UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE

6	IRONBURG INVENTIONS LTD.,
7	Plaintiff,
8	v.
9	VALVE CORPORATION,
	Defendant.

ORDER

C17-1182 TSZ

THIS MATTER comes before the Court on plaintiff's renewed motion for inter
partes review ("IPR") estoppel, docket no. 513, and defendant's cross-motion for a
finding of no IPR estoppel, docket no. 528. Having reviewed all papers filed in support
of, and in opposition to, each motion, the Court enters the following order.

15 Discussion

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Plaintiff Ironburg Inventions Ltd. ("Ironburg") owns United States Patent 16 No. 8,641,525 B2 ("'525 Patent"), a copy of which is attached as Exhibit A, docket 17 no. 44-1, to the Second Amended Complaint. The invention described in the '525 Patent 18 is "a hand held controller for a game console." See '525 Patent at 4:41 & 6:14. During 19 the period from June 2015 through December 2019, defendant Valve Corporation 20 ("Valve") sold approximately 1,612,136 devices known as the "Steam Controller." See 21 Stip. Facts Nos. 7 & 10-11, Jury Instr. No. 5 (docket no. 413). On February 1, 2021, a 22 jury rendered a verdict in favor of Ironburg, finding that, by distributing the Steam 23 ORDER - 1

Controller, Valve had willfully infringed Claims 2, 4, 7, 9, 10, 11, and 18 of the '525
 Patent. <u>See</u> Verdict (docket nos. 416 & 417). The jury awarded to Ironburg
 \$4,029,533.93 in damages. <u>Id.</u> By Order entered May 26, 2021, docket no. 458, the
 Court denied Valve's motion for judgment as a matter of law ("JMOL"), remittitur, or a
 new trial; the Court also denied Ironburg's motion for enhanced damages. On appeal, the
 Federal Circuit affirmed all but one of the Court's numerous rulings in this case. <u>See</u>
 <u>Ironburg Inventions Ltd. v. Valve Corp.</u>, 64 F.4th 1274 (Fed. Cir. 2023).

8 The only decision of this Court that was vacated by the Federal Circuit involved
9 the effect of Valve's failure to raise, in an IPR petition dated April 22, 2016, <u>see</u> Ex. C to
10 Becker Decl. (docket no. 262-3), the following grounds for challenging the validity of the
11 '525 Patent:

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Non-Petitioned Grounds	
Relevant Patent Claims ¹	Prior Art References
2, 9–11, and 18	Kotkin ²
2, 4, 7, and 9–11	Willner, ³ Koji, ⁴ and Raymond ⁵

15 See Ironburg, 64 F.4th at 1296 n.7 & 1297–1300; see also Order at 5 (docket no. 320).

16 The IPR that Valve sought in April 2016, on different grounds, was instituted in part on

¹⁸ ¹ In its response to Ironburg's original motion for IPR estoppel, Valve asserted obviousness on the basis of Kotkin as to Claims 1–3, 5, 6, 9–11, 14, 17–18, and 20 of the '525 Patent, and it asserted obviousness on the basis of Willner, Koji, and Raymond as to Claims 1, 2, 4–11, 13, 17, and 19–20 of the '525 Patent. See Def.'s Resp. at 1 (docket no. 276). These lists of patent claims have been narrowed to reflect the claims on which the jury found infringement.

² United States Patent Application Publication No. 2010/0298053 A1 filed by David Kotkin.

^{21 &}lt;sup>3</sup> United States Patent No. 6,760,013 B2 issued to Michael Willner and Scott Arnel.

²² ⁴ Japanese Patent Application No. JP-A H10-020951 filed by Koji Tsuchiya.

^{23 &}lt;sup>5</sup> United States Patent No. 5,773,769 issued to Christopher Raymond.

September 27, 2016, as IPR2016-00948 ("948 IPR"), <u>see</u> Ex. E to Becker Decl. (docket
 no. 262-5), and decided almost a year later, on September 22, 2017, by the Patent Trial
 and Appeal Board ("PTAB"), <u>see</u> Ex. K to Becker Decl. (docket no. 262-11) (concluding
 that Claims 1, 6, 13, 14, 16, 17, 19, and 20 of the '525 Patent are unpatentable).

5 A. <u>Collective Minds</u>

6 In January 2018, while the cross-appeals concerning the 948 IPR were pending 7 before the Federal Circuit, another entity, Collective Minds Gaming Co. Ltd. ("Collective 8 Minds"), petitioned for inter partes review, raising both Kotkin and the combination of 9 Willner, Koji, and Raymond as grounds for declaring certain claims of the '525 Patent 10invalid, including some of the claims already found unpatentable by the PTAB in the 11 948 IPR. See Pet. for Inter Partes Review, Collective Minds Gaming Co. v. Ironburg 12 Inventions Ltd., No. IPR2018-00354, 2018 WL 280722 (Jan. 3, 2018). The PTAB 13 instituted the requested IPR, but it never ruled on the merits of the obviousness 14 challenges presented by Collective Minds because the parties reached a settlement. See 15 Collective Minds Gaming Co. v. Ironburg Inventions Ltd., No. IPR2018-00354, 2018 WL 16 2938858 (P.T.A.B. June 7, 2018); see also Collective Minds Gaming Co. v. Ironburg 17 Inventions, Ltd., Nos. IPR2018-00354, -00355, -00356 & -00357, 2018 WL 6624854 18 (P.T.A.B. Dec. 14, 2018). These events occurred more than six months before the 19 Federal Circuit, shortly after hearing oral argument, affirmed the PTAB's decision in the 20 948 IPR. See Ex. A to Joint Status Report (docket no. 302-1) (containing a copy of the 21 Federal Circuit's two-page judgment dated July 15, 2019).

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1 As observed in this Court's previous Order concerning IPR estoppel, docket 2 no. 320, Valve's petition for the 948 IPR predated SAS Institute, Inc. v. Iancu, 138 S. Ct. 3 1348 (2018), in which the Supreme Court invalidated the PTAB's former practice of instituting inter partes review as to less than all of the claims in an IPR petition. Because 4 5 Valve's requested IPR had been instituted in part and not instituted in part, Valve could have, but did not seek, a post-SAS remand to the PTAB. See Order at 8-9 (docket 6 7 no. 320) (citing Google LLC v. Lee, 759 Fed. App'x 998 (Fed. Cir. 2019), and SiOnvx, LLC v. Hamamatsu Photonics K.K., 330 F. Supp. 3d 574 (D. Mass. 2018)). This Court 8 9 therefore imposed IPR estoppel with respect to the non-instituted grounds, and the Federal Circuit affirmed this decision. See Ironburg, 64 F.4th at 1297. The Court now 10 11 notes that, if Valve had requested a post-SAS remand, it could have sought further relief 12 from the PTAB, including consolidation of the two IPR proceedings initiated by Valve 13 and Collective Minds, respectively, involving the same patent. See 35 U.S.C. § 315(d); 14 37 C.F.R. § 42.122.

