

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,**
Petitioners

v.

MAXELL LTD.,
Patent Owner

Inter Partes Review No. IPR2025-01311
Patent No. 11,812,091

**PETITIONERS' REPLY TO
PATENT OWNER'S RESPONSE**

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PETITIONERS' EXHIBIT LIST

Ex. No.	Description
1001	U.S. Patent No. 11,812,091
1002	File History of U.S. Patent No. 11,812,091
1003	Declaration of Dr. Benjamin B. Bederson in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 11,812,091
1004	<i>Blackberry Corp. v. Maxell, Ltd.</i> , IPR2019-00089, Paper 1 ('394 patent IPR petition)
1005	<i>Blackberry Corp. v. Maxell, Ltd.</i> , IPR2019-00089, Paper 10 (PTAB Mar. 29, 2019)
1006	<i>Motorola Mobility, LLC v. Maxell, Ltd.</i> , IPR2022-01348, Paper 1 ('394 patent IPR petition)
1007	<i>Motorola Mobility, LLC v. Maxell, Ltd.</i> , IPR2022-01348, Paper 7 (PTAB Feb. 23, 2023)
1008	<i>Vizio, Inc. v. Maxell, Ltd.</i> , IPR2023-00316, Paper 1 ('394 patent IPR petition)
1009	<i>Vizio, Inc. v. Maxell, Ltd.</i> , IPR2023-00316, Paper 9 (PTAB July 6, 2023)
1010	U.S. Patent No. 7,293,276 to Phillips
1011	U.S. Patent Publication No. 2005/0188408 to Wallis
1012	U.S. Patent 8,170,394 File History
1013	U.S. Patent Publication No. 2012/0087637 to Logan
1014	U.S. Patent Publication No. 2004/0154040 to Ellis
1015	U.S. Patent No. 8,773,360 to Uchida
1016	Shneiderman, B. (2005) <i>Designing the User Interface: Strategies for Effective Human-Computer Interaction, Fourth Edition</i> , Addison-Wesley. ISBN 0-321-19786-0
1017	U.S. Patent No. 7,667,123 to Phillips
1018	<i>Blackberry Corp. v. Maxell, Ltd.</i> , IPR2019-00089, Paper 15 (Termination Decision Document)
1019	<i>Motorola Mobility, LLC v. Maxell, Ltd.</i> , IPR2022-01348, Paper 25 (Order: Settlement as to Motorola Mobility LLC)
1020	<i>Vizio, Inc. v. Maxell, Ltd.</i> , IPR2023-00316, Paper 37 (Termination Due to Settlement After Institution)
1021	U.S. Patent Publication No. 2002/0174430 to Ellis (Ellis'430)
1022	Client/Server Software Architectures--An Overview, available at

Ex. No.	Description
	https://web.archive.org/web/20050228093112/http://sei.cmu.edu/str/descriptions/clientserver_body.html (February 2005), <i>last accessed</i> September 3, 2025
1023	S. A. Bly and J. K. Rosenberg. 1986. A comparison of tiled and overlapping windows. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '86). Association for Computing Machinery, New York, NY, USA, 101–106. https://doi.org/10.1145/22627.22356
1024	Didier Le Gall. 1991. MPEG: a video compression standard for multimedia applications. <i>Commun. ACM</i> 34, 4 (April 1991), 46–58. https://doi.org/10.1145/103085.103090
1025	Amy K. Karlson, Benjamin B. Bederson, & John SanGiovanni. 2005. AppLens and launchTile: two designs for one-handed thumb use on small devices. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '05). Association for Computing Machinery, New York, NY, USA, 201–210. https://doi.org/10.1145/1054972.1055001
1026	Bederson, B. B., Clamage, A., Czerwinski, M. P., & Robertson, G. G. (2004). DateLens. <i>ACM Transactions on Computer-Human Interaction</i> , 11(1), 90–119. https://doi.org/10.1145/972648.972652
1027	Petitioners' "Sotera Plus" Stipulation
1028	Complaint from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Sept. 7, 2023).
1029	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Mar. 21, 2025).
1030	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Jul. 9, 2025).
1031	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. May 2, 2025) (public version)
1032	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Sept. 18, 2025) (public version).
1033	Excerpts of the trial transcript from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. May 22, 2025).
1034	Letter from Maxell to Samsung dated July 7, 2021.
1035	Email thread between Maxell and Samsung from July 2021 to January 2022.
1036	Letter from Maxell to Samsung dated December 29, 2021

Ex. No.	Description
1037	IPR2024-00867, Paper 40 (Petitioner's Response to Patent Owner's Request for Authorization to File Materials from Related Matters).
1038	IPR2024-00717, Paper 33 (Order Denying Patent Owner's Request for Authorization to File Materials).
1039	IPR2024-00828, Paper 42 (Petitioner's Response to Patent Owner's Motion to Submit Supplemental Information).
1040	IPR2024-00828, Paper 47 (Petitioner's Sur-reply to Patent Owner's Motion to Submit Supplemental Information).
1041	IPR2024-00828, Paper 50 (Order Denying Patent Owner's Motion to Submit Supplemental Information).
1042	IPR2024-00735, Paper 41 (Petitioner's Opposition to Motion to Submit Supplemental Information).
1043	Patent Owner's infringement contentions cover pleading from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex.).
1044	Petitioner's Motion to Stay Pending <i>Inter Partes</i> Review from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex. Oct. 24, 2025).
1045	"Order Focusing Patent Claims and Prior Art" from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex. Aug. 18, 2025).
1046	Order on Samsung's Motion to Stay from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex. Dec. 15, 2025).
1047	Maxell's Amended Infringement Contentions, Appendix 5: October 20, 2025 Infringement Contentions Applying Claims 1-3, 6, 7, 10, 13-17, and 20 of U.S. Patent No. 11,812,091 to the Accused Samsung '091 Products (Redline)
1048	Maxell's Infringement Contentions, Appendix 5: August 12, 2025 Infringement Contentions Applying Claims 1-3, 6, 7, 10, 13-17, and 20 of U.S. Patent No. 11,812,091 to the Accused Samsung '091 Products
1049	Deposition Transcript of Karansher Singh

