

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES) INC.
Petitioner

v.

INTELLECTUAL VENTURES I LLC
Patent Owner

Inter Partes Review No.
IPR2024-01224

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

PETITIONER'S REQUEST FOR DIRECTOR REVIEW

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I. INTRODUCTION

Petitioner respectfully requests Director Review of the institution decision in this IPR proceeding. The Board improperly denied institution based on errors of both fact and law. Specifically, the Board: (a) required a higher burden for proving publication of a relied upon reference in the Petition (Paper 1) than precedent requires; (b) ignored evidence and argument that Dammann (Ex. 1005) was both presented at European Wireless 2002 conference and published in the conference proceedings before the priority date; and (c) failed to follow precedent and allow Petitioner to respond to prior art challenges with new evidence. 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

U.S. Patent No. 7,623,439 (the "'439 Patent") claims priority only 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 '439 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, 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. *Id.*, 1:37-41. 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.*, 8:5-9. Thus, the sole purported point of novelty, “cyclic advancement,” is no different than the well-known process of cyclic delay.

B. Petitioner's Motion for Authorization to File a Preliminary Reply

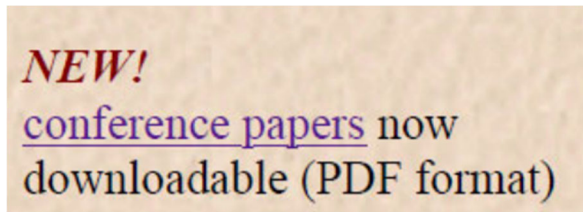
For Ground I, the Petition relied on a combination of two references, (1) A. Dammann, P. Lusina, and M. Bossert, On the equivalence of space–time block coding with multipath propagation and/or cyclic delay diversity in OFDM, in Proc. Eur. Wireless 2002, pp. 847–851 (Ex. 1005) (hereinafter “Dammann”) 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.” Paper 1 at 21. The Petition evidenced these facts by relying upon Exhibits 1014, 1015, and 1016.

Exhibit 1014 is an Internet Archive capture of the publicly available 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 [was expected to] ... 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 public page further indicates that as of the date of the capture, *i.e.*, October 28, 2002, conference papers are now downloadable in PDF format, and displays a clickable hyperlink (in purple underlined text) that opens a page giving access to the conference schedule and electronic copies of the presented papers.



Ex. 1014 at 1 (detail).

Exhibit 1015 is an Internet Archive capture of the publicly available 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.* This webpage also includes a clickable hyperlink that accesses a contact page for buying hard copies of and accessing

electronic versions of the proceedings.

- 152 papers have been accepted for presentation in the conference and publication in the [proceedings](#) Ex. 1015 at 1 (detail).

Exhibit 1016 is an Internet Archive capture of the publicly available European Wireless 2002 webpage, which indicates it was captured November 23, 2004, and shows the list of papers published and the schedule of papers presented on Wednesday, February 27, 2002. Ex. 1016 at 1. The Dammann paper is part of Track C, “Space-Time Signal Processing for Wireless Systems.” *Id.* at 6. A clickable hyperlink (red underlined text) is included on the webpage that directly opens an electronic copy of the paper.

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

Ex. 1016 at 6.

Further, Exhibit 1016 shows that papers including Dammann were presented during the time window from 14.00-15.00 between lunch and coffee break. Within Track C, “Space-Time Signal Processing for Wireless Systems,” four papers were presented in addition to Dammann. *See id.* The Track C label on the schedule is a clickable hyperlink (red underlined text) that opens electronic copies of each of the papers in this group, including Dammann. *Id.* at 6.

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

Ex. 1016 at 1.

C. Petitioner Requested Authorization to File a Preliminary Reply

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, namely requiring Petitioner to prove public accessibility of Dammann via the ‘docenti.ing.unipi.it’ website without considering all of the evidence on the record. *Id.* at § VII (“THE PETITION FAILS TO ***DEMONSTRATE*** THAT DAMMANN IS PRIOR ART”, emphasis added). Petitioner requested authorization to file a reply, explaining in an email to the panel, “Petitioner believes that good cause exists and that it is in the interest of justice to address the Patent Owner’s argument challenging the public availability of Dammann (Ex.1004) before an institution decision is reached,” citing “the Board’s precedent in *Hulu LLC v. Sound View Innovations* [that] authorizes the Petitioner to submit additional information

including a reply to support its argument that a reference qualifies as a printed publication, if challenged by the Patent Owner.” Ex. 3002 at 1. The Board responded that “Petitioner is authorized to file a Motion for Leave for Authorization to File a Preliminary Reply, limited to 5 pages ... [t]he motion should include a discussion of the effect of time bar under 35 U.S.C. § 315(b) on the Petition, which may render any preliminary reply moot, and of the timeliness of the request, starting from the time of filing of Patent Owner’s Preliminary Response in IPR2024-00883 in which Patent Owner made the argument that Dammann has not been adequately shown as a printed publication.” Ex. 3004 at 1.