The Court did not, however, make this observation in its prior ruling. Instead, in
reaching its earlier decision, the Court viewed Collective Minds' IPR petition as evidence
that, during the timeframe when Valve was motivated to learn of references that might
have rendered the '525 Patent invalid, a skilled searcher reasonably could have been
expected to discover Kotkin and the combination of Willner, Koji, and Raymond. <u>See</u>
Order at 11–13 (docket no. 320). As a result, pursuant to 35 U.S.C. § 315(e)(2),⁶ the

 ⁶ The cited statute provides in relevant part as follows: "The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision . . . may not assert . . . in a civil action arising in whole or in part under section 1338 of title 28 . . . that the claim is

1	Court concluded that Valve was estopped from raising the non-petitioned grounds as	
2	defenses at trial. Order at 13 (docket no. 320). On appeal, the Federal Circuit agreed	
3	with this Court that,	
4	provided the other conditions of the statute are satisfied, § 315(e)(2) estops a	
5	petitioner as to invalidity grounds a skilled searcher conducting a diligent search reasonably could have been expected to discover, as these are grounds that the petitioner "reasonably could have raised" in its petition.	
6	64 F.4th at 1298; <i>compare</i> Order at 10 (docket no. 320) ("The statutory language has	
7	been interpreted to include any patent or printed publication about which a petitioner	
8	actually knew or that 'a skilled searcher conducting a diligent search reasonably could	
9	have been expected to discover.""). The Federal Circuit also articulated for the first time	
10	that the burden of proving,	
 11 12 13 	by a preponderance of the evidence, that a skilled searcher exercising reasonable diligence would have identified an invalidity ground rests on the patent holder, as the party asserting and seeking to benefit from the affirmative defense of IPR estoppel.	
14	64 F.4th at 1299.	
15	Based on its perception that this Court had improperly placed the burden on Valve	
16	to disprove IPR estoppel, the Federal Circuit remanded for further proceedings. See id. at	
17	1298–99. The Federal Circuit viewed the record as insufficient to establish whether	
18	Collective Minds (i) undertook merely a "reasonably' diligent" search that did not	
19	involve "extraordinary measures," or (ii) "employed 'scorched earth' tactics" to find the	
20	prior art references. <u>Id.</u> Declining Valve's request that a "trial" be ordered, the Federal	
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22	invalid on any ground that the notitioner raised or reasonably could have raised during that inter-	

invalid on any ground that the petitioner raised or reasonably could have raised during that inter
 partes review." 35 U.S.C. § 315(e)(2).

Circuit has left to this Court to decide "whether to reopen the record and permit
 discovery, the relevance of Valve's own search efforts," and whether the IPR estoppel
 dispute is "amenable to resolution via case-dispositive motions or some other
 mechanism." *Id.* at 1300.

5 On remand, the Court has allowed limited discovery. See Minute Order (docket no. 511). As part of this process, Ironburg was provided an opportunity to obtain 6 7 declarations from individuals with personal knowledge about the searches performed by 8 Collective Minds. See id. at \P 1(b). No such declaration has been submitted. Thus, the 9 record remains silent with regard to the intensity with which Collective Minds engaged in 10its efforts to locate the patents (Willner and Raymond) and patent applications (Kotkin 11 and Koji) at issue. As a result, the Court GRANTS Valve's motion to strike, see Def.'s 12 Surreply at 3 (docket no. 540), Ironburg's assertion that Collective Minds "*easily*" found 13 the four references, see Pl.'s Reply at 1 (docket no. 536) (emphasis added). The Court, 14 however, notes that a diligent search conducted at a time when Valve could still have 15 asked for a post-SAS remand of the 948 IPR would have uncovered the PTAB's publicly-16 available decision to institute the IPR requested by Collective Minds, which set forth in 17 detail the two grounds of unpatentability now at issue. See Collective Minds, 2018 WL 18 2938858, at *2 & *8–14.

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B. Valve's Own Search Efforts

As contemplated by the Federal Circuit, this Court has considered the evidence concerning Valve's preparations before petitioning to institute the 948 IPR. The relevant materials, in the form of a declaration and three appendices, were provided to the Court

in opposition to Ironburg's original motion for IPR estoppel. <u>See</u> Williams Decl., Ex. B
 to Barceló Decl. (docket no. 277-2). The declaration has been offered again, but this time
 without the first appendix, which contained excerpts from David Hunt, Long Nguyen,
 and Matthew Rodgers, PATENT SEARCHING TOOLS & TECHNIQUES (2007) [hereinafter
 "Hunt"]. <u>See</u> Williams Decl., Ex. C to Cotropia Decl. (docket no. 530-1); Williams Decl.
 at App'x 1, Ex. B to Barceló Decl. (docket no. 277-2).

7 The declaration, along with all three appendices, was initially provided to the 8 PTAB in support of Valve's opposition to Ironburg's request to terminate IPR2017-00136 ("136 IPR") on the basis of estoppel pursuant to 35 U.S.C. § 315(e)(1), which 9 10relates to matters before the United States Patent and Trademark Office ("PTO"). See 11 Valve Corp. v. Ironburg Inventions Ltd., Nos. IPR2017-00136 & IPR2017-00137, 2018 12 WL 575390, at *2 (P.T.A.B. Jan. 25, 2018) (identifying the declaration as Exhibit 1019); 13 see also Williams Decl. (docket no. 530-1 at 44) (captioned as relating to the 136 IPR). 14 The 136 IPR challenged Claim 20 of the '525 Patent as anticipated by Wörn, also known 15 as United States Patent No. 6,362,813 B1. See Valve, 2018 WL 575390, at *1 & n.3. 16 The PTAB concluded that "a skilled searcher conducting a diligent search reasonably 17 would have been expected to discover Wörn" through a classification search. See id. at *2-4. 18

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1. <u>Classification Searches</u>

Before the advent of digital, text-searchable databases, "[t]he way to navigate
patents was by relying exclusively on the patent classification system." <u>See</u> Hunt at 35
(docket no. 277-2 at 20). Patents involving similar technology should have the same or

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similar classifications, making them easier to find. <u>See Valve</u>, 2018 WL 575390, at *2;
 <u>see also</u> Hunt at 41 (docket no. 277-2 at 26) ("Since patent classification systems were
 designed to assist with patent searching, they are a good place to start.").

