

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Zebra Technologies Corporation
Petitioner

v.

Intellectual Ventures I LLC
Patent Owner

Inter Partes Review No.
IPR2024-00883

Patent No. 7,623,439
Filing Date: May 4, 2005
Issue Date: November 24, 2009

PETITIONER'S REQUEST FOR DIRECTOR REVIEW

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I. Introduction

The Board improperly denied institution based on errors of both fact and law. Specifically, the Board: (a) applied a higher burden of proving publication to the Petition than precedent requires; (b) ignored evidence and argument that Dammann was both presented at European Wireless 2002 and published in the conference proceedings before the priority date; and (c) blinded itself to additional evidence Petitioner attempted to submit to establish publication. Petitioner thus respectfully requests that the Director order the Board to apply the correct legal standard to the evidence offered by Petitioner, and institute a proceeding.

II. Background

A. The '439 Patent and Its Earliest Claimed Priority Date.

U.S. Patent No. 7,623,439 (the "'439 Patent") claims priority to U.S. Provisional Application No. 60/572,481, which was filed on May 20, 2004. Accordingly, the earliest possible effective filing date of the '439 Patent is May 20, 2004. Its claims recite cyclically shifting a first OFDM packet to generate a shifted OFDM packet, and then transmitting the two packets at substantially the same time. The patent acknowledges that this process had been well-known long before its filing date as "cyclic delay," a process where one packet is delayed in time relative to another packet. Ex. 1001, Fig. 5 (labeled "PRIOR ART"), col. 1:40-55.

The '439 Patent suggests that it improves upon cyclic delay through what it terms cyclic advancement, i.e., wherein one packet is shifted forward of the other

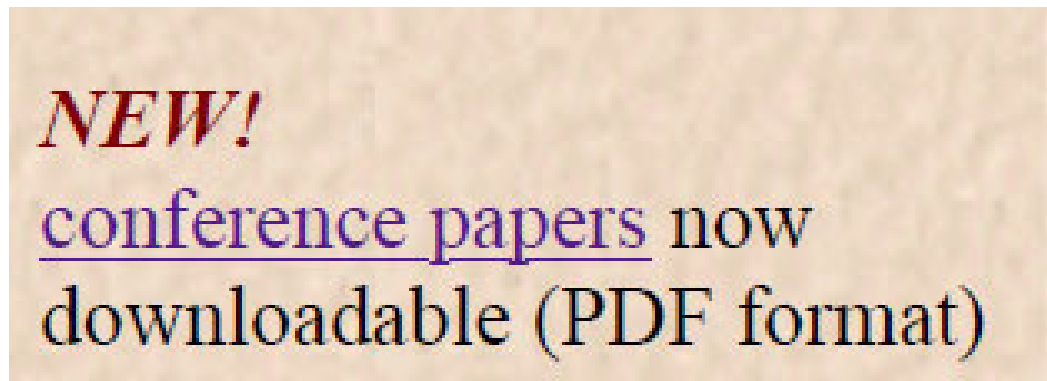
packet, as opposed to delay. As the '439 Patent itself explains, “[d]ue to the periodic nature of OFDM subcarriers, mathematically, a small cyclic advance of 100 nsec is identical or equivalent to a large delay of 3100 nsecs (the OFDM symbol waveform repeats with a period of 3.2 μ sec or 3200 nsec).” *Id.* at 8:5-9. Thus, the sole purported point of novelty, “cyclic advancement,” is no different than the well-known process of cyclic delay.

B. The Dammann Reference and Evidence of Publication Prior to May 2004 Submitted with the Petition.

For Ground I, the Petition relied on a combination of two references, (1) A. Dammann, P. Lusina, and M. Bossert, *On the equivalence of space–time block coding with multipath propagation and/or cyclic delay diversity in OFDM*, in Proc. Eur. Wireless 2002, pp. 847–851 (Ex. 1005) (hereinafter “Dammann”) and U.S. Patent No. 5,961,575 to Hervin *et al.* (Ex. 1006). The Petition explained that “152 papers, including Dammann, were accepted for presentation in the [European Wireless 2002 Conference] and publication in the proceedings.” Petition at 21. The Petition evidenced these facts by relying upon Exhibits 1014, 1015, and 1016.