Petitioner timely filed a five-page motion, which addressed the required topics. Paper 8. This motion stated that “Petitioner’s reply will provide information, including a supporting declaration from a research librarian that confirms that Ex. 1005 was publicly available before the critical date of the ’439 patent ... [and] will rely only on additional archived pages of the same website that was previously submitted to show public accessibility of the Ex.1005, many of which can be accessed on the hyperlinks of the exhibits already of record.” *Id.* at 1. The Board denied Petitioner’s motion, stating that “Petitioner has not demonstrated good cause to file a pre-institution reply to address Patent Owner’s arguments as to the status of Dammann.” Paper 10 at 8.

D. The Decision Denying Institution

On February 6, 2005, the Board denied institution. Paper 11. 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* in the Petition and for allegedly “never squarely address[ing] the key issue of whether Dammann was publicly accessible.” *Id.* at 21. However, the Petition cited the “reasonable likelihood” standard set forth in *Hulu*, regardless of whether *Hulu* itself was cited. *See e.g.*, Paper 1 at 5, 65. Moreover, Petitioner also addressed the issue of public accessibility of Dammann using Exhibits 1014-1016. *Id.* at 22-23. Following the Board’s statement that “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. Paper 11 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.” *Id.* at 26. Moreover, the Board ignored Petitioner’s evidence that Dammann was available for download with the other conference papers in a PDF format on the conference website as well as provided to conference participants. Ex. 1014 at 1. Instead, the Board 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.” Paper 11 at 26. 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)” 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.* As shown below, this analysis both applies the incorrect standard at the institution stage and ignores the actual arguments and evidence provided in the Petition.

III. LEGAL STANDARDS

A. Director Review

The Director may review the Board’s decision whether to institute trial in an AIA proceeding for abuse of discretion. 37 C.F.R. § 42.75(a); Director Review Process, § 5(A)(ii)(c). ““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. Printed Publications as Prior art

A reference qualifies as a “printed publication” “upon a satisfactory showing

that such document 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.” *In re Wyer*, 655 F.2d 221, 226 (CCPA 1981). There are “many ways a reference may be disseminated to the interested public” (*Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348 (Fed. Cir. 2016)) including oral presentations with provided written copies (*Massachusetts Institute of Technology v. AB Fortia*, 774 F.2d 1104, 1109 (Fed. Cir. 1985); *In re Klopfenstein*, 380 F.3d 1345, 1347, 1352 (Fed. Cir. 2004), and publications in electronic format (*In re Wyer* at 227).

C. *Hulu* Standard for Establishing Prior Art

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*”). The precedential opinion panel of *Hulu* considered a denial 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?’” *Id.* 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 (emphasis added). 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.* (emphasis added). The *Hulu* panel introduced the “reasonable likelihood” standard for providing sufficient evidence of publication, which is based on “the totality of the evidence” submitted with the Petition, and 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).

IV. ARGUMENTS

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 (emphasis added). The Decision applied a higher burden requiring proof of public dissemination, versus this lower reasonable likelihood standard. Paper 11 at 27-33. This higher burden is not the reasonable likelihood standard required by *Hulu*. Applying the incorrect burden is an abuse of discretion. *See Intelligent Bio-Sys.* 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 further below.

B. The Board Did Not Consider Evidence in the Record that Dammann Is Prior Art

The Petition included three exhibits that individually and together establish at least a reasonable likelihood that both: (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 and was publicly available via the conference website.

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 have been accepted for presentation in the conference and publication in the proceedings”). Exhibit 1016 also establishes that Dammann was one of the 152 papers accepted for presentation and even provides the date and specific time window when Dammann was presented. *See supra II.B.* Additionally, hyperlinks within Exs. 1014-1016 provide public access directly to an electronic copy of Dammann. *Id.* Similar to the cases discussed above in section *III.B*, express indication in Damman itself of its public presentation at the European

Wireless 2002 conference is at least sufficient to establish that the reference was published and disseminated to the public through presentation. *Id.*

The Board did not consider this evidence of Damman's public presentation and dissemination. Instead, the Board overlooked the evidence provided in the Petition, incorrectly finding that "there is no evidence of record that Dammann was actually physically disseminated to the public, such as at the conference site." Paper 11 at 26. Besides ignoring the evidence presented, this analysis is legally incorrect. The Federal Circuit stated "[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). Thus, the Petition establishes a reasonable likelihood that Dammann was published at the European Wireless 2002 conference. No more is required for institution.