4 The United States is a party to the treaty known as the Strasbourg Agreement, 5 pursuant to which the International Patent Classification ("IPC") system was established in 1971. See https://www.wipo.int/treaties/en/classification/strasbourg. In accordance 6 7 with the Strasbourg Agreement, the PTO is required to indicate on its issuing documents 8 (e.g., patents and published patent applications) the appropriate designations within the 9 IPC system, and the PTO does so within the section of its materials labeled "Int. Cl." See 10Manual of Patent Examining Proc. § 906 (9th ed. 2020) [hereinafter "MPEP"] (available 11 at https://www.uspto.gov/web/offices/pac/mpep). Since January 1, 2013, the PTO has 12 also employed the Cooperative Patent Classification ("CPC") system, which was jointly 13 developed with the European Patent Office. See <u>GeigTech E. Bay LLC v. Lutron Elecs</u>. 14 Co., Nos. 18 Civ. 5290, 19 Civ. 4693, & 20 Civ. 10195, 2023 WL 8827572, at *10 15 (S.D.N.Y. Dec. 21, 2023). The various IPC (or IC) and CPC classifications are, in many 16 instances, identical, but the PTO maintains a list of deviations between the two systems. 17 See https://www.uspto.gov/web/patents/classification/cpc/html/discordance-list.html.

The PTO previously used the United States Patent Classification ("USPC")
system, but only "design" and "plant" applications, application publications, and patents
currently receive USPC designations. <u>See MPEP §§ 903 & 903.04</u>. The USPC codes,
however, are still a means of finding "utility" applications, application publications, and
patents that predate the switch to the CPC system. <u>See Cotropia Decl. at ¶ 35 (docket</u>

no. 530) ("Patent offices do not change the classification on the printed versions of
 published patent applications or issued patents. Those are fixed at the time of printing.").

3 The PTAB's application of § 315(e)(1) estoppel in the 136 IPR, in which Valve sought to invalidate Claim 20 of the '525 Patent on the basis of Wörn, is illustrative of 4 5 how patent classifications should be considered in evaluating what a diligent skilled searcher reasonably could have been expected to discover. The '525 Patent is in USPC 6 7 class 463, subclass 37, which relates to "Amusement Devices: Games" that are "[h]and 8 manipulated (e.g., keyboard, mouse, touch panel, etc.)." See Valve, 2018 WL 575390, at 9 *2; see also '525 Patent at 1, \P (52) (docket no. 44-1). The prior art on which Valve 10wished to rely (Wörn) is in USPC class 345, subclass 169. See Valve, 2018 WL 575390, 11 at *3; see also United States Patent No. 6,362,813 B1 at 1, ¶ (52). Rejecting Valve's 12 expert's assertion that a diligent skilled searcher would not have looked for material 13 under USPC 345/169, the PTAB observed that the '525 Patent itself cited previous 14 patents that are in USPC 345/169, and that the respective descriptions for USPC classes 15 345 and 463 cross-reference each other. Valve, 2018 WL 575390, at *2–3. The PTAB also noted that the titles for USPC 463/37 and 345/169 are similar. Id. at *3; see id. at *2 16 17 (USPC class 345 concerns "Computer Graphics Processing and Selective Visual Display 18 Systems," subclass 169 is labeled "Portable (i.e., handheld, calculator, remote controller), 19 and subclass 169 is indented under subclass 168, which is indented under subclass 156, 20 which relates to "Display Peripheral Interface Input Device"). Concluding that a skilled 21 searcher performing a diligent search would have searched USPC 345/169 and thereby 22 identified Wörn as pertinent prior art, the PTAB determined that Valve was estopped in

the 136 IPR under § 315(e)(1) because it failed to raise the Wörn ground in its earlier
 petition giving rise to the 948 IPR. <u>See id.</u> at *3–4.

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<u>Kotkin and Koji</u>

A similar analysis leads to the conclusion that Kotkin and Koji were reasonably
discoverable. Unlike in the 136 IPR proceeding, however, whether a particular patent
classification should have been searched is not at issue here; the classifications associated
with Kotkin and Koji were actually searched before Valve sought inter partes review as
to the '525 Patent. Thus, unlike the PTAB in the 136 IPR, this Court need not address
whether a skilled searcher would have looked for materials with the classifications
assigned to Kotkin and Koji.

11 Shortly after the '525 Patent issued in February 2014, Valve's attorneys hired 12 Landon IP, Inc., which was later purchased and rebranded as CPA Global (Landon IP) Inc., to conduct prior art searches. See Williams Decl. at ¶¶ 2–4, Ex. C to Cotropia Decl. 13 14 (docket no. 530-1 at 45). A four-person team, including Jamila Williams acting as 15 "Technical Lead," conducted eleven classification searches and 45 keyword searches 16 within the United States and Japanese patent databases and then transmitted their results 17 to one of Valve's lawyers on March 27, 2014. Id. at ¶¶ 5 & 9 (docket no. 530-1 at 45-46 18 & 47). The searches performed in March 2014 are enumerated in Appendices 2 and 3 to 19 Ms. Williams's declaration, but the results of those searches (*i.e.*, any lists or summaries 20 of prior art references) have not been provided to the Court. Instead, in an attempt to 21 cure this deficiency in Ms. Williams's declaration, one of Valve's experts, Christopher

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Cotropia,⁷ has asserted that Ms. Williams did not discover Kotkin, Koji, or Raymond, <u>see</u>
 Cotropia Decl. at ¶¶ 18, 20, 34, 44, & 53 (docket no. 530), but he says nothing about
 Ms. Williams's three peers. More importantly, however, Mr. Cotropia does not purport
 to have any personal knowledge about what Ms. Williams and her colleagues found in
 March 2014, and he cites no evidence to support his representation concerning what
 materials were or were not located.

7 In addition to lacking any indicia of reliability, Mr. Cotropia's statements that 8 Kotkin and Koji were not found are contradicted by the search methodology that 9 Ms. Williams and her teammates used. Of the eleven classification searches run in 10March 2014, one sought materials with an IC or CPC designation of "A63F-013/06," 11 which is the exact code under which Kotkin was indexed, and another requested 12 references with an IC or CPC classification of "G06F3/033," which was one of four 13 labels assigned to Koji. The search strings and the relevant sections of the patent 14 applications at issue are reproduced below and on the next page.