Exhibit 1014 is an Internet Archive capture of the Webpage for European Wireless 2002, which indicates it was captured on October 28, 2002. It explains that the conference was held February 25-28, 2002, and “[t]he conference will bring together researchers and practitioners presenting the most up-to-date results and achievements primarily in the following fields: advancement in physical layers

and MAC protocols for indoor/cellular narrowband networks and broadband radio access systems; architectures and related protocols for the interworking of fixed and wireless (terrestrial and satellite) networks.” Ex. 1014. The page further indicates that as of the date of the capture, i.e., October 28, 2002, conference papers are now downloadable in .PDF format:



Id.

Exhibit 1015 is an Internet Archive capture of the European Wireless 2002 webpage, which indicates it was captured May 23, 2003, and which explains that “Though named ‘European’, the EW2002 conference has received attention from all over the world. 221 papers, from 25 different countries in 5 continents, have been submitted.” Ex. 1015. Further, this exhibit explains that 152 papers were selected to both: (1) be presented at the conference, and (2) be published in conference proceedings. *Id.*

- 152 papers have been accepted for presentation in the conference and publication in the [proceedings](#).

Exhibit 1016 is an Internet Archive capture of the European Wireless 2002 webpage, which indicates it was captured November 23, 2004, and which shows the list of papers published and the schedule of papers presented on Wednesday, February 27, 2002. Of relevance is that the Dammann paper is part of Track C, “Space-Time Signal Processing for Wireless Systems.” Ex. 1016 at 6.

Space-Time Signal Processing for Wireless Systems

Chair: Sergio Barbarossa, University of Rome “La Sapienza”, Italy

- On the equivalence of Space-Time Block Coding with Multipath Propagation and/or Cyclic Delay Diversity in OFDM

A. Dammann¹, P. Lusina², M. Bossert²,

¹ German Aerospace Center (DLR) - ² University of Ulm, Germany

Further, Exhibit 1016 makes clear that Track C papers related to “Space-Time Signal Processing for Wireless Systems” were presented during the time window from 14.00-15.00, which fell between the lunch and coffee break. *Id.* at 1.

Time	Track A	Track B	Track C
12.30	Lunch		
12.45			
13.00			
13.15			
13.30			
13.45			
14.00	Energy Efficient Computation	Advanced Wireless Systems and Services	Space-Time Signal Processing for Wireless Systems
14.15			
14.30			
14.45			
15.00			
15.15	Coffee Break		
15.30			

Within Track C, “Space-Time Signal Processing for Wireless Systems,” there are four papers, in addition to Dammann, that were presented. *See id.* at 6.

Further, other presenters at the conference included multiple U.S.-based professors, including those from University of Illinois, Georgia Institute of Technology, and UCLA (*id.* at 2); University of Pennsylvania and University of California (*id.* at 3) as well as U.S.-based companies such as Qualcomm Inc., USA and AT&T; Labs - Research, NJ, USA (*id.* at 4).

C. Petitioner’s Preliminary Reply and Attempt to Present Additional Evidence Confirming Dammann Was Published.

In its Preliminary Response, the Patent Owner argued that Dammann was not published. *See* Paper 6 at 42-52. Notably, the Preliminary Response did not cite *Hulu*, nor address the “reasonable likelihood” standard, but instead sought a higher standard. *Id.* at § VII (“THE PETITION FAILS TO **DEMONSTRATE** THAT DAMMANN IS PRIOR ART”).¹ The Preliminary Response further addressed the *Fintiv* factors, and with respect to Factor 6, urged that “As discussed above, Petitioner’s challenge is weak.” *Id.* at 75. Petitioner requested authorization to file a reply explaining in an email to the panel, “[t]here is good cause for a reply to address the *Fintiv* factors, which Patent Owner addressed in its preliminary response....” Ex. 3001 at 2. The Board responded that “Petitioner is authorized 5-pages for this preliminary reply limited to these *Fintiv* issues.” *Id.* at 1.

¹ All emphasis added unless noted.

