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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LINEX TECHNOLOGIES, INC.
Patent Owner and Appellant

Appeal 2016-007605
Reexamination Control 90/013,418
United States Patent 6,493,377 B2
Technology Center 3900

Before JAMES T. MOORE, JOHN A. JEFFERY, and JENNIFER L. McKEOWN, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. §§ 134 and 306 the Examiner's decision to reject claims 1–15, 22–29, and 32–37.[1] We have jurisdiction under 35 U.S.C. §§ 134 and 306.

We affirm.

STATEMENT OF THE CASE

This proceeding arose from a request for *ex parte* reexamination filed on December 12, 2014 of United States Patent 6,493,377 B2 ("the '377 patent"), issued to Schilling et al. on December 10, 2002.

The '377 patent describes a wireless distributed network for reducing power and power variations when transmitting packets having spread-spectrum modulation. Specifically, the system includes remote stations and nodes, where a node's spread-spectrum transceiver communicates with the remote stations over radio waves. *See generally* Abstract; col. 2, l. 20 – col. 3, l. 22. Claim 1 is illustrative of the invention and is reproduced below:

> 1. A distributed network, spread-spectrum system, comprising:
>
> a plurality of remote stations;
>
> a plurality of fixed nodes forming the distributed network for covering a particular geographic area, the plurality of fixed

[1] Although Appellant indicates that claims 1–4, 10, 22, and 28–37 stand finally rejected, the Examiner nevertheless indicates that claims 1–15, 22–29, and 32–37 are finally rejected. *Compare* App. Br. 2 *with* Final Act. 1, 8; Ans. 2. Because the Examiner does not indicate that any ground of rejection is withdrawn and reiterates on page 2 of the Answer that claims 1–15, 22–29, and 32–37 are rejected, we presume that these claims are so rejected.

nodes including a hub node, each fixed node covering a micro-cell having a radius less than one mile;

each fixed node including, a plurality of spread-spectrum transceivers for communicating, using packets having spread-spectrum modulation, over radio waves, with the plurality of remote stations, each packet having a source address and a destination address;

a particular remote station of the plurality of remote stations being capable of accessing, using radio waves, a first fixed node in the distributed network, employing traffic information sent by the first fixed node, and sending one or more packets to the first fixed node thereby using minimum power;

a store-and-forward subsystem, coupled to the spread-spectrum transceiver, for storing and forwarding one or more packets to and from the remote station, and for storing and forwarding the one or more packets to and from another fixed node in the plurality of fixed nodes;

a flow-control subsystem, coupled to the store-and-forward subsystem, for controlling the store-and-forward subsystem, to store each packet arriving at the spread-spectrum transceivers, said flow-control subsystem communicating traffic information between each of the fixed nodes in the plurality of fixed nodes, with the traffic information including traffic density at each of the nodes, said flow-control subsystem, responsive to the traffic information and to a packet having the destination address to the hub node, for routing the packet through appropriate nodes to the hub node, said flow-control subsystem, responsive to the traffic at each fixed node, each packet having a destination address to a first recipient node, for transmitting the packet from the hub node to an appropriate node, routing the pack.et to the first recipient node, said flow-control subsystem, responsive to the traffic congestion and to a plurality of packets having voice data, for routing the plurality of packets through a path in the plurality of

> fixed nodes to ensure that the plurality of packets arrive sequentially; and
>
> said hub node, responsive to an information packet arriving from a central office, for routing the information packet to a second recipient node.

RELATED PROCEEDINGS

This appeal is said to be related to various proceedings. First, on page 1 of the Appeal Brief, Appellant informs us of two civil proceedings and an *ex parte* reexamination proceeding (Control No. 90/013,627) for U.S. Patent 7,176,503 B2 which is a continuation of the '377 patent as noted on page 13 of the Brief. No decision has been rendered in the '627 appeal.

On page 15 of the Appeal Brief, Appellant also refers to three other related *ex parte* reexamination proceedings, namely Control Numbers 90/013,002 ("'002 proceeding"); 90/013,001 ("'001 proceeding"); and 90/013,400 ("'400 proceeding"). The '002 proceeding involves the '377 patent, and the latter two proceedings involve the '503 patent. App. Br. 15. Reexamination certificates have issued in these three proceedings.

