

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

NETFLIX, INC.,
Appellant

v.

DIVX, LLC,
Appellee

2022-1083

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2020-00558.

Decided: March 1, 2023

MARK CHRISTOPHER FLEMING, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for appellant. Also represented by LAUREN MATLOCK-COLANGELO, New York, NY; NORA N. XU, Washington, DC.

PARHAM HENDIFAR, Lowenstein & Weatherwax LLP, Santa Monica, CA, argued for appellee. Also represented by NATHAN NOBU LOWENSTEIN, KENNETH J. WEATHERWAX.

Before NEWMAN, REYNA, and TARANTO, *Circuit Judges*.

TARANTO, *Circuit Judge*.

DivX, LLC owns U.S. Patent No. 10,225,588, which describes and claims systems and methods for streaming media. Netflix, Inc. and Hulu, LLC (petitioners) successfully sought institution of an inter partes review (IPR) to challenge all claims of the '588 patent as unpatentable for obviousness. In a final written decision, the Patent Trial and Appeal Board concluded that petitioners failed to prove obviousness because they did not demonstrate that a relevant artisan would have had a reasonable expectation of success in combining the asserted prior art to arrive at the inventions claimed in the '588 patent. Petitioners appeal. Because the Board legally erred in its obviousness analysis, and the error cannot be regarded as harmless, we vacate and remand.

I

A

The patent describes streaming as “the playback of media on a playback device, where the media is stored on a server and continuously sent to the playback device” ’588 patent, col. 1, lines 45–48. Media streams (*e.g.*, audio, video, or subtitle streams) are sent to playback devices in segments, and the devices generally store a sufficient amount of received media so that playback can proceed without disruption, *i.e.*, without interruption of playback to await receipt of the next needed portion of the media. *Id.*, col. 1, lines 48–53. Adaptive bitrate streaming (ABS) is a form of streaming that uses diminution in quality of the media to prevent (or minimize) such disruption: When detected network bandwidth or other conditions indicate a constricting of possible throughput, a lower quality version of the media (requiring less data) is streamed, so that the playback continues without interruption, though at lower quality. *Id.*, col. 1, lines 59–64. For ABS, the source media is encoded in multiple versions, each with a different bitrate (amount of data transmitted per unit of time), and a

playback device adjusts the stream quality by switching between the different encodings depending on available resources, with a higher bitrate corresponding to higher quality. *Id.*, col. 1, lines 64–67. The encoded source media is stored on a media server in one or more container files. *Id.*, col. 2, lines 12–15. To stream media between a server and a playback device, ABS systems “typically” use Hypertext Transfer Protocol (HTTP). *Id.*, col. 2, lines 1–5.

The ’588 patent claims systems and methods for performing ABS of media stored within Matroska container files using HTTP, where “frames” of the media (a relatively small segment in a hierarchy of segments) are partially encrypted. *Id.*, col. 1, lines 38–41; *id.*, col. 4, lines 39–58. The patent makes clear that ABS (at least in some form), encryption, Matroska container files, and HTTP all pre-dated the ’588 patent. *Id.*, col. 1, lines 59–67; *id.*, col. 2, lines 1–11, 35–46, 47–62. In contrast to pre-existing ABS and encryption systems, the patent says, “each of the alternative streams of protected video” in the ’588 patent’s claimed ABS system “includes partially encrypted video frames that are encrypted using a set of common keys.” *Id.*, claim 1, col. 27, lines 37–40.

Claim 1 is representative for present purposes:

1. A playback device for playing protected content from a plurality of alternative streams, comprising:

- a set of one or more processors; and

- a non-volatile storage containing an application for causing the set of one or more processors to perform the steps of:

- obtaining a top level index file identifying a plurality of alternative streams of protected video, wherein each of the alternative streams of protected video includes partially encrypted video frames that are encrypted using a set of common keys comprising at least one key, and wherein the

partially encrypted video frames contain encrypted portions and unencrypted portions of data;

- obtaining a copy of the set of common keys;
- detecting streaming conditions for the playback device;
- selecting a stream from the plurality of alternative streams of protected video based on the detected streaming conditions;
- receiving a container index that provides byte ranges for portions of the selected stream of protected video within an associated container file;
- requesting portions of the selected stream of protected video based on the provided byte ranges;
- locating encryption information that identifies encrypted portions of frames of video within the requested portions of the selected stream of protected video;
- decrypting each encrypted portion of the frames of video identified within the located encryption information using the set of common keys; and
- playing back the decrypted frames of video obtained from the requested portions of the selected stream of protected video.

Id., col. 27, lines 30–63.

