of the MBMS. Final Act. 6 (citing HTC 1; Oprescu-Surcobe ¶ 46). However, the Examiner’s proffered reason for why it would have been obvious to an artisan of ordinary skill to modify HTC’s teaching or suggestion of broadcasting a peer discovery signal to include contents from Oprescu-Surcobe’s RRCConnectionRequest message 412 is conclusory. See Final Act. 6–7; Ans. 19. In particular, the Examiner fails to provide persuasive findings or explanation showing the relevance of Oprescu-Surcobe’s RRCConnectionRequest, or the contents thereof, to peer discovery.
Accordingly, we do not sustain the Examiner’s 35 U.S.C. § 103 rejection, based on the combination of HTC and Oprescu-Surcube, of claim 1, and claims 2–6, 8–17, 19–28, and 30–36, which contain the same or similar recitations. The Examiner also does not show that WiMAX cures the noted deficiency of HTC and Oprescu-Surcube. Therefore, we also do not sustain the Examiner’s 35 U.S.C. § 103(a) rejection, based on the combination of HTC, Oprescu-Surcube, and WiMAX, of claims 7, 18, and 29.

DECISION

We reverse the Examiner’s decision rejecting claims 1–36.

REVERSED