Petitioner timely filed a five-page preliminary reply, which addressed the *Fintiv* factors, including the merits of the Petition. Petitioner argued that Dammann is prior art, including citing an Internet Archive Declaration (Exhibit 1017) and citing a related proceeding challenging the same patent relying upon a similar Dammann article. Shortly thereafter the Board issued an order expunging the Preliminary Reply and Exhibit 1017, explaining “[w]e did not authorize the filing of new evidence, i.e., a new declaration (Ex. 1017), in support of the Preliminary Reply.” Paper 8. The Board further explained “No new preliminary reply is authorized at this time. If Petitioner still desires to file a preliminary reply, it may make that request within three business days by sending an email to the Board and particularly stating the reasons therefor.”

Petitioner requested a new preliminary reply. The Board denied this request in email correspondence on October 9, 2024, which stated: “Petitioner is authorized to file a Preliminary Reply limited to filing of a *Sotera* stipulation. The substance of the stipulation is limited to one page without any discussion of the substantive merits of the case.”

D. The Decision Denying Institution.

On November 20, the Board denied institution. Paper 10 (the “Decision”). The Decision noted that “Petitioner asserts Dammann ... qualif[ies] as prior art under at least 35 U.S.C. § 102(b).” *Id.* at 11. The Decision criticized Petitioner for

not citing *Hulu* and for allegedly “never squarely address[ing] the key issue of whether Dammann was publicly accessible.” *Id.* at 20. But Petitioner plainly cited the “reasonable likelihood” standard set forth in *Hulu*, regardless of whether *Hulu* itself was cited. *See, e.g.*, Petition at 5 & 65. Moreover, Petitioner also squarely addressed the issue of public accessibility of Dammann using Exhibits 1014-1016. Petition at 20-21.

Because “the first page of the Dammann reference itself, as well as the remaining four pages, are devoid of *any* publication date, associated conference, or conference date,” the Board limited its inquiry to Exhibits 1014-1016. *Id.* at 22-23. However, rather than addressing the substance of the disclosure of those Exhibits, the Board incorrectly found “there is no evidence of record that Dammann was actually physically disseminated to the public, such as at the conference site.” Paper 10 at 24. Moreover, the Board also ignored Petitioner’s evidence that Dammann was included within the proceedings of the conference, and instead erroneously held that “our inquiry is focused on whether an interested skilled artisan, using reasonable diligence, would have found Dammann on the “docenti.ing.unipi.it” website.” *Id.* at 24-25. The Board held that “Petitioner fails *to sufficiently establish* that Dammann qualifies as a prior-art printed publication under 35 U.S.C. § 102(b)” (*id.* at 26) because it presented no “testimonial evidence of record that a person interested in wireless diversity in OFDM systems would

have been aware of the ‘docenti.ing.unipi.it’ website as a place to search for such subject matter.” *Id.* at 26. As shown below, this analysis both applies the incorrect standard at the institution stage and ignores the actual arguments and evidence in the Petition.

III. Legal Standard

A. Standard for Director Review

The Director may review the Board’s decision whether to institute trial in an AIA proceeding for abuse of discretion. Director Review Process, § 5(A)(ii)(c).² “An abuse of discretion is found if [a] decision: (1) is clearly unreasonable, arbitrary, or fanciful; (2) is based on an erroneous conclusion of law; (3) rests on clearly erroneous fact finding; or (4) involves a record that contains no evidence on which the Board could rationally base its decision.” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016) (quoting *Bilstad v. Wakalopulos*, 386 F.3d 1116, 1121 (Fed. Cir. 2004) (citations omitted).

B. The *Hulu* Standard for Publication at the Institution Phase.

The standard for addressing public accessibility is addressed in *Hulu, LLC v. Sound View Innovations, LLC*. IPR2018-01039, Paper 29 (PTAB Dec. 20, 2019) (precedential) (“*Hulu*”). In *Hulu* the precedential opinion panel considered a denial

² <https://www.uspto.gov/patents/ptab/decisions/director-review-process>

of institution and granted “rehearing to address the following issue: ‘What is required for a petitioner to establish that an asserted reference qualifies as “printed publication” at the institution stage?’” *Hulu*, at 2.

