

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HUGHES NETWORK SYSTEMS, LLC and  
HUGHES COMMUNICATIONS, INC.,  
Petitioner,

v.

CALIFORNIA INSTITUTE OF TECHNOLOGY,  
Patent Owner.

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Case IPR2015-00059  
Patent 7,916,781 B2

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Before KALYAN K. DESHPANDE, GLENN J. PERRY, and  
TREVOR M. JEFFERSON, *Administrative Patent Judges*.

PERRY, *Administrative Patent Judge*.

DECISION ON MOTION  
Denying Petitioner's Motion for Additional Discovery  
*37 C.F.R. § 42.51(b)(2)*

## INTRODUCTION

On October 14, 2014, Hughes Network Systems, LLC and Hughes Communications, Inc. (collectively “Hughes”) filed a Petition for *inter partes* review of the ’781 patent. Paper 1. It filed a Corrected Petition (Paper 4, “Pet.”) on October 30, 2014. Patent Owner California Institute of Technology (“CIT”) filed a Preliminary Response on January 29, 2015 (Paper 13, “Prelim. Resp.”) challenging Divsalar as a publication available as prior art against the ’781 patent. Prelim. Resp. 19–23. We instituted trial on April 27, 2015 (Paper 18, “DI”) including challenges based on the Divsalar reference. CIT filed its formal response on July 28, 2015 (Paper 24, “Resp.”). Patent Owner’s formal response argues that Petitioner has not met its burden in establishing that Divsalar is a publication available as a prior art reference as of the critical date, the same position it took in its Preliminary Response.

Pursuant to our authorization on September 4, 2015, Petitioner (“Hughes”) filed a Motion (Paper 25, “Mot.”) pursuant to 37 C.F.R. §§ 42.51 and 42.52 seeking document discovery and testimony from Dr. Dariush Divsalar and Dr. Robert McEliece regarding the fact of publication of their paper (Ex. 1011): “Coding Theorems for ‘Turbo-Like’ Codes,” (the “Divsalar Reference”). CIT opposes (Paper 28, “Opp.”). The documents Hughes seeks include: 1) all documents reflecting or referring to submission of the Divsalar Reference for publication, 2) all documents reflecting or referring to availability of the Divsalar reference to members of the public, and 3) all documents reflecting or referring to publication of the Divsalar Reference. For reasons stated below, Hughes’ request for discovery is DENIED.

## DISCUSSION

### *Legal Principles*

Under 35 U.S.C. § 102(b), a person is entitled to a patent unless “the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States.” Whether a document qualifies as a printed publication under § 102 is a legal conclusion based on underlying factual determinations. *SRI Int’l, Inc. v. Internet Sec. Sys., Inc.*, 511 F.3d 1186, 1192 (Fed.Cir.2008) (citation omitted). “Public accessibility” has been called the touchstone in determining whether a reference constitutes a printed publication bar under 35 U.S.C. § 102(b). *Id.* at 1194. A reference is publicly accessible upon a satisfactory showing that it has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it. *Bruckelmyer v. Ground Heaters, Inc.*, 445 F.3d 1374, 1378 (Fed. Cir. 2006); *see also In re Cronyn*, 890 F.2d 1158, 1160 (Fed. Cir. 1989) (“The statutory phrase ‘printed publication’ has been interpreted to mean that before the critical date the reference must have been sufficiently accessible to the public interested in the art; dissemination and public accessibility are the keys to the legal determination whether a prior art reference was ‘published.’”) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1568 (Fed.Cir.1988)).