THE REJECTION

The Examiner rejected claims 1–15, 22–29, and 32–37 under 35 U.S.C. § 103(a) as unpatentable over RICOCHET TECHNOLOGY OVERVIEW, http://web.archive.org/web/19991012055521/http:/www.metricom.com/individuals/techover.htm ("Ricochet"), Young (US 5,719,868; Feb. 17, 1998), Robert E. Kahn et al., *Advances in Packet Radio Technology*, 66 IEEE PROC. 1468, 1468–78 (1978) ("Kahn"), and Michael B. Pursley et al., *Routing for Multimedia Traffic in Wireless Frequency-Hop*

Communication Networks, 17 IEEE J. SELECTED AREAS IN COMM. 784, 784–92 (1999) ("Pursley 2").[2] Final Act. 8–56.[3]

SUBSTANTIAL NEW QUESTION OF PATENTABILITY (SNQ)

In the Reply Brief, Appellant argues that an SNQ was not raised in this proceeding because, among other things, Ricochet was cited as a primary reference in the '400 proceeding along with Kahn and Young, and Ricochet was found to not use traffic information at nodes to route signals through the system. Reply Br. 2–5, 33–34. Appellant further contends that no SNQ exists because the prior art of record in the '002 proceeding was found to not anticipate the two node-based limitations noted on page 11 of the Reply Brief, and that ostensibly no prior art added in this proceeding contributes any information sufficient to modify these earlier findings. *Id.* at 11–12. Moreover, Appellant argues that because points were made in the '001 proceeding that the cited references did not disclose plural transceivers at each node, there is allegedly no SNQ in this proceeding. *Id.* at 27–28. Appellant adds that because the point was made in the '002 proceeding that none of the cited references accessed and selected a neighboring node based on traffic information as claimed, there is allegedly no SNQ in this proceeding. *Id.* at 31–32.

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[2] Although another reference to Pursley ("Pursley 1") is cited in this proceeding (Ans. 2), only Pursley 2 is cited in the rejection.

[3] Throughout this opinion, we refer (1) the Final Rejection mailed October 16, 2015 ("Final Act."); (2) the Appeal Brief filed March 28, 2016 ("App. Br."); (3) the Examiner's Answer mailed May 4, 2016 ("Ans."); and (4) the Reply Brief filed July 5, 2016 ("Reply Br.").

These arguments are unavailing. First, Appellant's SNQ arguments are raised for the first time in the Reply Brief and are, therefore, deemed to be waived as untimely. Under 37 C.F.R. § 41.41(b)(2),[4] we do not consider any argument raised in the Reply Brief which (1) was not raised in the Appeal Brief, or (2) is not responsive to an argument raised in the Examiner's Answer, unless good cause is shown—an exception that is inapplicable here. Therefore, Appellant's SNQ arguments are improper for that reason alone.

Second, MPEP § 2274(VI) requires that Appellant request reconsideration of the SNQ issue before the Examiner before we can review that issue—a requirement that has not been satisfied here. Although this section provides two non-limiting examples of when this reconsideration can be requested, namely in a patent owner's statement or response under 37 C.F.R. §§ 1.530 and 1.111, respectively, this request must be nevertheless made before the Appeal Brief. *See* § 2274(VI) (requiring that a patent owner *first* request consideration before the Examiner, and *then* seek review of the Examiner's SNQ determination before the Board); *see also id.* (requiring a patent owner identify in its Appeal Brief the communication in which the owner first requested reconsideration of the SNQ before the Examiner). Therefore, even if Appellant's Appeal Brief raised the SNQ issue for the first time in this proceeding—which it does not because this

[4] This rule applies to this *ex parte* reexamination appeal as well as *ex parte* appeals. *See* MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) § 2273 (9th ed. Rev. 07.2015, Nov. 2015).

issue was raised for the first time in the Reply Brief—such an argument would still be untimely and, therefore, not before us.

That is not to say, however, that despite an Appellant's not complying with the procedural mandates of MPEP § 2274(VI), the Board cannot review the Examiner's SNQ determination that is so facially improper that no reasonable mind could accept it such that there is no substantial evidence to support the determination. *See In re Gartside*, 203 F.3d 1305, 1312 (Fed. Cir. 2000). One such circumstance would be when it is indisputably clear from the record that a patentability question deemed as an SNQ was already decided in the original examination, for no procedural rule can enable reexamination under those circumstances. *See In re Recreative Technologies Corp.*, 83 F.3d 1394, 1396–98 (Fed. Cir. 1996).

But that is not the case here. Although there is some overlap in the references cited in the above-noted reexamination proceedings identified in the Reply Brief that are said to preclude an SNQ (*see* Reply Br. 2–5, 11–12, 27–28, 31–34), the rejections are not the same, for they involve different claims, and rely on different evidence, findings, and conclusions. Moreover, these rejections are based on different combinations of prior art references—a distinction that further establishes that these rejections constitute different grounds of rejection despite citing identical references. *See In re McDaniel*, 293 F.3d 1379, 1384 (Fed. Cir. 2002) (noting that obviousness rejection that added a prior art reference (Grot) to a combination of other prior art references did not share a common ground of rejection with claims rejected as obvious over those other references).