Hulu made clear that “at the institution stage, the petition must identify, with particularity, evidence sufficient to establish *a reasonable likelihood* that the reference was publicly accessible before the critical date of the challenged patent.” *Id.* at 13. Further, while this “reasonable likelihood” standard “is a higher standard than mere notice pleading ... it is *lower than* the ‘preponderance’ standard to prevail in a final written decision.” *Id.* With respect to what evidence is sufficient to establish this “reasonable likelihood” standard, the *Hulu* panel explained that this is determined based on “the totality of the evidence” submitted with the Petition, which is not limited to evidence on the face of the reference. *Id.* at 17-18.

Finally, post-institution, “if the patent owner challenges a reference’s status as a printed publication, a petitioner may submit a supporting declaration with its reply to further support its argument that a reference qualifies as a printed publication.” *Id.*, at 15 (collecting cases authorizing submission of additional evidence of publication). Alternatively, “if a patent owner does not challenge the reference’s status as a printed publication, the petitioner may move to submit the declaration through the supplemental information process.” *Id.*

IV. Argument

A. The Decision Required More than “Reasonable Likelihood.”

The Board legally erred in misapplying the standard from its precedential decision in *Hulu*. As explained in detail above, *Hulu* requires a Petition at the institution stage to “identify, with particularity, evidence sufficient to establish *a reasonable likelihood* that the reference was publicly accessible before the critical date of the challenged patent.” *Hulu*, at 13. The Decision did not address Petitioner’s evidence according to this standard. To the contrary, the Board applied a higher burden requiring proof of public dissemination, versus the lower reasonable likelihood standard. Paper 10, at 24, 26, & 32. The Board began its analysis by addressing the burden on final written decision versus the burden at institution (*Id.* at 19) and did so by citing *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016). The Board presents this as illustrative of Petitioner’s burden, but *Magnum Oil* relates to a final written decision, not the standard for institution. And *Hulu* confirms that these standards are different. *Hulu*, at 13 (the “reasonable likelihood “standard “is *lower than* the ‘preponderance’ standard to prevail in a final written decision.”).

In addressing the evidence presented, the Decision assigned Petitioner a higher burden than actually articulated by *Hulu*, namely a burden “to provide evidence *sufficient to establish* that the Dammann reference was publicly

accessible before the critical date.” Paper 10, at 26. Elsewhere the Board similarly misstated the standard and made clear that it assigned to Petitioner “*the burden to prove*, under the standard for instituting review, that Dammann is a printed publication.” *Id.*, at 24. And in its ultimate conclusion, the Decision stated: “we determine that Petitioner fails *to sufficiently establish* that Dammann qualifies as a prior-art printed publication under 35 U.S.C. § 102(b).” *Id.* at 26; *see also id.* at 32 (“Petitioner has not met their *threshold burden of establishing* that Dammann is a prior art printed publication to the claims of the ’439 patent....”).

This is not the reasonable likelihood standard required by *Hulu*. Applying the incorrect burden is an abuse of discretion. *See Intelligent Bio-Sys.*, 821 F.3d at 1367. Under the standard to be applied at institution, the evidence Petitioner offered is more than sufficient to establish a reasonable likelihood that Dammann is a publication, as explained above and as further explained below.

B. The Decision Did Not Consider Evidence that Dammann Was (1) Presented at European Wireless 2002 and (2) Published in Conference Proceedings Prior to May 2004.

The Petition included three exhibits that individually and together establish a reasonable likelihood both that: (1) Dammann was publicly presented, and therefore published, to the attendees of European Wireless 2002, and (2) Dammann was published in the proceedings of European Wireless 2002.

**1. Dammann Was Publicly Presented and Therefore
Published to Attendees of European Wireless 2002.**

The Petition established a reasonable likelihood that Dammann was published to the attendees of European Wireless 2002. As explained above, Exhibits 1014-1016 collectively show that papers were presented at the proceedings in February 2002. Ex. 1015 (noting that 152 papers were “accepted for *presentation in the conference*....”). And Exhibit 1016 establishes that Dammann was one of the 152 papers accepted for presentation, and even provides the specific time window at which Dammann was presented. Ex. 1016 at 6.

