UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC., AMAZON WEB SERVICES, INC., AND AMAZON.COM SERVICES LLC,

Petitioner

v.

B.S.D. CROWN, LTD.,

Patent Owner.

IPR2025-00057
U.S. Patent No. 8,934,887 B2

PETITIONER'S REQUEST FOR DIRECTOR REVIEW

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EXHIBIT LIST

Exhibit	Reference
1001	U.S. Patent No. 8,934,887 ("'887 Patent" or "'887Pat.")
1002	File History of the '887 Patent ("'887FH")
1003	Declaration of Dr. Paul Martin ("Martin")
1004	Dr. Paul Martin CV
1005	Korean Patent Application Publication No. 10-2012-0046807 ("Yoon")
1006	U.S. Patent No. 9,424,052 ("Overton")
1007	U.S. Patent Application Publication No. 2009/0305790 A1 ("Lu")
1008	M. Lubonski, V. Gay and A. Simmonds, "An adaptation architecture to improve QoS of multimedia services for enterprise remote desktop protocols," Next Generation Internet Networks, 2005, Rome, Italy, 2005, pp. 149-156 ("Lubonski")
1009	Richardson, Iain E., The H.264 Advanced Video Compression Standard (2nd ed.), 2010, Wiley Publishing ("Richardson")
1010	U.S. Patent Application Publication No. 2006/0098619 A1 ("Nix")
1011	Declaration of June Ann Munford
1012	Complaint, *BSD Crown, Ltd. f/k/a Emblaze, Ltd. v. Amazon.com Inc.*, NDCA-3-24-cv-03503
1013	Plaintiff's Infringement Contentions in *BSD Crown, Ltd. f/k/a Emblaze, Ltd. v. Amazon.com Inc.*, NDCA-3-24-cv-03503
1014	Excerpts from Federal Court Management Statistics, June 2024
1015	U.S. Patent Application Publication No. 2001/0052012 A1 ("Rinne")
1016	M. A. Talaat, M. A. Koutb, H. M. Kelash and R. H. Aboelez, "Content-aware adaptive video streaming system," 2005 International Conference on Information and Communication Technology, Cairo, 2005, pp. 265-276 ("Talaat")
1017	A Few More Reasons Why RDP is Insecure. https://thehackernews.com/2023/07/a-few-more-reasons-why-rdp-is-insecure.html

Exhibit	Reference
1018	Understanding the Remote Desktop Protocol (RDP). https://learn.microsoft.com/en-us/troubleshoot/windows-server/remote/understanding-remote-desktop-protocol
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1026	VMware Celebrates Seven Years of Continual Innovation and Execution. https://news.broadcom.com/releases/7year
1027	[Xen-devel] [ANNOUNCE] Xen high-performance x86 virtualization. https://sourceforge.net/p/xen/mailman/message/5533663/
1028	News (older entries). https://www.virtualbox.org/wiki/News_pre_4_3
1029	Ten years of KVM. https://lwn.net/Articles/705160/
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1039	Dinh, H.T., Lee, C., Niyato, D. and Wang, P. (2013), A survey of mobile cloud computing: architecture, applications, and approaches. Wirel. Commun. Mob. Comput., 13: 1587-1611. https://doi.org/10.1002/wcm.1203
1040	Email from Board authorizing Petitioner's Reply
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1042	DocketNavigator stay statistics for Judge Donato in NDCA
1043	CAP Co., Ltd. v. McAfee, Inc. Powered by TCPDF (www.tcpdf.org) 3-14-cv-05068 (CAND), 4/11/2017, docket entry 81

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1044	DocketNavigator time to milestones statistics for Judge Donato in NDCA
1045	District Court Docket as of April 3, 2025

I. INTRODUCTION

Pursuant to 37 C.F.R. §42.71(d), Petitioner requests Director Review of the Board's institution denial ("DI," Paper 13). The Board abused its discretion by denying without explanation Petitioner's **unopposed** request for authorization to submit a preliminary reply to address an unforeseeable claim construction argument for the term "at least one of the display, the audio, and the hardware (HW) action" that first appeared in Patent Owner's Preliminary Response (POPR). The Board further compounded its error by adopting Patent Owner's (PO) construction on the basis of erroneous findings of fact (that PO had not even advanced) to deny institution without ever giving Petitioner a chance to respond. Petitioner therefore requests that the Director vacate the Board's decision and remand with instructions to (1) authorize a preliminary reply and sur-reply as to claim construction, and (2) issue a new institution decision in view of the full record.