As the Examiner explained during prosecution, the Ricochet reference is presented in a new light in this proceeding, namely with respect to nodes in a distributed network that (1) cover a microcell having a radius of less than one mile, and (2) transmit traffic information allowing a remote station to access a first node in a distributed network using minimum power. *See* Office Action Ordering Reexamination 13–15 (mailed Feb. 12, 2015). Because of these new and non-cumulative teachings, as well as those in various other cited prior art references, an SNQ was deemed to be raised and, therefore, reexamination was ordered. *Id.* at 7–16. On this record, we see no error in these findings and conclusions.

Accordingly, we are unpersuaded of error in the Examiner's SNQ determination even if the issue was before us—which it is not.

THE OBVIOUSNESS REJECTION

The Examiner finds that Ricochet discloses many recited elements of claim 1 except for (1) each fixed node including plural transceivers, and (2) each packet having a source and destination address, but cites Young and Kahn, respectively, for teaching these features. Final Act. 8–13. The Examiner also cites Pursley 2 for teaching that (1) traffic information includes traffic density, and (2) packets carry voice traffic. *Id.* at 12–13. Based on these collective teachings, the Examiner concludes that the claim would have been obvious. *Id.* at 8–13.

Appellant argues that the cited prior art does not disclose the recited distributed network spread-spectrum system that uses plural spread-spectrum transceivers at each fixed node as claimed. App. Br. 16. According to

Appellant, skilled artisans would not have combined the cited references as the Examiner proposes because (1) the goals of those references and the '377 patent differ; (2) the proposed combination requires redesigning Ricochet's system, thus greatly impacting Ricochet's principle of operation; and (3) the cited references are non-analogous art. App. Br. 16–44; Reply Br. 5–33.

ISSUES

(1) Under § 103, has the Examiner erred in rejecting claim 1 by finding that Ricochet, Young, Kahn, and Pursley 2 collectively would have taught or suggested a distributed network spread-spectrum system where each fixed node includes plural spread-spectrum transceivers?

(2) Is the Examiner's proposed combination of these references supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion? This issue turns on whether the proposed combination would destroy Ricochet's principle of operation, and whether the cited references constitute analogous art.

ANALYSIS

We begin by noting that this dispute involving the Examiner's obviousness rejection turns solely on the two issues presented in our issue statement. As indicated previously, in addition to Appellant's combinability arguments, only one limitation was contested in the Appeal Brief, namely that each fixed node includes plural spread-spectrum transceivers. *See* App. Br. 16. *Accord* Ans. 3–4 (responding to this argument). Accordingly,

Appellant's arguments presented for the first time in the Reply Brief that the cited references allegedly fail to show a *different* limitation, namely a remote station that can select and access a first fixed node based on traffic information (Reply Br. 11, 32), are deemed to be waived as untimely and are, therefore, not before us. *See* 37 C.F.R. § 41.41(b)(2).

Turning to the rejection, the Examiner acknowledges that Ricochet's distributed network spread-spectrum system includes a single transceiver at each fixed node, but lacks plural transceivers at each fixed node. Final Act. 9; Ans. 3. To cure this deficiency, the Examiner cites Young's teaching of using radios with multiple transmitters and receivers, including transceivers. Final Act. 9 (citing Young, col. 2, ll. 22–25); Ans. 3–4. In light of this teaching, the Examiner concludes that providing plural transceivers in lieu of a single transceiver at a fixed node in Ricochet would have been obvious to, among other things, increase the number of communications channels—a fact further evidenced by the Matsumoto reference. Ans. 4–5.[5]

We see no error in this position. Ricochet's spread-spectrum, packet-switching system uses a mesh architecture where radio transceivers, called "Microcell Radios," are typically mounted on street lights or utility poles, and placed every quarter to half mile in a checkerboard pattern. Ricochet, E4, E25.[6] Notably, each radio employs 162 channels—each of which is 160 kHz wide—over which transmissions are "spread." *Id.*

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[5] Although this reference was not cited in the rejection, it is nonetheless cited as evidence of knowledge within the level of ordinary skill in art at the time of the invention. Ans. 4.

