

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

DIRECTSTREAM, LLC,
Patent Owner.

Case No. IPR2018-01605, IPR2018-01606, IPR2018-01607
U.S. Patent No. 7,620,800 B2

**PETITIONER'S OPPOSITION TO PATENT OWNER'S MOTION TO
EXCLUDE**

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I. Introduction

The evidence of record establishes that Exhibits 1074, 1077, 1079, and 1076, and certain testimony in Exhibits 1075 and 1078 are admissible. Patent Owner's laundry list of possible bases for excluding, *see* Paper 61 ("Mot") at 1-2, and its thin justifications for such bases, are more fairly characterized as, at best, a challenge to the sufficiency of evidence rather than the admissibility of the evidence. For the reasons demonstrated below, because Patent Owner has not met its burden of establishing these documents or portions of document as not admissible, *see* 37 C.F.R. § 42.20(c), *FLIR Sys., Inc. v. Leak Surveys, Inc.*, IPR2014-00411, Paper 113 at 5 (PTAB Sept. 3, 2015), its motion must be denied.

II. Exhibits 1074, 1077, and 1079

A. Exhibits 1074 and 1079 Are Authentic Documents

Patent Owner objects to the authenticity of Exhibits 1074 and 1079¹. Mot. 6. However, the standard for admissibility under Fed. R. Evid. 901(a) is "slight," which is clearly met by the exhibits themselves, *see United States v. Turner*, 718 F.3d 226, 232 (3d Cir. 2013), and Patent Owner identifies nothing about the documents themselves that brings into question their authenticity. Indeed, as

¹ Patent Owner did not move to exclude Exhibit 1077 on the ground of Authenticity.

Patent Owner bears the burden as movant to demonstrate these documents are not authentic, summarily saying they are not without more is insufficient to challenge their authenticity. *See* 37 CFR § 42.20 (c) (“The moving party has the burden of proof to establish that it is entitled to the requested relief.”); *Samsung Electronics America, Inc. v. Uniloc 2017 LLC*, IPR2017-01798, Paper 32 at 103 (PTAB Jan. 31, 2019). For at least this reason—*i.e.*, that Patent Owner has utterly failed to satisfy its burden—and for the reasons discussed below, Patent Owner’s arguments should be rejected.

1. Exhibit 1074 is an Authentic IEEE Publication

Exhibit 1074 is an IEEE publication and is authenticate under Fed. R. Evid. 901(b) and self-authenticating under 902(6) and/or 902(7) at least because it contains an IEEE trade inscription, copyright symbol, and ISBN. *See, e.g., Ericsson Inc. v. Intellectual Ventures I LLC*, IPR2014-00527, Paper 41 at 12 (PTAB May 18, 2015) (IEEE publication authenticated under Fed. R. Evid. 901(b)(4)); *Liberty Mut. Ins. Co. v. Progressive Casualty Ins. Co.*, CBM2012-00010, Paper 59 at 37 (PTAB Feb. 24, 2014) (holding that an IEEE article is self-authenticating under Fedd. R. Evid. 902(6)); *ACCO Brands, Inc. v. PC Guardian Anti-Theft Prods.*, 592 F. Supp. 2d 1208, 1219 (N.D. Cal. 2008) (Macintosh Portable computers were self-authenticating under Fed. R. Evid. 902(7) “because they are inscribed with the Macintosh Portable trade name”). As explained above,

Patent Owner has identified nothing that would call in to question the authenticity of this document.

Exhibit 1074 is an IEEE article by Gokhale et al. entitled “FPGA Computing in a Data Parallel C.” The IEEE mark on the first page of appears as “0-8186-3890-7/93 \$03.00 © 1993 IEEE.” EX1074, 94. Accordingly, Exhibit 1074 is self-authenticating under Fed. R. Evid. 902(6) and/or 902(7) because it contains an IEEE trade inscription, copyright symbol, and ISBN.

