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UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte HONG WANG and HUARUI LIANG

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Appeal 2017-010658
Application 13/373,658
Technology Center 2600
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Before MARC S. HOFF, JOHN A. EVANS, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

EVANS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] seeks our review under 35 U.S.C. § 134(a) of the
Examiner's Final Rejection of Claims 1, 2, 4–9, 12–15, 18–22, 25, 26, and
31–34. App. Br. 7. Claims 3, 10, 16, 23, 27–30, and 35–38 are canceled.
Claims Appendix. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.[2]

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[1] We refer to the inventors, collectively, as Appellant. The Appeal Brief
identifies Samsung Electronics Co., Ltd., as the real party in interest. App.
Br. 2.

[2] Rather than reiterate the arguments of Appellant and the Examiner, we

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<div align="center">STATEMENT OF THE CASE</div>

The claims relate to a method for managing base stations. *See* Claims Appendix (independent claims).

<div align="center">INVENTION</div>

Claims 1, 7, 14, and 20 are independent. An understanding of the invention can be derived from a reading of illustrative claim 1, which is reproduced below with some formatting added:

> 1.   A method for managing a plurality of base stations, the method comprises:
>
> receiving type information of the plurality of base stations and information on uplink signal energy of at least one terminal measured by the plurality of base stations;
>
> identifying a base station among the plurality of base stations based on the type information of the plurality of base stations and the information on uplink signal energy of the at least one terminal,
>
> wherein the base station is in a closed state providing no access service to terminals; and
>
> transmitting a message for transitioning the base station from the closed state to an open state to provide the access service to the terminals,

wherein respective type information of respective base station among the plurality of base stations is related to a size of coverage of the respective base station.

Claims Appendix.

References and Rejections[3]

Voltolina	US 2011/0044284 A1	Filed May 28, 2010
Kuningas	US 2011/0201339 A1	Priority Oct. 29, 2008
Breuer	EP 2 056 628 A1	June 5, 2009

The claims stand rejected as follows:

1. Claims 1, 2, 4, 5, 7–9, 12, 14, 15, 18, 20–22, 25, and 31–34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Voltolina and Breuer. Final Act. 4–9.

2. Claims 6, 13, 19, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Voltolina, Breuer, and Kuningas. Final Act. 9–10.

Allowable Subject Matter

Claims 11, 17, and 24 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Final Act. 10.

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[3] The present application is being examined under the pre-AIA first-to-invent provisions. Final Act. 2.

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ANALYSIS[4]

We have reviewed the rejections of claims 1, 2, 4–9, 12–15, 18–22, 25, 26, and 31–34 in light of Appellant's arguments that the Examiner erred. We consider Appellant's arguments as they are presented in the Appeal Brief, pages 13–40.

CLAIMS 1, 2, 4, 5, 7–9, 12, 14, 15, 18, 20–22, 25, AND 31–34:[5]

OBVIOUSNESS OVER VOLTOLINA AND BREUER.

Appellant argues all claims as a group over the limitations of claim 1, designated as "representative." App. Br. 8. Therefore, we decide the appeal on the basis of representative claim 1, and refer to the rejected claims collectively herein as "the claims." *See* 37 C.F.R. § 41.37(c)(1)(iv); *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

Receiving type information.

Claim 1 recites, *inter alia*, "receiving type information of the plurality of base stations and information on uplink signal energy of at least one terminal measured by the plurality of base stations."

The Examiner finds claim 1 recites a method necessitated by the apparatus of claim 14. Final Act. 6. The Examiner finds Voltolina discloses

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[4] Appellant concludes: "[a]ll pending claims recite patent-eligible subject matter. Therefore, the rejections under 35 U.S.C. § 101 are improper." App. Br. 17. This argument is moot because no such ground of rejection has been entered in the Final Action.

[5] The Examiner has withdrawn the rejections of dependent claims 2, 4, 8, 15, and 21. Ans. 3. *See infra.*

an apparatus for managing a plurality of base stations including a communication unit configured to receive type information of the plurality of base stations. Final Act. 4.

Appellant contends that Voltolina uses traffic load statistics for the use of switching on a base station, but fails to mention an exchange of the type information. App. Br. 10. Appellant argues that Voltolina discloses various cell types, but does not disclose "receiving type information of the plurality of base stations and information on uplink signal energy of at least one terminal measured by the plurality of base stations," as claimed. *Id.*

The Examiner finds both the instant application and the Voltolina-Breuer combination relate to network optimization with respect to network load or traffic. Ans. 4. Specifically, the Examiner finds the cited art teaches the network will shut down or switch on certain base stations or cells depending upon traffic conditions. *Id.* The Examiner finds Voltolina teaches a macro cell as the basic cell type and teaches micro or pico cells as capacity-enhancing cells wherein the macro cell pre-possesses the type information of micro or pico cell. *Id.* Thus, the Examiner finds Voltolina inherently teaches receiving cell-type information for the cells to be regulated. *Id.* The Examiner finds Voltolina is not able to properly use various cell types without knowing what type of cells they are. Specifically, the macro cell needs to identify the neighboring micro cells before determining to selectively switch one on or off. Ans. 5.