Public presentation at a conference of interested attendees is sufficient to establish publication. *See, e.g., Massachusetts Institute of Technology v. AB Fortia*, 774 F.2d 1104, 1109 (Fed. Cir. 1985) (finding that a paper was a printed publication where it was presented at a conference to “between 50 and 500 persons interested and of ordinary skill in the subject matter [who] were actually told of the existence of the paper and informed of its contents by the oral presentation, and the document itself was actually disseminated without restriction to at least six persons.”); *In re Klopfenstein*, 380 F.3d 1345, 1347, 1352 (Fed. Cir. 2004) (finding as a printed publication a presentation that “was shown for an extended period of time to members of the public having ordinary skill in the art,” despite that “no copies of the presentation were ..., and the presentation was never catalogued or indexed in any library or database.”).

The Board did not consider this evidence of presentation. Instead, the Board overlooked this evidence, incorrectly finding that “there is no evidence of record that Dammann was actually *physically disseminated to the public, such as at the conference site.*” (Pages 24-25). Besides ignoring the evidence presented, this analysis is legally incorrect. The Federal Circuit has explained “[i]f accessibility is proved, there is no requirement to show that particular members of the public actually received the information.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988); *see also In re Lister*, 583 F.3d 1307, 1313–14 (Fed. Cir. 2009) (“[O]ur cases have held that once accessibility is shown, it is unnecessary to show that anyone actually inspected the reference.”).

Thus, Petitioner’s evidence establishes a reasonable likelihood that Dammann was published to skilled artisans at European Wireless 2002. No more is required for institution.

2. Dammann Was Published Prior to May 2004 in the Proceedings of European Wireless 2002.

As a separate error, the Board ignored evidence that established a reasonable likelihood that Dammann was published in the proceedings of European Wireless 2002. Ex. 1015 (“152 papers have been accepted for ... *publication in the proceedings.*”). Dammann is clearly listed as a presented article, which was separately published in the proceedings. Ex. 1016.

As noted above, the Board ignored this evidence, instead asking only whether Dammann was accessible on a website versus in the conference proceedings, as the Petition showed. *See* Petition at 21 (“152 papers, including Dammann, were accepted for presentation in the conference and publication in the proceedings”). But even if the Board limited its analysis to the website, its finding is still fatally flawed as Exhibit 1014 makes clear that conference papers, including Dammann, were available for download by at least October 28, 2002. Ex. 1014.

Because the Decision ignored these facts and arguments and applied an incorrect standard, it rests on an error of law and clearly erroneous factual finding, and thus the Board abused its discretion in denying institution. *See Intelligent Bio-Sys.*, 821 F.3d at 1367.

C. The Board Blinded Itself to Additional Evidence of Publication, Which *Hulu* Authorizes Petitioners to Provide.

As explained above, the Board originally authorized a Preliminary Reply to address the *Fintiv* factors (Ex. 3001), which necessarily included responding to Factor 6 and the strength of the Petition as addressed in the Preliminary Response. Paper 6 at 75 (“As discussed above, Petitioner’s challenge is weak.”). Based on the authorization Petitioner attempted to present additional evidence that the subject matter in Dammann was publicly accessible, including a declaration confirming that a related article with similar disclosure was publicly available. The Board struck this evidence despite its prior grant of leave for a Reply. Paper 8.

Such evidence is plainly permissible after institution under *Hulu. Hulu*, at 21 (“Patent Owner may challenge Petitioner’s evidence, and ***Petitioner may respond if appropriate, as indicated herein.***”). Indeed, as *Hulu* explained, “if the patent owner challenges a reference’s status as a printed publication, a petitioner may submit a supporting declaration with its reply to further support its argument that a reference qualifies as a printed publication.” *Id.*, at 15. Thus, since it could have been presented post-institution, this evidence should have been accepted in the authorized preliminary reply, and to exclude it was an abuse of discretion as well.

The Board should not blind itself to the additional evidence Petitioner attempted to submit to confirm that Dammann was published.

V. Conclusion

In view of the foregoing, Petitioner respectfully requests that the Director reverse the Decision and order the Board to institute a proceeding.

Dated: December 19, 2024

Respectfully submitted,

By: /Michael Morlock/

Michael Morlock

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Lead Counsel for Petitioner

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing
PETITIONER'S REQUEST FOR DIRECTOR REVIEW has been served via
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