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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/866,756	11/08/2010	Kari Juhani Niemela	863.0225.U1(US)	4242
29683	7590	12/09/2016	EXAMINER	
HARRINGTON & SMITH 4 RESEARCH DRIVE, Suite 202 SHELTON, CT 06484-6212			CROMPTON, CHRISTOPHER R	
			ART UNIT	PAPER NUMBER
			2463	
			MAIL DATE	DELIVERY MODE
			12/09/2016	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KARI JUHANI NIEMELA and OLLI JUHANI PIIRAINEN

Appeal 2015-007481
Application 12/866,756
Technology Center 2400

Before CAROLYN D. THOMAS, JEFFREY S. SMITH, and
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–10, 13–19, 21–29, and 32–37, which are all the claims pending in the application. Claim 20 is canceled. The rejections of claims 11, 12, 30, and 31 have been withdrawn. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Representative Claims

1. A method comprising:
processing data comprising a plurality of resource units,
wherein each resource unit comprises two portions of
user data, and
wherein, in a time domain, a plurality of users are
associated with subsequent resources units and
associated with an original combination of users in
the resource units; and
reordering or shuffling portions of user data relating to a
particular user of the plurality of users between the
subsequent resource units such that different
combinations of user data relating to the particular user
of the plurality of users are transmitted in the subsequent
resource units, wherein the original combination of users
in the resource units is not maintained over the time
domain.

Prior Art

Ranta-Aho	US 2008/0117873 A1	May 22, 2008
Tsai	US 2012/0008617 A1	Jan. 12, 2012

Examiner's Rejections

Claims 1–10 and 13–17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tsai.

Claims 18, 19, 21–29, and 32–37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsai and Ranta-Aho.

ANALYSIS

We adopt the findings of fact made by the Examiner in the Final Rejection and Examiner's Answer as our own. We concur with the conclusions reached by the Examiner for the reasons given in the Examiner's Answer. We highlight the following for emphasis.

Section 102 rejection of claims 1–10 and 13–17

Claim 1 recites “each resource unit comprises two portions of user data.” The Examiner finds the scope of this term encompasses a time slot having at least two portions of user data. *See* Ans. 5. Appellants contend there is a difference between time slots and resource units. Reply Br. 7. According to Appellants, the claim term “resource unit,” when read in light of the Specification, means two portions of user data for each time period. Reply Br. 8.

Appellants' Specification discloses that each resource unit is, among other things, a slot or a frame. Spec. 5:1–9. Appellants' Specification also discloses that “[f]or each radio resource unit (i.e. for each given frame or time period of the TDMA slot) two combinations of portions of user data . . . take turns.” Spec. 6:31–34. Thus, Appellants' Specification discloses that, for each resource unit (or time period), two combinations of portions of user

data take turns. We find the broadest reasonable interpretation of the claim term “resource unit comprises two portions of user data,” when read in light of Appellants’ Specification, encompasses at least a time slot comprising two or more portions of user data.

The Examiner finds that Figure 4 of Tsai shows time slots, where each time slot contains portions of user data for multiple users. Ans. 5. We agree with the Examiner that this disclosure of Tsai describes “each resource unit comprises two portions of user data” within the meaning of claim 1.

Claim 1 also recites “reordering or shuffling portions of user data relating to a particular user of the plurality of users between the subsequent resource units.” The Examiner finds the scope of reordering or reshuffling portions of user data between subsequent resource units encompasses assigning user data to time slots in a pseudo-random way, or assigning by utilizing different frequency hopping sequences. Ans. 7–8. Appellants contend the claimed shuffling is not the same as randomness. Reply Br. 9–10. Appellants’ Specification does not provide a definition of “reordering or shuffling” that excludes a pseudo-random process of assigning user data to time slots, or that excludes frequency hopping. *See* Ans. 8 (citing Spec. 7:24–8:7).

The Examiner finds Figure 4 and Paragraph 26 of Tsai disclose assigning portions of user data for each user to different time slots using frequency hopping in a pseudo-random way. Ans. 7–8. We agree with the Examiner that this describes “reordering or shuffling portions of user data relating to a particular user of the plurality of users between the subsequent resource units” within the meaning of claim 1.

We sustain the rejection of claim 1 under 35 U.S.C. § 102. Appellants do not present arguments for separate patentability of claims 2, 3, 6–10, and 13–17, which fall with claim 1.

Section 102 rejection of claims 4 and 5

Claim 4 recites “portions of user data are originally assigned to resource units *according to an interleaving pattern.*” Emphasis added. The Examiner finds the scope of this claim term encompasses sending data for a third user between data from a first user and a second user as shown by resource unit T0 in Figure 4 of Tsai. Ans. 9. Appellants contend Tsai does not consider interleaving, because Tsai is not considering an orthogonal sub channel concept which multiplexes two mobile stations on the same radio resource. Reply Br. 11. However, claim 4 does not recite an orthogonal sub channel multiplexing two mobile stations on the same radio resource. *See* Ans. 9.

Appellants’ Specification discloses an example of assigning portions of user data to resource units according to an interleaving pattern, such as a multichannel interleaving pattern as “a pattern may define a half-rate (HR) sub-channel and/or an OSC sub-channel for each portion of user data.” Spec. 3:32–4:3. However, we do not read this non-limiting example into the claim, because a “claim construction must not import limitations from the specification into the claims.” *Douglas Dynamics, LLC v. Buyers Products Co.*, 717 F.3d 1336, 1342 (Fed. Cir. 2013).

Appellants have not provided persuasive evidence or argument to rebut the Examiner’s finding that the scope of “portions of user data are originally assigned to resource units according to an interleaving pattern,”

when read in light of the Specification, encompasses at least sending data for a third user between data from a first user and a second user in a resource unit as disclosed by Figure 4 of Tsai.

Appellants present arguments for the patentability of claim 5 similar to those presented for claim 4 which we find unpersuasive. *See* Reply Br. 11–12. We sustain the rejection of claims 4 and 5 under 35 U.S.C. § 102.

Section 103 rejections of claims 18, 19, 21–29, and 32–37

Appellants present arguments for patentability for claims 18, 19, 21–29, and 32–37 similar to those presented for claims 1–10 and 13–17 which we find unpersuasive. *See* Reply Br. 15–21. Appellants also contend that a person skilled in the art would not combine the teachings of Tsai and Ranta-Aho. Reply Br. 15–16. We disagree with Appellants’ contention for the reasons given by the Examiner on pages 8 and 9 of the Answer.

We sustain the rejections of claims 18, 19, 21–29, and 32–37 under 35 U.S.C. § 103.

DECISION

The Examiner’s rejections of claims 1–10, 13–19, 21–29, and 32–37 are affirmed.

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