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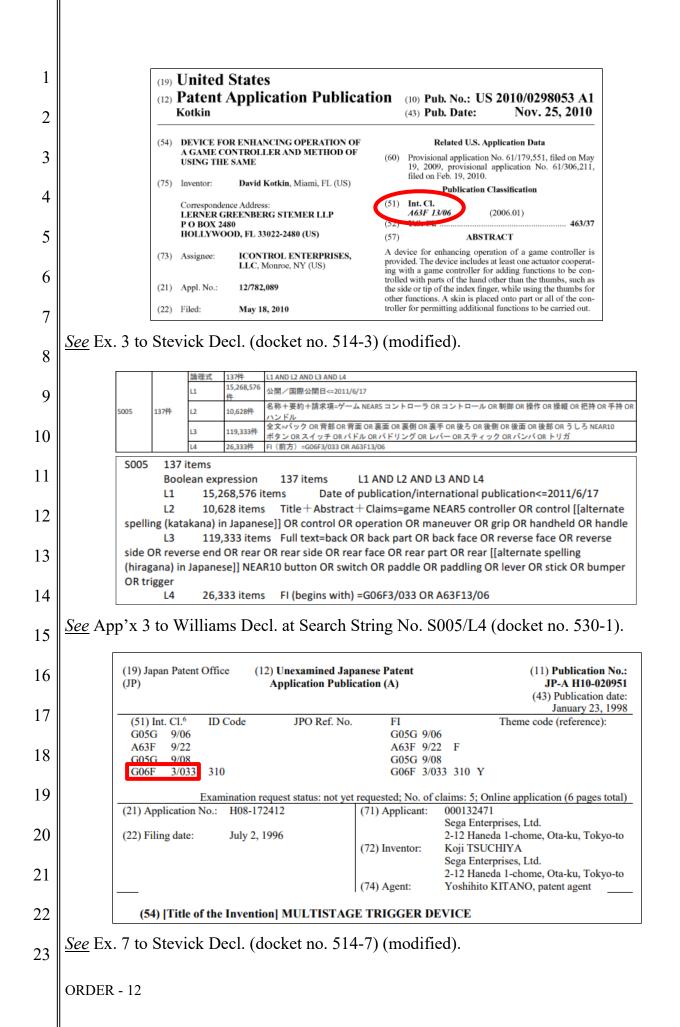
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	The analyst used a cut-off date of published before June 17, 2011.
	Questel Orbit
#	Search String

52 (A63F-013/06)/IC/CPC

Search History

⁷ Mr. Cotropia is the same expert who opined that a skilled searcher would not have looked for materials (like Wörn) classified under USPC 345/169, and the PTAB disregarded his testimony for lack of "a persuasive explanation." <u>Valve</u>, 2018 WL 575390, at *3.



1	Kotkin and Koji ⁸ must have been among the references identified during the
2	March 2014 search. Based on the classifications that Valve's own consultant believed
3	were relevant, the Court concludes, as a matter of law, ⁹ that a skilled searcher conducting
4	a diligent search, at the relevant time, reasonably could have been expected to (and likely
5	did) discover both Kotkin and Koji. See TrustID, Inc. v. Next Caller Inc., No. 18-172,
6	2021 WL 3015280, at *1 (D. Del. July 6, 2021) ("One way to show what a skilled search
7	would have found would be (1) to identify the search string and search source that would
8	identify the allegedly unavailable prior art and (2) present evidence, likely expert
9	testimony, why such a criterion would be part of a skilled searcher's diligent search."
10	(quoting <u>Clearlamp, LLC v. LKQ Corp.</u> , No. 12 C 2533, 2016 WL 4734389, at *9 (N.D.
11	
12	⁸ Although Appendix 3 to Ms. Williams's declaration does not identify the references found, it
13	does show that 26,333 items were located using the classifications G06F3/033 or A63F13/06; Koji must have been among them. When the classification search results were narrowed by
14	(i) excluding materials that post-dated the application for the '525 Patent, and (ii) requiring that certain word patterns appear in the title, abstract, claims, and/or text, only 137 documents were
15	reported. <u>See</u> App'x 3 to Williams Decl. (docket no. 530-1 at 54 & 57). Koji satisfies the time restriction; it was published almost 15 years before June 17, 2011. <u>See</u> Ex. 7 to Stevick Decl. (docket no. 514-7 at 2). Moreover, within the text of Koji, the phrase "rear side" appears within
16	ten words of "button" as required by Search String No. S005/L3. <u>See id.</u> (docket no. 514-7 at 5). Although the combination of "game" and "controller" is not present in the title, abstract, or
17	claims of Koji, as contemplated by Search String No. S005/L2, the term "video game controller" shows up in the field-of-invention section, and the word "controller" is repeated four times in the
18	abstract. <u><i>Id.</i></u> (docket no. 514-7 at 2–3). Thus, the search actually performed in March 2014 establishes by a preponderance of the evidence that Koji was or reasonably could have been
10	discovered with the requisite diligence.

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 ⁹ Whether IPR estoppel applies is a question of law to be addressed through motion practice.
 20 See <u>GeigTech</u>, 2023 WL 8827572, at *1 ("judges, not juries, decide what issues parties are or are not legally barred from raising"); <u>EIS, Inc. v. IntiHealth Ger GmbH</u>, No. 19-1227, 2023 WL

^{21 6797905,} at *4 (D. Del. Aug. 30, 2023); *Innovative Memory Sys., Inc. v. Micron Tech., Inc.,* No. 14-1480, 2022 WL 4548644, at *5 (D. Del. Sep. 29, 2022) (observing that IPR estoppel is

²² meant "to streamline litigation, not to further complicate already complicated trials by sending questions about the reasonableness of prior art searches to the jury").

Ill. Mar. 18, 2016))); see also Aseteck Danmark A/S v. CoolIT Sys., Inc., No. 19-cv-410,
 2019 WL 7589209, at *8 (N.D. Cal. Dec. 30, 2019) (also quoting <u>Clearlamp</u>).

3 Because Valve proposes to present Kotkin as a standalone basis for invalidating Claims 2, 9–11, and 18 of the '525 Patent, the conclusion that Kotkin was reasonably 4 5 discoverable is dispositive. As a result, Valve is precluded by \S 315(e)(2) from proceeding further on its contention that Kotkin renders the claims at issue unpatentable, 6 7 and the Court need not address the merits of the invalidity challenge premised on Kotkin 8 or engage in any further analysis concerning Kotkin. With regard to Koji, however, the 9 Court turns to the question of whether the other two references Valve seeks to combine 10with this Japanese patent application, namely Willner and Raymond, were known or also 11 findable by a skilled searcher exercising reasonable diligence.