Appellant reiterates that Voltolina fails to teach receiving the claimed uplink signal energy of at least one terminal. Reply Br. 2. Rather, Appellant

argues Voltolina teaches the cells which provide the basic coverage collect traffic statistics which enables the affected cell to begin off-loading traffic by causing a micro/pico cell to switch on. Reply Br. 3.

Voltolina discloses that a base station manages its associated capacity-enhancing cells.

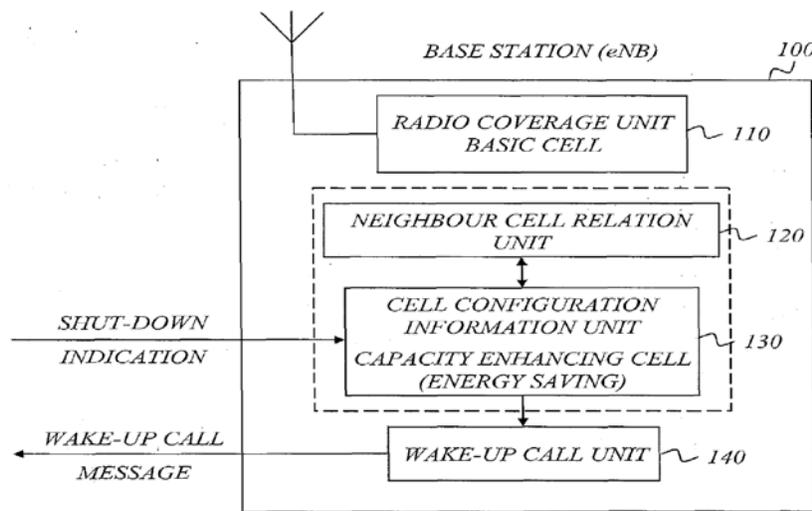Figure 7 of Voltolina is reproduced below.

Fig. 7

Figure 7 of Voltolina is a schematic block diagram illustrating an example of a base station serving a basic cell.

Voltolina discloses base station 100 includes a radio coverage unit 110, a neighbor cell relation unit 120, a cell configuration information unit 130, and a wake-up call unit 140. Voltolina ¶ 121. The radio coverage unit 110 is configured to serve a basic cell providing basic radio coverage and is

connected to the antenna(s). *Id.* The neighbor cell relation unit 120 is configured to manage neighbor cell relation(s) including a neighbor cell relation between the basic cell and an associated capacity enhancing cell served by another base station. *Id.* Voltolina discloses "the cell configuration information unit 130 is configured . . . to keep corresponding cell configuration information related to the capacity enhancing cell. *Id.*

The Examiner finds Voltolina inherently teaches "receiving the cell type information of certain cells that may be shut down or switched on." Ans. 4. However, the claims further recite receiving "information on uplink signal energy of at least one terminal measured by the plurality of base stations" and "identifying a base station among the plurality of base stations based on the type information of the plurality of base stations and the information on uplink signal energy of the at least one terminal." We are not persuaded Voltolina teaches the claimed information on uplink signal energy of at least one terminal.

In view of the foregoing, we find the prior art fails to teach at least one claimed limitation and thus decline to sustain the rejection of claims 1, 5, 7, 9, 12, 14, 18, 20, 22, 25, and 31–34.

CLAIMS 2, 4, 8, 15, AND 21:

OBVIOUSNESS OVER VOLTOLINA AND BREUER.

The Examiner has withdrawn the rejections of claims 2, 4, 8, 15, and 21. Ans. 3.

CLAIMS 6, 13, 19, AND 26:

OBVIOUSNESS OVER VOLTOLINA, BREUER, AND KUNINGAS.

Appellant contends that Kuningas fails to cure the deficiencies of the Voltolina-Breuer combination. App. Br. 16. The Answer does not separately apply Kuningas. Ans. 6.

In view of the foregoing, we decline to sustain the rejection of claims 6, 13, 19, and 26.

DECISION

The rejections of claims 1, 5–7, 9, 12–14, 18, 19, 20, 22, 25, 26, and 31–34 under 35 U.S.C. § 103 are REVERSED.

REVERSED