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Marian Rudolf

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EXAMINER

KAMARA, MOHAMED A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 13/553,417	Applicant(s) RUDOLF ET AL.	
	Examiner MOHAMED KAMARA	Art Unit 2412	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/24/2013.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 4) ☐ Other: ____. |

DETAILED ACTION

Claims 1-20 are currently pending. Claims 1 and 11 are currently amended.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the service request." There is no antecedent basis for this limitation in the claim. Therefore, it is not clear what is being referred to. Also, the SME being a "layer-independent entity" is not clear, despite being described in the specification as being "off to the side" (see paragraph 0007 of the PGPub). Therefore, the claim is vague and indefinite.

A similar problem exists in claim 11. Claims 2-10 and 12-20 are also rejected for depending from rejected base claims.

Claim Rejections - 35 USC § 103

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-7, 11 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stein A. Lundby (US 2002/0111183 A1) in view of Peter Larsson (US 2002/0172186 A1) & John E. Hoffmann et al (US 2004/0114535 A1).

For Claim 1, Lundby discloses a method (see an optional payload in ¶ 0031, lines 2) of exchanging measurements in wireless communications, the method comprising: receiving a measurement request (see wireless apparatus 200 receives FL PC commands in ¶ 0046, lines 17-19), wherein the measurement request includes a request for a measurement of a parameter (see The FL PC commands provide information containing instructions for power control in ¶ 0046, lines 10-14); transmitting a measurement report (see a corresponding power control command is transmitted in response ... and the base station may use the transmitted power as an indication of

Art Unit: 2412

the channel quality in ¶ 0042, lines 10-13), wherein the measurement report includes the requested measurement of the parameter (see the mobile station measures the SNR in ¶ 0042, lines 7-9). Lundby does not disclose storing the requested measurement of the parameter in a management information base (MIB), and wherein the service request is carried in a transmit power control (TPC) frame. However, Larsson et al. from a similar field of endeavor discloses storing the requested measurement of the parameter (see a transmit power information request in ¶ 0031, lines 4-7) in a management information base (MIB) (see the setting of Beacon TP is determined by IEEE 802.11 management information base, MIB of the node initiating a (I)BSS in ¶ 0089, lines 7-9), and wherein the service request is carried in a transmit power control (TPC) frame (see BEACON TPC, the allowed transmit power level allows domain specific settings. Each station within an (I)BSS uses the allowed domain transmit power when sending a frame containing any of the appropriate IEs in ¶ 0089, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the BEACON TPC taught in Larsson with the system taught in Lundby in order to determine a transmit power setting such that all stations or nodes within an (I)BSS will have a sufficient CIR to be able to receive frames.

Lundby and Larsson fail to disclose that the service request is a service primitive message between a station management entity (SME) and a media access control (MAC) layer management entity (MLME), where the SME is a layer-independent entity. However, Hoffmann et al. from a similar field of endeavor discloses that the service request is a service primitive message (see the SME 800 may cause (i.e., command or request) the MAC layer 805 to return metrics or a table of metrics for multiple beam angles and at least one beacon signal in ¶ 0054, lines 4-7) between a station management entity (SME) and a media access control (MAC) layer

Art Unit: 2412

management entity (MLME) (see the SME 800 is in communication with the MAC layer 805 ...

The SME 800 is a layer-independent entity that may be viewed as a separate management plane or residing "off to the side" from the MAC layer in ¶ 0044, lines 4-11), where the SME is a layer-independent entity. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the station management entity (SME) taught in Hoffmann with the system taught in Lundby and Larsson in order to improve range and data rates for users and increase network efficiency.

For Claim 5, Lundby discloses a method wherein the parameter includes a signal-to-noise indicator (see the mobile station measures the SNR in ¶ 0042, lines 7-9).

For Claim 6, Lundby discloses a method, wherein the parameter includes a received channel power indicator (RCPI) (see the receiver measures the incoming Eb/No in ¶ 0030, lines 4-5).

For Claim 7, Lundby discloses a method wherein the parameter includes a link measurement (see determining a power control decision for the forward link based on the SNR in ¶ 0010, lines 6-8).