[6] Although the Ricochet reference consists of various exhibits labeled "B5.1" to "B5.9," the reference is paginated consecutively from pages "E1"

Given this limited number of channels for a particular transceiver, we see no reason why additional transceivers could not be provided in Ricochet as the Examiner proposes to, among other things, expand the number of channels, particularly given Young's teaching in column 2, lines 25 and 26 that radios containing multiple transmitters and receivers were known in the art. Even assuming, without deciding, that Young does not mention these multi-transceiver radios *again* either in the cited reference or in later patents as Appellant contends (Reply Br. 16, 21), such silence does not obviate the fact that the reference nevertheless teaches that multi-transceiver radios are known in the art, even if this teaching appears only once in the reference.

And even assuming, without deciding, that Young does not enable any disclosed embodiment using multiple transmitters as Appellant contends (*id.* at 17–19), that alone is not dispositive, for it is well settled that published subject matter is prior art for all that it teaches in obviousness determinations—even if the reference itself is not enabling. *See In re Antor Media Corp.*, 689 F.3d 1282, 1292 (Fed. Cir. 2012) (citing *Symbol Techs. Inc. v. Opticon Inc.*, 935 F.2d 1569, 1578 (Fed. Cir. 1991)). In any event, a reference's teachings are not considered in a vacuum, but rather considered together with the knowledge of ordinarily skilled artisans. *See In re Paulsen*, 30 F.3d 1475, 1480–81 (Fed. Cir. 1994). Cited references, then, do not have to explain every detail to render a claimed invention obvious since the reference is speaking to those skilled in the art. *Id.* at 1480.

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to "E27." For clarity, we refer to Ricochet's pages consistent with this numbering scheme.

Here, we see no error in the Examiner's reliance on Young for the limited purpose for which it was cited, namely that radios containing multiple transceivers were known in the art, and that providing multiple transceivers in lieu of a single transceiver in each of Ricochet's fixed nodes would have been obvious to, among other things, increase the number of channels—a predictable result. Ans. 4–5. Appellant's arguments regarding Young's individual shortcomings in this regard (*see* Reply Br. 15–21) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). That Young may not pertain to spread-spectrum systems as Appellant contends (Reply Br. 33) is of no consequence here given the limited purpose for which Young was cited, namely to show that radios containing multiple transceivers were known in the art, and that providing known multi-transceiver radios in lieu of single-transceiver radios in Ricochet's spread-spectrum system would have been obvious. Ans. 4–5.

Nor are we persuaded that the proposed combination would destroy Ricochet's principle of operation as Appellant contends (App. Br. 16–17), or otherwise render Ricochet unsuitable for its intended purpose. *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Appellant contrasts Ricochet's concatenating the path from the source to the destination via a central "Name Server" with Young's establishing a single direct path at each node to prevent interference. App. Br. 16–17. Appellant also asserts that Ricochet's terminals access multiple fixed nodes, but Young's terminals are co-located and mobile. *Id.* at 17. Based on these differences, Appellants

reason that the proposed combination would eliminate Ricochet's core function where terminals and nodes are separate entities. *Id.*

But as the Examiner indicates, the Examiner does not propose to physically combine Ricochet's nodes with those of Young, but rather merely relies on Young for a limited purpose, namely to show that radios containing multiple transceivers were known in the art, and that providing known multi-transceiver radios in Ricochet's spread-spectrum system would have been obvious. Ans. 4–5. It is well settled that "a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements." *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (citations omitted). Nor is the test for obviousness whether a secondary reference's features can be bodily incorporated into the structure of the primary reference. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *Id.* And here, the Examiner's proposed combination predictably uses prior art elements according to their established functions to yield a predictable result. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007).

Lastly, we see no error in the Examiner's findings that the cited references constitute analogous art. Prior art is analogous if it is (1) from the same field of endeavor as that of Appellant's invention regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Here, the Examiner finds that the cited references are in the same field of endeavor because each cited reference relates to (1) wireless

communication in a distributed network of nodes, and (2) transmission of packets over the network. Ans. 5–7. The Examiner also finds that the cited references are reasonably pertinent to Appellant's problems pertaining to (1) reducing power levels; (2) increasing network capacity; and (3) creating a flexible and dynamically adaptable network. *Id.* at 7–10. Despite Appellant's arguments to the contrary (App. Br. 17–44; Reply Br. 7–11), Appellant does not persuasively rebut the Examiner's findings in this regard (Ans. 5–10) which we adopt as our own.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 2–15, 22–29, and 32–37 not argued separately with particularity.

CONCLUSION

The Examiner did not err in rejecting claims 1–15, 22–29, and 32–37 under § 103.

DECISION

The Examiner's decision rejecting claims 1–15, 22–29, and 32–37 is affirmed.

Requests for extensions of time in this *ex parte* reexamination proceeding are governed by 37 C.F.R. § 1.550(c). *See* 37 C.F.R. § 41.50(f).

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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

cc: Third Party Requester

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