

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SDI TECHNOLOGIES, INC.,
Petitioner,

v.

BOSE CORPORATION,
Patent Owner.

Case IPR2014-00343
Patent 8,401,682 B2

Before KARL D. EASTHOM, MICHAEL J. FITZPATRICK,
and DAVID C. MCKONE, *Administrative Patent Judges*.

MCKONE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

A. Background

SDI Technologies, Inc. (“Petitioner”) filed an Amended Petition (Paper 6, “Pet.”) requesting *inter partes* review of claims 25, 26, 52, 53, 55–61, and 75 of U.S. Patent 8,401,682 B2 (Ex. 1001, “the ’682 patent”). Bose Corporation (“Patent Owner”) filed a Preliminary Response (Paper 12, “Prelim. Resp.”). Pursuant to 35 U.S.C. § 314, in our Decision to Institute, we instituted this proceeding as to all of the challenged claims of the ’682 patent. Paper 13 (“Dec.”).

After the Decision to Institute, Patent Owner filed a Patent Owner Response (Paper 16, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 17, “Reply”). A consolidated oral hearing was held on February 24, 2015, in this matter and *SDI Technologies, Inc. v. Bose Corp.*, IPR2014-00346 (“IPR-346”). Paper 31 (“Tr.”).

Petitioner relies on the testimony of Andrew B. Lippman, Ph.D. (Ex. 1017, “Lippman Decl.”) in support of its contentions. Patent Owner relies on the testimony of Robert L. Stevenson, Ph.D. (Ex. 2120, “Stevenson Decl.”) in support of its contentions.

We have jurisdiction under 35 U.S.C. § 6(c). This Decision is a final written decision under 35 U.S.C. § 318(a) as to the patentability of the challenged claims. Based on the record before us, Petitioner has demonstrated, by a preponderance of the evidence, that all of the challenged claims are unpatentable.

B. Related Proceedings

In *SDI Technologies, Inc. v. Bose Corp.*, IPR2013-00350 (“IPR-350”), we held, in a final written decision (IPR-350, Paper 36, “IPR-350 FWD”), that claims 1–21, 24, 27, 28, 30–48, 51, 54, 62, 63, 67–70, 73, 74, and 76 of the ’682 patent are unpatentable. Patent Owner has appealed that decision. IPR-350, Paper 40.

Petitioner also filed two petitions for *inter partes* review of U.S. Patent No. 8,364,295 (“the ’295 patent”), *SDI Technologies, Inc. v. Bose Corp.*, IPR2013-00465 (“IPR-465”), and IPR-346. Pet. 4; Paper 8, 3. The ’682 patent matured from a continuation of the application that gave rise to the ’295 patent. In a final written decision in IPR-465 (Paper 40), we held that claims 1–21, 24, 27, 29–47, 50, 63, 64, 68–70, 73, 74, 77, and 78 of the ’295 patent are unpatentable. Patent Owner appealed that decision. IPR-465, Paper 44. In a Final Written Decision in IPR-346, issued concurrently with this Decision, we hold that claims 25, 26, 51, 52, 53, 55–59, 60–62, 75, and 76 of the ’295 patent are unpatentable.

Patent Owner asserted the ’682 and ’295 patents in *Bose Corp. v. SDI Technologies, Inc.*, Case No. 13-cv-10277-WGY (D. Mass.), filed on February 13, 2013. Pet. 3; Paper 8, 2.

C. References Relied Upon

Petitioner relies upon the following prior art references:

Guy Hart-Davis & Rhonda Holmes, MP3!, I DIDN’T KNOW YOU
COULD DO THAT ...TM 65–83 (Sybex, Inc. 1999) (Ex. 1009,
“WinAmp”);

Remote control WinAmp and more, downloaded at web.archive.org/web/19990508121919/http://www.evation.com/irman/index.html (Ex. 1010, “Irman Web Pages”); and

Altec Lansing Techs., Inc., *ADA310W Altec Lansing Computer Speaker System User Guide* (1998) (Ex. 1011, “Altec Lansing Manual”).

D. The Asserted Ground

We instituted this proceeding based on Petitioner’s ground of obviousness, under 35 U.S.C. § 103(a), of claims 25, 26, 52, 53, 55–61, and 75 over WinAmp, Irman Web Pages, and Altec Lansing Manual. Dec. 21.

E. The ’682 Patent

The ’682 patent generally relates to audio systems for reproducing sound from computer files and computer network radio stations. Ex. 1001, 1:16–19. Figure 1 of the ’682 patent is reproduced below.

