

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GREAT WEST CASUALTY COMPANY, BITCO GENERAL
INSURANCE CORPORATION, and
BITCO NATIONAL INSURANCE COMPANY,
Petitioner,

v.

TRANSPACIFIC IP I LTD. and
INTELLECTUAL VENTURES II LLC,
Patent Owner.

Case IPR2015-01912
Patent 8,929,555 B2

Before MICHAEL W. KIM, THOMAS L. GIANNETTI, and
ROBERT L. KINDER, *Administrative Patent Judges*.

KINDER, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

Great West Casualty Company, BITCO General Insurance
Corporation, and BITCO National Insurance Company (collectively
“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute

an *inter partes* review of claims 1, 7, and 13–15 of U.S. Patent No. 8,929,555, issued on January 6, 2015 (Ex. 1001, “the ’555 patent”). Paper 1 (“Pet.”). Transpacific IP I Ltd. and Intellectual Ventures II LLC (collectively “Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we institute an *inter partes* review of all challenged claims.

I. BACKGROUND

A. The ’555 patent (Ex. 1001)

The ’555 patent is entitled “Data Encryption Systems and Methods.” The ’555 patent generally relates to data encryption methods that involve the generation of encryption key seeds that may be utilized for generating data encryption keys. Ex. 1001, 1:35–43. The ’555 patent recites:

The system includes a storage device storing data and an encryption/decryption module. The encryption/decryption module randomly generates a device key seed according to the occurrence time of a specific operation or the interval between two specific operations on the storage device, and applies the device key seed to data encryption.

Id. at Abstract. The ’555 patent discloses a storage device and a host, each of which includes an encryption/decryption module. *Id.* at 3:1–2, 7–9, 11–16, Fig. 1. The host may be a processor-based electronic device, such as a computer system, an electronic schoolbag, or a mobile device. *Id.* at 3:4–7. The storage device is used for storing data and may also be a mobile device, such as a mobile phone, USB handy disk, or a language learning machine. *Id.* at 3:9–11; *see also id.* at Abstract, Fig. 1.

According to the '555 patent, the encryption/decryption modules may be implemented in either hardware or software and are responsible for generating key seeds and keys, as well as performing encryption and decryption operations. *Id.* at 3:7–9, 15–20. The storage device receives a read data request, and in response randomly generates a device key seed S_d according to the time of a specific operation or the interval between two specific operations on the storage device. *Id.* at 3:25–30. The device key seed is also randomly generated “in response to interrupts that notify the storage device of occurrence of the two specific operations.” *E.g., id.* at 5:17–20.

B. Illustrative Claim

Claims 1, 7, and 15 are the contested independent claims. Claim 1 is illustrative of the claims at issue and is reproduced below:

1. A data encryption system, comprising:

a storage device adapted to store data D , the storage device including:

an encryption/decryption module adapted to randomly generate a device key seed S_d according to a time interval between two specific operations on the storage device, and adapted to apply the generated device key seed S_d to data encryption of the data D ,

wherein the storage device is adapted to randomly generate the device key seed S_d in response to interrupts that notify the storage device of occurrence of the two specific operations.

Ex. 1001, 5:9–20. Claims 1, 7, and 15 are similar in scope. One notable difference is that claim 1 refers to “an encryption/decryption module adapted to,” but claims 7 and 15 do not require such a module.

C. Related Proceedings

Petitioner identifies the following related proceedings involving the '555 patent: *Intellectual Ventures II LLC v. BITCO General Insurance Corporation f/k/a Bituminous Casualty Corporation et al*, Civ. No. 6-15-cv-00059 (E.D. Tex.), *Intellectual Ventures II LLC v. Great West Casualty Company*, Civ. No. 6-15-cv-00060 (E.D. Tex.), and *Intellectual Ventures I LLC et al v. HCC Insurance Holdings, Inc. et al.*, Civ. No. 6-15-cv-00660 (E.D. Tex.). Pet. 1–2. *See also* Paper 5 (Patent Owner Mandatory Notices).

D. References

Petitioner relies on the following references:

Reference		Date	Exhibit
Dillaway	US 7,545,931 B2	Apr. 12, 2002 (filed) Oct. 16, 2003 (published)	Ex. 1005
Dev/Random	Theodore Ts'o, <i>random.c – A strong random number generator</i> , version 1.00, last modified May 26, 1996	July 3, 1996 ¹	Ex. 1006
Extracting Randomness	José Castejón-Amenedo et al., <i>Extracting Randomness From External Interrupts</i> , IASTED Int'l Conf. on Comm., Network, and Information Security, presented Dec. 10–12, 2003	Dec. 10, 2003	Ex. 1007

Petitioner also relies on the Declaration of Bruce Schneier. Ex. 1003.

¹ For purposes of this Decision, we accept Petitioner's evidence that Dev/Random was a publicly available printed publication as of July 3, 1996. *See* Pet. 21–24 and accompanying exhibits.

E. Grounds Asserted

Petitioner challenges the patentability of claims 1, 7, and 13–15 of the '555 patent on the following grounds (Pet. 2–3):

Reference(s)	Basis	Claims Challenged
Dillaway	§ 102	1, 7, and 13–15
Dillaway	§ 103(a)	1, 7, and 13–15
Dillaway and Dev/Random	§ 103(a)	1, 7, and 13–15
Dillaway and Extracting Randomness with or without Dev/Random	§ 103(a)	13 and 14

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Under the rule of broadest reasonable interpretation, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Furthermore, if the applicant for patent desires to be its own lexicographer, the purported definition must be set forth in either the specification or prosecution history. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002).

Only terms which are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Wellman, Inc. v. Eastman*

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