UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC.,
Petitioner,

v.

BROADCOM CORPORATION,
Patent Owner.

Case IPR2017-01544
Patent 7,342,967

PATENT OWNER'S PRELIMINARY RESPONSE

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Patent Owner Broadcom Corporation ("Broadcom") respectfully submits this Preliminary Response to Petitioner LG Electronics, Inc.'s ("Petitioner" or "LG") Petition for *Inter Partes* Review ("Petition") of Broadcom's U.S. Patent No. 7,342,967 (the "'967 Patent" or Ex. 1001).

The '967 Patent discloses and claims a novel and innovative system for decoding and displaying pictures that are transmitted as compressed data in transport packets. Specifically, the '967 Patent's system is directed to a system that processes and displays a special type of encoded data stream known as a Headend In The Sky (HITS) stream. Rather than having complete reference pictures, known as I-pictures in the MPEG-2 standard, a HITS stream uses a series of I-slices that are spread out through a series of consecutive pictures. The '967 Patent's system uses instructions in the transport packets as the catalyst for a specific decoding procedure for HITS streams. The procedure involves decoding slices above an I-slice and the I-slice but without decoding the slices below the I-slice. This procedure "advantageously reduces the processing required to build a clean reference picture."

All five of LG's grounds of alleged unpatentability fail to establish that there is a reasonable likelihood that LG will prevail as to at least one of the challenged claims. LG's unpatentability arguments are based on two primary references (U.S. Patent Application Publication No. 2001/0026677 – "Chen '677" and U.S. Patent

Application Publication No. 2002/0061183 – "MacInnis") and a secondary reference (ISO/IEC Standard 13818-2:2000 – "ISO 13818-2"). As discussed in detail below, LG's Petition fails to explain how (1) Chen '677 discloses "instructions" or a "host processor" or (2) MacInnis discloses "wherein execution of the instructions by the video decoder comprises causing." Accordingly, LG's Petition should be denied in its entirety.

I. THE INVENTIONS OF THE '967 PATENT

The '967 Patent is entitled "SYSTEM AND METHOD FOR ENHANCING PERFORMANCE OF PERSONAL VIDEO RECORDING (PVR) FUNCTIONS ON HITS DIGITAL VIDEO STREAMS." The Application for the '967 Patent was filed on December 11, 2002, and issued on March 11, 2008. Ex. 1001 at p. 1. Since its issuance, the '967 Patent has been assigned at all times to Patent Owner Broadcom Corporation.

The '967 patent generally relates to a system for displaying pictures that include, among other components, a host processor for transmitting transport packets providing a plurality of instructions, and a video decoder for executing those instructions. The execution of the instructions causes the decoder to (1) select a picture comprising an intracoded slices, at least a slice above the intracoded slice, and at least a slice below the intracoded slice; (2) decode the intracoded slice and the slice above the intracoded slice; and (3) decode at least a portion of another

picture after decoding the intracoded slice and the slice above the intracoded slices, without having decoded the slice below the intracoded slice. The patent explains that by not "decoding the portion of the P-pictures below the intracoded slice advantageously reduces the processing required to build a clean reference picture." Ex. 1001 at 3:8-10.

II. THE ASSERTED PRIOR ART

"In an *inter partes* review, the burden of persuasion is on the petitioner to prove 'unpatentability by a preponderance of the evidence,' 35 U.S.C. § 316(e), and that burden never shifts to the patentee." *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). LG's unpatentability arguments are based on two primary references (Chen '677 and MacInnis) and a secondary reference (ISO 13818-2).[1]

Ground 1 asserts that MacInnis anticipates claims 1-5.

Ground 2 asserts that the combination of MacInnis and ISO 13818-2 renders obvious claim 4.

Ground 3 asserts that Chen '677 anticipates claims 1-4.

Ground 4 asserts that Chen '677 renders obvious claim 5.

