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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SATYAJIT ROY and
HANNY KADRICHU[1]

Appeal 2018-004892
Application 14/580,671
Technology Center 2400

Before JASON V. MORGAN, ERIC B. CHEN, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

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 1–25. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] Appellant is the Applicant and real party in interest, Hughes Network Systems, LLC. Appeal Br. 1.

Invention

The Specification discloses a bandwidth allocation manager that "can employ smart admission techniques to admit new terminals based upon the available bandwidth capacities of TDMA [(time division multiple access)] inroute channels including committed information rate (CIR) bandwidth requirements of already admitted terminals and current and CIR bandwidth requirements of the new terminals." Abstract. In particular, the bandwidth allocation manager "[a]ttempts . . . to fully load a first TDMA inroute channel before providing admission to a second TDMA inroute channel." *Id.* This is accomplished by admitting a terminal to "the channel capable of admitting the terminal and having the least available bandwidth capacity." Spec. ¶ 4.

Illustrative Claim (*key limitations emphasized*)

1. A method, comprising:

determining available bandwidth capacity of each channel in a network;

determining bandwidth requirements of a terminal seeking admission to the network;

determining all channels in the network that are capable of admitting the terminal based on their respective bandwidth capacity and the bandwidth requirements of the terminal;

selecting the channel capable of admitting the terminal and having the least available bandwidth capacity; and

admitting the terminal to the selected channel.

Rejection

The Examiner rejects claims 1–25 under 35 U.S.C. § 103 as being unpatentable over Agarwal (WO 2010/054394 A2; published May 14, 2010)

and Singh et al. (US 2008/0240146 A1; published Oct. 2, 2008) ("Singh"). Final Act. 5–12.

ANALYSIS

Claim 1 is directed to a method that, as part of the process for admitting a terminal, selects "the channel capable of admitting the terminal and having the least available bandwidth." That is, the method requires selection—from among all the channels with sufficient available bandwidth to meet bandwidth requirements of the terminal—of the channel with the smallest amount of available bandwidth. *See* Spec. ¶ 40, Fig. 2. This serves to "seek a 'best fit' . . . by trying to admit new terminals in such a manner that . . . channels having capacity are filled as close to capacity as possible before considering admission to another . . . channel." *Id.* ¶ 43.

The Examiner initially rejects claim 1 by finding that Agarwal's dynamic resource allocation in a satellite communication system discloses most of the claim recitations (*see* Final Act. 5), but fails to "explicitly teach selecting the channel capable of admitting the terminal and having the least available bandwidth capacity" (*id.* at 6). The Examiner, thus, relies on Singh's selection of a low rate channel when a device requesting bandwidth cannot use a high rate channel to render obvious modifying Agarwal to include this feature. *Id.* (citing Singh ¶ 7).

Appellant contends, and we agree, that Singh's cited teachings are not relevant to the disputed recitation. Appeal Br. 14–15. Singh does not select a channel based on the channel having "the least available bandwidth capacity." At best, Singh selects a type of channel that has the highest rate useable by a device requesting bandwidth. Singh ¶ 7. This would be a low rate channel when the device requesting bandwidth is not able to use a high

rate channel, but in that case Singh merely discloses "selecting one of the low rate channels" to satisfy the request for bandwidth without specifically selecting the low rate channel with the least available bandwidth capacity. *Id.* Therefore, we agree with Appellant that the Examiner erred in relying on Singh to teach or suggest "selecting the channel capable of admitting the terminal and having the least available bandwidth capacity," as recited in claim 1.

In response to Appellant's arguments, the Examiner does not provide additional findings showing that Singh teaches or suggests this recitation. Rather, the Examiner determines that "the phrase 'capable of' recited in [the] limitation[] '. . . selecting the channel **capable of** admitting the terminal and having the least available bandwidth capacity' [is] not [a] positively recited claim limitation." *Id.* at 3 (citing MPEP § 2111.04). That is, the Examiner interprets the disputed recitation as merely reflecting an intended use of the selected channel and, thus, not being entitled to patentable weight.

Appellant contends the Examiner erred because the "'capable of' [limitation] as used in [claim 1] is neither an optional nor a contingent clause." Reply Br. 3 (citing MPEP § 2111.04). Rather, Appellant persuasively argues, the disputed recitation reflects characteristics of a channel such that "of those channels having the requisite characteristic, i.e., having available bandwidth to support terminal bandwidth requirements, the channel that has the least available capacity is selected." Reply Br. 4.

We agree with Appellant that the recited properties of the channel to select are entitled to patentable weight. The phrase "capable of," as used in the disputed recitation, is directed to filtering out channels that do not have

sufficient available bandwidth to admit the terminal. *See, e.g.*, Spec. ¶ 40 ("[A]ll channels in a network that are capable of admitting the terminal based on their respective bandwidth capacities and the bandwidth requirements of the terminal are determined."). The next part of the disputed recitation, "having the least available bandwidth capacity," is a separate characteristic that is also used to determine which channel to select from among remaining channels—those channels having sufficient capacity to admit the terminal. *See id.* ("[T]he channel capable of admitting the terminal that has the least available bandwidth capacity is selected.").

The Examiner's findings do not show that Agarwal teaches or suggest using both of these channel characteristics (i.e., identifying the channel with the least available bandwidth capacity that also has sufficient available bandwidth capacity to admit the terminal) in making a channel selection. *See* Ans. 3–6. Therefore, we agree with Appellant that the Examiner's findings do not show that Agarwal, either alone or in combination with Singh, teaches or suggests "selecting the channel capable of admitting the terminal and having the least available bandwidth capacity," as recited in claim 1.

Accordingly, we do not sustain the Examiner's 35 U.S.C. § 103 rejection of claim 1, and claims 2–25, which recite similar recitations.

DECISION

We reverse the Examiner's decision rejecting claims 1–25.

REVERSED