2. Dammann Was Published Before 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" including Dammann). Dammann is not only clearly listed as a presented article but was also separately published in proceedings that were made available to conference attendees as well as on the conference website. *Supra II.B.*

In fact, hyperlinks included on the Exs. 1014-1016 webpages still provide public access directly to an electronic copy of Dammann. *Id.* Physical copies of conference presentations, including Dammann, were also disseminated (noting that hyperlink in Ex. 1014 leads to a page providing a contact number and price for printed copies of the conference proceedings). *See* Ex. 1014; *supra* II.B. This evidence establishes that Dammann qualifies as an accessible printed publication.

As discussed above, the Board ignored this evidence. That is, instead of considering Dammann's public presentation and inclusion in conference proceedings (as provided by the Petition), the Board based its decision on the inquiry of whether Dammann was physically disseminated. Paper 11, pp. 26-27. However, Ex. 1014 makes clear that conference papers, including Dammann, were available for download by at least October 28, 2002, and the hyperlinks on the page give access to an electronic copy of the paper. *See* Ex. 1014; *supra* II.B. Further, as discussed below, the Board's conclusion that no evidence was provided showing "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" is also incorrect based on the content of Exs. 1014-1016 which show a connection between the European Wireless 2002 conference and School of Engineering at the University of Pisa (using URL addresses 'ing.unipi.it'), which hosted and provided ongoing support for the conference. Exs. 1014-1016. Because the Decision ignored these

facts and arguments and applied an incorrect standard, the Decision rests on an error of law and erroneous factual finding, and thus the Board abused its discretion in denying institution. *See Intelligent Bio-Sys.* at 1367.

3. The Board Denied Entry of Additional Evidence of Publication, Which *Hulu* Authorizes Petitioners to Provide

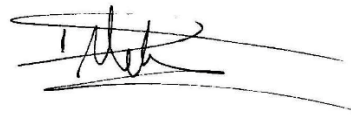
Petitioner could not have introduced additional evidence of Dammann's public availability in the Petition because, by filing a "copycat" Petition of the Petition in IPR2024-00883, Petitioner signaled its intention to file a motion for joinder. Paper 8 at 1; Paper 1 at 16. Entry of the additional evidence would have risked denial of joinder with the other proceeding. *See Microsoft Corp. v. Uniloc 2017 LLC*, IPR2019-00744, Paper 11 at 5, 11-12 (denying joinder on the grounds of differences in declarations including public accessibility issues). Thus, Petitioner sought to file a preliminary reply to submit the additional evidence of Dammann's public availability. As discussed above, Petitioner's motion stated that the reply would include "a supporting declaration from a research librarian that confirms that Ex. 1005 was publicly available before the critical date of the '439 patent" and would "rely only on additional archived pages of the same website" shown in Exs. 1014-1016. *Supra II.C*; Paper 8 at 1. Although this evidence was directly responsive to the Board's inquiries about Dammann's public accessibility, the Board did not allow entry of the requested Declaration and denied Petitioner's motion. In doing so, the

Board not only ignored evidence already in the record providing the public accessibility of Dammann but also rejected further evidence of publication.

Such evidence is permissible after institution under *Hulu*. *Hulu* at 21 (“Patent Owner may challenge Petitioner’s evidence, and Petitioner may respond if appropriate, as indicated herein.”). Further, *Hulu* states “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. Likewise, Petitioner’s requested supporting declaration should have been considered by the Board in this case. Due to the denial of institution, Petitioner could not present this evidence, and therefore, it should have been accepted in the requested Petitioner’s Reply.

V. CONCLUSION

In view of the foregoing, Petitioner requests that the Director reverse the Decision and order the Board to institute an *inter partes* proceeding.



Dated: March 7, 2025 _____

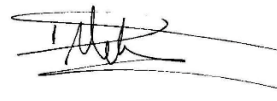
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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, the undersigned hereby certifies that this “PETITIONER’S REQUEST FOR DIRECTOR REVIEW” was served by filing this document through the Patent Trial and Appeal Case Tracking System (P-TACTS) and via e-mail to the following attorneys of record for the Patent Owner:

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