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C. Known or Reasonably Discoverable References

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1. <u>Willner</u>

14 Like Wörn, Willner is classified in USPC 345/169. See United States Patent 15 No. 6,760,013 B2 at 1, ¶ (52), Ex. 6 to Stevick Decl. (docket no. 514-6). For the same 16 reasons that Wörn was reasonably discoverable, Willner could have been found by a 17 skilled searcher exercising reasonable diligence. See Valve, 2018 WL 575390, at *2-4; 18 see also Innovative Memory, 2022 WL 4548644, at *4 (expressing doubt about whether "§ 315(e) leaves any room for a patent challenger to argue that it could not reasonably 19 20 have raised an indexed, searchable U.S. patent in its prior IPR proceedings"). Indeed, 21 Willner was actually identified by a skilled searcher, and the reference appears on the

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face of the '525 Patent, having been cited by the patent examiner. <u>See</u> '525 Patent at p. 2
 (docket no. 44-1).

3 As noted in the Court's earlier Order, in response to Ironburg's original motion 4 for IPR estoppel, Valve made no attempt to argue that Willner was not actually known, 5 or was undiscoverable via a reasonably diligent search, at the time it filed its IPR petition. Order at 11 (docket no. 320). In opposing Ironburg's renewed motion for IPR estoppel, 6 7 Valve continues to focus solely on the other references, Kotkin, Koji, and Raymond, 8 and the Court now explicitly rules that Ironburg has met its burden of showing by a 9 preponderance of the evidence that, at the relevant time, Willner was known from the 10face of the '525 Patent and/or reasonably could have been expected to be discovered by a 11 diligent skilled searcher.

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2. <u>Raymond</u>

13 The IC and USPC codes with which Raymond is indexed were not among those 14 used in the eleven classification searches performed by Ms. Williams and her colleagues 15 in March 2014. Moreover, neither Raymond nor its IC or USPC designations appear in 16 the '525 Patent. Thus, to evaluate whether Raymond was reasonably discoverable, the 17 Court must consider the evidence with which the parties have supplemented the record on 18 remand. See Minute Order (docket no. 511) (granting leave to provide expert testimony). 19 Ironburg has offered the testimony of the following employees of Cardinal Intellectual 20 Property, Inc.: (i) Seth Greenia, a search professional; and (ii) Brian Hameder, a project 21 manager. See Greenia Decl. at ¶ 1 (docket no. 515); Hameder Decl. at ¶ 1 (docket 22 no. 516). According to Messrs. Greenia and Hameder, a reasonably diligent search

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would have found (and did find) all four references at issue, including Raymond, during
 approximately fifty (50) hours of work at a cost of roughly \$10,825. See Greenia Decl. at
 ¶¶ 10 & 29 (docket no. 515); see also Hameder Decl. at ¶¶ 8–9 (docket no. 516).¹⁰

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a. <u>Citation Search</u>

5 Mr. Greenia reports initially finding Raymond using a "citation search," which looks for materials that either cite to (are forward of) or are cited by (are backward from) 6 7 a particular reference. See Greenia Decl. at ¶¶ 21, 26, & 27 (docket no. 515). In a search 8 conducted between August 25 and September 1, 2023, Mr. Greenia used a set of twenty 9 published applications, utility patents, and design patents, some of which pre-date and 10 others of which post-date Valve's April 2016 IPR petition, and then identified prior art 11 (*i.e.*, any item existing before the application for the '525 Patent was filed on June 17, 12 2011) that either was cited in or cited to one of those twenty documents, producing a list 13 of 292 references. See Search Strings Nos. 33 & 34, App'x F to Greenia Decl. (docket 14 no. 515-6 at 5); see also Cotropia Decl. at ¶ 30 (docket no. 530) (explaining that the "cta" 15 command, which was used in Search String No. 34, searches for "all backward and 16 forward citations").

17 Valve's expert, Christopher Cotropia, criticizes Mr. Greenia's methodology for
18 attempting to "improperly benefit from information unavailable to a skilled searcher
19 performing a diligent search in April 2016," when Valve filed its IPR petition. Cotropia

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 ¹⁰ Valve's motion to strike, <u>see</u> Def.'s Resp. & Cross-Mot. at 21–22 (docket no. 528), the first declaration of Mr. Hameder, is DENIED. The topics addressed by Mr. Hameder, namely, the costs associated with Mr. Greenia's searches and whether such expenses are typical for patents of similar complexity, are well within the parameters of permitted discovery.

Decl. at ¶ 25 (docket no. 530). This criticism applies to forward citation searches, *i.e.*,
searches for materials that cite to an earlier reference. See id. at ¶¶ 23–24. As explained
by Mr. Cotropia, "[t]he universe of forward citations grows over time." Id. at ¶ 23. The
database is always expanding because new applications and patents are constantly being
filed, published, or issued, and each of these documents cites to one or more previously
filed or published applications and/or earlier-issued patents.

7 The Court agrees with Mr. Cotropia's assessment about the flaw in Mr. Greenia's 8 "cta" (forward-and-backward citation) approach. Raymond is cited in United States 9 Patent No. D983,269 S, which is a design patent that was issued to Ironburg on April 11, 102023, and which is one of the twenty references included in Mr. Greenia's "cta" search 11 string. See App'x F to Greenia Decl. (docket no. 515-6 at 5). The citations in this design patent would not have been available to a diligent skilled searcher before Valve filed its 12 13 IPR petition in April 2016. Mr. Greenia has not identified any item in his group of 14 twenty applications and patents that both predated Valve's IPR petition and cited to 15 Raymond. The Court therefore concludes that the results of Mr. Greenia's Search String No. 34 do not prove or tend to prove¹¹ by a preponderance of the evidence that a skilled 16

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¹⁹¹¹ Given this ruling, the Court GRANTS in part Valve's motion, <u>see</u> Def.'s Resp. & Cross-Mot. at 20–21 (docket no. 528), to strike Mr. Greenia's opinion. Mr. Greenia's view that Raymond was reasonably discoverable via a forward/backward citation search is deemed irrelevant and inadmissible, <u>see</u> Fed. R. Evid. 401(a) & 402, and is therefore STRICKEN. The Court need not address whether the results of Search String No. 34 with respect to Kotkin and Koji are also lacking in probative value because those two references were reasonably discoverable using the classification searches performed by Valve's contractor in March 2014. Thus, as to Kotkin and Koji, Valve's motion to strike Mr. Greenia's testimony relating to his Search String No. 34 is STRICKEN in part as moot.

searcher conducting a diligent forward citation search at the relevant time reasonably
 could have been expected to discover Raymond.