In *In re Klopfenstein*, 380 F.3d 1345 (Fed. Cir. 2004), our reviewing court rejected an argument that “distribution and/or indexing” are the key components to a “printed publication” inquiry because that argument “fails to properly reflect what our [Federal Circuit] precedent stands for,”

explaining that “printed publication” means reasonably accessible through generally available media that serve to disseminate information. *Id.* at 1348. A printed publication need not be easily searchable after publication if it was sufficiently disseminated at the time of its publication. *Suffolk Technologies, LLC v. AOL Inc.*, 752 F.3d 1358, 1364 (Fed. Cir. 2014).<sup>1</sup>

#### *Threshold Showing of Publication*

We have required only a “threshold showing” of public availability in order to institute trial. *See Apple, Inc. v. DSS Tech. Mgmt., Inc.*, Case IPR2015-00369, slip op. at 5 (PTAB Aug. 12, 2015) (Paper 14). When petitioners have not come forward with any credible evidence establishing a key aspect of public availability, we have denied institution. *See id.* at 5–6 (no evidence thesis was indexed, cataloged, and shelved); *Actavis, Inc. v. Research Corp. Techs., Inc.*, Case IPR2014-01126, slip op. at 10–13 (PTAB Jan. 9, 2015) (Paper 21) (same); *Cisco Systems, Inc. v. Constellation Techs., LLC*, Case IPR2014-01085, slip op. at 7–9 (PTAB Jan. 9, 2015) (Paper 11) (noting “naked assertion,” unsupported by record, that reference was published).

The fact that we institute an *inter partes* review is not dispositive of the issue of whether a particular reference document qualifies as a publication reference. CIT had an opportunity in its response to produce evidence that Divsalar is not a publication reference. In this case, CIT has not come forward with evidence to establish that Divsalar is not available as

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<sup>1</sup> As explained in *Klopfenstein*, the word “disseminate” is not used in its literal sense, i.e. “make widespread” or “to foster general knowledge of” and does not require distribution of reproductions or photocopies. *In re Klopfenstein*, 380 F.2d. at 1352, n. 3.

a publication reference. Rather, it challenges the sufficiency of Petitioner's evidence with respect to publication of Divsalar prior to the critical date.

### *Routine Discovery*

Hughes frames the discovery sought as "routine discovery" that should have already should have been provided by CIT pursuant to 37 C.F.R. § 42.51(b)(1)(iii) because the information sought is inconsistent with a position advanced by CIT in its response (Paper 24). Mot. 2. The alleged "position" advanced by CIT is that Hughes' evidence<sup>2</sup> "fail[s] to establish the availability of Divsalar as 102(b) prior art." Paper 25.

Hughes argues that our Decision to Institute (Paper 18) noted that Divsalar is identified as a cited reference on the face of the '781 patent (Ex. 1005). Page 2 of the '781 patent is reproduced below.

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##### U.S. PATENT DOCUMENTS

2001/0025358 A1 9/2001 Eidson et al.

##### OTHER PUBLICATIONS

Benedetto, S., et al., "A Soft-Input Soft-Output Maximum A Posteriori (MAP) Module to Decode Parallel and Serial Concatenated Codes," *The Telecommunications and Data Acquisition Progress Report (TDA PR 42-127)*, pp. 1-20, Nov. 1996.

Benedetto, S., et al., "Bandwidth efficient parallel concatenated coding schemes," *Electronics Letters*, 31(24):2067-2069, Nov. 1995.

Benedetto, S., et al., "Design of Serially Concatenated Interleaved Codes," *ICC 97*, vol. 2, pp. 710-714, Jun. 1997.

Benedetto, S., et al., "Parallel Concatenated Trellis Coded Modulation," *ICC 96*, vol. 2, pp. 974-978, Jun. 1996.

Benedetto, S., et al., "Serial Concatenated Trellis Coded Modulation with Iterative Decoding," *Proceedings 1997 IEEE International Symposium on Information Theory (ISIT)*, Ulm, Germany, p. 8, Jun. 29-Jul. 4, 1997.

Benedetto, S., et al., "Serial Concatenation of Interleaved Codes: Performance Analysis, Design, and Iterative Decoding," *The Telecommunications and Data Acquisition Progress Report (TDA PR 42126)*, pp. 1-26, Aug. 1996.

Benedetto, S., et al., "Serial concatenation of interleaved codes: performance analysis, design, and iterative decoding," *Proceedings 1997 IEEE International Symposium on Information Theory (ISIT)*, Ulm, Germany, p. 106, Jun. 29-Jul. 4, 1997.

Benedetto, S., et al., "Soft-Output Decoding Algorithms in Iterative Decoding of Turbo Codes," *The Telecommunications and Data Acquisition Progress Report (TDA PR 42-124)*, pp. 63-87, Feb. 1996.