Nevertheless, to the extent one might argue it is not self-authenticating, Exhibit 1074 is authenticated under Fed. R. Evid. 901(b)(4) based on the totality of the circumstances. Fed. R. Evid. 901(b)(4) (“The appearance, contents, substance, internal patterns, or other distinctive characteristics of the item, taken together with all the circumstances.”) For example, the appearance of the paper is consistent with papers appearing in other proceedings as they have, for example, titles, authors, contact information including email addresses, page numbers beginning in the middle of a document, and conclude with a listing of references. Nothing about this exhibit suggests it is not what it purports to be, and Patent Owner never identifies anything to suggest otherwise. Accordingly, the circumstantial evidence shown in this documents demonstrates that Exhibit 1074 is authentic.

2. Exhibits 1074 and 1079 Are Ancient Documents

Exhibits 1074 and 1079 are also authentic because they meet the age requirements and authentication criteria to constitute ancient documents as specified in Fed. R. Evid 901(b)(8).

First, each exhibit is over 20 years old. EX1074, (1993); EX1079 (1996); The challenged exhibits appear in a condition that creates no suspicion about their authenticity. *See* Fed. R. Evid. 901(b)(8)(A) . They appear “consistent with their citation to other documents contemporaneous to the time at which they were alleged to have been published.” *See Compass Bank v. Intellectual Ventures II*, IPR2014-00724, Paper 41 at 55-56 (PTAB Nov. 5, 2015) (finding, for example, an RFC to be authentic and admissible by qualifying as an ancient document). Patent Owner fails to provide any evidence that these exhibits are not, on their face, what they appear to be, and never challenged the authenticity of any of these exhibits. *See generally* Mot. 6. Moreover, Exhibit 1074 is available to download on the IEEE website, *see* <https://ieeexplore.ieee.org/Xplore/home.jsp>, while Exhibit 1079 is available from several well-known book sellers², places they would likely be, if authentic. *See* Fed. R. Evid. 901 (b) (8)(B).

B. Exhibits 1074, 1077, and 1079 Do Not Contain Hearsay

² <https://www.amazon.com/VHDL-Programmable-Logic-Kevin-Skahill/dp/0201895730>

Patent Owner also asserts that Exhibits 1074, 1077, and 1079 are “inadmissible hearsay,” Mot. 7, because Petitioner uses these documents “to prove the truth of technical matters allegedly asserted in such documents.” *Id.* As demonstrated below, Patent Owner has failed to prove the following exhibits contain excludable hearsay.

1. Exhibits 1074, 1077, and 1079 Are Not Hearsay

Exhibits 1074, 1077, and 1079 are not offered for the truth of the matter asserted but rather serve a non-hearsay purpose. The Board has repeatedly held that a statement is not hearsay if offered for the effect a statement on the understanding of a person of ordinary skill in the art, or “to show what one of ordinary skill in the art would have known about the technical features and developments in the pertinent art.” *Apple v. DSS Tech. Mgmt.*, IPR2015-00369, Paper 40 at 38 (PTAB June 17, 2016); *Apple v. VirnetX*, IPR2017-00337, Paper 31 at 51-52 (PTAB May 30, 2018); *Liberty Mut. Ins. Co.* at 36-37. Here, Petitioner relies on Exhibits 1074, 1077, and 1079 to show technologies described in the 800 Patent, such as “hardware description languages, such as VHDL, [used] to configure FPGAs,” *e.g.*, Reply, Paper 49, 7, 17, 29, (citing Exhibits 1074, 1077, 1079). Thus, these exhibits were offered “to show what one of ordinary skill in the art would have known about the technical features and developments in the pertinent art.” *DSS Tech. Mgmt.*, at 38. The exhibits are not hearsay when offered

for that purpose and should be admitted to show what a skilled person would have known about the prior art.

Thus, exhibits 1074, 1077, and 1079 are admissible because they serve a non hearsay purpose.

2. Patent Owner Fails to Establish Exhibits 1074, 1077, and 1079 Constitute Hearsay by Not Identifying What Statements are Hearsay.

