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.

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

PATENT OWNER'S RESPONSIVE REMAND BRIEF ON CLAIM CONSTRUCTION[1]

[1] This Brief is being submitted pursuant to the Board's Order of August 25, 2025 (Paper 18).

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	*B.S.D. Crown, Ltd. v. Amazon.com, Inc.*, Plaintiff's Preliminary Claim Constructions, Case No. 3:24-CV-03503-JD (N.D. Cal. Jan. 10, 2025)
2002	*B.S.D. Crown, Ltd. v. Amazon.com, Inc.*, Defendants' Preliminary Claim Constructions, Case No. 3:24-CV-03503-JD (N.D. Cal. Jan. 10, 2025)
2003	Comparison of Districts Within the Ninth Circuit — 12-Month Period Ending December 31, 2024 (available at https://www.uscourts.gov/sites/default/files/2025-02/fcms_na_distcomparison1231.2024.pdf)
2004	Patent Owner's Power of Attorney
2005	*B.S.D. Crown, Ltd. v. Amazon.com, Inc.*, Defendants' Invalidity Contentions, Case No. 3:24-CV-03503-JD (N.D. Cal. Dec. 9, 2024)
2006	*B.S.D. Crown, Ltd. v. Amazon.com, Inc.*, Case No. 3:24-CV-03503-JD, Scheduling Order
2007	*B.S.D. Crown, Ltd. v. Amazon.com, Inc.*, The Parties' Amended Joint Claim Construction And Prehearing Statement, Case No. 3:24-CV-03503-JD (N.D. Cal. Apr. 4, 2025)

Petitioner incorrectly interprets the phrase "at least one of the display, the audio and the hardware (HW) action" in claim 1 (and similar phrases in claims 11, 20, and 28) in the disjunctive, thereby rewriting the phrase to mean "the display, the audio, ***or*** the hardware action."[2] Petitioner's Opening Remand Brief ("Pet. Br.") concedes that in *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 886 (Fed. Cir. 2004), the Federal Circuit held that when "[t]he phrase 'at least one of' precedes a series of categories of criteria, and the patentee used the term 'and' to separate the categories," the phrase typically connotes a conjunctive list requiring at least one value from each category. Pet. Br., 1-2. Petitioner fails to show how the claims and the specification of the '887 patent compel a disjunctive interpretation contrary to *SuperGuide*. Considered in full, the '887 patent disclosures and claims confirm that the conjunctive construction is correct.

I. BACKGROUND

A. The Board's Institution Decision Correctly Construed the Claims

As the Board acknowledged in its Institution Decision (Paper 13, "D.I.") on May 29, 2025, "numerous courts and tribunals (including PTAB) have declined to follow the Federal Circuit's *SuperGuide* construction of 'at least one of' when the

[2] This dispute is also ongoing in district court. *See* Ex. 2007, 3. The Markman hearing is currently scheduled for October 23, 2025. Ex. 1046, 11 (Dkt. No. 69).

patent's claims, specification, or prosecution history necessitate a broader meaning." D.I., 14-15 (collecting cases). However, the Board fully evaluated the '887 patent to correctly reach a conjunctive construction. Looking first at the claims, the Board correctly noted that the plain language of claims 1 and 20 require producing three separate components—"[A] a display [B] audio and [C] a hardware (HW) action by a HW component of the mobile device"—and that receiving input information for all three separate components would be required to satisfy the claimed requirement to produce all three components. D.I., 16-17. The Board also correctly relied upon the specification of the '887 patent as describing "hardware (HW) actions as separate and distinct from video/audio actions. For example, the specification describes: (1) '[t]he mobile device 10 produces the **display**, speaker **audio** and/or a **HW action** of a hardware component (e.g., **activates and/or controls a GPS and/or one or more sensors**) based on the mirrored emulated user interface information)'" and (2): [quoting '887 patent, 10:56-64]." D.I., 17-18 (quoting Prelim. Resp., 10). The Board then correctly concluded that the proper construction was "conjunctive." D.I., 18.

II. CLAIM CONSTRUCTION

A. The Claims Themselves Compel a Conjunctive Construction

As the Board correctly noted, the antecedent basis for sending "at least one of the display, audio and the HW action" in claims 1 and 20 is "to produce a

display, audio and a hardware (HW) action." '887 patent, 13:44-46; 15:43-44. This antecedent phrase uses the conjunctive term "and," which indicates a conjunctive meaning in the "at least one of . . . and" term. As the Board also correctly recognized, if "input information" is required to produce three (3) separate components: "[A] a display, [B] audio and [C] a hardware (HW) action by a HW component of the mobile device," 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, namely "[A] the display, [B] the audio ***and*** [C] the hardware (HW) action by the HW component of the mobile device." D.I., 16-17 (emphasis added).

