UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ADVANCED MICRO DEVICES, INC. AND PENSANDO SYSTEMS, INC.,

Petitioners,

v.

CONCURRENT VENTURES, LLC AND XTREAMEDGE, INC.,

Patent Owners.

Case No. IPR2025-00479
U.S. Patent No. 10,944,634

PATENT OWNERS' PRELIMINARY RESPONSE TO PETITION FOR *INTER PARTES* REVIEW

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PATENT OWNERS' EXHIBIT LIST

Exhibit	Description
2001	Text Order Denying AMD/Pensando's Motion to Stay Case (Judge Robert Pitman) in *Concurrent Ventures, LLC and XtreamEdge, Inc. v. Advanced Micro Devices, Inc. and Pensando Systems, Inc.*, No. 1-24-cv-00335 (W.D. Tex. 2024)
2002	First Amended District Court Scheduling Order (Dkt. 77) in *Concurrent Ventures, LLC and XtreamEdge, Inc. v. Advanced Micro Devices, Inc. and Pensando Systems, Inc.*, No. 1-24-cv-00335 (W.D. Tex. 2024)
2003	Webpage printouts of Docket Navigator Time to Trial regarding the District Court for the Western District of Texas and Judge Alan D. Albright
2004	Webpage printout of "AMD Reports Fourth Quarter and Full Year 2024 Financial Results" dated March 4, 2025 (https://ir.amd.com/news-events/press-releases/detail/1236/amd-reports-fourth-quarter-and-full-year-2024-financial-results)
2005	AMD/Pensando's Invalidity Contentions (Cover Pleading) in *Concurrent Ventures, LLC and XtreamEdge, Inc. v. Advanced Micro Devices, Inc. and Pensando Systems, Inc.*, No. 1-24-cv-00335 (W.D. Tex. 2024)

Concurrent Ventures, LLC ("CV") and XtreamEdge, Inc. ("XE") (collectively "CV/XE" or "Patent Owners") respectfully submit this Patent Owners' Preliminary Response (POPR) to the Petition for *Inter Partes* Review ("IPR") of U.S. Patent No. 10,944,634 ("the '634 patent") filed by Advanced Micro Devices, Inc. ("AMD") and Pensando Systems, Inc. ("Pensando") (collectively "AMD/Pensando" or "Petitioners").

I. INTRODUCTION

Patent Owners submitted their Brief in Support of Patent Owners' Request for Discretionary Denial of Institution of *Inter Partes* Review (Paper 6, "Discretionary Denial Brief") on May 9, 2025. The Director and Board should deny institution of AMD/Pensando's Petition against CV/XE's '634 patent for all the reasons stated therein and thus need not reach the merits of the Petition (except as relevant to the discretionary denial analysis). Even if the Board does reach the merits, however, institution should still be denied. As explained below, none of the Petition's three obviousness grounds establishes a reasonable likelihood of prevailing against any challenged claim, at least because the prior art underlying each ground plainly lacks a key limitation present in every challenged claim.

II. BACKGROUND

A. Overview of the ’634 Patent

The inventors of the ’634 patent identified a significant problem with computer network architecture and connection methodologies that was only increasing as computer networks increased in complexity and scope: “[a] TCP/IP (transmission control protocol/Internet protocol) network connection between two endpoints starts off without knowledge of the performance of the connection and the effect of bandwidth realized between the peers.” EX1001, 1:6-10. As a result, existing network connection technologies provided one of two unpalatable options for achieving maximum bandwidth connections: either (1) using standard connection algorithms that resulted in “considerable time loss” as connection algorithms “average out to the effect of the bandwidth,” or (2) using more sophisticated algorithms that were “comput[ationally] intensive” and “difficult to implement.” *Id.*, 1:10-18. The resulting “time delays and sub-optimal transmission bandwidth” had a particularly “significant effect in situations where the network connection involves set up, transfer of data, then tear down, and is repeated over and over again, such as for IoT (Internet of things), database access, website content and/or static asset serving (e.g., images).” *Id.*, 1:18-23. In view of these problems in the art, the ’634 patent inventors recognized that “[a]n improvement to the rapidity at which full bandwidth is achieved for a given network connection would increase

communication efficiency to the benefit of the endpoints of the network connection, and users in general." *Id.*, 1:23-29.