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b. <u>Classification Search</u>

4 Although Mr. Greenia found Raymond using a forward/backward citation search, 5 he did not include the reference in his initial search results because it was considered to be of only "peripheral relevance." Greenia Decl. at ¶ 27 (docket no. 515). When asked 6 7 to perform a supplemental search, Mr. Greenia again identified Raymond, but this time 8 through a classification-based search, the results of which were narrowed by using certain 9 keywords and Boolean logic. See id. at ¶ 28; see also id. at App'x G, Search String 10 No. 26 (docket no. 515-7 at 6). Mr. Greenia began with certain USPC codes (returning 11 41,075 results), IC designations (identifying 289,186 references), and CPC classifications 12 (locating 37,419 documents), and then narrowed the combined field to items predating the filing of the application for the '525 Patent (reducing the total to 179,830 hits). See 13 14 id. at App'x G, Search Strings Nos. 22–25. Mr. Greenia then searched within the 15 remaining materials for a pattern of relevant terms (like "levers" within eight words of "flexible" and "key" or "lever" or "paddle" near "flexible"), and Raymond appeared 16 17 among the 368 results. See id. at App'x G, Search String No. 26.

18 With respect to Raymond, Valve does not contend that the USPC, IC, and/or CPC
19 values, date restriction, and/or keywords that Mr. Greenia used were inappropriate or
20 inconsistent with those that a diligent skilled searcher would employ.¹² Rather, on behalf

 $[\]begin{bmatrix} 22 \\ 1^2 \text{ Valve and its expert attack Mr. Greenia's choices of IC or CPC classifications only with respect to Kotkin and Koji. <u>See</u> Cotropia Decl. at ¶ 42 (docket no. 530). \\ \end{bmatrix}$

1	of Valve, Mr. Cotropia speculates that an intervening reclassification (occurring
2	sometime after March 2014, when Ms. Williams and her teammates completed their
3	work, and before September 2023, when Mr. Greenia commenced his supplemental
4	search) might explain why Mr. Greenia found Raymond, but Ms. Williams did not. See
5	Cotropia Decl. at $\P\P$ 41 & 44 (docket no. 530). Again, however, the record is silent with
6	regard to what Ms. Williams (or her colleagues) discovered. In addition, Mr. Hameder
7	has represented that the IC designation under which Raymond was located ("H01H
8	21/00") has not been updated since January 2006, ¹³ <u>see</u> Hameder Decl. at \P 6 (docket
9	no. 538); see also Ex. 8 to Stevick Decl. (docket no. 514-8) (showing that, when issued in
10	June 1998, Raymond's IC code was "H01H 21/86"), and thus, a diligent skilled searcher
11	looking for materials with the classification "H01H 21/00" in the April 2016 timeframe
12	would reasonably have been expected to find Raymond. The Court concludes that
13	discovering Raymond at the relevant time ¹⁴ would not have required any "extraordinary
14	measures" or "scorched earth" tactics.

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¹³ Valve's motion to strike, <u>see</u> Def.'s Surreply at 2–3 (docket no. 540), Mr. Hameder's second declaration, which is based on Valve's theory that Mr. Hameder describes work performed after he was deposed, is DENIED. Mr. Hameder's declaration offers appropriate responses to the challenges raised by Valve during his deposition and in opposition to Ironburg's renewed motion

for IPR estoppel. Moreover, the status of IC code "H01H 21/00" is a fact "readily determined from sources whose accuracy cannot reasonably be questioned," about which the Court may and does take judicial notice. See Fed. R. Evid. 201. Valve's alternative request for an opportunity

to further depose Mr. Hameder and submit additional briefing and evidence, <u>see</u> Def.'s Surreply at 3 (docket no. 540), is also DENIED.

 ¹⁴ Valve's and its expert's insistence on April 2016 as a litmus test for the proper scope of prior art ignores the procedural posture of this case, *see supra* pp. 4-6, but the Court has assumed for purposes of its rulings on Ironburg's renewed motion for IPR estoppel that what a skilled searcher conducting a diligent search reasonably could have been expected to discover should be measured as of the period shortly before Valve petitioned to institute the 948 IPR.

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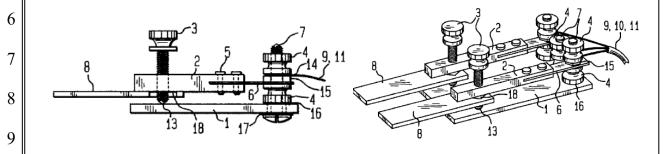
1

c. Combining Raymond with Willner and Koji

2 Valve contends that, even if Raymond could have been identified using reasonable 3 diligence, a skilled searcher would not have understood Raymond's relevance, and would not have "discovered" the Willner-Koji-Raymond ground. See Def.'s Resp. & Cross 4 5 Mot. at 5–6 (docket no. 528). Indeed, as previously mentioned, Mr. Greenia believed that 6 Raymond, which discloses "[a] twin lever mechanical key unit with horizontal finger 7 pads for code transmission when used with an electronic iambic keyer," Raymond at 8 Claims 1 & 2, Ex. 8 to Stevick Decl. (docket no. 514-8), was of only "peripheral relevance," and he did not include the reference in his summaries regarding prior art of 9 10 particular concern. See Greenia Decl. at ¶ 27 & App'xs B & C (docket nos. 515, 515-2, 11 & 515-3). The problem for Valve, however, is that its argument against IPR estoppel 12 proves too much; the contention attempts to improperly shift the burden to Ironburg to 13 disprove invalidity while also undermining Valve's ability to show unpatentability. 14 With respect to its invalidity contention premised in part on Raymond, Valve 15 concentrates on the thickness elements defined in Claims 9, 10, and 11, which depend from Claim 1¹⁵ and require as follows: 16 17 18 ¹⁵ Claim 1 of the '525 Patent reads: 19 A hand held controller for a game console comprising: 20 an outer case comprising a front, a back, a top edge, and a bottom edge, wherein the back of the controller is opposite the front of the controller and the top edge is opposite the bottom edge; and 21 a front control located on the front of the controller: 22 wherein the controller is shaped to be held in the hand of a user such that the user's thumb is positioned to operate the front control; and 23