I. INTRODUCTION

PO's Response relies entirely on rewritten claims, unclaimed "architecture," and mischaracterized prior art. PO states the claims should be given their "ordinary and customary meaning," but then rewrites them to avoid the prior art. For example, PO limits "digital contents" to moving video content, but excludes a digital menu used to purchase the video. POR, 24-25. PO also requires the same digital content be displayed while alternatively displaying a linear operation panel and an interactive operation panel. POR, 19, 20, 24-26, 42. Neither of these arguments find intrinsic support. Indeed, both arguments were rejected by the Board, and should be rejected again.

PO also introduces unclaimed architectural limitations found nowhere in the '091 patent, such as, *e.g.*, "a dual-input switching architecture," and "two-mode signal governed by two independent instruction sets." POR, 37, 38. These characterizations are PO's attempts to supplement its brief specification because claim terms such as "outside server," "related information," "time-related information," and "panel-related information" appear nowhere therein. Despite their absence, however, PO characterizes them as posing "*the central architectural question in this proceeding.*" POR, 5.

PO repeatedly mischaracterizes the prior art. In one example, PO asserts Wallis does not display operation buttons on a screen (POR, 32), even though

Wallis expressly discloses this (EX1011, ¶19). PO makes several other misrepresentations, each of which are identified and corrected below.

PO's attempts to rewrite its claims, expand its disclosure, and mischaracterize the prior art should be rejected, and all of the Challenged Claims should be found invalid as obvious.

II. PROSECUTION HISTORY

There is no indication that any of the references listed on the face of the '091 patent (Ellis'430 is not listed) were substantively considered by the Examiner, much less that they were considered in the combinations of Grounds 1-6.

PO argues that "the Examiner had full visibility into the very prior art theories Samsung now presses" because some of Petitioners' references, the instituted '394 IPR petitions, and Dr. Bederson's '394 invalidity report were before the examiner. POR, 9-12. But PO's "full visibility" argument is belied by its acknowledgement that the '091 patent claims recite new, unchallenged claim language, including "related information," "time related information," and "panel related information." POR, 9, 11-12.

III. CLAIM CONSTRUCTION

Despite PO's statement that the Challenged Claims should be given their "ordinary and customary meaning," (POR, 13), PO repeatedly advances constructions departing from the ordinary meaning and unsupported by the

specification. In one example, PO argues the term “digital contents” excludes the digital VoD menu depicted in Phillips’ FIG. 17a. PO also argues that the “the same reproduced digital content” must be displayed “while alternatively display[ing] two operation panels – one linear and one interactive ...” POR, 26. As explained below, *infra*, §VI.B, the Board already rejected these arguments and they should be rejected again.

IV. LEVEL OF ORDINARY SKILL IN THE ART

PO does not dispute Petitioners’ proposed level of ordinary skill in the art. POR, 14. Dr. Bederson confirmed that a POSITA’s “other relevant industry experience” (EX1003, ¶53) includes “not only client-server architectures but also embedded devices such as set-top boxes,” (EX2023, 50:12-25) and that a POSITA would be familiar with “video on-demand systems, DVD, DVRs, and other kinds of systems for interacting with digital content and video.” EX2023, 48:11-49:21. PO’s expert agreed. EX1049, 13:8-18, 15:7-17:16.

V. DR. BEDERSON’S DECLARATION

PO wrongly argues that Dr. Bederson’s declaration “does not reflect independent technical analysis” and accuses Dr. Bederson of “cop[ying] verbatim substantial portions of the Petition’s legal arguments and present[ing] them as expert testimony.” POR, 15. But his declaration expressly states that it reflects his own opinions, and his deposition confirmed this. *See, e.g.*, EX1003, ¶¶1, 2, 27, 28,

52, 54-55, 85, 148, 154, 166, 188, 202; EX2023, 21, 24-25, 28, 33, 37-40, 42, 48-50. Equally important, his declaration is replete with citations to the '091 patent, the prior art, prior Board findings, examiner's statements, and the knowledge of a POSITA. Indeed, PO does not identify a single instance where Dr. Bederson's declaration "does not disclose the underlying facts or data on which it is based." POR, 17.

PO's recurring refrain that Dr. Bederson impermissibly "gap-fills" (POR, 17-19, 46-47, 53-55) also rings hollow. Dr. Bederson relies on POSITA knowledge only to explain motivation to combine disclosed teachings—a use the USPTO's July 31, 2025 Memorandum enforcing 37 C.F.R. §42.104(b)(4) ("2025 Memorandum") expressly permits.

VI. GROUND 1: CLAIMS 1, 3-5, 7, 11-15, 17, AND 20 ARE OBVIOUS OVER PHILLIPS AND WALLIS

A. Motivation to Combine

PO's motivation-to-combine attack (POR, 18-22) is factually and legally incorrect. PO's assertion that "Dr. Bederson's conclusory reasons ... are not grounded in the teachings of the references" (POR, 19) ignores his reliance on Phillips' and Wallis' disclosures. EX1003, ¶¶149-153 (Petition, 46-48). PO's reliance on the 2025 Memorandum (POR, 19) is also unavailing because it expressly permits what PO complains about: "[g]eneral knowledge may still be

used in an IPR to support a motivation to combine or to demonstrate the knowledge of a person having ordinary skill in the art.” 2025 Memorandum, 1.

PO's other assertions either misrepresent the claim language, the prior art, or both (POR, 19-22), and are addressed below in connection with the limitations.