Patent Owner fails to satisfy its burden of proof for Exhibits 1074, 1077, and 1079 because it does not identify what statements in these exhibits are hearsay. *See* 37 C.F.R. § 42.20(c); *Apple Inc. v. VirnetX*, IPR2016-00331, Paper 29 at 47 (PTAB June 22, 2017) (“Patent Owner does not explain why [the exhibits] are hearsay or what part of them constitute hearsay.”). Patent Owner merely states in conclusory fashion that “Petitioner cites each of these documents to prove the truth of technical matters allegedly asserted in such documents, *i.e.*, to support Petitioner’s specific factual assertions regarding a technical issue.” Mot. 5. It does not identify, however, “specifically the textual portions of the aforementioned exhibits that allegedly are being offered for the truth of the matter asserted, yet seeks to exclude the entirety of each exhibit.” *Liberty Mut. Ins.* at 36. The Board should not have to “go through the entirety of each exhibit and determine which portion of the exhibit [Patent Owner] believes to be hearsay.” *Id.*

Thus, Patent Owner's failure to identify the relevant statements is alone sufficient reason to deny its motion.

3. Exhibits 1074 and 1079 are Admissible As Ancient Documents

Exhibits 1074 and 1079 qualify for the ancient document hearsay exception. Statements in an authentic "document that was prepared before January 1, 1998" are excepted from the rule against hearsay. Fed. R. Evid. 803(16).

Exhibits 1074 and 1079 meet the age requirements and authentication criteria (for the reasons demonstrated above) to constitute ancient documents. First, the date on each exhibit indicates that they were prepared before January 1, 1998.³ EX1074, 94; EX1079, Cover-1-Cover-4. Thus, the Board should admit any hearsay within Exhibits 1074 and 1079—to the extent any exists—under the ancient document exception. *See QSC Audio Prods., LLC, v. Crest Audio, Inc.*, IPR2014-00127, Paper 43 at 14 (PTAB Apr. 29, 2015) (admitting statements on dates under Fed. R. Evid. 803(16)); *see also Apple v. VirnetX*, IPR2016-01585, Paper 32 at 56 (PTAB Feb. 20, 2018).

C. Exhibit 1077 is Relevant

³The publication dates occur before the cut-off date—*i.e.*, January 1, 1998—for ancient documents. Fed. R. Evid.803(16) (amended 2017)

Patent Owner also objects to Exhibit 1077 as lacking relevance. But Patent Owner's motion runs afoul of the prohibition against using a motion to exclude "to challenge the sufficiency of the evidence to prove a particular fact." 77 Fed. Reg. at 48,767; *FLIR Sys., Inc. v. Leak Surveys, Inc.*, IPR2015-00065, Paper 71 at 4–5, 9 (PTAB Sept. 3, 2015); *see also Illumina, Inc. v. The Tr. Of Columbia Univ. Of New York*, IPR2018-00797, Paper 65 at 11 (PTAB Sept. 9, 2019).

For example, Patent Owner complains that Exhibit 1077 should be excluded because the definitions of "data structure" and "data path," are not claim terms. Mot. 7. Whether or not "data structure" and "data path" are claim terms is simply of no moment—Patent Owner's assertions are unambiguously directed to challenging the "sufficiency of the evidence to prove a particular fact," 77 Fed. Reg. at 48,767, a plainly improper use of a motion to exclude. *Id.* Moreover, Patent Owner's argument that Petitioner "attempts to redefine the clear words used in a dictionary definition" in order to "obfuscate," Mot. 8, is incredulous given that Petitioner quotes these definitions directly, Reply, 29 and furthermore filed the entirety of the exhibits as evidence.

