

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC., and  
ZTE(USA) INC.,  
Petitioner,

v.

INVT SPE LLC,  
Patent Owner.

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Case IPR2018-01474  
Patent 7,206,587 B2

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Before THU A. DANG, KEVIN F. TURNER, and BARBARA A. BENOIT,  
*Administrative Patent Judges.*

DANG, *Administrative Patent Judge.*

DECISION  
Denying Institution of *Inter Partes* Review  
37 C.F.R. § 314(a)

## I. INTRODUCTION

### A. Background

Apple Inc. and ZTE (USA) Inc. (collectively “Petitioner”) filed a Petition for *inter partes* review of claims 3 and 4 of U.S. Patent No. 7,206,587 B2 (Ex. 1001, “the ’587 patent”). Paper 3 (“Pet.”). INVT SPE LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). After receiving authorization (Paper 8), Petitioner filed a Reply (Paper 9) to address Patent Owner’s argument that institution should be denied for efficiency reasons, and Patent Owner filed a Sur-Reply (Paper 10).

Although Petitioner initially sought to include claim 3 in its challenge, Patent Owner statutorily disclaimed that claim after the Petition was filed. *See* Ex. 2001. For the reasons discussed below, in this Decision, we do not regard disclaimed claim 3 as a claim challenged in the Petition, and instead regard claim 4 as the only challenged claim.

By statute, institution of an *inter partes* review may not be authorized “unless . . . 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 and the Preliminary Response, we are not persuaded Petitioner demonstrated a reasonable likelihood of prevailing in establishing unpatentability of claim 4 of the ’587 patent. Accordingly, no trial is instituted.

*B. Related Proceedings*

According to Petitioner, the '587 patent is at issue in: *INVT SPE LLC v. Apple, Inc.*, Case No. 2:17-cv-03738 (D.N.J.); *INVT SPE LLC v. HTC Corporation and HTC America, Inc.*, Case No. 2:17-cv-03740 (D.N.J.); and *INVT SPE LLC v. ZTE Corporation and ZTE (USA) Inc.*, Case No. 2:17-cv-06522 (D.N.J.). Pet. 32. Further, Petitioner asserts that the '587 patent was previously at issue in *Inventergy, Inc. v. Apple, Inc.*, Case No. 1:17-cv-00196 (D. Del.). *Id.*

*C. The '587 Patent*

The '587 patent issued on April 17, 2007, from an application filed December 18, 2002, and is a continuation of application No. 10/089,605, filed on April 1, 2002, now U.S. Patent No. 6,760,590. Ex. 1001, [45], [22], and [63].

The '587 patent relates to “[allocating] communication resources . . . to communication terminals based on downlink channel quality.” *Id.* at 2:37–43. According to the '587 patent, “among information indicative of downlink channel quality, which has a possibility of decreasing the downlink throughput when the information is received erroneously in a base station, a communication terminal provides such information with less susceptibility to errors in the propagation path to transmit.” *Id.* at 2:44–52.

In an embodiment, “[the] communication terminal . . . transmits with less susceptibility to errors in the propagation path in proportion to information for which the amount of change is large within CIR[, i.e., ‘desired carrier to interference ratio’] information.” *Id.* at 19:30–34 (brackets in original). For example, “[i]f a CIR value is indicated by a value with a decimal fraction (such as 8.7 dB),” then “information for which the

amount of change is large” and “that indicates a broad value” refers to “the integer part (here, ‘8’).” *Id.* at 19:40–45. In such case, “since the amount of change per unit of the integer part is 1dB, while the amount of change per unit of the fractional part is 0.1 dB, the integer part is ‘information for which the amount of change is large[.]’” *Id.* at 19:45–54. Therefore, “if an integer part is received erroneously by a base station, the degree of error is large compared with the case where a fractional part is received erroneously[.]” *Id.*

Figure 15, reproduced below, illustrates a configuration of the CIR signal creation section of a communication terminal. *Id.* at 3:32–34.

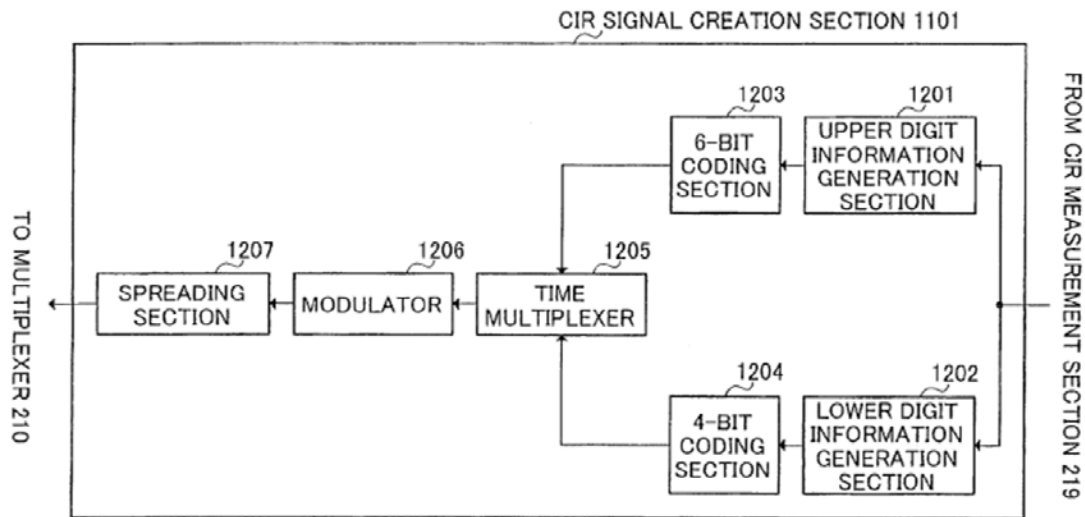


FIG.15

Figure 15 depicts a configuration of CIR signal creation section 1101, wherein, for a CIR value output from CIR measurement section is “8.7 dB,” “upper digit information generation section 1201 outputs the value of the integer part, ‘8’, to the 6-bit coding section 1203,” and “lower digit

information generation section 1202 outputs the value of the fractional part, ‘7’, to the 4-bit coding section 1204.” *Id.* 20:29–41.

*D. The Challenged Claim*

Independent claim 4 is the remaining challenged claim at issue, and is reproduced below:

4. A communication terminal apparatus comprising:
  - a measuring device that measures reception quality of a pilot signal to output information having a plurality of bits that indicate the measured reception quality;
  - a coding device that encodes the information to obtain a code word; and
  - a transmitter that transmits the code word, wherein:
    - the coding device encodes the information such that the most significant bit of the plurality of bits is less susceptible to errors in a propagation path than other bits of the plurality of bits.

Ex. 1001, 26:20–30.

*E. Asserted Grounds of Unpatentability*

Petitioner contends that claims 3 and 4 are unpatentable based on the following specific grounds (Pet. 7):

Reference(s)	Basis	Claim(s) Challenged
Bender <sup>1</sup> and Jarvinen <sup>2</sup>	§ 103 <sup>3</sup>	3

<sup>1</sup> Paul Bender, et al., “CDMA/HDR: A Bandwidth-Efficient High-Speed Wireless Data Service for Nomadic Users,” IEEE COMMUNICATIONS MAGAZINE (July 2000) (“Bender”; Ex. 1004).

<sup>2</sup> U.S. Patent No. 6,470,470 B2 (October 2, 2002) (“Jarvinen”; Ex. 1006).

<sup>3</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. Because the challenged patent was filed before March 16, 2013, we refer to the pre-AIA version of § 103.

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