B. Limitation [1e]

PO wrongly asserts that Phillips' Figure 17a does not disclose an interactive control panel displayed together with the reproduced digital contents. POR, 24-26. The '091 patent provides helpful context: Figures 2-4, below, illustrate operation panels A4, A5, alternatively displayed in operation panel display area A3:

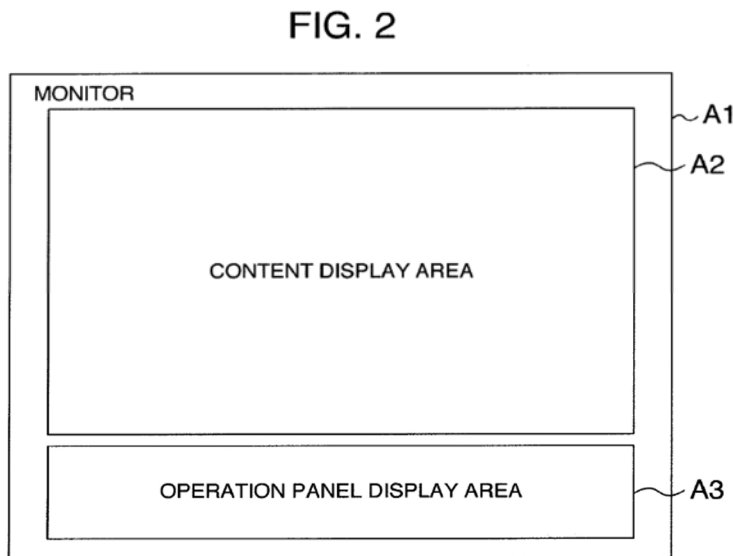
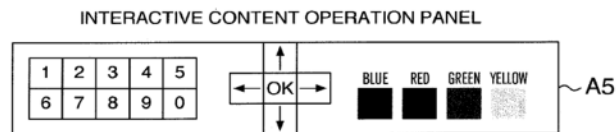


FIG. 3



FIG. 4

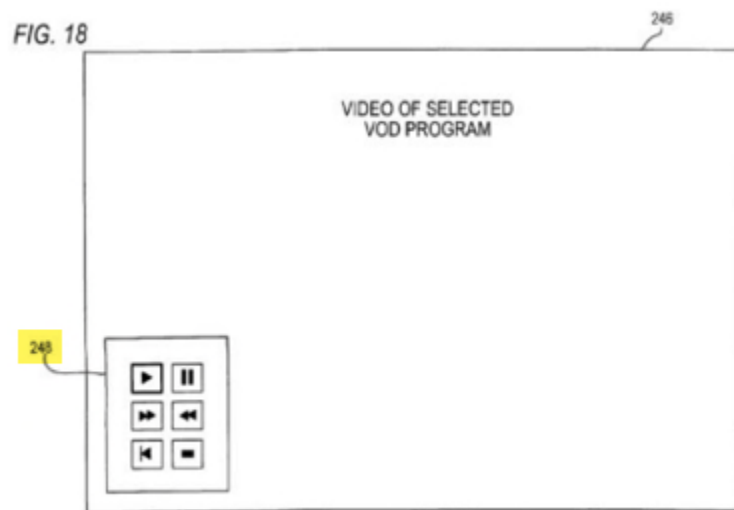


The specification discloses that “during reproduction of linear contents such as moving image contents, a linear content operation panel A4 is displayed in the operation panel display area A3” (EX1001, 3:53-59), and “[d]uring reproduction of interactive contents such as data broadcast contents, an interactive content operation panel A5 is displayed in the operation panel display area A3” (EX1001, 3:60-65). Thus, for different digital contents, a different operation panel is alternatively displayed. Petition, 27-32; EX1003, ¶¶40-42.

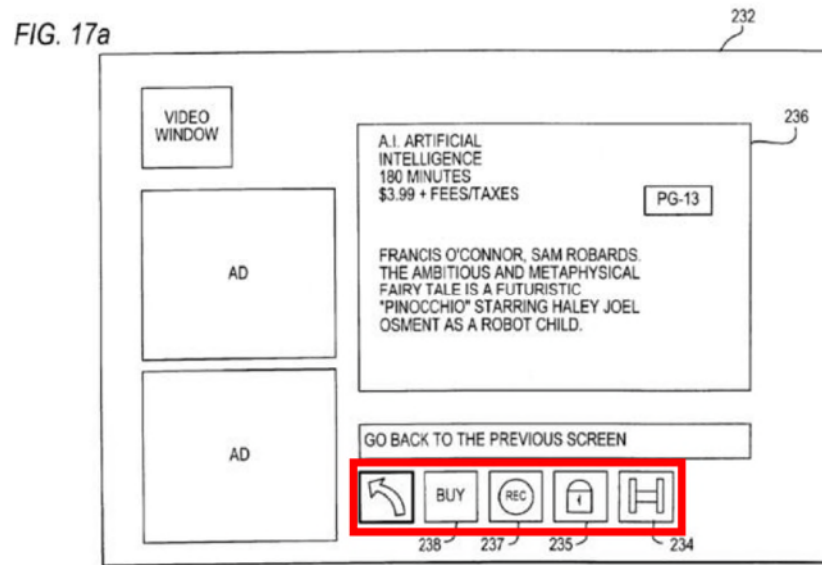
Phillips discloses this “alternatively display” limitation. Petition, 27-32. PO disputes this, characterizing the VoD information screen (Figure 17a) and the playback screen (Figure 18) as “sequential steps in a purchase-and-play workflow, not two operation panels that are alternatively displayed ‘together with the reproduced digital contents.’” POR, 24. PO also argues “no digital content is being reproduced” in Figure 17a because “[t]he information shown ... is [] descriptive metadata *about* the content,” “not the reproduced digital content itself.” POR, 24.