III. Exhibits 1076

Patent Owner further "*objects* under FED. R. EVID. 402 and 403 specifically to paragraphs 15-17, which discuss EX1074 for the first time." Mot. 8. However, Patent Owner never explains how citing an Exhibit "for the first time"

effects the admissibility of a declaration. Patent Owner again uses its motion to exclude as a vehicle to attack the sufficiency of evidence rather than the admissibility of evidence. 77 Fed. Reg. at 48,767; *FLIR Sys., Inc.*, IPR2015-00065 at 4–5, 9; *see also Illumina, Inc.* at 11. Additionally, Patent Owner was not prejudiced by Dr. Stone’s reliance on Exhibit 1074 as it was aware of the Gokhale paper in advance of filing its Patent Owner Response, and was afforded an opportunity to respond to these arguments in its Sur-Reply—an opportunity it took advantage of. Sur-Reply 17-19.

Patent Owner complains that “Dr. Stone attempts to characterize Petitioner's reply exhibit as somehow first introduced by Patent Owner in its Response,” Mot. 8, and that this means “paragraphs 15-17” must be “excluded as prejudicial in the inability for Patent Owner to respond.” *Id.*

However, discussion of the Gokhale and Minnich paper (EX1074) was actually first raised by Patent Owner, as is objectively apparent from the record. In its Patent Owner Response (Paper 36, 83), DirectStream claims that “Splash2 is limited in its capabilities and relies on the external Sun workstation to handle any looping” citing to “EX2169 at 14-15.” That section of EX2169 is specifically a summary and discussion of the Gokhale paper (EX1074) in relation to Splash2.

1.4.5 Splash 2

Splash 2 contains one or more boards each with an array of 16 well connected XILINX 4010 chips [Gokhale and Minnich, 1993]. The architecture does an excellent job supporting pipelined and SIMD processor configurations. Splash 2, for example, can be programmed in dbC, which is a superset of C used on other SIMD computers. The dbC preprocessor produces C that runs on the Sun and VHDL which define SIMD processors with an instruction set tailored to the application, one or more of which fit into

EX2169, 14.

Therefore, far from being “irrelevant to any issues presented by Patent Owner,” Mot. 8, the Gokhale paper sits front and center in Patent Owner’s argument that Splash2 relies on the external Sun workstation to handle looping. Response, 83. Moreover, the paper is relevant to positions that Patent Owner has taken as part of its arguments related to claim construction.

However, more fundamentally, Patent Owner fails to provide any basis for their claim that sections of an expert report should be ignored because it discusses an exhibit “for the first time.” Indeed, the declaration submitted with Petitioner’s Reply (EX1076) properly respond to arguments raised by Patent Owner in its Response—e.g., arguing that “computational loop” should be defined as “a set of computations that is executed repeatedly per datum, either a fixed number of times or until some condition is true or false.” See Response, Paper 36, 65; *On Semiconductor Corp. v. Power Integrations, Inc.*, IPR2016-00809, Paper 67 at 67-

68 (PTAB Sept. 22, 2017); *Anacor Pharm., Inc. v. Iancu*, 889 F.3d 1372 (Fed. Cir. 2018).

Additionally, Patent Owner is not prejudiced, *first* because it was well aware of the Gokhale paper in advance of filing its Patent Owner Response. *Second*, because it had a full and fair opportunity to be heard in its Sur-Reply. Indeed, Patent Owner specifically discussed the disclosure of looping in Splash2 and the sections of EX2169 at issue in its Sur-Reply. Sur-Reply, 17-19. They therefore have actually responded these arguments. And *third*, they cross-examined Dr. Stone regarding his reply declaration and failed to ask him any substantive questions.

IV. Exhibits 1075 and 1078

A. Testimony in Exhibits 1075 and 1078 is Relevant

Patent Owner also objects to certain testimony in Exhibits 1075 and 1078 as lacking relevance. But Patent Owner's motion runs afoul of the prohibition against using a motion to exclude "to challenge the sufficiency of the evidence to prove a particular fact" yet again. 77 Fed. Reg. at 48,767; *FLIR Sys., Inc.*, IPR2015-00065 at 4-5, 9; *see also Illumina, Inc.* at 11.

For example, Patent Owner complains that testimony at 65:12-17 of Exhibit 1075 should be excluded because "the question asked is vague, ambiguous, calls for a legal conclusion, and misleading."