B

On February 18, 2020, petitioners petitioned the Board to institute an IPR of all claims of the '588 patent, asserting that the claims are unpatentable for obviousness over U.S. Patent Pub. No. 2011/0096828 (Chen) in view of U.S. Patent Pub. No. 2007/0083467 (Lindahl) and U.S. Patent No. 8,683,066 (Hurst). Specifically, petitioners argued that a relevant artisan would have combined “Chen’s adaptive streaming teachings” with Lindahl’s encryption “teachings, including partial encryption and key management” and Hurst’s encryption and common key “teachings,” J.A. 11025, 11027, “to address piracy concerns and improve

efficiency,” J.A. 11026. Petitioners also relied on another reference, U.S. Patent No. 8,243,924 (Chen-924), but only as support for the argued combination of Chen, Lindahl, and Hurst. J.A. 11027–28. Only the Board’s findings about the combination of Chen and Lindahl (the latter teaching the required partial-frame encryption) are presented for review in this appeal.

Chen describes and claims a system (we may use the singular for present purposes) for block-request streaming using what the Board in this matter referred to as “scalable layers.” *See* Chen, abstract. In the Chen system, data are “organized as blocks that are transmitted and decoded as a unit, and the system is configured to provide and consume scalable blocks such that the quality of the presentation increases as more of the block is downloaded.” *Id.*, ¶ 27. Chen also describes use of forward error correction (FEC) in its system. *E.g.*, *Id.*, ¶¶ 87–88. Before describing the asserted inventive system, Chen discusses already-existing ABS technology, including HTTP streaming, with the following features: video is “encoded at multiple bitrates to form different versions” and “broken into smaller pieces . . . to form segments”; client devices request individual media segments, spliced together after receipt; and client devices “switch to different data rates based on available bandwidth” or other triggers, such as “buffer occupancy and network measurements, for example.” *Id.*, ¶¶ 63–64.

Lindahl discloses partially encrypting media data using “one or more encryption keys when encrypting each block” of data. Lindahl, abstract, ¶ 54. It teaches that a user may “receive a global key” for accessing the encrypted media. *Id.*, ¶ 64; *see id.*, ¶ 66. And it discloses partial encryption of frames. *Id.*, ¶¶ 55–56, 61; Figures 5A–5C.

Chen-924 (not one of the three references asserted as the combination that would have been obvious to a skilled artisan) describes ABS with partial frame encryption using various container file formats (none of which are the

Matroska file format). Chen-924, col. 1, lines 21–27; *id.*, col. 2, line 66, through col. 3, line 6. The Chen-924 streaming system may “be configured and arranged to monitor network conditions over which the container is received and dynamically modify the downloading based on some predefined criteria of the network conditions.” *Id.*, col. 14, lines 61–65. In the Chen-924 system, “encryption may be selectively applied to at least a portion of a video . . . stream . . . of the real-time streamed, progressively, or adaptively downloaded container Selective encryption may further include selectively encrypting at least a portion of [a frame] . . . within the container stream.” *Id.*, col. 6, lines 1–9.

The Board, in its final written decision, concluded that petitioners had not shown unpatentability of any of the claims. *Netflix, Inc. v. DivX, LLC*, 2021 WL 3729361, at *11 (P.T.A.B. Aug. 23, 2021). From the outset, the Board characterized petitioners as arguing for a combination of “the teachings of Lindahl and Hurst with Chen, such that the [digital rights management] processes, including partial encryption and key management, of Lindahl and Hurst, would have been employed in Chen’s adaptive streaming *system*.” *Id.* at *5 (emphasis added). The Board determined that petitioners “sufficiently established that an ordinarily skilled artisan would have had some motivation to combine the teachings of Chen, Lindahl, and Hurst,” but that their “obviousness showing does not sufficiently demonstrate that one of ordinary skill in the art would have had a reasonable expectation of success, in view of all of the disclosure and teachings of Chen and Lindahl,” of making the combination with Chen’s “system” the Board was analyzing. *Id.* at *6. Specifically, the Board found that at least the scalability feature of the Chen system was incompatible with Lindahl’s partial frame encryption and, with no showing of why a relevant artisan would implement the Chen system without at least scalability, petitioners failed to demonstrate a reasonable expectation of

success in “integrating partial frame encryption aspects of Lindahl, into Chen’s system that may utilize scalable layers and FEC processes.” *Id.* at *10; *see id.* at *9–10. The Board also concluded that the need to modify standard file formats casts enough doubt (in particular, “significant doubt”) on “the efficacy of combining” Chen and Lindahl to defeat a conclusion of reasonable expectation of success in “combining the cited aspects of Lindahl into Chen’s system.” *Id.* at *10.