But PO identifies no evidence to support limiting “digital contents” to purchased VoD content to the exclusion of an interactive VoD content screen. POR, 24-25. PO’s limiting construction should be rejected because it does not reflect the plain meaning of “digital contents” and is inconsistent with the ’091 patent specification.

Both the VoD (e.g., FIG. 18) and the VoD content screen (e.g., FIG. 17a) of Phillips are digital contents received from an outside server. EX1010, 19:37-57; 20:8-20; EX1003, ¶100. The VoD includes linear digital content controlled using a linear control panel (248, FIG. 18, below).



The VoD content screen includes interactive digital content controlled using an interactive control panel (FIG. 17a (annotated), below).

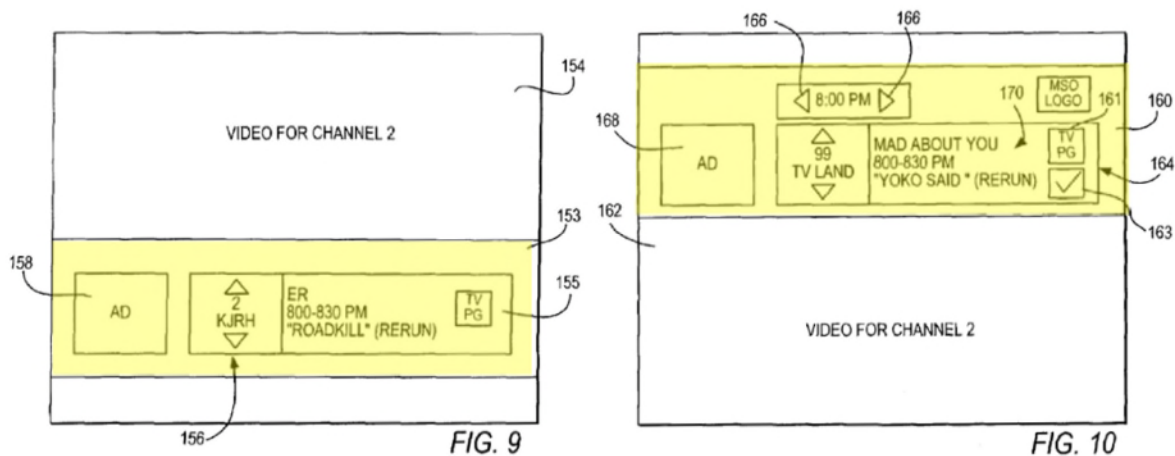


PO's attempt to limit the definition of "digital contents" to only moving video digital content contradicts the '091 specification, which emphasizes the breadth of the term and confirms that it includes both linear content (*e.g.*, video content) and interactive content. EX1001, 3:53-65, 1:23-28 ("The present invention relates to image rendering techniques for an apparatus which reproduces digital contents multiplexing a plurality of contents having different information."). Indeed, control panel A5 includes interactive buttons such as arrows, numbers and colors for interaction with non-moving digital content, such as, *e.g.*, a menu. EX1001, 3:60-65.

Importantly, the Board already rejected PO's argument in finding that Phillips' Figure 17a displays "digital contents." Petition, 31-32. PO dismisses this finding, arguing that "Phillips' system presents these screens sequentially, in

different use contexts.” POR, 25-26. But PO never explains why Figure 18 is “digital contents” while Figure 17a—which displays interactive VoD content, a video clip, and advertisements (Petition, 27-28)—is not. POR, 24-26. Indeed, PO’s expert, Dr. Singh, admitted Figure 17a displays “digital information” (EX1049, 62:1-3) and “digital content,” including an advertisement (EX1049, 62:9-63:1).

PO’s argument that Phillips’ Figures 9 and 10 are “not operation buttons for controlling the reproduction of digital content” (POR, 25) is also wrong. The interactive operation buttons displayed on flip display 153 of (Figure 9, below) allow the viewer to “change the channel using channel up and down keys.” Petition, 29. These keys are interactive operation buttons and changing the channel on live TV is “controlling the reproduction of digital content.” Similarly, when browsing, interactive operation buttons are displayed on browse display 160 (Figure 10, below) allowing the user to browse advertisements, program and program-related information, or the like, which likewise “control[] the reproduction of digital content.” *Id.*



Lastly, PO recycles its argument that “the same reproduced digital content” must be displayed “while alternatively display[ing] two operation panels.” POR, 26. Not only was this argument expressly rejected by the Board in the Blackberry IPR proceeding (EX1005, 30-31), but it contradicts the '091 patent which explains the digital content can change and the type of digital content results in different operation panels being displayed. Dr. Singh conceded the point: asked whether the embodiment within the '091 patent, at 3:53-65, which pairs linear content with panel A4 and interactive content with panel A5, is covered by claim 1, he answered “what is described in Figure 2 and Figure 4 is consistent with claim one.” EX1049, 110:3-111:4. Thus, PO’s “same-content” requirement cannot be squared with its own expert’s reading of the specification.

In any event, as the Petition explained, Figure 17a also displays, in “Video Window,” a preview or trailer of the same video clip later shown in Figure 18. Petition, 28. Thus, not only does Figure 17a include digital content, but both

Figures 17a and 18 include at least portions of the same VoD, and therefore disclose this limitation even under PO's improperly-narrow and unsupported construction.