II. LEGAL STANDARD

The Director may review and reverse incorrect Board decisions where, as here, those decisions involve an abuse of discretion, erroneous findings of fact, or erroneous conclusions of law. *United States v. Arthrex, Inc.*, 594 U.S. 1, 25 (2021); *see also* Revised Interim Director Review Process §2.B; *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016).

III. BACKGROUND

A. The ’887 Patent (EX-1001)

The ’887 Patent generally relates to systems and methods for a mobile device to interface with a user while the processing, storage, and network interface are handled remotely by a server. The patent describes eleven embodiments in which a mobile device gathers input data and sends it to a server for processing, after which the server sends display and/or audio user interface information to the mobile device for output to the user, as summarized below:

Embodiment	Corresponding Figure	Corresponding Description
1	Fig. 2	4:43-5:47, 4:64-65 (“server 12 processes the input information to produce a display and/or audio output”), 5:8-9, 5:24-28, 5:41-43
2	Fig. 3	5:48-6:21, 6:15-21 (“pass in real time…display graphics motions…perform voice calling or send SMS”)
3	Fig. 4	6:22-8:4, 6:63-66, 6:66-7:3 (The mobile device 10 produces the display, speaker audio **and/or** a HW action…”)[1], 7:57-62
4	Fig. 5	8:4-9:17, 8:37-43 (“If the mobile OS on the server receives input information to draw a circle on the display…[it] emulates the resulting display and send user interface information for reproducing the resulting display…”, 8:43-47, 8:47-53, 8:54-65
5	Fig. 6	9:18-11:11, 9:29-32 (For example, audio data is sent from the server…in a first stream separate and different from a second stream in which video data is sent.”), 10:43-44, 10:56-58

[1] All emphasis added unless otherwise stated.

Embodiment	Corresponding Figure	Corresponding Description
6	Fig. 7	11:12-33, 11:29-33 ("The mobile device 10 decodes the processed audio/video data…and displays the results and reproduces the audio.")
7	Fig. 8	11:34-62, 11:57-62 ("The first and second mobile devices 10 receive the processed audio/video streams…)
8	Fig. 9	11:63-12:11, 12:8-11 ("The mobile device 10 decodes audio data sent from the server 12)
9	Fig. 10	12:12-33, 12:22-26 ("The server 12…separates the web page display into video, image, text and audio streams and sends the web page to the mobile device.")
10	Fig. 11	12:34-48, 12:39-44 ("The server 12…sends user interface information including display data and audio data to the mobile device 10");
11	Fig, 12	12:49-62, 12:53-59 ("server 12…sends user interface information including display data and/or audio data…to the mobile device 10")

Of the '887 Patent's eleven embodiments, eight (Figs. 3, 5-8, 10-12) send both video/display[2] and audio data from the server for reproduction at the mobile device, one (Fig. 9) sends only audio data, one (Fig. 4) discloses the mobile device "produc[ing] the display, speaker audio **and/or** a HW [hardware] action" (*id.*, 6:66-7:3), and one (Fig. 2) sends video/display and audio to the mobile device (*see supra*) for "producing a display, audio, and other feedback" (*id.*, 5:35-38) without explaining what constitutes "other feedback." Importantly, in not a single

[2] Petitioner groups "text and/or notification data" with "video/display data" because the '887 Patent provides no indication that this data is used in any other way.

embodiment does the server send—and the mobile device reproduce—a video/display, audio, **and** a HW action by a HW component.[3]

B. Petitioner's Challenge

Just four months after PO sued Petitioner in district court—and 2.5 months **before** the parties exchanged proposed claim constructions in that action—Petitioner filed this petition challenging claims 1-8, 11-17, 20-25, and 28 of the '887 Patent on eight obviousness grounds involving six different prior-art references. Petition, Paper 1, 2. The Petition did not advance any particular claim construction but explained, among other things, why it would have been obvious to a POSITA in view of the prior art "to reproduce at the mobile device at least one of the display, the audio and the HW action by the HW component of the mobile device." *Id.*, 11-12, 44, 72-73 (limitation 1[c]).

[3] During prosecution, the Examiner rejected the pending claims based on prior art that disclosed "at least one of a display, audio and HW action" by sending either video alone or video and audio to a mobile device for reproduction. EX1002, 129-164. Notably, however, the Examiner never interpreted the claims of the '887 Patent to require that display, audio, **and** HW action be sent to and/or reproduced by the mobile device, nor did the Applicant ever argue that the claims require all three. *See id.*, 191-201.