Berrou, C., et al., "Near Shannon Limit Error-Correcting Coding and Decoding: Turbo Codes," *ICC 93*, vol. 2, pp. 1064-1070, May 1993.

Digital Video Broadcasting (DVB)—User guidelines for the second generation system for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications (DVB-S2), ETSI TR 102 376 V1.1.1 Technical Report, pp. 1-104 (p. 64), Feb. 2005.

Divsalar, D., et al., "Coding Theorems for 'Turbo-Like' Codes," *Proceedings of the 36<sup>th</sup> Annual Allerton Conference on Communication, Control, and Computing*, Monticello, Illinois, pp. 201-210, Sep. 1998.

Divsalar, D., et al., "Effective free distance of turbo codes," *Electronics Letters*, 32(5):445-446, Feb. 1996.

Divsalar, D., et al., "Hybrid Concatenated Codes and Iterative Decoding," *Proceedings 1997 IEEE International Symposium on Information Theory (ISIT)*, Ulm, Germany, p. 10, Jun. 29-Jul. 4, 1997.

Divsalar, D., et al., "Low-Rate Turbo Codes for Deep-Space Communications," *Proceedings 1995 IEEE International Symposium on Information Theory (ISIT)*, Whistler, BC, Canada, p. 35, Sep. 1995.

Divsalar, D., et al., "Multiple Turbo Codes for Deep-Space Communications," *The Telecommunications and Data Acquisition Progress Report (TDA PR 42-121)*, pp. 66-77, May 1995.

Divsalar, D., et al., "Multiple Turbo Codes," *MILCOM '95*, vol. 1, pp. 279-285, Nov. 1995.

Divsalar, D., et al., "On the Design of Turbo Codes," *The Telecommunications and Data Acquisition Progress Report (TDA PR 42-123)*, pp. 99-121, Nov. 1995.

Divsalar, D., et al., "Serial Turbo Trellis Coded Modulation with Rate-1 Inner Code," *Proceedings 2000 IEEE International Symposium on Information Theory (ISIT)*, Sorrento, Italy, pp. 194, Jun. 2000.

Divsalar, D., et al., "Turbo Codes for PCS Applications," *IEEE ICC '95*, Seattle, WA, USA, vol. 1, pp. 54-59, Jun. 1995.

Jin, H., et al., "Irregular Repeat—Accumulate Codes," *2nd International Symposium on Turbo Codes*, Brest, France, 25 pages, Sep. 2000.

Jin, H., et al., "Irregular Repeat—Accumulate Codes," *2nd International Symposium on Turbo Codes & Related Topics*, Brest, France, p. 1-8, Sep. 2000.

Richardson, T.J., et al., "Design of Capacity-Approaching Irregular Low-Density Parity-Check Codes," *IEEE Transactions on Information Theory*, 47(2):619-637, Feb. 2001.

Richardson, T.J., et al., "Efficient Encoding of Low-Density Parity-Check Codes," *IEEE Transactions on Information Theory*, 47(2):638-656, Feb. 2001.

Wiberg, N., et al., "Codes and Iterative Decoding on General Graphs," *Proceedings 1995 IEEE International Symposium on Information Theory (ISIT)*, Whistler, BC, Canada, p. 468, Sep. 1995.

Aji, S.M., et al., "The Generalized Distributive Law," *IEEE Transactions on Information Theory*, 46(2):325-343, Mar. 2000.

Tanner, R.M., "A Recursive Approach to Low Complexity Codes," *IEEE Transactions on Information Theory*, 27(5):533-547, Sep. 1981.

\* cited by examiner

<sup>2</sup> Declaration testimony of Robin Fradenburgh (Ex. 1064).

Note that Divsalar is listed at the bottom of column 1 under the heading “OTHER PUBLICATIONS.” The file history (Ex. 1006) of the ’781 patent reveals that Divsalar is listed on the patent as a result of an Information Disclosure Statement<sup>3</sup> submitted by applicant on June 30, 2008 identifying and submitting Divsalar as document “BD” in the section entitled “Other Documents (include Author, Title, Date, and Place of Publication)” to the Examiner during prosecution. The Examiner initialed entry “BD” indicating that it had been considered on October 5, 2010. Ex. 1006, 73.