Petitioners timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

The parties in this case accept a familiar framework for proving obviousness. Under that framework, a challenger asserting obviousness based on a combination of prior-art references must demonstrate “that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharmaceuticals USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)). There is a “clear distinction in our case law between a patent challenger’s burden to prove that a skilled artisan would have been motivated to combine prior art references and the additional requirement that the patent challenger also prove that the skilled artisan would have had a reasonable expectation of successfully achieving the claimed invention from the combination.” *Eli Lilly & Co. v. Teva Pharmaceuticals International GmbH*, 8 F.4th 1331, 1344 (Fed. Cir. 2021).

Obviousness is an issue of law decided in light of numerous facts, with the ultimate issue and what legal standards apply to be decided *de novo* on appeal and the fact-finding tribunal’s findings on underlying facts reviewed for substantial-evidence support. *PersonalWeb Technologies*,

LLC v. Apple, Inc., 917 F.3d 1376, 1381 (Fed. Cir. 2019); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). Whether a skilled artisan had a motivation to combine references in the way required to achieve the claimed invention and would have had a reasonable expectation of success in doing so are factual issues. *PAR Pharmaceutical, Inc. v. TWI Pharmaceuticals, Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014). “Substantial evidence review asks ‘whether a reasonable fact finder could have arrived at the agency’s decision and requires examination of the record as a whole, taking into account evidence that both justifies and detracts from an agency’s decision.’” *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1366 (Fed. Cir. 2016) (quoting *In re Gartside*, 203 F.3d 1305, 1312 (Fed. Cir. 2000)).

The Board in this case rejected petitioners’ obviousness challenge because it found no proof that a relevant artisan would have had a reasonable expectation of success in combining Lindahl with the Chen “system.” Petitioners, in appealing that conclusion, do not argue that substantial evidence is lacking to support the Board’s finding of no proven reasonable expectation of success of the combination with Chen’s “system.” Rather, they contend that the Board committed a fundamental legal error in defining the combination it was evaluating as Lindahl with Chen’s “system,” *i.e.*, with the system Chen teaches as its advance over the prior art (its inventive system). We agree with petitioners that the Board committed this legal error. And we conclude that the error was prejudicial, so we vacate the Board’s decision and remand.

A

Two legal principles are key to petitioners' appeal. First, in an IPR, "the petitioner's contentions . . . define the scope of the litigation all the way from institution through to conclusion." *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348, 1357 (2018). Second, a prior-art reference "must be considered for everything it *teaches* by way of technology and is not limited to the particular *invention* it is describing and attempting to protect." *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985); *see also Belden*, 805 F.3d at 1076 (same); *In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012) ("A reference must be considered for everything that it teaches, not simply the described invention or a preferred embodiment."); *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006) ("[T]he teaching of the . . . reference is not limited to the specific invention disclosed."); *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983) ("The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." (internal quotation marks omitted) (quoting *In re Lemelson*, 397 F.2d 1006, 1009 (C.C.P.A. 1968))); *In re Boe*, 355 F.2d 961, 965 (C.C.P.A. 1966) ("All of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art.").

The Board violated those principles in its ruling in this matter. The Board relied for its ruling on a combination of Lindahl with Chen's "system," *i.e.*, what Chen said was the inventive advance described and claimed, rather than a combination of Lindahl with disclosures in Chen of background art. But in their petition, petitioners argued that a relevant artisan would have combined Lindahl (and Hurst) with Chen's "teachings," and they pointed to the portions in Chen describing pre-Chen art, without scalability or FEC features that were part of what Chen describes as aspects of its own inventive system. *See, e.g.*, J.A. 11025

(“Chen’s adaptive streaming teachings”); J.A. 11026 (“The teachings of Chen relied on here”); J.A. 11026–27 (citing Chen, ¶¶ 24, 26–27, 63–65); *see also* J.A. 11077–78. Those pre-Chen-art portions were what the petition relied on, as relevant here, and they were fully available as teachings for petitioners’ obviousness challenge. The Board’s re-definition, pervasively substituting a focus on Chen’s own inventive “system” for the petition’s focus on particular Chen disclosures about pre-Chen art, *see Netflix*, 2021 WL 3729361, at *6–11, was a fundamental legal error.

B

The Board’s error was prejudicial, *i.e.*, not harmless. *See* 5 U.S.C. § 706 (requiring “due account” to be “taken of the rule of prejudicial error” in review under the Administrative Procedure Act); *Shinseki v. Sanders*, 556 U.S. 396, 406, 409 (2009) (explaining that this rule is a harmless-error rule). Petitioners, seeking relief on appeal, have the burden to show that the error at issue warrants vacatur and was not harmless. *Shinseki*, 556 U.S. at 409. We conclude that vacatur is indeed warranted.

