

DOCKET NO.: 2214362-00124US1

Filed on behalf of Sony Interactive Entertainment LLC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Sony Interactive Entertainment LLC,
Petitioner,

v.

Intellectual Pixels Limited,
Patent Owner

Case IPR2021-00237
U.S. Patent No. 10,681,109

PETITIONER'S RESPONSE BRIEF PURSUANT TO PAPER NO. 43

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Patent Owner's ("PO") Opening Brief distorts the Federal Circuit's opinion and asks the Board to make findings contrary to the Federal Circuit's express rulings. PO's invitation to commit error should be declined.

I. ARGUMENT

A. The Federal Circuit Found that Wiltshire's "Figure 2, and the Text ... Describing It" Disclose the "Generating" Limitation

Far from "condemn[ing] Sony's Petition to inevitable failure" as PO suggests (PO Br. at 2), the Federal Circuit's opinion *confirms* the unpatentability of the challenged claims. *See* Petitioner's Opening Brief ("Br."). PO attempts to flip the Federal Circuit's opinion on its head by making two false assertions—first, that the Federal Circuit found that Doom is Wiltshire's "only" example of "generating," and second, that Doom is a separate embodiment that Petitioner needed to combine with other embodiments to meet the other claim limitations. PO Br. at 1-4. Both assertions are wrong.

First, the Federal Circuit did *not* find Doom to be the "only" example of "generating" in Wiltshire. The opinion explicitly relies on "Figure 2, and the text in Wiltshire describing it," and "descriptions of other embodiments in Wiltshire," to conclude that "Wiltshire discloses generation of a new image contrary to the Board's conclusions." Opinion at *5-6 (citing Ex. 1004 (Wiltshire), 7:7-45, 8:2-7).

Second, Doom is *not* a separate embodiment from Wiltshire's client-server system upon which the Petition relies. Pet. at 19-51. The Federal Circuit

confirmed that Wiltshire's system, including its Figure 2 disclosures, specifically apply to Doom. Opinion at *8 ("Wiltshire explicitly discloses that Figure 2 is to be applied to games like Doom"); *id.* at *9 (requiring "crediting Wiltshire's disclosure of applying its system to video games like Doom"). The Federal Circuit thus confirmed that Doom is explicitly part of Wiltshire's system relied upon in the Petition, and thus Doom need not be combined with any other embodiment to render the claims obvious. *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1343 (Fed. Cir. 2016) (rejecting argument that prior art disclosures need to be combined where prior art "explicitly contemplates the combination of the disclosed functionalities"). PO's suggestions to the contrary (PO Br. at 2-4) are mistaken.

B. PO's Arguments Regarding "Compressing the at Least One Updated Image" Are Wrong Under the Federal Circuit's Opinion

PO's argument that Wiltshire does not teach "on-the-fly creation and compression of an MPEG stream" (PO Br. at 5) is contrary to the Federal Circuit's opinion and Wiltshire's express disclosures. The Federal Circuit confirmed that "images" generated on Wiltshire's server are "new." Opinion at *5-6. Wiltshire describes various types of "images" that are generated by the server, including "a compressed video MPEG stream." Ex. 1004, 7:5-17 ("The image may include any type of graphical information including ... an encoded audio/video stream such as a *compressed* video MPEG stream"). Step 230 of Wiltshire's Figure 2 sends the generated "video stream" to the client. *Id.*, Figure 2. Dispelling all doubt about

whether the stream is compressed on-the-fly, Wiltshire expressly states that the bandwidth of the transmitted stream can be reduced by “*using* data compression techniques[.]” *Id.*, 7:62-64; Pet. at 27-28. Dr. Fuchs testified that reading Wiltshire’s compression disclosures as being limited to the use of pre-existing compressed images (as PO suggests) would not work for interactive video games like Doom. Ex. 1033 (Fuchs Reply Decl.) ¶¶ 42-43, 49-50; Br. at 3. In sum, by determining that the images Wiltshire generates are *new* images, the Federal Circuit confirmed that the compressed MPEG streams that Wiltshire transmits are newly generated images that Wiltshire then compresses for transmission.