C. Limitation [1f]

PO does not dispute that Phillips' flip tuning and browse features (Figures 9 and 10) disclose "time related information which represents a time during which reproduced digital contents and at least one of the interactive buttons are displayed," or that those features are received from an outside server. POR, 27-31. PO disputes only that the time period (*e.g.*, "a few seconds or a minute or two") after which the flip and browse displays "may be removed automatically from [the] display screen"¹ is received from an outside server. POR, 27. PO is wrong. A POSITA would understand Phillips' flip tuning and browse features, including the time during which they are displayed, to be "[p]rogram guide application functions" and/or "other interactive television applications [that] may be supported using server 36 and other servers connected to communications network 34 such as server 56." Petition, 34 (citing EX1010, 8:1-7; EX1003, ¶110). At minimum, it would have been obvious to a POSITA that "the time period during which the program guide application functions are displayed (time related information)

¹ EX1010, 16:36-38, 17:25-28; EX1003, ¶109.

would also be received from these same outside servers.” Petition, 34.

PO then characterizes Phillips’ flip and browse auto-dismissal feature as “a local UI housekeeping function,” following “an imperative, event-driven model: the client-device autonomously decides when to hide an overlay by monitoring whether the user has been inactive” and “requires nothing beyond a local idle timer.” POR, 27-28 (citing EX1019, ¶¶62-69). Neither PO nor Dr. Singh cite Phillips, or anything else, to support these assertions. Instead, Dr. Singh relies on an unsupported representation of Phillips: his own diagram depicting “no server involvement” for the flip/browse timeout (EX2019, ¶64). This ignores that Phillips expressly discloses these are “[p]rogram guide application functions ... supported using server 36 and other servers.” EX1010, 8:1-7. His assertion that the timeout “applies identically regardless of what program is airing” (EX2019, ¶64) is wholly unsupported. And his assertion that “time related information” must be “content-specific metadata that travels with the digital content” (EX2019, ¶65) adds a specificity requirement absent from the claims, which recite only that such information be received “from an outside server.”

PO also has no response to why, in light of Phillips, a POSITA would not have considered it obvious to receive the time period from the same outside server from which the flip and browse features are received. Petition, 34.

PO’s reliance on Dr. Bederson’s deposition testimony that server-based and

local timers “are different ways of doing things” (POR, 29) is misplaced. That was not a “concession[.]” that Phillips’ overlay timeout “is most naturally understood as a local timer”—Dr. Bederson merely agreed there are different implementation methods. When testifying about Phillips’ actual disclosure, Dr. Bederson stated “Phillips discloses that time-related information ... can come from a server, which is – can be used to control removing a graphical element from a display after a period of time.” EX2023, 18:19-19:4. Dr. Bederson found support for his opinion in Phillips, while Dr. Singh blindly disagrees.

PO’s attack on Shneiderman’s “Eight Golden Rules of Interface Design” (“Shneiderman”) fares no better. PO misleadingly argues that Dr. Bederson could not answer whether Shneiderman’s consistency rule “specifies where information should be stored,” on the device or the server, and “whether information should be hard coded or received dynamically.” POR, 30-31.

This misses the point. Shneiderman is not relied on for where information should be stored generally, but for the disclosure that “consistency” (Shneiderman’s first Golden Rule) is best achieved by centralizing display parameters on a server. EX1003, ¶111. A local, device-specific timer would vary from device to device, undermining that consistency. EX2023, 45:1-19. Because the browse and flip features are already server-sourced, “it only makes sense that the time period during which the program guide applications are displayed (time

related information) would also be received by these same outside servers.”

Petition, 35-36 (citing EX1003, ¶¶112-113).

D. Limitation [1g]

PO's misrepresentations about Wallis boil down to its incorrect assertion that Wallis discloses active buttons on a physical remote, not buttons displayed on a screen. POR, 32. On the contrary, Wallis unambiguously discloses user-selectable buttons ***displayed on a screen*** based on attribute data. EX1011, ¶¶19, 47, 48, 92. Indeed, when shown ¶19, Dr. Singh admitted that “it refers to a graphical user interface. So there would be a user interface on a screen in Wallis.” EX1049, 118:20-22. Thus, PO's argument that Wallis's attributes do not “trigger[] the rendering of any on-screen operation panel” (POR, 32) is belied by Wallis's express disclosures and is contradicted by its own expert.

PO's assertion that “Wallis does not disclose two distinct operation panels or any mechanism for choosing between them based on attribute values” is of no consequence. POR, 34-35. Petitioners rely on Wallis' disclosure of panel related information and on Phillips' disclosure of two distinct, alternatively displayed operation panels. Petition, 27-32.

Lastly, PO asserts Dr. Bederson “confirm[ed] the distinction between enabling an input and displaying a panel on screen.” POR, 35-36. Here too, PO points to Dr. Bederson responding to a vague hypothetical with no connection to

Wallis's disclosure. EX2023, 39:15-42:15 (repeatedly stating his opinions are based on the references' actual disclosures but answering counsel's hypotheticals). With respect to Wallis's disclosure, Dr. Bederson was clear that Wallis "discloses a number of attributes that a [POSITA] would combine with Phillips' display of operation panels to choose whether or not to display those operation panels in different circumstances." EX1023, 38:4-11.

E. Limitations [1i] and [1j]

Regarding limitation [1j], the Petition explained that, once the flip or browse display is removed from a live television broadcast (shown in Figures 9 and 10), a POSITA would understand that the linear controls (shown in Figure 18) could be used to control the live television broadcast since the user equipment may be a digital video recorder (DVR), which a POSITA would know allows control of live television broadcasts. Petition, 38-39. Dr. Singh acknowledged a POSITA would know this DVR functionality. EX10XX, 13:21-14:1; 17:19-18:14.

PO ignores Phillips' disclosure and Petitioners' contentions, and thus, waived any response. Scheduling Order, B.1.a. ("Schedule"). Instead, PO relies on Dr. Singh's "analogy," which is completely untethered from the '091 patent claim language. POR, 38-39. But even under Dr. Singh's flawed analysis, these limitations are obvious over Phillips in view of Wallis. Petition, 37-39; EX1003, ¶¶119-122.