C. PO's Claim Construction

The POPR included one argument on the merits that purportedly applied to all Challenged Claims. It was based on PO's proposal that the term "at least one of the display, the audio, and the hardware (HW) action" should be construed to mean "at least one of **each of** the display, the audio and the HW action." POPR, 8-18.[4] For support, PO cited two cases for the general proposition that "[t]he plain and ordinary meaning of an 'at least one of…and' term is conjunctive," but PO provided no analysis relating those cases to the '887 Patent. *Id.,* 8-11 (citing *SuperGuide Corp. v. DirectTV Enters., Inc.,* 58 F.3d 870, 885-86 (Fed. Cir. 2004) and *Medgraph, Inc. v. Medtronic, Inc.*, 843 F.3d 942, 949-50 (Fed. Cir. 2016)). In addition, PO cited two passages from the '887 Patent (POPR, 9-10 (citing '887Pat., 6:66-7:3 and 10:56-64)), but provided no substantive analysis or explanation of how those passages allegedly show that "[t]he specification reinforces a conjunctive reading." *Id.* PO also did not address the remainder of the intrinsic record in justifying the proposed construction. *Id.*

[4] The POPR additionally included a *Fintiv* argument for discretionary denial under 35 U.S.C. §314. POPR, Paper 7, 26-28.

D. Cursory Denial of Unopposed Request for Authorization for a Preliminary Reply on Claim Construction

On March 17, 2025, just seven days after receiving the POPR—and after meeting and conferring with PO—Petitioner emailed the Board requesting a 5-page preliminary reply to address (1) PO's *Fintiv* arguments and (2) PO's claim construction of the "at least one of…" term. EX1040, 2. PO did not oppose this request. *Id.* Nevertheless, the Board responded a week later and granted the request only as to the *Fintiv* issue without providing any explanation for denying Petitioner's unopposed request to also address claim construction. *Id.*, 1.

Accordingly, Petitioner's April 7, 2025 Preliminary Reply addressed only *Fintiv* Arguments. Paper 8. As part of the merits analysis of *Fintiv* factor 6, Petitioner included a short, four-sentence statement that PO's proposed claim construction was erroneous and that the Board had previously declined to apply PO's cases in the manner that PO proposed to support its construction. *Id.*, 5. But Petitioner could not substantively address claim construction given the Board's limited authorization. *See id.*

E. The Board's Institution Denial

On May 29, 2025, the Board denied institution after adopting PO's proposed construction, finding that "the plain and ordinary meaning of the phrase 'at least one of [A] the display, [B] the audio and [C] the hardware (HW) action' [is] conjunctive." DI, 18. On the basis of that construction, the Board found that the

prior art "fails to show all three (3) components to be reproduced" at the mobile device. *Id.*, 22-23, 28-29, 33.

In its claim construction analysis, the Board relied upon the same two cases cited in the POPR. DI, 13-14. And without addressing the unforeseeability of PO's construction—which was the basis for Petitioner's request for a preliminary reply—the Board found that Petitioner did "not proffer any explanation as to (1) why the normal conjunctive meaning of the phrase 'at least one of [A], [B], and [C]' does not apply in this Petition, or (2) why a disjunctive construction should apply when a patent claim, specification, or the prosecution history necessitates a meaning that is wider in scope." *Id.*, 14. In other words, the Board faulted Petitioner for failing to do the very thing that Petitioner had requested permission to do—the very thing that PO did not oppose—and that the Board had inexplicably not allowed.

Thus, without giving the Petitioner an opportunity to respond, the Board found that a conjunctive construction is supported by the '887 Patent claims and specification, reasoning that "if 'input information is required to produce three (3) separate and distinct components…then the 'user interface information' for use in reproducing at the mobile device is, likewise, required to include the three (3) separate and distinct components." DI, 16-17. The Board cited Figure 2 for support because it depicts a mobile device sending three types of input information to the

server. *Id.* Notably, PO did not make this argument in the POPR. *Compare*, POPR, 8-18 *to* DI, 16-17.