First, it is not true that Petitioner uses 65:12-17 of Exhibit 1075 “to show that Dr. Homayoun ‘never offers an interpretation of ‘computational loop...’” Indeed, simply reading the entire sentence shows that Petitioner relies on 65:12-17 of Exhibit 1075 to show that “Dr. Homayoun, never offers an interpretation of ‘computational loop,’ *never contests the Board’s interpretation*, and never testifies as to what he believes the ordinary meaning of the phrase is. EX2112, ¶195; EX1075, 65:12-17.”

In any event, the questions were not vague or confusing, and the record is clear that Dr. Homayoun clearly understood he was being asked if he ever offered an opinion as to the Board’s interpretation of the term.

5 Q. Okay. So on the next page of
6 Exhibit 2111, page 87, do you see paragraph 195?

7 A. Yes, I see.

8 Q. And in 195, you recount the Board's
9 interpretation of the computational loop claim
10 language; correct?

11 A. Yes.

12 Q. Would you agree that you don't have an
13 opinion here saying that the Board's interpretation
14 is incorrect?

15 MR. HSU: Objection to form.

16 THE WITNESS: Yes, **I don't have an opinion to**
17 **say that the board interpretation is incorrect.**

EX1075, 65:5-17.

DirectStream also argues that the question “calls for a legal conclusion,” however it is unclear how this question, which asks an experts opinion about a claim construction, could be considered rendering a legal opinion.

Patent Owner next contends that “the cited deposition passage should still be excluded as irrelevant” because Dr. Homayoun discusses computational loops outside of ¶195. Mot. 10. However, Patent Owner only objected to this question on the grounds of “form,” and therefore has waived any objection based on relevance.

Patent Owner next claims that its expert’s testimony at page 27:4-12 in Exhibit 1075, should be excluded because “the question asked is vague, ambiguous, calls for a legal conclusion, and misleading.” Mot. 10. Patent Owner further claims that Petitioner “purposefully misstates” the applicable legal standard in an attempt to “purposefully . . . elicit confusing testimony.”

However, never specifically explains how his testimony is “purposefully misstat[ed]” anything. Mot. 10. Indeed, the entirety of Patent Owner’s argument runs afoul of the prohibition against using a motion to exclude “to challenge the sufficiency of the evidence to prove a particular fact.” 77 Fed. Reg. at 48,767; *FLIR Sys., Inc.* IPR2015-00065 at 4–5. Here Patent Owner is plainly debating the

sufficiency of the legal arguments underlying Petitioner's Reply and not the admissibility of this testimony.

Patent Owner also seeks to exclude "EX1078, 65:12-17" because the questions was "is vague, ambiguous, and calls for a speculative answer and thus should be excluded." Mot. 11. However, Patent Owner did not object to this question at the time.

11 Q. And then the sentence after that, "When
12 the actual program executes" -- that actual
13 program is what you create using dbC, correct?

14 A. Yes.

15 Q. Okay. So what this is saying is, if you
16 use dbC on Splash 2, Mr. Halverson believes the
17 loops get done in the Sun workstation?

18 A. In the Sun workstation. Yeah.

19 Q. It doesn't say that's the only way to do
20 it on Splash 2; isn't that right?

21 **MR. VINNAKOTA: Objection to form**

EX1078, 65:11-21. Patent Owners objection came after the next questions was asked. Therefore, Patent Owner did not timely object to this question, and has waived any objections.

In any event, Patent Owner does not explain how the questions is vague, ambiguous, or speculative. For this reason alone, Patent Owner has not met its burden of establishing these portions of Dr. El-Ghazawi's testimony are not admissible, *see* 37 C.F.R. § 42.20(c), *FLIR Sys., Inc.*, IPR2014-00411 at 5, its motion must be denied.

V. Conclusion

For the foregoing reasons, Petitioner respectfully requests that the Board deny Patent Owner's Motion and rule the exhibits admissible for the reasons identified above.

Dated: January 22, 2020

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on January 22, 2020, a copy of the foregoing document has been served via email on the following:

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