Moreover, as noted in the POPR (Paper 10, 9), the claims negate a disjunctive construction. For example, claim 11 confirms a conjunctive construction by referring to a "plurality of different data types and the server sends each different type of data" [3] ('887 patent, 14:55-57), which only makes sense when "and" is read conjunctively to include "each" of the different data types, i.e., the display, the audio, and hardware action. Addressing claim 11, Petitioner abandons its disjunctive reading entirely. Petitioner's contention—that only one

[3]Petitioner agrees that each independent claim "should be construed consistently." Pet. Br., 6. n.2. Thus, the reasoning for claim 11 applies to each independent claim.

type of data is required (i.e., display, audio, ***or*** hardware action)—becomes nonsensical in the context of claim 11's requirement for "each different type" sent to a mobile device. Petitioner argues that claim 11 somehow requires "two data types" (Pet. Br., 5), but provides no justification for "each" to refer to only "two" data types, when three types of data are expressly recited in claim 11.

Petitioner also overlooks that the antecedent basis in the claim language itself is not directed to the "at least one" group as a whole. Instead, the antecedent basis is directed to "the display," "the audio," and "the HW action," thus indicating that these itemized elements stand alone and are each included, rather than being lumped into a group where only one may be included. Looking at claim 1, the "processing" step requires (in relevant part): "processing … the input information to produce a stream of user interface information for use in reproducing at the mobile device at least one of ***the*** display, ***the*** audio and ***the*** hardware (HW) action … ." (emphasis added). The "sending" step then requires (also in relevant part): "sending … the stream of user interface information to the mobile device to reproduce at the mobile device at least one of ***the*** display, ***the*** audio and ***the*** HW action … ." (emphasis added). Importantly, if Petitioner's interpretation were correct, the "sending" element would include antecedent basis before the "at least one of" phrase to therefore treat the included information as a group. Specifically, under Petitioner's interpretation, the "sending" limitation would need to read

"sending … the stream of user interface information to the mobile device to reproduce at the mobile device ***the*** at least one of the display, the audio and the HW action … ." This would have been necessary to establish that the "sending" element is only sending the information that was included in ***the*** "at least one of" group in the "processing" element. But this is not how the claims of the '887 patent were drafted. Instead, the "sending" element applies the antecedent basis to the individual elements, including "the display," "the audio," and "the HW action," therefore indicating that information for reproducing each of these three elements is required and present in the stream of user interface information. This use of individual antecedent basis for each of the three types of data, rather than for the "at least one of" group, also confirms that a conjunctive construction is correct.

B. The Specification Also Supports a Conjunctive Construction

The specification reinforces a conjunctive reading. It refers to **hardware actions** that are distinct from **video** and **audio** actions. *See, e.g.*, '887 patent, 10:56-64 ("The mobile device 10 decodes and assembles the separate **video**, image and text data streams of the display data/user interface data into a display. The mobile device 10 enables **different HW operations or actions** according to requests from the [server] 12. For example, the mobile device 10 **enables the camera and/or microphone** in response to a request from the server 12. The mobile device 10 decodes the compressed **audio** of the user interface data and

reproduces the audio at the speaker in coordination with the assembled display.") (emphasis added); '887 patent, 6:66-7:3 ("The mobile device 10 produces the **display**, speaker **audio** and/or a **HW action** of a hardware component (e.g., **activates and/or controls a GPS and/or one or more sensors**) based on the mirrored emulated user interface information.") (emphasis added).

Moreover, the specification teaches that the three types of data streams are sent and assembled for reproduction by the mobile device. For example, the '887 patent explains that "[a] server-to-client protocol at the server 12 separates the emulated user experience, i.e., the user interface data resulting from processing of the input information by the mobile OS and/or applications at the server 12, into different data ***streams*** including video, image, audio, notification and text data streams." '887 patent, 8:54-59 (emphasis added). Then, "[t]he mobile device 10 decodes and ***assembles the separate video, image and text data streams*** of the display data/user interface data into a display." '887 patent, 10:56-58 (emphasis added). It also "enables ***different HW operations or actions*** according to requests from the [server] . . . . The mobile device 10 decodes the compressed ***audio*** of the user interface data and reproduces the audio at the speaker ***in coordination with the assembled display***." '887 patent, 10:58-64 (emphasis added). It would not make sense if the claims permitted only one of the display, the audio ***or*** the hardware (HW) actions because the '887 patent teaches assembling and integrating

different data streams together.

Moreover, while Petitioner argues that there are disclosed embodiments that do not require each of the data, it is not necessary for the conjunctive construction to capture every embodiment. *SIMO Holdings Inc. v. Hong Kong UCloudlink Network Tech. Ltd.*, 983 F.3d 1367, 1379-80 (Fed. Cir. 2021). Further, the Federal Circuit made clear that the exclusion of some exemplary embodiments is insufficient to rebut *SuperGuide* and does not "contradict the specification" where the conjunctive construction "captur[es] one embodiment expressly described." *Id.* at 1379-80 (cleaned up). Here, there are many embodiments where the invention's disclosed purpose is served where each of the display, the audio and the hardware (HW) action are selected. *See* '887 patent, 2:33-36; 2:43-46; 2:54-57; 2:67-3:3; 3:6-8; 3:44-45; 3:61-63.