Despite appearing nowhere in the '091 specification, PO asserts “limitations [1i] and [1j] establish dual-input switching architecture at the core of the invention.” POR, 37. Regardless, Phillips in view of Wallis discloses the functional substance of PO's made-up description: Phillips discloses “when the server defined time window is active interactive buttons must be displayed irrespective of any other factor” (Petition, 32-38), and Phillips in view of Wallis discloses “only once that window has closed does the panel related information dictate which panel appears” (Petition, 38-39).

PO's expert further embellishes the claims as reciting a “priority-driven state machine.” EX2019, ¶80. That label, like “dual-input switching architecture,” appears nowhere in the '091 patent. The claims require only that interactive buttons be displayed during the period represented by time related information, with panel related information otherwise controlling which panel appears—exactly what Phillips in view of Wallis discloses. Petition, 37-39.

PO's analogy that the '091 patent's “controller functions like a two-mode signal governed by two independent instruction sets from the server” (POR, 38-39) similarly fails. Putting aside that “two-mode signal” and “instruction sets” appear nowhere in the '091 patent, the Petition explains how Phillips in view of Wallis discloses PO's analogy. Petition, 32-39.

F. Claim 14

Claim 14 is essentially the same as claim 1, except claim 14 recites “a video on demand server” instead of an “outside server.” Ignoring the Petition’s reference to claim 13, reciting “wherein the outside server is a video on demand server” (Petition, 44-45), PO wrongly argues that Petitioners did not address the “video on demand” limitation. POR, 39. PO failed to respond to these contentions regarding claim 13 as included in limitation [14a] and thus waived any response. Schedule.

PO acknowledges Phillips discloses a VoD server but asserts “Petitioner nowhere identifies where Phillips or Wallis discloses a VoD server delivering the claimed time related information or panel related information.” POR, 39. PO is wrong. As explained for limitation [1f], Phillips discloses time related information received from an outside server. Petition, 32-36. Thus, in connection with claim 14, Phillips’ VoD server delivers the same time related information. Petition, 45.

As explained for limitation [1g], Wallis discloses panel related information received from an outside server. Petition, 36-37. Thus, for purposes of claim 14, Phillips combined with Wallis discloses a VoD server that delivers panel related information. Petition, 45.

Lastly, PO summarizes its earlier denials (POR, 18-22) regarding motivation to combine Phillips and Wallis. POR, 39-40. Petitioners incorporate their earlier response, *supra*, §VI, here.

G. Limitations [1a]-[1d], [1h] or Claims 3-5, 7, 11-13 15, 17 and 20

PO does not dispute limitations [1a]-[1d] and [1h] are disclosed by the prior art. PO also does not independently respond to the Petition regarding claims 3-5, 7, 11-13, 15, 17 and 20. Rather, PO relies on alleged deficiencies in independent claims 1 and 14. POR, 40. Any independent response is waived. Schedule.

VII. GROUND 2: CLAIMS 1, 3-5, 7, 11-15, 17, AND 20 ARE OBVIOUS OVER PHILLIPS, WALLIS AND LOGAN

Logan is cited as further evidence of “time related information” that is “received from an outside server.” Petition, 49-50. Logan confirms this directly: the Mini-Nav Bar’s presentation “may be configured by the viewer or the provider ... to control ... the time duration after which the Mini-Nav Bar disappears.” EX1013, ¶¶93-95. Because the provider—an outside server—configures that duration, Logan discloses server-delivered time related information. Logan is offered in addition to Phillips’ disclosure of that limitation, not for the “alternatively displaying” limitation, which Phillips supplies. Petition, 27-32, 49-50. Thus, PO’s assertions that “Logan’s Mini-Nav Bar does not constitute a first and second operation panel” (POR, 41) and does not disclose limitation [1e] (POR, 42) miss the mark: Phillips, not Logan, discloses the two alternating panels (Petition, 27-32), and Phillips in view of Wallis discloses limitation [1e] (*Id.*, 38-39).

PO asserts the Mini-Nav Bar is “not content-specific meta data ... [that] determines which operation panel to display.” POR, 41-42. But neither the claims nor the specification requires “time related information” to be content-specific. In fact, neither “time related information” nor “meta data” appear anywhere in the '091 patent specification. PO's attempt to link “time related information” to an “appreciation term” (POR, 42) also fails—that term is recited in claim 8, not claim 1, and misassigns time related information's role: it is the role of panel related information to “decid[e] whether [to] display[] the first operation panel ... or the second operation panel.” EX1001, 6:24-28.

Lastly, PO denies a POSITA would be motivated to combine Logan with Phillips and Wallis and in doing so largely ignores the reasons in the Petition (POR, 43); thus, PO waived any response. Schedule. PO instead argues no motivation exists because Logan's “sports segment navigation overlay” is a “fundamentally different use case” than Phillips. POR, 43. But neither Phillips nor Wallis limit the type of digital content reproduced, and, in fact, Phillips expressly discloses sports-related digital content. *See, e.g.*, EX1010, 7:2, 7:7, 25:3, 27:61.

PO also asserts “merging them would not produce the claimed architecture in which server-delivered metadata controls the alternative display of two control panels alongside reproduced content.” POR, 43. But Logan is cited for “time related information,” not the “alternatively displaying” limitation, which is

disclosed by Phillips in view of Wallis. Petition, 27-32.

**VIII. GROUND 3: CLAIMS 2, 6, 10 AND 16 ARE OBVIOUS OVER
PHILLIPS- WALLIS COMBINATIONS AND UCHIDA**

PO acknowledges “Uchida demonstrates that a screen can be partitioned into a content area and a control area,” and “*where* on the screen to place content. POR, 44, 48 (emphasis in original). PO’s assertion that “[a]t no point does any server-supplied metadata instruct the display device which control panel to render” (POR, 44 (emphasis in original)) misses the point. Uchida is cited only for its undisputed disclosure of the size/location of the operation control panel relative to the reproduced digital contents. Petition, 53-62. The Phillips-Wallis combinations disclose panel related information for deciding which operation panel to display. Petition, 36-37.