For Claim 11, Lundby discloses an access point comprising:

a measurement entity configured to (see a base station apparatus includes a control processor for power control in ¶ 0008, lines 1-3); receive a measurement request (see wireless apparatus 200 receives FL PC commands in ¶ 0046, lines 17-19), wherein the measurement request includes a request for a measurement of a parameter (see The FL PC commands provide information containing instructions for power control in ¶ 0046, lines 10-14); transmit a measurement report (see a corresponding power control command is transmitted in response ... and the base station may use the transmitted power as an indication of the channel quality in ¶ 0042, lines 10-13),

Art Unit: 2412

wherein the measurement report includes the requested measurement of the parameter (see the mobile station measures the SNR in ¶ 0042, lines 7-9). Lundby does not disclose storing the requested measurement of the parameter in a management information base (MIB), and wherein the service request is carried in a transmit power control (TPC) frame. However, Larsson et al. from a similar field of endeavor discloses storing the requested measurement of the parameter (see a transmit power information request in ¶ 0031, lines 4-7) in a management information base (MIB) (see the setting of Beacon TP is determined by IEEE 802.11 management information base, MIB of the node initiating a (I)BSS in ¶ 0089, lines 7-9), and wherein the service request is carried in a transmit power control (TPC) frame (see BEACON TPC, the allowed transmit power level allows domain specific settings. Each station within an (I)BSS uses the allowed domain transmit power when sending a frame containing any of the appropriate IEs in ¶ 0089, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the BEACON TPC taught in Larsson with the system taught in Lundby in order to determine a transmit power setting such that all stations or nodes within an (I)BSS will have a sufficient CIR to be able to receive frames.

Lundby and Larsson fail to disclose that the service request is a service primitive message between a station management entity (SME) and a media access control (MAC) layer management entity (MLME), where the SME is a layer-independent entity, wherein the service request is carried in a transmit power control (TPC) frame. However, Hoffmann et al. from a similar field of endeavor discloses that the service request is a service primitive message (see the SME 800 may cause (i.e., command or request) the MAC layer 805 to return metrics or a table of metrics for multiple beam angles and at least one beacon signal in ¶ 0054, lines 4-7) between a

Art Unit: 2412

station management entity (SME) and a media access control (MAC) layer management entity (MLME) (see the SME 800 is in communication with the MAC layer 805 ... The SME 800 is a layer-independent entity that may be viewed as a separate management plane or residing "off to the side" from the MAC layer in ¶ 0044, lines 4-11), where the SME is a layer-independent entity, wherein the service request is carried in a transmit power control (TPC) frame (see beacon signal received from a second access point in ¶ 0048, lines 6-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the station management entity (SME) taught in Hoffmann with the system taught in Lundby and Larsson in order to improve range and data rates for users and increase network efficiency.

For Claim 15, Lundby discloses an AP, wherein the parameter includes a signal-to-noise indicator (see the mobile station measures the SNR in ¶ 0042, lines 7-9).

For Claim 16, Lundby discloses an AP, wherein the parameter includes a received channel power indicator (RCPI) (see the receiver measures the incoming Eb/No in ¶ 0030, lines 4-5).

For Claim 17, Lundby discloses an AP, wherein the parameter includes a link measurement (see determining a power control decision for the forward link based on the SNR in ¶ 0010, lines 6-8).

5. Claims 2-3, 9-10, 12-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stein A. Lundby (US 2002/0111183 A1) in view of Peter Larsson (US 2002/0172186 A1) & John E. Hoffmann et al (US 2004/0114535 A1) as applied to claims 1 and 11 above, and further in view of Xinxi Diao et al. (US 7,099,674).

Art Unit: 2412

For Claims 2 & 12, Lundby, Larsson and Hoffmann disclose all of the claimed subject matter, with the exception of an absolute value of the requested measurement. However, Diao et al. from a similar field of endeavor discloses an absolute value of the requested measurement (see absolute value in col.5, lines 5-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the absolute value taught in Diao with the system taught in Lundby, Larsson and Hoffmann in order to ensure the quality of the communication.

For Claims 3 & 13, Lundby, Larsson and Hoffmann disclose all of the claimed subject matter, with the exception of a statistical average of the requested measurement. However, Diao et al. from a similar field of endeavor discloses a statistical measurement (see the statistic result of the parameter statistic unit in col.3, lines 1-4) average of the requested measurement (see summing the interference power in col.4, lines 10-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the summing of the interference power in Diao with the system taught in Lundby, Larsson and Hoffmann in order to ensure the quality of the communication.

For Claims 9 & 19, Lundby, Larsson and Hoffmann disclose all of the claimed subject matter, with the exception of requesting for a stored measurement of a parameter. However, Diao et al. from a similar field of endeavor disclose requesting for a stored measurement of a parameter (see storing the calculation results of the former two steps for using in col.3, lines 53-59 or col.6, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the storing of the calculation results taught in Diao with the system taught in Lundby, Larsson and Hoffmann in order to utilize radio resources sufficiently.