The inventors provided such an improvement through the innovative methods and devices described and claimed in the '634 patent. In particular, the inventors developed a method for network optimization that uses a separate tuning server to leverage data collected from past network connections between particular endpoint devices to determine an optimal starting bandwidth based upon those past connections. As explained in more detail below, the prior art relied upon in the Petition discloses nothing of the sort.

B. The Claims of the '634 Patent

Claim 1:

Independent claim 1 of the '634 patent is shown below. For convenience, Patent Owners have included the limitation labels used by Petitioners.

1[pre] A method for network connection optimization, comprising:

[1a] collecting, at a first endpoint device coupled to a network, parameter values for determination of bandwidth of network connections to further endpoint devices;

[1b] determining at a tuner server, distinct from the first endpoint device and the further endpoint devices, that a next network connection from the first

endpoint device to a second endpoint device matches a geographical area of a past network connection; and

[1c] initiating the next network connection, from the first endpoint device to the second endpoint device, based on the determination at the tuner server, with a transmission bandwidth based on the parameter values for the past network connection.

EX1001, claim 1; *see also* Pet., 81 (claim appendix). The language of independent claims 8 and 15 is similar with respect to the arguments made in this POPR.

C. The Parallel Litigation

Patent Owners, CV/XE, are presently asserting the '634 patent in the following district court action: *Concurrent Ventures, LLC and XtreamEdge, Inc. v. Advanced Micro Devices, Inc. and Pensando Systems, Inc.*, No. 1-24-cv-00335 (W.D. Tex. 2024).

D. The IPR Petition's Alleged Unpatentability Grounds

Grounds	Claims	Statutory Basis	Prior Art
1	1–20	§103	Erskine
2	1–20	§103	Scherzer
3	1–20	§103	Scherzer in view of Gillett

E. Related IPR Matters

Petitioners have also filed three other petitions for *inter partes* reviews on three other patents asserted in the district court action: IPR2025-00223, IPR2025-00478, and IPR2025-00486.

III. CLAIM CONSTRUCTION

Petitioners do not propose any terms for express construction, although they note the express construction for "geographical area" that they proposed in the parallel litigation. Pet., 8.

The Board need not engage in express claim construction at this stage of the proceeding as the defects in the Petition's unpatentability theories outlined below hold true under any reasonable interpretation of the claim language.

IV. PETITIONERS HAVE NOT SHOWN A REASONABLE LIKELIHOOD OF PREVAILING ON ANY CHALLENGED CLAIMS

A. Ground 1 – Ground 1 fails at least because Erskine does not disclose "initiating the next network connection…with a transmission bandwidth based on the parameter values" of a "past network connection."

The Petition's Erskine ground suffers from a global flaw that affects the entirety of Ground 1: Erskine does not disclose that the ***transmission bandwidth*** of any "next network connection" is "***based on*** the parameter values for the past network connection," as required by independent claims 1, 8, and 15.

Claims 1, 8, and 15 recite "***initiat[ing] the next network connection***, from the first endpoint device to the second endpoint device, based on the determination at [the tuner server], ***with a transmission bandwidth based on the parameter values for the past network connection***." Erskine does not disclose or suggest that "the next network connection" has "a transmission bandwidth based on the parameter values for the past network connection." Instead, Erskine teaches a binary, accept/reject decision as to whether to allow a new call to proceed based on a comparison between the bandwidth needed for the call and a predetermined "sliding maximum interzone bandwidth value," as illustrated below in Figure 3:

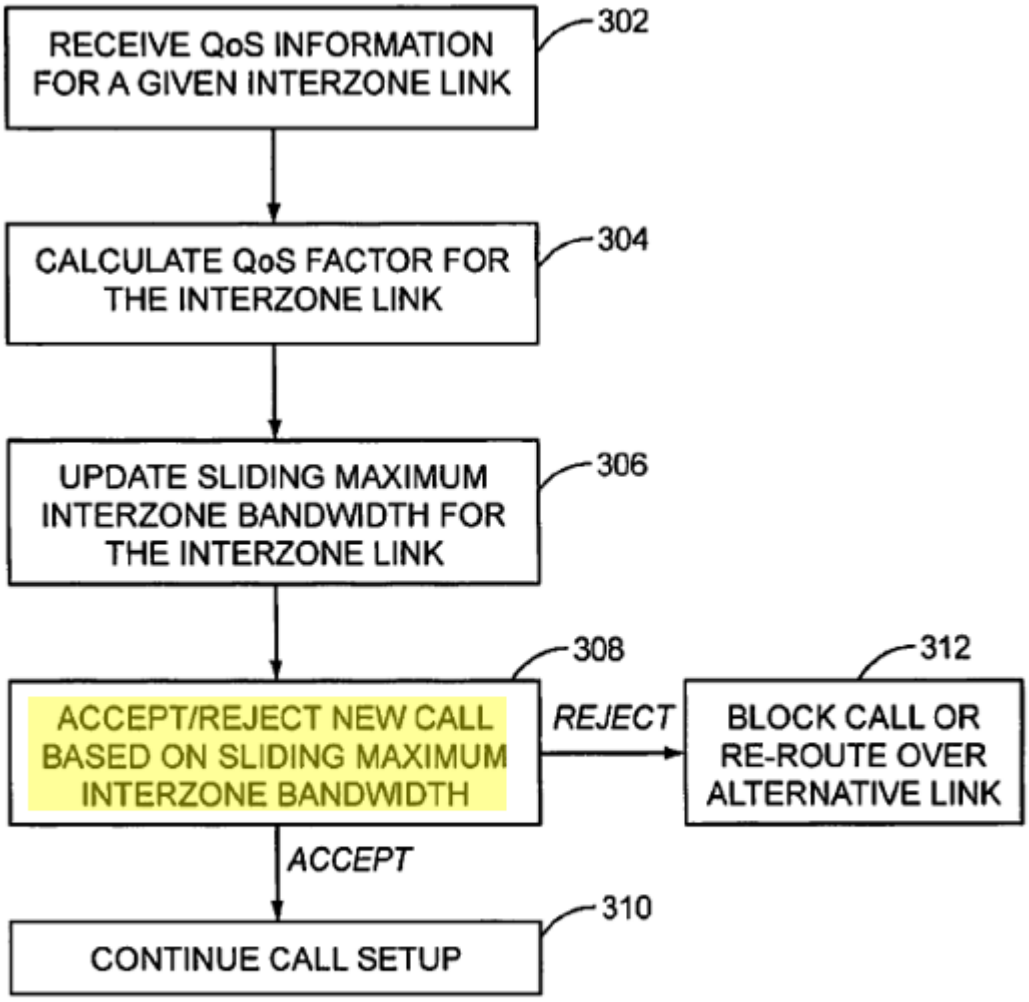


FIG. 3

EX1004, Fig. 3 (annotated); *see also id.* at 9:15-26. Notably, if a new call is allowed to proceed, the call proceeds with "the bandwidth necessary for the new call," which Erskine does not disclose is based on the "parameter values of a "past network connection." *Id.*, 8:36-43.