PO’s denial that a POSITA would be motivated to combine Uchida with the Phillips-Wallis combinations largely ignores the Petition’s contentions (POR, 45-48), and thus waived any response. Schedule. And Dr. Bederson’s reasons for combining Uchida are not, as PO claims (POR, 47), untethered from the references: the Petition explains, *e.g.*, that Phillips and Uchida share the same goal of positioning an operation panel so as not to obstruct displayed content. Petition, 61 (citing EX1003, ¶184). And as stated earlier, PO’s citation to the 2025 Memorandum is misplaced. *Supra*, §V.

Attacking Dr. Bederson's reliance on Shneiderman's consistency principle, PO asserts that "a preference for visual uniformity is not an argument about system architecture" and "[c]onsistent panel placement can readily be achieved through local logic without any server-supplied metadata." POR, 46. This again misses the point. Uchida is not cited for server-supplied metadata—the Phillips-Wallis combinations supply that—but solely for its undisputed disclosure that different operation panels can be displayed in the same rendering area without altering the content display area's size. Petition, 53-62; POR, 44 (conceding Uchida partitions the screen into content and control areas). Whether Uchida's own panel-selection logic runs locally (POR, 44; EX2019, ¶¶97, 99, 102) is irrelevant, because the claims require only that the time related and panel related information, supplied by Phillips-Wallis, originate from a server.

PO reads too much into Dr. Bederson's agreement that a "designer could achieve consistency by 'showing the same panel for all content.'" POR, 47 (citing EX1023, 47:12-17). Dr. Bederson never said that it would be desirable to display the same panel for all content, or that it would solve the obstruction problem. EX1023, 47:12-17. Consistency, as used in this context, is directed to the relative locations on the screen of the operation panel and the displayed content, and has nothing to do with server metadata. Petition, 35-36, 58-60; EX1003, ¶113.

IX. GROUND 4: CLAIMS 8, 9, 18 AND 19 ARE OBVIOUS IN VIEW OF GROUND 1 AND ELLIS

Contrary to PO's assertion, Ellis discloses the "appreciation term" exactly as described in the '091 patent; *e.g.*, "any time prior to 8:00PM Friday (*appreciation term*), the interactive buttons are displayed along with the digital content, such as the title and its available time-frame (in yellow highlighted portion) (*a time during which the reproduced digital contents and at least one of the interactive operation buttons are displayed*).” Petition, 63 (citing EX1014, ¶165; EX1003, ¶190).

PO's only attempt to distinguish Ellis is by relying on a rewriting of the claims. Examples include:

- “The appreciation term [of the '091 patent] is a presentation-layer construct” PO, 49;
- “The expiration date [of Ellis] is a data-layer construct” PO, 49;
- “The appreciation term feeds into the controller ... Ellis's expiration date, by contrast, feeds into the storage subsystem” PO, 49.

PO's attempts to rewrite the claim language should be rejected because PO must “live with the language it chose.” *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1583 (Fed. Cir. 1996).

Dr. Singh opines: “[t]he expiration date in Ellis has no connection to the display of operation panels, the availability of interactive operation buttons, or the type of user interface presented during playback.” EX2019, ¶114. At his deposition, however, Dr. Singh contradicted his declaration and agreed Ellis

presents “some interactive ability to press yes or no” (EX1049, 154:1-8), and that up until expiration, the screen is available for the user to interact with, after which “the content is gone” and the user cannot interact with it (EX1049, 154:21-155:20). That is precisely the time-bounded availability of interactive buttons the Petition identified. Petition, 62-64.

Regarding motivation to combine, PO ignores most of the Petition's reasons and thereby waived any response. Schedule. For example, PO ignores that Phillips' specification and figures largely overlap with Ellis's, both disclosing flip and browse features (Petition, 65-66), and that because Phillips already tracks timing of screen displays, additionally tracking time to manage program expiration dates would have been a modest technical modification a POSITA would have readily understood. Petition, 66.

Lastly, PO asserts the need for a four-step redesign. POR, 51. This ignores that Ellis is cited only for its time-bounded availability as the appreciation term within the Phillips-Wallis combination. Petition, 63-64. There is no need to redesign Ellis.

X. GROUND 5: CLAIMS 8, 9, 18 AND 19 ARE OBVIOUS IN VIEW OF GROUND 2 AND ELLIS

PO argues that Dr. Bederson “offers no standalone [motivation-to-combine] rationale for the four reference combination” and repeats its “gap-filling”

objection. POR, 52-54. But the motivation for each reference was already explained in Grounds 2 and 4—Logan for time related information and Ellis for the appreciation term—and each serves a discrete, articulated purpose. Petition, 50-52, 65-68. Relatedly, PO's unsupported attempt to frame the references as directed to "a different system layer" a POSITA would not be motivated to combine (POR, 54) is untethered from the references' disclosures and the claim language, so should be rejected. Petitioners incorporate their responses for Grounds 2 and 4.

XI. GROUND 6: CLAIMS 1-3, 6-9 AND 14-19 ARE OBVIOUS IN VIEW OF ELLIS'430 IN VIEW OF WALLIS

A. Motivation to Combine

PO's attack on motivation to combine (POR, 55) is factually and legally incorrect. PO asserts that "Dr. Bederson's conclusory reasons to combine ... are not grounded in the teachings of the references" (POR, 55), but ignores his citations to both Ellis'430 and Wallis. EX1003, ¶¶263-267 (also cited at Petition, 90-92). PO's reliance on the 2025 Memorandum (POR, 55) is again misplaced. *Supra*, §V.