Moreover, even though the "Touch screen / Sensors / Buttons / Camera / Camcorder" actions of Fig. 2 are only depicted with a single headed arrow going from a mobile device to a server (Pet. Br., 7-8), other descriptions in the '887 patent show that streams for audio, video, and hardware action flow in separate streams ***from*** a server ***to*** a mobile device. *See, e.g.*, '887 patent, 7:63-66 ("The mobile device 10 sends each type of data (e.g., voice, audio, image, video, notification, sensor, etc.) to the server 12. Similarly, the mobile device 10 receives from the server 12 a separate stream for each type of data ….").

When combined with the clear intentions of the plain claim language, the specification confirms that a conjunctive construction is the proper outcome.

C. Petitioner's Arguments Fail to Alter This Outcome

i. Claiming a List of Categories with Possible Values Follows *SuperGuide*

Petitioner argues that "*SuperGuide* [is] inapplicable when the listed items following 'at least one of' are not categories containing many possible values." Pet. Br., 2 (relying on *Apple, Inc. v. CPC Pat. Tech. PTY, Ltd.,* IPR2022-00601, Paper 31, 28 (Sept. 27, 2023) (hereinafter, "*CPC*") (citations omitted); *Taiwan Semiconductor Mfg. Co. v. Godo Kaisha IP Bridge 1*, IPR2017-01862, Paper 9, 9-10 (Feb. 6, 2018) (hereinafter, "*TSMC*")). But this argument fails because the video, audio, and hardware action claimed in the '887 patent ***are*** categories containing many possible values.

The specification confirms that the display, audio, and hardware (HW) action are categories permitting selection of different values or parameters in each category. The display information can include "video, image and/or text data," ('887 patent, 7:60), and can be associated with "all animations and/or graphics changes, e.g., changes in games, web browsing and scrolling screens … ." *Id*., 5:3-8. The video can be "real time and high quality display graphics motions, e.g., menu scrolling, game action and videos … ." *Id*., 6:16-18. The audio information, if associated with the selected display information, would also include audio and

hardware action associated with the transmitted "animations and/or graphics changes, e.g., changes in games, web browsing and scrolling screens … ." *Id*., 5:4-5. The audio and video can also correspond to a "video or VoIP call." *Id*., 11:34-62. Similarly, the hardware/input components receiving hardware action information include many different selectable parameters (such as GPS or Bluetooth), *see id*., 6:34-47 (listing hardware components), "activate[d]" based on received information and "input thereto." *Id*., 6:50-54. Thus, Petitioner's assertion that the display, audio, and hardware actions are not selectable values is wrong.

ii. Drafting Techniques Used Also Support a Conjunctive Construction

Petitioner also crafts an argument that "Applicant clearly knew how to recite a conjunctive list—e.g., by omitting 'at least one of'" in elements 1[a] and 20[a]. Pet. Br., 4. But the Applicant also clearly knew how to state "and/or" in the specification, such as at 6:67 ("the display, speaker audio and/or a HW action"), in contrast to the claims where no "and/or" option was used. It is wrong to insert an "or" into the claims where no "or" was used or intended. It also defies logic that Petitioner proposes a conjunctive interpretation for the negative limitations enumerating all three types of information in 1[a] and 20[a], but then shifts tacks and proposes a disjunctive interpretation in elements 1[b] and 20[b]. Pet. Br., 4.

iii. The File History Does Not Support a Disjunctive Construction

Finally, Petitioner's claim differentiation argument (Pet. Br., 4, 10) is based on a snapshot of prosecution history, but fails to cite to any actual ***patent*** claims that could give rise to a presumption that this disputed term employs a disjunctive meaning. Per *Bd. of Regents of the Univ. of Tex. Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008), the Federal Circuit held that different claim terms in an ***issued patent*** are "presumed to have different meanings." This does not lend credence to a distinction based on application claims alone. And Petitioner's reliance on a prosecution history that states "and/or" does not weigh in favor of a disjunctive construction of "at least one of … and" in the claims.

III. CONCLUSION

Accordingly, the terms "at least one of the display, the audio and the hardware (HW) action" should be construed as "at least one of each of the display, the audio and the hardware (HW) action," which requires at least one display action, at least one audio action, ***and*** at least one hardware (HW) action, consistent with the plain and ordinary meaning of the conjunctive form.

For the reasons presented above, Petition's proposed construction should be rejected, and no *inter partes* review should be instituted for similar reasons as those set forth in the Board's Order Denying Institution dated May 29, 2025.

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CERTIFICATE OF SERVICE

Petitioner has consented to e-mail service in this proceeding. Pursuant to 37 C.F.R. §42.6, the undersigned certifies that on this date, a copy of the foregoing document was served by email upon the following counsel at the below email addresses:

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