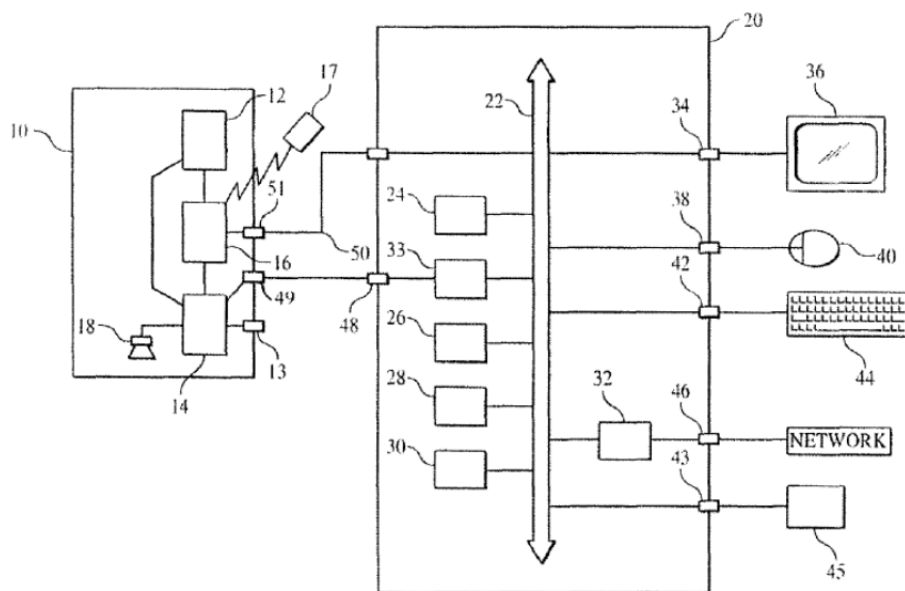


FIG. 1

Figure 1 shows sound reproduction device 10 (such as a Bose Wave® radio) that includes AM/FM tuner 12, audio signal processing circuitry 14, control electronics circuitry 16 for controlling the tuner and the signal processing circuitry, remote control device 17 for controlling the control electronics circuitry, and speaker 18. *Id.* at 3:30–35, 4:49–52. Sound reproduction device 10 is connected to computer 20 through control connector 50, which connects control electronics circuitry 16 to the computer's bus 22, and through a connector between the audio system's analog input terminal 49 and the computer's stereo jack 48. *Id.* at 3:54–58. Stereo jack 48 facilitates connection of the computer's sound card 33 to the sound reproduction device's audio signal processing circuitry 14. *Id.* at Fig. 1. The computer includes hard disk drive 30 that can store digital music files. *Id.* at 3:41–44, 6:52–7:3. The computer also is connected to a network, such as the Internet. *Id.* at 3:49–53. The computer can access web radio stations through the network. *Id.* at 6:40–48. Signals from remote control 17, received by sound reproduction device 10, can control functions of computer 20. *Id.* at 10:31–56.

Claim 55, reproduced below, is illustrative of the claimed subject matter:

55. An audio system configured to connect to a separate computer that has a plurality of user functions, a subset of the user functions relating to control of audio information, and is configured to provide audio information from any one of a plurality of sources, including digital music files stored on the computer and a network accessible by the computer, the audio system comprising:

- (A) a sound reproduction system comprising:
 - a housing;

control circuitry located within the housing for receiving control commands;

audio signal processing circuitry located within the housing for processing audio signals for reproduction;

one or more speakers for reproducing audio signals processed by the audio signal processing circuitry;

an connector located at least partially within the housing that is configured to provide a physical and electrical connection exclusively between the sound reproduction system and the computer, wherein the connection includes one or more signal paths configured to (i) receive audio information from the computer corresponding to the digital music files stored on the computer and audio information from the network via the computer, (ii) transmit to the computer signals for controlling the computer, and (iii) receive signals from the computer; and

(B) a remote control device configured to transmit signals representing at least a first type of command from a user and a second type of command from a user to the control circuitry of the sound reproduction system, wherein the first type of command is a command to control a user function of the sound reproduction system and the second type of command is a command to control a user function of the computer,

wherein the control circuitry is configured to receive the signals from the remote control and, in response to receiving such signals:

(i) control the user function of the sound reproduction system when the user issues a command of the first type, and

- (ii) transmit to the computer, via a signal path of the connector, a signal for controlling the user function of the computer when the user issues a command of the second type.

II. ANALYSIS

A. Estoppel

As explained above, in IPR-350, we held, *inter alia*, that independent claims 1 and 28 are unpatentable as obvious under 35 U.S.C. § 103(a). That determination was based on the same prior art asserted in the present proceeding. Claims 25 and 26 depend from claim 1, and claims 52 and 53 depend from claim 28. Independent claim 55 is similar to claims 1 and 28. In this proceeding, Patent Owner makes several arguments regarding the patentability of the challenged claims and the admissibility of evidence that it previously raised in IPR-350, and which we did not find persuasive.

At the hearing, Petitioner argued that Patent Owner is estopped, under 37 C.F.R. § 42.73(d)(3), from arguing in this proceeding any patentability or admissibility issue that was decided in Petitioner's favor in the Final Written Decision in IPR-350. Tr. 7:16–8:20. Patent Owner objected to the application of estoppel and, in the alternative, requested an opportunity to brief the issue. *Id.* at 21:1–12. We permitted the parties to submit simultaneous briefs addressing estoppel. *Id.* at 76:3–77:13. Petitioner filed a Brief on the Applicability and Scope of 37 C.F.R. 42.73(d)(3) (Paper 29, “Pet. Estoppel. Br.”), and Patent Owner filed a Brief on the Applicability and Scope of Patent Owner Estoppel under 37 C.F.R. § 42.73(d)(3) (Paper 30, “PO Estoppel Br.”).