PO asserts Wallis does not disclose "server-informed, metadata-driven panel selection at the heart of the '091 patent." POR, 57. Setting aside that none of these terms appear in the '091 patent, Wallis discloses the claimed panel related information received from an outside server. Petition, 81.

Lastly, PO argues that because Ellis'430's "exhaustive disclosure" never discloses panel related information, that silence proves the combination would not have been obvious. POR, 57. PO's conclusion rests on the faulty presumption that a single reference must disclose every permutation and limitation. That is not the law, and PO cites no authority supporting its position.

B. Limitation [1d]

PO's argument that Ellis'430 does not disclose a controller (POR, 58) is wrong. A POSITA would understand Ellis'430's "tuning and digital video circuitry" within set-top box 9922, which controls playback and sends audio/video signals to the display (EX1021, ¶¶181, 183), to be the claimed "controller."

Under its plain meaning, the recited controller is any component that controls what is displayed; nothing in the claims requires a "Model-View-Controller software paradigm." POR, 58. That Ellis'430's circuitry receives time related information (Petition, §XI.A.7) while panel related information is supplied via the Wallis combination (Petition, §XI.A.8) confirms Ellis'430 in view of Wallis discloses the full "controller" limitation regardless of nomenclature. Ellis'430 also discloses that set-top box 9922 "may send audio/video signal and signals that are representative of graphics through recording equipment 9924 to display device 9926 for presentation to the user" (Petition, 74-75), and that "user computer equipment may include a computer based receiver having integrated set

top box circuitry.” EX1021, ¶168.

PO virtually concedes Ellis'430's disclosure of a controller, arguing that “Ellis'430 is a sprawling disclosure covering PVR-related and program guide functionality – recording scheduling, storage management, deletion priorities, live television buffering, multi-user profiles, and dozens of distinct overlays and display screens.” POR, 56-57. Indeed, at his deposition, Dr. Singh agreed “there is a controller” in Ellis'430. EX1049, 120:15-121:11. He further conceded the term “model-view-controller,” as used in PO's Response and his declaration, appears nowhere in the '091 patent. EX1049, 125:14-21.

C. Limitations [1e] Through [1j]

Regarding limitation [1e], PO repeats its assertion that the “alternatively displaying” limitation is not met because “the two overlays are tied to entirely different user activities involving entirely different content” and that “they are not two operation panels that a controller alternates between in conjunction with the same reproduced digital content.” POR, 59; *see also*, POR, 26. For the reasons explained above, *supra*, §VI.B, these arguments should be rejected.

PO incorrectly asserts that “the browse/flip overlay 260 does not send ‘user instructions of interactive functions to the outside server.’” POR, 60. But Ellis'430 discloses that changing the channel causes “title 264 [to] change to be the title of the current program on the new channel.” Thus, when the channel is changed, an

instruction is sent to the outside server prompting the server to deliver the new title. Petition, 75-76. PO also incorrectly requires the linear control buttons such as rewind, play, fast-forward, etc. to send user instructions to the outside server. POR, 60. The limitation requires user instructions of only interactive (not linear) functions be sent to the outside server.

PO's assertion that "no component in Ellis'430 selects between these overlays based on received 'related information'" (POR, 60-61) is irrelevant—Wallis discloses panel related information. Petition, 81. Petitioners also incorporate their responses regarding Wallis. *Supra*, §VI.D-E.

For limitation [1f], PO asserts "Ellis'430 nowhere states that program times define a period during which the overlay is displayed or that the overlay's presence is governed by 'time related information' received from a server." POR, 61. This misstates the limitation and the Petition.

Ellis'430 discloses that live-broadcast air times and the browse/flip overlays are both received from a distribution facility. Petition, 78-81. Whenever the browse/flip overlay is displayed during a live broadcast, that constitutes time related information (*a time during which the reproduced digital contents and at least one of the interactive buttons are displayed*). Petition, 78-81.

Regarding limitations [1i] and [1j], PO repeats its assertions from Ground 1, *i.e.*, "Dr. Bederson ... suggest[s] that deactivation of the browse/flip overlay leads

to the display of PVR overlay 2404 on the same content” and “Ellis’430 does not describe this sequence.” POR, 61.

Again, PO is wrong. As the Petition states, “Ellis’430 discloses at least one time other than the when the user is viewing a scheduled live broadcast (*other than the time represented by the time related information*), a linear operation panel overlay 2404 is displayed during playback of a program video.” Petition, 81-82. There is no alleged “sequence.”

D. Claim 14

As with Ground 1, PO asserts “[Dr. Bederson’s] declaration simply cross-references his analysis of claim 1.” But PO ignores that for limitation [14a], the Petition (and Dr. Bederson’s declaration) cites to Ellis’430’s disclosure of a video-on-demand server. Petition, 88 (citing EX1021, Fig. 8; EX1003, ¶248). PO does not respond to this and therefore any response is waived. Schedule.

E. Limitations [1a]-[1c], [1h], Claims 2, 3, 6-9, and 15-19

PO does not respond to the Petition regarding limitations [1a]-[1c] or dependent claims 2, 3, 6-9 and 15-19. Thus, PO has waived any response to those limitations and claims. Schedule.

XII. CONCLUSION

All Challenged Claims should be found unpatentable.

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CERTIFICATION UNDER 37 C.F.R. §42.24

Under the provisions of 37 C.F.R. §42.24(d), the undersigned hereby certifies that the applicable word count for Petitioners' Reply to Patent Owner's Response totals 5,486 as calculated by Microsoft Word, which is less than the 5,600 allowed under 37 C.F.R. §42.24.

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CERTIFICATE OF SERVICE

The undersigned certifies pursuant to 37 C.F.R. §§42.6(e) and 42.105 that on August 18, 2026, a true and correct copy of the Petitioners' Reply Brief was served by emailing a copy of same (by agreement) to the following attorneys for the

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