Ground 5 asserts that the combination of Chen '677 and ISO 13818-2 renders obvious claims 1-5.

[1] MacInnis is Ex. 1003, Chen '677 is Ex. 1004, and ISO 13818-2 is Ex. 1009.

III. CLAIM CONSTRUCTION

In *inter partes* review, claims in an unexpired patent are given their "broadest reasonable construction in light of the specification of the patent in which it appears." *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2133 (2016) (citing 37 C.F.R. § 42.100(b)). This is the broadest reasonable construction that a person of ordinary skill in the art would give the term in the context of the specification and its ordinary meaning in the art. *See, e.g., Nichia Corp. v. Emcore Corp.*, Case IPR2012-00005, 2014 WL 574596, at *4 (PTAB, Feb. 11, 2014); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1275 (Fed. Cir. 2015).

"[The] construction cannot be divorced from the specification and the record evidence." *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011). "Above all, the broadest reasonable interpretation must be reasonable in light of the claims and specification." *PPC Broadband, Inc. v. Corning Optical Communications RF*, 815 F. 3d 747, 755 (Fed. Cir. 2016). "A construction that is "unreasonably broad" and which does not "reasonably reflect the plain language and disclosure" will not pass muster." *Microsoft Corp. v. Proxyconn, Inc.*, 789 F. 3d 1292, 1298 (Fed. Cir. 2015). Similarly, "giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation." *In re Skvorecz*, 580 F.3d 1262, 1267 (Fed. Cir. 2009).

"instructions"

For the purpose of this preliminary response, Patent Owner is applying LG's proposed construction of the term "instructions," which LG proposes to mean "commands, separate from video or audio data, that specify trick play functions to be performed." Petition at 12.

IV. GROUNDS 3-5 FAIL AS TO ALL CHALLENGED CLAIMS

A. Chen does not anticipate claim 1

1. Chen does not disclose "instructions" under LG's proposed construction

Under LG's own proposed construction of the term "instructions," LG fails to identify any "instructions" in Chen '677. LG's argument that Chen '677 discloses "instructions" is based solely on what LG characterizes as "Broadcom's construction."[2] Petition at 55-57. However, LG explicitly provides its own construction for "instructions" and characterizes Broadcom's proposed construction as wrong. Petition at 13. LG does not even attempt to argue that Chen '677 discloses "instructions" under its own proposed construction. *Id*. at 55-57. Accordingly, based on this alone, LG's Petition should be denied as to all grounds of unpatentability based on Chen '677.

Under LG's own proposed construction of "instructions," Chen '677's

[2] What LG repeatedly characterizes as "Broadcom's construction" is a statement from a preliminary infringement contention in an ITC case and does not represent the claim construction position that Broadcom has asserted in the ITC case.

system does not disclose "commands, separate from video or audio data, that specify trick play functions to be performed." Chen '677 does not describe any commands separate from video or audio data, let alone any commands that specify trick play functions to be performed. In fact, Chen '677 is silent as to how the system is notified of the trick play functions that are to be performed.

Accordingly, based on LG's failure to explain how Chen '677 discloses "instructions" under its own proposed construction and Chen '677's lack of disclosure with respect "instructions," LG's Petition should be denied as to Ground 3 – anticipation based on Chen '677.

2. Chen does not disclose a "host processor"

LG's Petition also fails because LG does not identify a "host processor" in Chen '677. LG points to the "receiver 210" in Chen '677 as the "host processor"; however, receiver 210 is not a "host processor" as described in the '967 Patent. LG argues that Chen '677's receiver 210 is a "host processor" under the following construction of "host processor": "any device or element that processes an incoming transport stream (i.e., a stream of packets), extracts the packets from the stream, and passes the packets on to a decoder device (such as any audio or visual decoding device or functionality)." Petition at 54. Under LG's proposed construction of "host processor," the host processor must perform 3 actions: (1) "processes an incoming transport stream," (2) "extracts the packets from the