Hughes argues that “[a]ccordingly, at least as to information from Dr. McEliece, Petitioners are entitled to their requested discovery under the Routine Discovery standard. Indeed, [CIT] should have already provided these materials under 42.51(b)(1)(iii).” Mot. 5.

We disagree that CIT should have already provided the information now sought because it is routine discovery that contradicts a position taken. The routine discovery provisions are intended to require disclosing evidence that is inconsistent with a substantive position taken. For example, if a party takes the position that a widget is made of steel and has in its position evidence that the widget is made of aluminum, that evidence must be disclosed.

CIT argues, based on the record thus far developed, that Hughes has not met its burden with respect to establishing that Divsalar is available as a prior art reference because it is a “publication” that was published before the

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<sup>3</sup> 37 C.F.R. 1.97(h) states: “The filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b).”

critical date (May 18, 2000)<sup>4</sup> in this case. Arguments pointing to a deficiency in petitioner's case do not impose an obligation on the part of CIT to provide evidence supplementing that provided by Hughes. Hughes is not entitled to the requested discovery because it is "routine."

*Interest of Justice*

Hughes also casts its discovery request as being "in the interests of justice." Mot. 2–3, 5–6. According to Hughes, the "Garmin" factors used to evaluate whether facts satisfy this standard favor granting the requested discovery. *Id.* Hughes notes that it has already submitted substantial evidence that Divsalar is available as a publication reference. Mot. 6 (citing Ex. 1011; Ex. 1064; Ex. 1006 p.4). According to Hughes, both potential witnesses list Divsalar among their publications on their respective public biographies. Hughes argues that these facts demonstrate likely possession of information by the potential witnesses showing that Divsalar is a publication reference prior to the '781 patent. Mot. 6.

Hughes argues that it has no other way than this discovery to learn what evidence is known or in the possession of these authors regarding publication of Disvsalar. Even if we accept that as true, Hughes did not choose to rely on these witnesses in the first instance. These witnesses are not the only way to establish Divsalar as a publication. In fact, Hughes chose another way. It chose to make its case for publication and prove a publication date by submitting the declaration of Robin Fradenburgh, a librarian at the University of Texas. Furthermore, according to CIT, after proffering Ms. Fradenburgh's testimony, Hughes refused to make its witness

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<sup>4</sup> Provisional application 60/205,095 was filed on May 18, 2000.

available for cross-examination. Opp. 5. A party advancing testimony must make that witness available for cross-examination.

Hughes could have adopted any number of strategies for establishing the fact of publication and the publication date. There is no evidence addressing, for example, the following questions: What was the normal business process of the Allerton Conference with respect to gathering papers after its conferences, reviewing them and publishing them? The record does not indicate any interaction with officials at the Allerton Conference in this regard. When did the Allerton Conference actually receive the Divsalar paper? When did the Allerton Conference send its papers for printing? How does the Conference distribute papers once the proceedings of the conference are prepared? Could the Allerton Conference have provided a distribution list for its conference papers listing multiple libraries to which it sends copies?

CIT argues that the discovery requested is neither “routine” nor “in the interest of justice.” CIT correctly notes that a party seeking additional discovery has the burden of demonstrating that the additional discovery is “necessary in the interest of justice.” 37 C.F.R. § 42.51(b)(2); *Garmin Int’l Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (Mar. 5, 2013). “That is significantly different from the scope of discovery generally available under the Federal Rules of Civil Procedure.” *Garmin*, IPR2012-00001, Paper 26 at 5. Opp. 3.

CIT also correctly notes that an *inter partes* review proceeding is different from the District Court proceeding relying upon notice pleading and more complete discovery afforded by the Federal Rules of Civil Procedure.

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Hughes had its opportunity to determine its strategy and make its case in its petition. Permitting a change in strategy for Hughes at this stage is not in “the interest of justice.”

**ORDER**

Accordingly, it is:

**ORDERED** that the Motion for Additional Discovery is **DENIED**.

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