

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS AMERICA, INC., AND SAMSUNG
ELECTRONICS CO., LTD.,
Petitioner,

v.

COBBLESTONE WIRELESS, LLC,
Patent Owner.

IPR2024-00319
Patent 8,891,347 B2

Before NATHAN A. ENGELS, NORMAN H. BEAMER, and
RUSSELL E. CASS, *Administrative Patent Judges*.

CASS, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

Samsung Electronics America, Inc., and Samsung Electronics Co., Ltd. (collectively, “Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–4, 6–12, 14–17, and 19–23 of U.S. Patent No. 8,891,347 B2 (Ex. 1001, “the ’347 patent”). Paper 3 (“Pet.”), 3. Cobblestone Wireless, LLC (“Patent Owner”) filed a Preliminary Response. Paper 13 (“Prelim. Resp.”). With our permission, Petitioner filed a Preliminary Reply (Paper 14), and Patent Owner filed a Preliminary Sur-reply (Paper 15).

An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314 (2018); *see also* 37 C.F.R. § 42.4(a) (2021) (“The Board institutes the trial on behalf of the Director.”). The reasonable likelihood standard is “a higher standard than mere notice pleading,” but “lower than the ‘preponderance’ standard to prevail in a final written decision.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential).

For the reasons provided below and based on the record before us, we determine that Petitioner has not established a reasonable likelihood that any of the challenged claims are unpatentable. Accordingly, we do not institute an *inter partes* review based on the Petition.

B. Real Parties in Interest

Petitioner identifies Samsung Electronics America, Inc. and Samsung Electronics Co., Ltd. as real parties in interest. Pet. 73. Petitioner also states that, “[o]ut of an abundance of caution and to avoid additional issues associated with real parties-in-interest, Petitioner[] likewise identif[ies] T-Mobile USA, Inc., AT&T Services Inc., AT&T Corp., AT&T Mobility LLC, and Cellco Partnership d/b/a Verizon Wireless because Petitioner[’s] products are accused of infringement in their respective patent infringement actions.” *Id.* at 73–74. Patent Owner names itself as the real party in interest. Paper 7, 2.

C. Related Proceedings

Both parties identify, as matters involving or related to the ’347 patent, the following district court proceedings: *Cobblestone Wireless, LLC v. T-Mobile USA, Inc.*, No. 2:22-cv-00477 (E.D. Tex.); *Cobblestone Wireless, LLC v. Cellco Partnership d/b/a Verizon Wireless*, No. 2:22-cv-00478 (E.D. Tex.); *Cobblestone Wireless, LLC v. AT&T Inc.*, No. 2:22-cv-00474 (E.D. Tex.); and *Cobblestone Wireless, LLC v. Samsung Electronics Co.*, No. 2:23-cv-00285 (E.D. Tex.). Pet. 74; Paper 7, 2. Also, T-Mobile USA, Inc., AT&T Services Inc., AT&T Corp., AT&T Mobility LLC, Cellco Partnership d/b/a Verizon Wireless, Nokia of America Corporation, and Ericsson Inc. filed a petition on December 4, 2023, challenging the ’347 patent in IPR2024-00136.

D. The ’347 Patent (Ex. 1001)

The ’347 patent relates to a method for wireless communication in a system including a transmitter, a receiver, and multiple propagation paths formed between the transmitter and the receiver that are capable of carrying

a signal transmitted by the transmitter to the receiver. Ex. 1001, code (57). The method performs a channel estimation of a first signal from the transmitter on one propagation path to obtain parameter information on the propagation path, predistorts a second signal at the transmitter according to the channel estimation, and transmits the predistorted signal from the transmitter to the receiver via the propagation path. *Id.*

A schematic representation of a wireless communication system capable of performing the claimed method is shown in Figure 1, reproduced below.

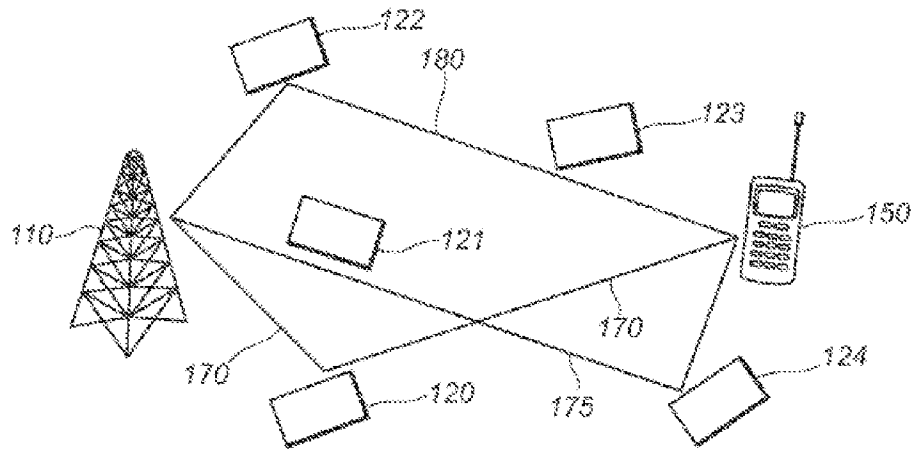


FIG. 1

Figure 1 is a schematic representation of a wireless communication system capable of performing the claimed method. Ex. 1001, Fig. 1, 2:45–47. As the '347 patent explains, Figure 1 “illustrates a single-link communication scenario between a base station which is configured so as to act as a transmitter 110 and a mobile station which is configured so as to act as a receiver 150.” Ex. 1001, 3:23–26. Between transmitter 110 and receiver 150 “are a number of buildings 120–124, which act as scatterers and bouncing points of communication signals traveling between the transmitter 110 and the receiver 150 via propagation paths 170, 175, and 180.” *Id.* at

3:26–30. These propagation paths “are different in delay, direction of arrival, direction of departure and Doppler frequency,” and the signals traveling along these paths “experience different distortions” so that the same signal traveling along these paths “may arrive at the receiver with different phases.” *Id.* at 3:47–50, 7:44–46. As a result, “[t]he resulting multiple replica of the originally transmitted signals are added at the receiver 150, either destructively or constructively.” *Id.* at 7:47–49.

The ’347 patent explains that “[t]ypically, equalization techniques known in the art are used in the receivers 150 to recover the original transmitted signal by removing the distortions.” Ex. 1001, 7:50–52. “[U]nlike the equalization technique which corrects the distortion at the receiver 150 after receiving the technique,” the system of the ’347 patent “adds a pseudo ‘distortion’ before the signals are transmitted at the transmitter 110.” *Id.* at 7:63–67. “These ‘pre-distorted’ signals,” the ’347 patent explains, “are then transmitted in such a way that the signal distortion can be successfully removed while propagating.” *Id.* at 7:67–8:3.

The ’347 Patent’s pre-distortion process is shown in more detail in Figure 4, reproduced below.

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