1	Claim 9:	"each elongate member has a thickness between about 1 mm and 10 mm"	
2 3	Claim 10:	"each elongate member has a thickness between about 1 mm and 5 mm"	
4	Claim 11:	"each elongate member has a thickness between about 1 mm and 3 mm."	
5	'525 Patent at 5:11-	16 (docket no. 44-1). ¹⁶ According to Valve's expert Robert	
6	Dezmelyk, the primary contribution of Raymond is a key or paddle "made from a flat,		
7	flexible strip of metal" to form "the actuating element for an input device." <u>See</u>		
8	Dezmelyk Decl. at	¶¶ 124 & 179 (docket no. 531). Mr. Dezmelyk opines that a person of	
9	ordinary skill in the	art would understand that a lever "could be fabricated of the typical	
10	plastic used for inpu	at devices" and that "a thickness of from 1 to 3 mm would provide	
11	sufficient flexibility	v, restoring force, and reliability." <u><i>Id.</i></u> at \P 213. Importantly, however,	
12			
13 14	the back o	ontrol and a second back control, each back control being located on of the controller and each back control including an elongate member	
15	that extends substantially the full distance between the top edge and the bottom edge and is inherently resilient and flexible.		
16	³ 525 Patent at 4:41–55 (docket no. 44-1). Claim 1 has already been invalidated. <u>See Valve</u> <u>Corp. v. Ironburg Inventions Ltd.</u> , No. IPR2016-00948, 2017 WL 4221468, at *13 & 21 (P.T.A.B. Sep. 22, 2017).		
17		itend that the teachings of Raymond contributed to the inventions set forth	
18	in Claims 2, 4, or 7 of the '525 Patent, which also depend from Claim 1 and articulate the following limitations:		
19 20	Claim 2:	"a top edge control located on the top edge of the controller," which controller is "shaped such that the user's index finger is positioned to operate the top edge control"	
21	Claim 4:	"at least one of the back controls has functions in addition to the top edge control and the front control"	
22	Claim 7:	"each elongate member is mounted within a recess located in the case of the controller."	
23	'525 Patent at 4:56-59	9, 4:63-65, & 5:4-6 (docket no. 44-1).	
	ORDER - 21		

Mr. Dezmelyk does not indicate that the thickness allegedly taught by Raymond could
exceed 3 mm, or could be as much as 10 mm or 5 mm, as reflected in Claims 9 and 10 of
the '525 Patent, respectively. Moreover, when asked in his deposition about the
components in Raymond that are described as "flat flexible steel strips (6)" and "finger
key pads (8)," Raymond at 2:29 –30 (docket no. 514-8) & Figs. 1 & 5 (reprinted below),



10 Mr. Dezmelyk acknowledged that Raymond does not specify the thicknesses of the strips, 11 and he testified that, for steel, the dimensional range needed to create the requisite flexibility was "half a millimeter or less." Dezmelyk Dep. (Feb. 16, 2024) at 79:12-80:3, 12 13 Ex. 3 to Meyer Decl. (docket no. 537-3). Thus, Mr. Dezmelyk's opinion does not even 14 purport to show obviousness as to Claims 9 and 10 of the '525 Patent, and his concession 15 concerning the maximum thickness in steel (0.5 mm) undermines his assertion that a 16 person of ordinary skill in the art would have been motivated by Raymond to use plastic that was 100–500% thicker (*i.e.*, in the range of 1-to-3 mm), as indicated in Claim 11 of 17 18 the '525 Patent. See Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 19 1360 (Fed. Cir. 2012) ("A party seeking to invalidate a patent on the basis of obviousness 20 must 'demonstrate, 'by clear and convincing evidence, that a skilled artisan would have 21 been motivated to combine the teachings of the prior art references to achieve the claimed 22 invention, and that the skilled artisan would have had a reasonable expectation of success

in doing so."" (quoting <u>Procter & Gamble Co. v. Teva Pharms. USA, Inc.</u>, 566 F.3d 989,
 994 (Fed. Cir. 2009) (quoting <u>Pfizer, Inc. v. Apotex, Inc.</u>, 480 F.3d 1348, 1361 (Fed. Cir.
 2007)))).

4 Against this backdrop, Valve argues that, to secure IPR estoppel, Ironburg must 5 prove that a skilled searcher conducting a diligent search at the relevant time must have read, interpreted, and understood the relevance of Willner, Koji, and Raymond combined. 6 7 See Def.'s Resp. & Cross-Mot. at 5–7 (docket no. 528). The authority that Valve cites 8 for this proposition, Palomar Technologies, Inc. v. MRSI Systems, LLC, No. 18-10236, 9 2020 WL 2115625, 2020 U.S. Dist. LEXIS 77929 (D. Mass. May 4, 2020), is both factually distinguishable¹⁷ and premised on an incorrect burden of proof.¹⁸ Moreover, 10 11 <u>Palomar</u> did not place on a patentee invoking IPR estoppel the impossible burden that 12 Valve now proposes.

The <u>Palomar</u> Court indicated that "it is not enough simply to locate a reference;
that reference must be read, and interpreted, and understood in the context of the patent."

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¹⁷ In *Palomar*, the expert who testified for the patent owner was found to have used a "hindsight approach," *i.e.*, creating search strings that relied "heavily on knowing the exact target" of the searches. *See* 2020 WL 2115625, at *9 & *14. In contrast, in this matter, the four references at issue, Kotkin, Willner, Koji, and Raymond, were "not provided or made known" to Mr. Greenia
¹⁸ Is form to grow the searches of the searches in th

¹⁸ before he commenced his search. Greenia Decl. at ¶ 12 (docket no. 515). Thus, unlike in
¹⁹ *Palomar* and other cases involving IPR estoppel, Mr. Greenia's opinions are not the product of "hindsight analysis," 2020 WL 2115625, at *14, or "plagued by hindsight bias," *EIS*, 2023 WL 6797905, at *4, and his results were not "essentially 'reverse engineered," *GeigTech*, 2023 WL 8827572, at *6.

¹⁸ The <u>Palomar</u> Court concluded that "the initial burden to assert estoppel should be on the party seeking to invoke it . . . , after which the burden shifts to the responding party to show that the prior-art reference could not reasonably . . . have been raised in the IPR proceeding." 2020 WL 2115625, at *4. This ruling was implicitly abrogated by the Federal Circuit. <u>See Ironburg</u>, 64 F.4th at 1297–99.

²³

Id. at *14. When making this observation, the Palomar Court was not faced with a 1 2 combination of references, but rather with standalone documents known as the Harigane 3 patent and the Ueno publication. See id. at *6. In evaluating whether Harigane or Ueno reasonably could have been found using a keyword search constructed from synonyms 4 5 and alternatives to the terms of the challenged patent, the *Palomar* Court noted that "[t]he farther afield that the searcher goes from the actual words in the patent, the less likely it is 6 7 that ... [the] searcher will ... locate the reference ... [and] understand its potential significance." See id. at *14. The Palomar Court's remarks do not address prior art that 8 9 is reasonably discoverable via classification searches, which themselves tend to establish 10the requisite connectedness or "potential significance" by revealing references involving 11 the same or similar subject matter, and this Court declines to construe the *Palomar* 12 Court's comments as broadly as Valve requests.