stream," and (3) "passes the packets on to a decoder device." LG does not present any arguments that Chen '677's receiver 210 performs actions (1) or (2). *Id*. at 54-55. LG explains that receiver 210 only "receiv[es] a progressive I-slice refreshed data stream 10" and then "[t]he stream is transmitted from the receiver 210 to the decoder 220." *Id*. at 55. Nowhere in its Petition does LG even attempt to argue that receiver 210 "processes an incoming transport stream" or "extracts the packets from the stream." Accordingly, because Chen '677 fails to disclose a host processor under LG's own applied construction of the term, LG's Petition should be denied as to Ground 3 – anticipation based on Chen '677.

B. Chen alone and the combination of Chen and ISO 13818-2 do not render obvious claim 1

LG's obviousness arguments presented as Ground 4 and Ground 5 do not address the deficiencies in Chen '677 that are discussed above. Accordingly, based on LG's failure to explain how Chen '677 discloses "instructions" and a "host processor," LG's Petition should be denied as to all grounds of unpatentability based on Chen '677.

V. GROUNDS 1-2 FAIL AS TO ALL CHALLENGED CLAIMS

A. MacInnis does not anticipate claim 1

LG's Petition fails because it does not explain how MacInnis discloses "wherein execution of the instructions by the video decoder comprises causing." LG points to the "command transport packets that contain various commands," as

the "instructions" that are executed by the video decoder. Petition at 27-28. However, LG never explains how these instructions ***cause*** the system to perform the slice decoding steps described in claim 1 and denoted as elements [1.4]-[1.6] in LG's Petition. *Id*. at 29. MacInnis's slice decoding process, which LG points to as teaching claim limitations [1.4]-[1.6], occurs irrespective of the commands received. Specifically, MacInnis describes the slice decoding process as occurring for both tricks modes ***and*** normal playback. Ex. 1003 at [79]-[82]; *see also id*. at [68]. Accordingly, MacInnis does not disclose that the commands in the transport packets are instructions that ***cause*** the slice-decoding procedure to occur. Because LG's Petition fails to describe how MacInnis's "command transport packets that contain various commands" cause the system to perform the slice decoding steps described in claim 1, LG's Petition should be denied as to Ground 1 – anticipation based on MacInnis.

B. The combination of MacInnis and ISO 13818-2 does not render obvious claim 1

LG's obviousness argument presented as Ground 2 does not address the deficiency in MacInnis that was discussed above. Accordingly, based on LG's failure to explain how MacInnis discloses "wherein execution of the instructions by the video decoder comprises causing," LG's Petition should be denied as to all grounds of unpatentability based on MacInnis.

VI. CONCLUSION

For the reasons discussed above, LG's Petition fails to establish that there is a reasonable likelihood that LG will prevail as to at least one of the challenged claims and should be denied in its entirety.

Respectfully submitted,

Dated: September 19, 2017

/John M. Caracappa/
John M. Caracappa
Reg. No. 43,532
Thomas C. Yebernetsky
Reg. No. 70,418
STEPTOE & JOHNSON LLP
1330 Connecticut Ave., N.W.
Washington, D.C. 20036
jcaracp@steptoe.com
tyebernetsky@steptoe.com

Attorney for Patent Owner
Broadcom Corporation

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies service of PATENT OWNER'S PRELIMINARY RESPONSE on the counsel of record for the Petitioner by filing this document through PTAB E2E system on September 19, 2017 and served a true and correct copy of the foregoing by electronic mail on the following counsel:

Erika H. Arner
Joshua L. Goldberg
Christopher C. Johns
Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
erika.arner@finnegan.com
joshua.goldberg@finnegan.com
christopher.johns@finnegan.com

Dated: September 19, 2017

/John M. Caracappa/
John M. Caracappa
Reg. No. 43,532

Attorney for Patent Owner
Broadcom Corporation