Further, contrary to PO’s arguments, the Board is not bound to its prior dicta that Wiltshire is “completely silent as to the content or origin of that ‘compressed video MPEG stream.’” PO Br. at 5-6. *First*, clinging to that statement would run counter to the Federal Circuit opinion. As explained above, the Federal Circuit confirmed that “Wiltshire discloses generation of a new image” (Opinion at *5-6) and a compressed MPEG video stream is a type of newly generated image.

Wiltshire’s disclosure of using “data compression techniques” on the transmitted video stream thus discloses both the “content” (newly generated images) and its “origin” (the game program). *Second*, the mandate rule provides that a party can only waive issues that are “within the scope of the judgment appealed from.”

Amado Corp. v. Microsoft, 517 F.3d 1353, 1360 (Fed. Cir. 2008). Here, the

judgment appealed was not based on the “compressing” limitation, but instead was based entirely on the “generating an updated image” limitation. *See* FWD at 32 (limiting conclusion to “generating” limitation). Thus, no arguments regarding the “compressing” limitation were waived. *Laitram Corp. v. NEC Corp.*, 115 F.3d 947, 954-55 (Fed. Cir. 1997) (holding that issues not reached by district court were not waived by failure to raise on appeal). **Third**, PO’s argument ignores that the Federal Circuit vacated the FWD in its entirety, directing the Board to make new findings consistent with the opinion on remand. *Integrated Tech. Corp. v. Rudolph Techs., Inc.*, 629 Fed. Appx. 972, 976 (Fed. Cir. 2015) (holding that after vacatur, district court “had to consider anew” the facts on remand).

Moreover, PO remains unable to overcome Wiltshire’s express disclosure that “data compression techniques” are used to transmit the generated video stream to reduce bandwidth—particularly when applied to interactive games like Doom. Ex. 1004, 7:62-64. PO simply argues again that Wiltshire does not explain how real-time “compression would work.” PO Br. at 6-7. However, Petitioner submitted uncontroverted evidence that by 1995, a POSITA would have understood how real-time compression would be “accomplished straightforwardly” based on Wiltshire’s disclosure of compression. Ex. 1002 (Fuchs Decl.) ¶ 27 (quoting Ex. 1016 (Levoy) at 21), Ex. 1033 (Fuchs Reply Decl.) ¶¶ 51-53; Petitioner’s Reply at 17-18. In addition, as Petitioner explained in its Reply, both

Wiltshire and the '109 patent (the latter of which discloses merely a box with the words “compress the image data”) have the same level of compression disclosure. Reply at 17-18, Ex. 1033 ¶¶ 51-53, Ex. 1001, Fig. 2D. There is no substantive difference between the disclosure in the '109 patent to “compress the image data” and Wiltshire's disclosure of “using data compression techniques” on the transmitted video stream. Ex. 1033 ¶¶ 51-53.

Finally, PO's suggestion that the Petition needed to establish that Doom “required MPEG streams” is misplaced. PO Br. at 7-8. The Petition established that Wiltshire's Figure 2 and its descriptions disclose the “compressing” limitation. The fact that Doom applies to Figure 2's system confirms what is already express in Wiltshire—that the generated images are compressed for transmission to reduce bandwidth. And Doom is not a separate embodiment, as explained in Section I.A.

C. PO's Arguments Regarding “Frame,” “Mobile Device,” and “Bandwidth” Should Be Rejected

As explained in Petitioner's Opening Brief, the Federal Circuit opinion confirms Petitioner's arguments regarding the “frame,” “mobile device,” and “bandwidth” limitations. Br. at 5-10. PO's suggestion that the Petition needs to show a “frame” in a separate Doom embodiment should be rejected as explained in Section I.A above. Finally, PO rehashes old arguments regarding “mobile device” and “bandwidth” limitations, all of which should be rejected as explained in the Petition, Reply, and Petitioner's Opening Brief on Remand.