13 Valve's suggestion that, to successfully invoke IPR estoppel, Ironburg must 14 establish that a skilled searcher would have comprehended how Willner, Koji, and 15 Raymond could together have rendered the '525 Patent obvious is also unsupported by 16 the Federal Circuit's recent guidance. The Federal Circuit made clear that this Court's 17 inquiry should concern "what the *searcher* of ordinary skill would *find* through 18 reasonable diligence," Ironburg, 64 F.4th at 1299 (emphasis omitted and added), which is 19 only a precursor to what a skilled *artisan* would have been *motivated to combine*. The 20 latter contention is Valve's burden to prove by clear and convincing evidence. See 21 Kinetic Concepts, 688 F.3d at 1360; see also Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 22 91 (2011) (holding that invalidity defenses must be proven by clear and convincing

evidence). To the extent that Raymond is too far afield from hand-held game-controller
 technology to be "discoverable" earlier with reasonable diligence, as Valve contends,
 Raymond likewise would be too remote for a skilled artisan to consider combining it with
 Willner and Koji to develop a hand held controller for a game console identical to the one
 disclosed in the '525 Patent, or more particularly, in Claims 2, 4, 7, and 9–11 of the '525
 Patent.

7

D.

Obviousness and Collateral Estoppel

8 Having concluded that a skilled searcher conducting a diligent search reasonably 9 could have been expected to discover (i) Kotkin and Koji through classification searches 10like the ones performed by Valve's own vendor, (ii) Willner from the face of the 11 '525 Patent, as well as via a search using its assigned USPC code, and (iii) Raymond by 12 a time-limited classification search combined with relevant keywords, the Court imposes 13 on Valve the estoppel required by \S 315(e)(2). Valve may not further pursue challenges 14 to the validity of the '525 Patent based on Kotkin and/or the combination of Willner, 15 Koji, and Raymond. In light of this ruling, the Court need not address the merits of 16 Valve's contentions that these references render Claims 2, 4, 7, 9, 10, 11, and 18 of the 17 '525 Patent unpatentable pursuant to 35 U.S.C. § 103, which precludes a patent "if the differences between the claimed invention and the prior art are such that the claimed 18 19 invention as a whole would have been obvious . . . to a person having ordinary skill in the 20 art." The Court also need not address Ironburg's argument that Valve is collaterally 21 estopped from raising § 103 arguments. The portions of the cross-motions involving 22 obviousness and collateral estoppel are STRICKEN as moot. Moreover, because the

Court does not reach the merits of Valve's invalidity contentions, Valve's motion to
 strike the opinions of Ironburg's expert Glen Stevick, Ph.D., P.E., <u>see</u> Def.'s Resp. &
 Cross Mot. at 22–23 (docket no. 528), is also STRICKEN as moot.¹⁹

4 Conclusion

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For the foregoing reasons, the Court ORDERS:

6 (1)Plaintiff's renewed motion for IPR estoppel, docket no. 513, is GRANTED 7 in part and STRICKEN in part as moot, defendant's cross-motion for a finding of no 8 IPR estoppel, docket no. 528, is DENIED in part and STRICKEN in part as moot, and 9 defendant's related motions to strike, docket nos. 528 & 540, are GRANTED in part, 10 DENIED in part, and STRICKEN in part, as indicated in this Order. Valve is precluded 11 by 35 U.S.C. § 315(e)(2) from asserting the non-petitioned grounds at issue (Kotkin and the combination of Willner, Koji, and Raymond) for challenging the validity of Claims 2, 12 13 4, 7, 9, 10, 11, and 18 of the '525 Patent.

(2) The Court hereby finds no just reason for delay, <u>see</u> Fed. R. Civ. P. 54(b),
and the Clerk is DIRECTED to enter a supplemental partial judgment consistent with this
Order, in favor of Ironburg and against Valve. The stay of execution imposed by the
Order entered July 29, 2021, docket no. 466, of the partial judgment entered July 19,
2021, docket no. 464, shall remain in effect pending further order. If no appeal is timely

^{20 &}lt;sup>19</sup> Valve did not seek to strike the copies of Kotkin, Willner, Koji, and Raymond that are attached to Dr. Stevick's declaration, <u>see</u> Exs. 3 & 6–8 to Stevick Decl. (docket nos. 514-3, 514-6, 514-7, & 514-8), and the Court has taken judicial notice of these publicly-available materials. *See* Fed.

^{21 &}amp; 514-8), and the Court has taken judicial notice of these publicly-available materials. <u>See</u> Fed. R. Evid. 201(b) & (c); <u>see also Anderson v. Kimberly-Clark Corp.</u>, 570 Fed. App'x 927, 932 n.3

 ⁽Fed. Cir. 2014) ("It is also well-established that a court may take judicial notice of patents or patent applications." (citing *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 954 n.27 (Fed. Cir. 1993))).

filed, the parties shall submit, within forty-nine (49) days of the date of this Order, an
 agreed-upon proposed order for disbursement to Ironburg of the funds currently held in
 the Registry of the Court. Such proposed order shall be consistent with the requirements
 of Local Civil Rule 67(b).

5 (3) This matter remains stayed as to Ironburg's infringement claims relating to
6 United States Patents Nos. 9,352,229 ("229 Patent") and 9,289,688 ("688 Patent"). <u>See</u>
7 Minute Order at ¶ 2(b) (docket no. 148).

8 (a) Ironburg has represented that the '229 Patent "does not add
9 appreciably to the case" if IPR estoppel applies with regard to the '525 Patent.
10 <u>See</u> Joint Status Report at 2 (docket no. 512). Ironburg shall show cause within
11 thirty-five (35) days of the date of this Order why its claims involving the
12 '229 Patent should not be dismissed, either with or without prejudice.

(b) With regard to the '688 Patent, the parties are DIRECTED to file a
Joint Status Report within fourteen (14) days after the Federal Circuit issues a
decision in *Valve Corp. v. Ironburg Inventions Ltd.*, No. 23-1725, which is on
appeal from *Valve Corp. v. Ironburg Inventions Ltd.*, No. IPR2017-00858, 2023
WL 698799 (P.T.A.B. Jan. 26, 2023) (concluding that Claims 18, 19, 21, 26, and
29 of the '688 have not been shown to be unpatentable).

19 (4) The Clerk is further DIRECTED to send a copy of this Order and the
20 supplemental partial judgment entered pursuant to Paragraph 2, above, to all counsel of
21 record.

22 23

1	IT IS SO ORDERED.
2	Dated this 7th day of May, 2024.
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4	Thomas Stelly
5	Thomas S. Zilly United States District Judge
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23	ORDER - 28