IV. ARGUMENT

A. The Board Abused Its Discretion by Refusing to Authorize a Preliminary Reply on Claim Construction

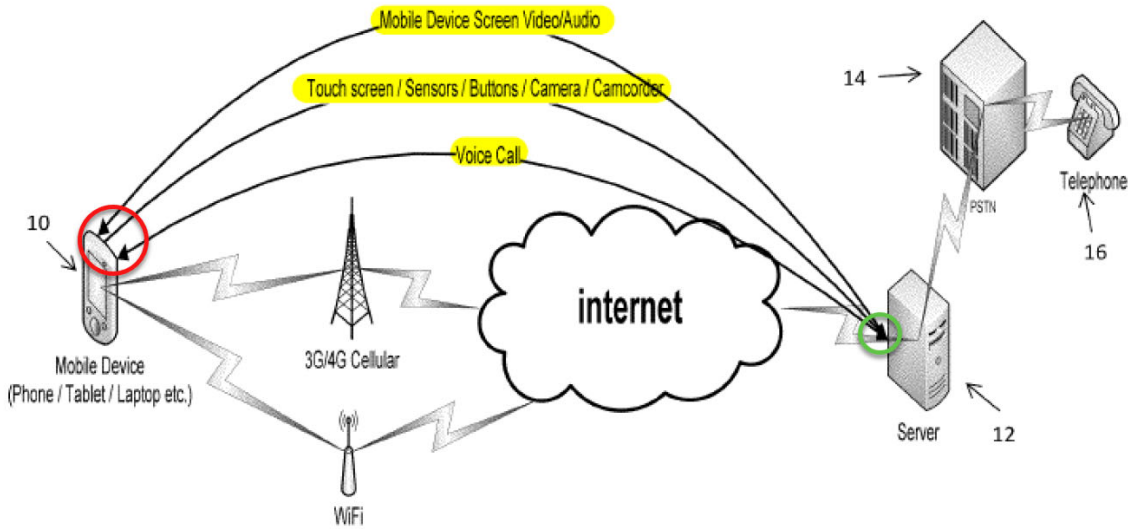
Under 37 C.F.R. §42.108(c), a petitioner may seek leave to file a preliminary reply to the POPR with a showing of good cause. Here, Petitioner met and conferred with PO and confirmed that PO did not oppose Petitioner's request for leave to submit such a reply on the issue of claim construction. EX1040, 2. As Petitioner explained, good cause existed because PO's proposed construction was unforeseeable given that the parties did not exchange preliminary constructions in the co-pending district court litigation until 2.5 months **after** Petitioner filed the Petition, and PO had never previously indicated that it would seek to construe the "at least one of …" term. *See* EX2006. Yet notwithstanding Petitioner's explanation and PO's non-opposition, the Board responded with a 2-sentence email a week later denying Petitioner's request for a preliminary reply on the issue of claim construction—despite granting the same unopposed request for a preliminary reply on *Fintiv* issues—thereby denying Petitioner an opportunity to substantively address PO's proposal without explaining ***why*** Petitioner's request was denied. EX1040, 1. This was an abuse of discretion that the Board did not cure in its institution denial. *See, e.g.*, *Semiconductor Components Industries, LLC, d/b/a Onsemi and Texas*

Instruments Inc. v. Greenthread, LLC, IPR2023-01242, IPR2023-01234, IPR2023-01244, Paper 94, 2-3 (granting Director Review where the Board denied discovery requests "and then cited the absence of evidence as a basis [for its decision]"). On the contrary, the Board compounded its error by crediting PO's misguided arguments and then faulting Petitioner for failing to address the unforeseeable construction in the Petition. *See id.*

If the Board had provided any explanation when it denied authorization for Petitioner's unopposed request, Petitioner could have asked for a conference call for reconsideration prior to the institution decision. But that did not happen. If it had, Petitioner would have been able to point out the numerous flaws in PO's construction, flaws that likewise permeate the Board's reasoning in adopting that construction. And doing so would not have imposed any significant additional burden on the Board since it did authorize a preliminary reply on *Fintiv* issues, and Petitioner could easily have addressed claim construction in that same submission.

B. The Board's Misplaced Reliance on Figure 2

The Board found that Figure 2 from the '887 Patent (reproduced below with annotations by Petitioner) supports a conjunctive reading of "at least one of…" because it shows mobile device sending three "separate and distinct components" of input information to the server.



In so doing, the Board pointed to the three components of information—[1] mobile device video/audio, [2] touch screen/sensors/buttons/camera/camcorder, and [3] voice call—indicated by the arrow joining the three lines pointing from the mobile device to the server (circled in green). Critically, however, the Board ignored that the server sends only ***two*** components of information—[1] mobile device video/audio and [2] voice call—back to the mobile device (circled in red). The server does ***not*** send "touch screen/sensors/buttons/camera/camcorder" information (which the Board equates to "a hardware (HW) action by a HW component of the mobile device"). Figure 2 thus does not support, and instead contradicts, the Board's conclusion that "'user interface information' for use in reproducing at the mobile device is, likewise, required to include the three (3) separate and distinct components…." DI, 17. Petitioner was unjustifiably deprived of an opportunity to explain this before the Board issued its institution decision.

C. The Board Ignored or Misunderstood the Rest of the Intrinsic Record

The Board's construction also excludes (at least) ten of the eleven embodiments disclosed in the '887 Patent, ignores the surrounding claim language, and finds no support in the prosecution history. The Board did not address any of this in its institution decision.