February 1, 2024

Respectfully Submitted,

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Table of Exhibits

Exhibit	Description
1001	U.S. Patent No. 10,681,109 (“109 patent”)
1002	Declaration of Dr. Henry Fuchs
1003	Declaration of Dr. Hall-Ellis
1004	U.S. Patent No. 6,409,602 (“Wiltshire”)
1005	U.S. Patent No. 6,404,817 (“Saha”)
1006	Chen, “The Development and Standardization of Asymmetrical Digital Subscriber Line,” IEEE Communications Magazine, May 1999 (“Chen”)
1007	PC Magazine, September 21, 1999 (“PC Magazine”)
1008	Baron et al., “MPEG Overview,” ITU/SMPTE Tutorial on Digital Terrestrial Broadcasting, January 1, 1994 (“Baron”)
1009	ITU-T Recommendation H.262 (“MPEG Standard”)
1010	Stay Order, Intellectual Pixel Ltd. v. Sony Interactive Entm’t LLC, Case No. 8:19-cv-01432-JVS-KES (C.D. Cal.), D.I.126
1011	Stay Stipulation, Intellectual Pixel Ltd. v. Sony Interactive Entm’t LLC, Case No. 8:19-cv-01432-JVS-KES (C.D. Cal.), D.I. 125
1012	<i>SPEX Techs., Inc. v. Kingston Tech. Corp.</i> , No. CV16-07349 JVS(AGRX), 2018 WL 2446801 (C.D. Cal.)
1013	Scheduling Order, Intellectual Pixel Ltd. v. Sony Interactive Entm’t LLC, Case No. 8:20-cv-01422-JVS-KES (C.D. Cal.), D.I. 36
1014	In Re: Coronavirus Public Emergency Order Concerning Reopening of the Southern Division, C.D. Cal. General Order No. 20-12, C.D. Cal. General Order 20-12

Exhibit	Description
1015	Order Regarding Motion to Dismiss, Intellectual Pixel Ltd. v. Sony Interactive Entm't LLC, Case No. 8:20-cv-01422-JVS-KES (C.D. Cal.), D.I. 42.
1016	"Polygon-Assisted JPEG and MPEG Compression of Synthetic Images," by Marc Levoy ("Levoy")
1017	First Amended Complaint, Intellectual Pixel Ltd. v. Sony Interactive Entm't LLC, Case No. 8:20-cv-01432-JVS-KES (C.D. Cal.), D.I. 69
1018	U.S. Patent No. 5,771,238 ("Sutton")
1019	"A G3 PowerPC™ Superscalar Low-Power Microprocessor," IEEE 1997 ("PowerPC")
1020	PC Magazine, April 23, 1996 ("1996 PC Magazine")
1021	U.S. Patent No. 6,434,695 ("Esfahani")
1022	Declaration of James M. Dowd in Support of Motion for Admission Pro Hac Vice
1023	Declaration of S. Dennis Wang in Support of Motion for Admission Pro Hac Vice
1024	Pictures of mobile devices
1025	November 6, 2021 Deposition Transcript of Dr. John C. Hart
1026	Wang and Garlan, Task-Driven Computing, May 2000 ("Wang")
1027	In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With respect to Commercial Mobile Services, FCC Report, August 18, 2000 ("FCC Report")
1028	Encyclopedia of Computer Science, Fourth Edition, 2000 ("Encyclopedia of Computer Science")

Exhibit	Description
1029	Ahamed et al., Digital Subscriber Line (HDSL and ADSL) Capacity of the Outside Loop Plant, IEEE Journal on Selected Areas in Communications, Vol. 13, No. 9, December 1995 ("Ahamed")
1030	Kompatsiaris et al., Using Asymmetric Digital Subscriber Line (ADSL) for Fast Internet and Multimedia Services ("Kompatsiaris")
1031	Complaint, Intellectual Pixel Ltd. v. Sony Interactive Entm't LLC, Case No. 8:20-cv-01422 (C.D. Cal.), D.I. 1 ("Original Complaint")
1032	Amended Complaint, Intellectual Pixel Ltd. v. Sony Interactive Entm't LLC, 8:20-cv-01422 (C.D. Cal.), D.I. 33 ("Amended Complaint")
1033	Reply Declaration of Dr. Henry Fuchs
1034	U.S. Patent No. 8,131,826 ("826 patent")
1035	U.S. Patent No. 10,013,605
1036	U.S. Patent No. 8,194,632
1037	PC Magazine Encyclopedia
1038	U.S. Patent No. 10,013,681

CERTIFICATE OF SERVICE

I hereby certify that on February 1, 2024, I caused a true and correct copy of the following materials:

- Petitioner's Response Brief Pursuant to Paper No. 43;
- Table of Exhibits;

to be served via e-mail on the following attorneys of record for Patent

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