

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

HUAWEI TECHNOLOGIES CO., LTD.,
Patent Owner.

Case IPR2017-01475
Patent 8,996,003 B2

Before TREVOR M. JEFFERSON, MICHELLE N. WORMMEESTER, and
JOHN F. HORVATH, *Administrative Patent Judges*.

WORMMEESTER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Samsung Electronics Co., Ltd. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–20 of U.S. Patent No. 8,996,003 B2 (Ex. 1001, “the ’003 patent”). We instituted an *inter partes* review of all the challenged claims because Petitioner demonstrated a “reasonable likelihood” of prevailing on “at least 1 of the claims challenged in the petition.” Paper 12 (“Inst. Dec.”); *see* 35 U.S.C. § 314(a).

After institution of trial, Huawei Technologies Co., Ltd. (“Patent Owner”) filed a Patent Owner Response (Paper 24, “PO Resp.”), and Petitioner filed a Reply (Paper 30, “Pet. Reply”). With our authorization, Patent Owner subsequently filed a Sur-Reply (Paper 38, “PO Sur-Reply”). Patent Owner also filed a Motion to Exclude (Paper 35), which we address below. On September 27, 2018, we conducted an oral hearing. A copy of the transcript (Paper 45, “Tr.”) is included in the record.

We have jurisdiction under 35 U.S.C. § 6(b). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–20 of the ’003 patent are unpatentable. This final written decision is issued pursuant to 35 U.S.C. § 318(a).

II. BACKGROUND

A. *Related Proceedings*

The parties identify one related district court case: *Huawei Technologies Co. v. Samsung Electronics Co.*, Case No. 3:16-cv-02787 (N.D. Cal.). Pet. 2; Paper 5, 1. The parties also identify two related requests for

IPR2017-01475
Patent 8,996,003 B2

inter partes reviews: IPR2017-01471 and IPR2017-01474.¹ Paper 5, 1;
Paper 11, 2.

B. The '003 Patent

The '003 patent is titled “Method, Terminal, and System for Cell Reselection.” Ex. 1001, at [54]. According to the '003 patent, developments in the mobile communication field have spurred the emergence of various mobile communication systems, which can be characterized as either LTE systems or non-LTE systems. *Id.* at 1:30–43. Thus, when a terminal (or mobile device) performs cell reselection while in motion, there may be different frequencies within a single system available for selection, as well as different cells throughout different systems available for selection. *Id.* at 1:43–47.

According to one embodiment of the '003 patent, a terminal camps on a cell of an LTE system, where the terminal obtains a dedicated priority list as well as a public priority list, and stores the lists. *Id.* at 4:7–8, 28–31. Between LTE, UMTS, and GERAN systems, where the latter two systems are non-LTE systems, the dedicated priority list may indicate the priority as GERAN>UMTS>LTE. *Id.* at 4:22–24. The public priority list may indicate the priority as LTE>UMTS>GERAN. *Id.* at 4:19–20.

The terminal performs cell reselection according to the dedicated priority list, which, in the embodiment described above, means the terminal camped on the cell of the LTE system reselects and camps on a cell of a

¹ Patent Owner specifically identifies Cases IPR2015-01471 and IPR2015-01474; however, the correct designations for these cases are IPR2017-01471 and IPR2017-01474.

GERAN system. *Id.* at 4:32–39. If the signal quality of the cell of the GERAN system does not meet the signal quality criterion, the terminal performs cell reselection according to the dedicated priority list again, this time reselecting and camping on a cell of a UMTS system. *Id.* at 4:40–44.

Assuming the terminal is currently camped on the cell of a GERAN system, the terminal next obtains a public priority list from the GERAN system and stores that list. *Id.* at 4:45–47. The GERAN system then provides the terminal with an indication as to whether the public priority list from the GERAN system is usable. *Id.* at 4:48–54. If the public priority list from the GERAN system is usable, the terminal either deletes the public priority list from the LTE system or labels it “unusable.” *Id.* at 4:62–5:2.

The terminal, now camped on the GERAN system, performs cell reselection according to the dedicated priority list from the LTE system as long as the list is valid. *Id.* at 5:3–7. The dedicated priority list is valid until the expiration of a timer, which is set to start when the terminal obtains the dedicated priority list. *Id.* at 5:9–11. Before the timer expires, the terminal camps on a cell with the highest priority according to the dedicated priority list. *Id.* at 5:20–22. While camped on such a cell, the terminal decides whether to perform cell reselection according to the signal quality of the cell. *Id.* at 5:22–24. When the signal quality decreases to below a preset threshold, the terminal may perform cell reselection. *Id.* at 5:24–26.

Once the dedicated priority list becomes invalid, the terminal stops using that list and deletes it. *Id.* at 5:27–29. The terminal then starts to use the public priority list for cell reselection. *Id.* at 5:29–30. In this case, that means the terminal reselects a cell of the LTE system based on the priorities specified in the public priority list. *Id.* at 5:30–32. Once camped on the

LTE system, the terminal obtains a new dedicated priority list and a valid time of that new list from the LTE system. *Id.* at 5:30–36.

C. Illustrative Claim

Petitioner challenges claims 1–20 of the '003 patent. Claims 1 and 15 are independent. Claim 1 is illustrative of the claims under challenge:

1. A non-transitory computer readable medium, comprising:
 - a computer program code including executable instructions, which, when executed by a terminal device, cause the terminal device to perform a method for cell reselection as follows:
 - receiving, when in a cell of a Long Term Evolution (LTE) system, a message including a dedicated priority list from the LTE system; and
 - performing, when camping on a cell of a non-LTE system, the cell reselection in accordance with the received dedicated priority list before a valid time of the dedicated priority list expires.

D. The Instituted Grounds

Petitioner asserts in its Petition two grounds based on obviousness under 35 U.S.C. § 103. Pet. 4, 23–63. We instituted *inter partes* review on all the challenged claims and on both asserted grounds. Inst. Dec. 18. The instituted grounds are as follows.

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