We may “affirm if an erroneous portion of an agency’s ruling is ultimately non-prejudicial, *i.e.*, not material to the bottom-line result given other portions of the agency’s ruling. . . . But we must not ourselves make factual and discretionary determinations that are for the agency to make.” *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1365 (Fed. Cir. 2015) (relying on, *e.g.*, *In re Chapman*, 595 F.3d 1330, 1338 (Fed. Cir. 2010), *In re Watts*, 354 F.3d 1362, 1369 (Fed. Cir. 2004), and *Securities & Exchange Commission v. Chenery Corp.*, 332 U.S. 194, 196–97 (1947)). Under that standard, we find prejudice here. The Board rejected petitioners’ challenge based on its finding of no proven reasonable expectation of success, and that finding was clearly based on the Board’s consideration of elements of the Chen “system” such as scalable layers. And the Board did not make other determinations that were

independent of the infected reasonable-expectation-of-success finding, of the error in framing the combination more generally, and of other errors and that suffice to make the legal error here immaterial to the bottom line.

The Board did not separately find that there was no proven motivation to make the petition-alleged combination of Chen's disclosures with Lindahl. Indeed, the Board "agree[d]" with petitioners that "the Petition provides ample motivation to combine" and stated that petitioners "sufficiently established . . . some motivation to combine the teachings of Chen, Lindahl, and Hurst." *Netflix*, 2021 WL 3729361 at *6. We recognize that, later in its decision, the Board did make several remarks about what a relevant artisan would have reason to do. *See, e.g., id.* at *7 (discussing what features a relevant artisan "would have sought to incorporate into Chen"); *id.* at *8 (stating that petitioners have "not demonstrated *why* [ordinarily skilled artisans] would jettison features [used in Chen's system] that are disclosed as useful"); *id.* at *10 (suggesting, though not clearly declaring, agreement with DivX's argument that a relevant artisan "would not have been motivated to combine Chen and Lindahl without many of the disclosed features of Chen because that would have reduced efficiency, rather than improve it"). But those remarks at most create some confusion about the Board's motivation finding. The Board, having stated a motivation finding favorable to petitioners, never stated that it was finding against petitioners on the motivation component of the obviousness analysis, a component distinct from the reasonable-expectation-of-success component, *Eli Lilly*, 8 F.4th at 1344. In these circumstances, the Board's overall discussion of motivation tends to confirm prejudice, not support a harmless-error determination under the *Chenery*-respecting standard we apply.

We leave to the Board on remand the decision whether to reconsider the issue of motivation to combine, now with a specific focus on the petition-asserted combination with

Chen disclosures (not with the Chen “system”). If such reconsideration is undertaken, then the Board should address the Chen-924 reference, on which the petition relies to show the motivation to combine, unless the reference is superfluous because petitioners independently established the required motivation—as the Board may have thought in quickly finding for petitioners on the motivation issue, with no mention of Chen-924.¹ If reconsideration of the motivation issue is undertaken, then the Board also should address any properly raised argument about the standards for assessing whether a relevant artisan would, in the first place, have selected a particular disclosure in one reference (here, Chen, a patent application) for combination with another reference. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000); *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998); *In re Sang Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Those standards are not limited to, but include, the principle that it is “not necessary to show that a combination is ‘the *best* option, only that it be a *suitable* option.’” *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 800 (Fed. Cir. 2021) (quoting *Par Pharmaceuticals*, 773 F.3d at 1197–98); *see also In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012); *Kahn*, 441 F.3d at 990.

The Board’s discussion of a relevant artisan’s ability to make needed modifications to file formats disclosed in Chen (to introduce partial encryption of frames from Lindahl) does not render harmless the legal error we have

¹ Petitioners argue in this court that Chen-924 supports their position on the reasonable-expectation-of-success issue, once focused on the petition-asserted combination. The Board cited petitioners’ mention of Chen-924 for such a purpose in their Reply before the Board. *Netflix*, 2021 WL 3729361 at *10. DivX has raised a question of forfeiture. On remand, the Board should consider these contentions to the extent necessary.

identified. The Board noted agreement between the parties “that some types of modifications would be necessary to standard file format in any resulting system of Chen and Lindahl.” *Netflix*, 2021 WL 3729361 at *10. But the Board concluded that it “need not decide whether [a relevant artisan] could and would have modified existing file formats to accomplish the goal of partial frame encryption,” because it was focusing on “combining aspects of Lindahl into Chen’s system,” as to which it had already found insufficient proof on the reasonable-expectation issue, making “significant doubt” about a relevant artisan’s ability to make needed format modifications just a “further contribut[ion]” to the Board’s conclusion on that issue. *Id.* That discussion is itself framed around the combination we have held to be legally incorrect. We leave for remand any clarification of the analysis of file-format modification in this matter.

III

For the foregoing reasons, we vacate the Board’s final written decision and remand the case for further proceedings consistent with this opinion.

The parties shall bear their own costs.

VACATED AND REMANDED