Art Unit: 2412

For Claims 10 & 20, Lundby, Larsson and Hoffmann disclose all of the claimed subject matter, with the exception of requesting to perform a new measurement of the parameter. However, Diao et al. from a similar field of endeavor disclose requesting to perform a new measurement of the parameter (see next calculation in col.3, lines 54-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the next calculation taught in Diao with the system taught in Lundby, Larsson and Hoffmann in order to utilize radio resources sufficiently.

6. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stein A. Lundby (US 2002/0111183 A1) in view of Peter Larsson (US 2002/0172186 A1) & John E. Hoffmann et al (US 2004/0114535 A1) as applied to claims 1 and 11 above, and further in view of Jerry D. Burchfiel (US 2004/0092281 A1).

For Claims 4 and 14, Lundby, Larsson & Hoffmann disclose all of the claimed subject matter with the exception of a histogram of values of the parameter over time. However, Burchfiel from a similar field of endeavor discloses a histogram (see histogram in ¶ 0106, lines 1-4) of values of the parameter over time (see over a given period of time in ¶ 0019, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the histogram taught in Burchfiel with the system taught in Lundby, Larsson & Hoffmann in order to permit increased data visibility.

Art Unit: 2412

7. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stein A. Lundby (US 2002/0111183 A1) in view of Peter Larsson (US 2002/0172186 A1) & John E. Hoffmann et al (US 2004/0114535 A1) as applied to claims 1 and 11 above, and further in view of Steven D. Gray (US 20040116112 A1).

For Claims 8 and 18, Lundby, Larsson & Hoffmann disclose all of the claimed subject matter, with the exception of a clear channel assessment (CCA) busy fraction. However, Gray et al. from a similar field of endeavor discloses a clear channel assessment (CCA) busy fraction (see FIG. 3, to provide a basic understanding of what Clear Channel Assessment (CCA) is in ¶ 0051, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Clear Channel Assessment taught in Gray with the system taught in Lundby, Larsson & Hoffmann in order to permit increased mobility communication.

Response to Amendment

8. New rejections, under USC 112 second, have been added as necessitated by applicant's amendments.

Response to Arguments

9. Applicant's arguments filed 06/24/2013 have been fully considered but they are not persuasive. Examiner will respond to applicant's arguments in the rebuttal that follows:

Examiner respectfully disagrees with Applicant's argument that the applied prior art does not disclose or suggest at least " *receiving a service primitive message between a layer-independent SME and a MAC-layer MLME within a TPC frame to request transmission measurements*" as recited in amended Claims 1 & 11.

Art Unit: 2412

The reason being Hoffman discloses that the SME 800 may cause (i.e., command or **request**) the MAC layer 805 to return metrics or a table of metrics for multiple beam angles and at least one beacon signal (see ¶ 0054, lines 4-7). Examples of the metrics include Received Signal Strength Indication (RSSI), Carrier-to-Interference ratio (C/I), Signal-to-Noise ratio (Eb/No), or other suitable measure of the quality of the received signal or signal environment (see ¶ 0029, lines 7-11). Hoffman further discloses that the SME 800 is in communication with the MAC layer 805, and that the SME 800 is a layer-independent entity (see ¶ 0044, lines 4-11).

Lastly, Larsson teaches the use of a BEACON TPC so that the allowed transmit power level allows domain specific settings. Each station within an (I)BSS uses the allowed domain transmit power when sending a frame containing any of the appropriate IEs (see ¶ 0089, lines 1-4).

For at least the foregoing reasons, Applicant's arguments for claims 1-20 are not persuasive.

Accordingly, this rejection is made final.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Malkamaki (US 2004/0097253 A1) is pertinent to communication, using a specific transmission parameter, between a base station and mobile station; Walton et al. (US 7885228 B2) is directed to obtaining an initial SNR estimate for each of multiple transmission channels used to transmit a data stream; and Kim et al (US 2003/0119452 A1) is concerned with transmitting a TPC command if the measured channel quality is less than a preset target channel quality.

Art Unit: 2412

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMED KAMARA whose telephone number is (571)270-5629. The examiner can normally be reached on Monday thru. Thursday 10:00 a.m. to 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW CHRISS can be reached on (571)272-1774. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2412

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMED KAMARA
Examiner
Art Unit 2412

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