In particular, Erskine explains that whether a call is connected "is determined by adding the additional bandwidth required (of the new call) to the current bandwidth between the zones, and comparing to the sliding maximum interzone bandwidth." *Id.*, 6:61-64. "If this amount is less than the sliding maximum value, then the call tentatively proceeds," but "[i]f the amount exceeds the sliding maximum value, then the call is blocked by the source call server and an alternative route may be attempted." *Id.*, 6:64-7:3. As these disclosures make clear, if a connected call ultimately results from this process, the call's bandwidth is not based on any "parameter values" collected from a past network connection—its bandwidth is the predetermined "additional bandwidth required (of the new call)." Thus the "transmission bandwidth" is not "based on the parameter values for the past network connection," it is whatever bandwidth the system determined is necessary for the additional call—a determination that is made independently from parameter values from past network connections.

The Petition dances around, but cannot avoid, this reality. Petitioners offer a convoluted theory that proceeds as follows: (1) Erskine teaches that a call will proceed only "if the bandwidth necessary for the call added to the current bandwidth is within the sliding maximum interzone bandwidth for that link," so that means (the argument goes) that the call's bandwidth is "determined based on the sliding maximum interzone bandwidth for that link," (2) "the sliding maximum interzone

bandwidth is determined based on the QoS parameters" so "Erskine therefore teaches initiating a call with a bandwidth determined based on the QoS parameters, and (3) "the QoS parameters are for the past network connection," so that means that Erskine discloses "a transmission bandwidth based on the parameter values (e.g., QoS parameters) for the past network connection." Pet., 27-29.

There are multiple flaws with this strained theory, but the Board need not reach them all because it fails at step 1. As Petitioner acknowledges, if a new call is ultimately connected its transmission bandwidth is "the bandwidth necessary for the new call." Pet., 18. This "necessary" bandwidth is predetermined independently of the "sliding maximum interzone bandwidth." *See* EX1004, 1:53-57, 9:15-26; 12:1-5. Even if Petitioners' complex chain of logic held up, Petitioners' theory still fails because the transmission bandwidth is not based on the "sliding maximum interzone bandwidth" or the QoS parameters—it is instead equal to the predetermined necessary bandwidth.

Thus, rather than providing a "next" connection "with a transmission bandwidth based on the parameter values for the past network connection," as the claims require, in Erskine's system if a new connection is made the transmission bandwidth is the "necessary" bandwidth—which is not based on the "sliding maximum interzone bandwidth" or the QoS data. At most, Erskine discloses a bandwidth ceiling for new calls—there is no disclosure of establishing or setting the

transmission bandwidth for the "next network connection," based on past parameter values or otherwise. Indeed, consistent with Erskine's disclosure that the transmission bandwidth for a new call is whatever is "necessary" for the new call, Erskine's Figure 2 shows that actual transmission bandwidths vary widely even when the "sliding maximum interzone bandwidth" is the same. EX1004, Fig. 2 (disclosing "Actual Instantaneous B/W Used" figures of 384, 750, 128, and 600 Kbps even though the "Sliding Maximum B/W" in all instances was 1000 Kbps). In sum, Erskine does not disclose this limitation because, rather than teaching that the transmission bandwidth for a new connection is "based on" on any parameter values derived from past network connections, it discloses that the transmission bandwidth for a new call is whatever happens to be necessary for the call. This is not what is claimed.

Petitioners do not argue that this element is otherwise disclosed or rendered obvious by Erskine. Since Petitioner has no alternative theory for supplying this limitation (*see* Pet., 26-29), Petitioner has not shown a reasonable likelihood of prevailing on Ground 1.

B. Grounds 2 & 3 - Grounds 2 and 3 fail at least because, like Erskine, Scherzer does not disclose "initiating the next network connection…with a transmission bandwidth based on the parameter values" of a "past network connection."

Petitioner's Scherzer-based grounds (Grounds 2 and 3) fail for similar reasons as Ground 1—Scherzer has no disclosure of a connection in which the "transmission bandwidth" is "based on the parameter values for [a] past network connection." Indeed, Scherzer's disclosure is miles from the claimed invention.

