

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVA HOLDING COMPANY, INC., LENOVA (UNITED STATES)
INC., and MOTOROLA MOBILITY LLC,
Petitioner,

v.

INTERDIGITAL TECHNOLOGY CORPORATION,
Patent Owner.

IPR2020-01413
Patent 8,199,726 B2

Before SALLY C. MEDLEY, MIRIAM L. QUINN, and
KRISTI L. R. SAWERT, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Lenovo Holding Company, Inc., Lenovo (United States) Inc., and Motorola Mobility LLC (collectively “Petitioner”) filed a Petition for *inter partes* review of claims 1–10 and 14–18 of U.S. Patent No. 8,199,726 B2 (Ex. 1001, “the ’726 patent”). Paper 1 (“Pet.”). InterDigital Technology Corporation (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . 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(a). Upon consideration of the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has established a reasonable likelihood of prevailing with respect to the unpatentability of at least one claim of the ’726 patent. Accordingly, for the reasons that follow, we institute an *inter partes* review of claims 1–10 and 14–18 of the ’726 patent.

A. Related Matters

The parties indicate that the ’726 patent is or has been the subject of, or relates to, the following proceeding: *InterDigital Technology Corporation et al. v. Lenovo Holding Company, Inc. et al.*, Case No. 1:19-cv-01590 (D. Del.) (“the underlying litigation”). Pet. 3; Paper 6, 2.

B. The ’726 Patent

The Specification of the ’726 patent relates to wireless digital communication systems with communication stations using code-division multiple access (CDMA) technology utilizing measurement techniques to determine downlink resource allocation. Ex. 1001, 1:12–16. The

'726 patent describes measuring channel quality (CQ) and signaling the information from user equipment (UE) to a base station. *Id.* at 2:27–31. Specifically, the '726 patent describes “several embodiments to measure and signal the CQ per timeslot, or subchannel, from the UE to the base station.” *Id.* at 2:29–31. Reproduced below is Figure 2.

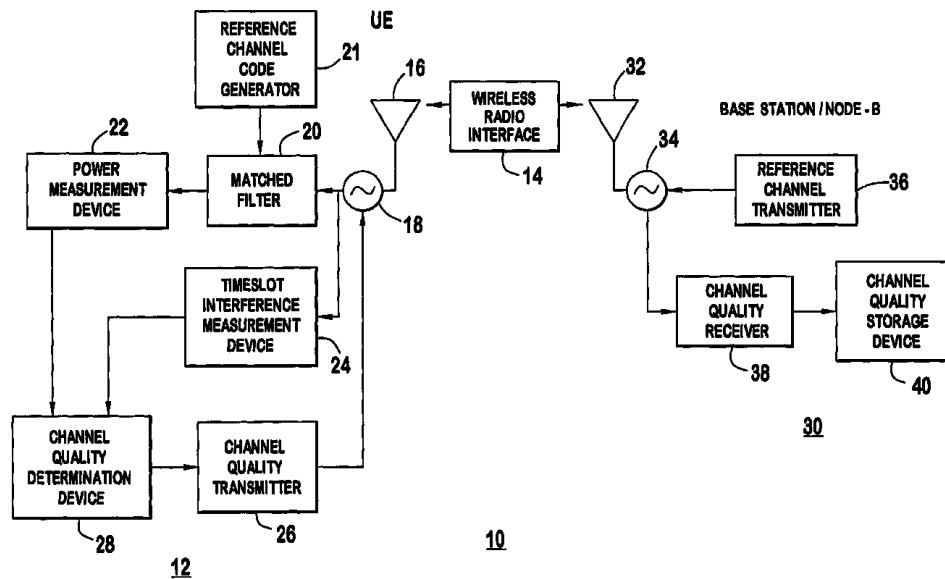


Figure 2 shows a block diagram illustrating a UE and a base station for implementing channel quality measurements for downlink resource allocation.

Figure 2 shows a UE with antenna 16 coupled through isolator/switch 18 to matched filter 20, which receives a downlink signal from the base station through wireless interface 14. *Id.* at 3:21–23, 3:51–53. Power measurement device 22 analyzes the output of matched filter 20 to determine the power level of the downlink signal and outputs this power level to CQ determination device 28. *Id.* at 3:26–29. Interference measurement device 24 is connected to a second input of CQ determination device 28. *Id.* at 3:30–33. CQ determination device 28 analyzes the power level output from power measurement device 22 and interference level from interference

measurement device 24 and provides a CQ measurement to transmitter 26.
Id. at 3:33–37.

C. Illustrative Claim

Petitioner challenges claims 1–10 and 14–18 of the '726 patent.
Claims 1, 6, and 14 are independent claims. Claim 1 is reproduced below.

1. A user equipment (UE), comprising:
 - a measurement device configured to take a plurality of measurements based on a downlink quality, wherein each of the plurality of measurements is taken on a respective downlink resource of a plurality of downlink resources;
 - a channel quality determination device configured to:
 - derive a first channel quality indication indicating a channel quality of the plurality of downlink resources; and
 - derive a plurality of difference indications, each difference indication being between the first channel quality indication and a channel quality indication for one of the plurality of downlink resources; and
 - a transmitting device configured to transmit at least one report including the first channel quality indication and the plurality of difference indications.

Ex. 1001, 6:58–7:7.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–10 and 14–18 are unpatentable based on the following grounds (Pet. 5):

Claim(s) Challenged	35 U.S.C §	Reference(s)/Basis
1–10, 14–18	103(a) ¹	Tiedemann ²
1–3, 6–8, 14–16	103(a)	Li ³
1–10, 14–18	103(a)	Li, Tiedemann
6–10	103(a)	Tiedemann, Padovani ⁴
1–10, 14–18	103(a)	Li, Gesbert ⁵
1–10, 14–18	103(a)	Tiedemann, Gesbert

II. DISCUSSION

A. Claim Construction

In this *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100 (b) (2019). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

“first channel quality indication”

Claim 1 recites “a first channel quality indication indicating a channel quality of the plurality of downlink resources.” Independent claims 6 and 14 recite a similar phrase. Petitioner contends that “a first channel quality

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’726 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA version of 35 U.S.C. § 103.

² U.S. Pat. No. 6,307,849 B1, issued Oct. 23, 2001 (Ex. 1005, “Tiedemann”).

³ U.S. Pat. No. 6,947,748 B2, issued Sept. 20, 2005 (Ex. 1006, “Li”).

⁴ U.S. Pat. No. 6,574,211 B2, issued June 3, 2003 (Ex. 1014, “Padovani”).

⁵ U.S. Pat. No. 6,760,882 B1, issued July 6, 2004 (Ex. 1012, “Gesbert”).

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