1. The Board's Construction Excludes Embodiments

It is well-established that a construction that excludes a preferred embodiment "is rarely, if ever, correct and would require highly persuasive evidentiary support." *E.g., Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Nevertheless, that is what the Board did here in adopting PO's conjunctive construction.

As explained above in §III.A, eight embodiments of the eleven in the '887 Patent (i.e., those described in relation to Figs. 3, 5-8, and 10-12) disclose sending only video and/or audio to the mobile device for reproduction. In addition, one embodiment (related to Fig. 9) discloses sending only audio to the mobile device for reproduction. *Id.* One embodiment (related to Fig. 4) expressly allows for the disjunctive case in which "[t]he mobile device [] produces the display, speaker audio, **and/or** a HW action" (*id.*, 6:63-7:3). And the last embodiment (Fig. 2) describes sending user interface information comprising "display, audio, and other feedback" without even suggesting that "other feedback" refers to a HW action. *Id.*

Thus, there is not a single embodiment in the '887 Patent that clearly discloses a mobile device receiving and reproducing display, audio, ***and*** a hardware action. Yet the Board did not address any of this.

Instead, the Board relied upon a portion of the specification ('887Pat 10:56-64) that, contrary to the Board's assertion, does not disclose "a stream of user interface information for use in reproducing at the mobile device…the HW action." DI, 17-18. Rather, this portion of the specification distinguishes between "the separate video, image and text ***data streams of the display data/user interface data***"—which are sent from the mobile device to the server—and "***requests from the server*** [according to which the mobile device enables different HW operations or actions]" sent from the server to the mobile device. *Id.* (quoting '887Pat, 10:56-64). These "requests" are not a "stream" or "user interface information" as described in the specification. '887Pat, 10:56-64. The Board (but not PO) also points to 4:53-63 (along with the incorrect interpretation of Figure 2 discussed above in §IV.B) to assert that the specification's disclosure of the mobile device sending each of audio, video, and a HW action to the server must equate to the server sending back to the mobile device a stream of user interface information comprising all three. DI, 17. Not so. The very next line (4:64-65) clearly states "the server 12 processes the input information to produce **a display and/or audio output** based on the input information." In other words, the specification does not disclose sending HW

actions from the server to the mobile device and cannot support the Board's reasoning. PO also did not raise this argument, but it is yet another error that Petitioner would have pointed out in a preliminary reply if given the opportunity to do so.

2. The Board's Construction is Unsupported by Claim Language

The Board also reasoned that because "independent claims 1 and 20 recite 'input information' received by remote server 12 from mobile device 10…to produce three (3) separate and distinct components…[s]uch recitations suggest a conjunctive understanding of the phrase 'at least one of….'" DI, 16. For support, the Board credited PO's argument—which Petitioner never had an opportunity to address—that "if 'input information' is required to produce three (3) separate and distinct components…then the 'user interface information for use in reproducing at the mobile device is, likewise, required to include the three (3) separate and distinct components." *Id.*, 17. This argument relies on the faulty premise that the claims require input information to produce three types of data, but in fact, the claims recite the opposite—that "input information ***has not been processed*** to produce a display, audio, and a hardware (HW) action." *E.g.*, '887Pat, claims 1, 20. The Board did not grapple with this tension at all in its institution decision.

3. The Board Did Not Address the Prosecution History

The Board's institution decision also does not mention the '887 Patent prosecution history at all, which was made of record in the IPR (EX1002). As explained above (§III.A, note 3), the Examiner found that the "at least one of…" limitation was rendered obvious by prior art disclosing either video alone or video and audio. At no point did the Examiner apply a construction that further required a hardware action, nor did Applicant argue for one. This is yet another point that Petitioner would have noted if given the opportunity to address PO's unforeseeable claim construction.

V. CONCLUSION

The Board thus erred by denying—without explanation—Petitioner's unopposed request for a Preliminary Reply to address PO's unforeseeable claim construction, and the Board further compounded that error by adopting PO's proposal that is contrary to the claim language and the intrinsic record, all while faulting Petitioner for failing to substantively address PO's proposal. Petitioner therefore requests that the Director vacate the Board's decision and remand with instructions to (1) authorize a preliminary reply and sur-reply as to claim construction, and (2) issue a new institution decision in view of the full record.

Respectfully submitted,

Dated: June 27, 2025

By: / *Jessica C. Kaiser* /
Jessica C. Kaiser
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Lead Counsel for Petitioner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on June 27, 2025, a copy of **PETITIONER'S REQUEST FOR DIRECTOR REVIEW** was served upon the below-listed counsel by electronic mail:

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Dated: June 27, 2025

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