Scherzer is principally devoted to information collection regarding wireless access points ("AP") to build a "radio resource database" that includes a variety of data points about each AP. *See* EX1005, 8:63-9:20. These reports are derived from "measurement trips" from user client devices in which the client device "is directed to associate with an AP other than the one used for current Internet connection, and conduct data acquisition" on that AP. EX1005, 7:33-36. While Scherzer discloses that the information collected may include historical data about the bandwidth available at particular APs, there is ***no disclosure whatsoever of what the transmission bandwidth will actually be*** for any new connection, much less a disclosure of "a transmission bandwidth based on the parameter values for [a] past network connection."

Petitioner implicitly admits as much, identifying no disclosure in Scherzer of the transmission bandwidth for a new connection (as opposed to collection of

historical bandwidth data). Pet. 65-67. Instead, Petitioner argues that Scherzer discloses this limitation because historical bandwidth information for particular APs may be collected and considered during the ***selection*** of "preferred access points". Pet. 65-66. But as Scherzer explains, this process relates purely to "select[ing] the right AP for connection" from multiple possibilities (EX1005, 9:31-34)—there is no disclosure of selecting or setting the transmission bandwidth for the next connection.

This mere selection of network access points is not what is claimed. The claims require "initiating the ***next*** network connection… ***with a transmission bandwidth*** based on the parameter values for the past network connection." EX1001, claim 1. But Scherzer never says what the transmission bandwidth of any "next," prospective, or new connection will be—at most it discloses what the bandwidth for a particular AP ***has been in the past***. This is far from the claimed method, which requires establishing the transmission bandwidth for the prospective "next" connection.

Petitioners do not argue that this element is otherwise disclosed or rendered obvious by Scherzer. Petitioners include a conclusory statement that "Scherzer, as well as the combination of Scherzer and Gillett, teaches initiating the connection with a transmission bandwidth based on the parameter values for the past network connection" but does not actually reference Gillett in any way. Pet. 64, 65. Petitioner thus relies solely on Scherzer's disclosure in arguing that the limitation is satisfied.

Since Petitioner relies exclusively on Scherzer to supply this limitation, both Grounds 2 and 3 fail as a result. Petitioner thus has not shown a reasonable likelihood of prevailing on Ground 2 or 3.

V. CONCLUSION

For the foregoing reasons, to the extent the Director does not discretionarily deny the Petition and the Board reaches the merits, the Board should deny institution of the requested IPR.

Dated: June 11, 2025

By: */s/Michael Matulewicz-Crowley*
Michael Matulewicz-Crowley
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Counsel for Patent Owners
Concurrent Ventures, LLC and
XtreamEdge, Inc.

CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that CV/XE's Patent Owners' Preliminary Response to the Petition for IPR consists of 2,278 words, excluding the table of contents, table of authorities, certificate of service, this certificate of compliance, or table of exhibits. This Patent Owners' Preliminary Response to the Petition for IPR complies with the type-volume limitation of 14,000 words as mandated by the Memo. In preparing this certificate, counsel has relied on the word count of the word processing system used to prepare this paper (Microsoft Word).

Dated: June 11, 2025

By: */s/Michael Matulewicz-Crowley*
Michael Matulewicz-Crowley
PTO Reg. No. 72,220

Counsel for Patent Owners Concurrent Ventures, LLC and XtreamEdge, Inc.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that pursuant to 37 C.F.R. §42.6(e)(1), a copy of the foregoing **CV/XE's Patent Owners' Preliminary Response to the Petition for IPR** was served on June 11, 2025 by filing this document through the Patent Trial and Appeal Board's P-TACTS System as well as delivering a copy via electronic mail upon the following attorneys of record for Petitioners:

Dated: June 11, 2025

By: */s/Michael Matulewicz-Crowley*
Michael Matulewicz-Crowley
PTO Reg. No. 72,220

Counsel for Patent Owners Concurrent Ventures, LLC and XtreamEdge, Inc.