According to Rule 42.73(d)(3),

A patent applicant or owner is precluded from taking action inconsistent with the adverse judgment, including obtaining in any patent:

- (i) A claim that is not patentably distinct from a finally refused or canceled claim; . . .

Petitioner argues that Rule 42.73(d)(3) should be read in the context of 37 C.F.R. § 42.2, which defines “judgment” as “a final written decision by the Board, or a termination of a proceeding.” Pet. Estoppel Br. 2–3, 6–7. Specifically, Petitioner argues that our Final Written Decision in IPR-350 is an “adverse judgment” and that Patent Owner’s advancement of arguments rejected in that Final Written Decision is “taking action inconsistent with” such adverse judgment, as stated in Rule 42.73(d)(3), giving rise to estoppel. *Id.*

Petitioner argues that Rule 42.73(d)(3) applies when the requirements of conventional issue preclusion are satisfied, namely, “(1) identity of the issues in a prior proceeding; (2) the issues were actually litigated; (3) the determination of the issues was necessary to the resulting judgment; and, (4) the party defending against [estoppel] had a full and fair opportunity to litigate the issues.” Pet. Estoppel Br. 3 (quoting *Jet, Inc. v. Sewage Aeration Sys.*, 223 F.3d 1360, 1366 (Fed. Cir. 2000)). Petitioner presents arguments as to why those conventional requirements are satisfied in this case. *Id.* at 3–6.

Nevertheless, we agree with Patent Owner that Rule 42.73(d)(3) does not apply in this case, at least because Patent Owner’s appeal rights in IPR-350 have not been exhausted. PO Estoppel Br. 1. As Patent Owner argues (PO Estoppel Br. 2), the Patent Office has explained in its discussion

accompanying the Final Rule that Rule 42.73(d)(3) applies estoppel against a party whose claim has been cancelled and not merely held unpatentable:

Section 42.73(d)(3) applies estoppel against a party whose claim was cancelled The rule is consistent with 35 U.S.C. 316(a)(4), as amended, and 326(a)(4), which require that the Office prescribe regulations establishing and governing the reviews and the relationship of such reviews to other proceedings under title 35.

Rules of Practice for Trials Before the Patent Trial and Appeal Board and Judicial Review of Patent Trial and Appeal Board Decisions, Discussion of Specific Rules, 77 Fed. Reg. 48,612, 48,625 (Aug. 14, 2012) (emphasis added); *see also* 77 Fed. Reg. at 48,614 (Differences Between the Final Rule and the Proposed Rule) (emphasis added):

Further, the final rule tailors the provisions to provide that a patent applicant or patent owner whose claim is canceled is precluded from taking action inconsistent with the adverse judgment, including obtaining in any patent: (1) A claim that is not patentably distinct from the finally refused or cancelled claim[.]

As Patent Owner points out (PO Estoppel Br. 2–3), under 35 U.S.C. § 318(b), a claim is not cancelled until all appeal rights have terminated.

We are not persuaded by Petitioner’s argument that Rule 42.2 implicitly defines “adverse judgment” to be a final written decision. “Adverse judgment” is not defined expressly. However, its use in Rule 42.73(d)(3) (“the adverse judgment”) is best read as a reference to the earlier use of the term in 37 C.F.R. § 42.73(b), which states

(b) A party may request judgment against itself at any time during a proceeding. Actions construed to be a request for adverse judgment include:

(1) Disclaimer of the involved application or patent;

- (2) Cancellation or disclaimer of a claim such that the party has no remaining claim in the trial;
- (3) Concession of unpatentability or derivation of the contested subject matter; and
- (4) Abandonment of the contest.

This is consistent with the Office's comments to Rule 42.73(d)(3), which explains that a "patent owner whose claim is canceled is precluded from taking action inconsistent with the adverse judgment." 77 Fed. Reg. at 48,614. Petitioner has not persuaded us that "adverse judgment" carries a broader meaning in subsection (d)(3) of Rule 42.73 than subsection (b) of the same Rule.

Accordingly, Patent Owner is not estopped from raising, in this proceeding, the patentability and admissibility arguments we rejected in IPR-350. Nevertheless, as explained below, we reject those arguments for substantially the same reasons as given in the Final Written Decision in IPR-350.

B. Patent Owner's Motion to Exclude

Patent Owner filed a Motion to Exclude Evidence Pursuant to 37 C.F.R. § 42.64 (Paper 20, "Mot. to Exclude"). Petitioner filed an Opposition to the Motion to Exclude (Paper 21, "Opp. to Mot. to Exclude"). Patent Owner filed a Reply to Petitioner's Opposition to the Motion to Exclude (Paper 22, "Reply to Mot. to Exclude").

Patent Owner contends that page seven of the Altec Lansing Manual (Ex. 1011) should be excluded. Mot. to Exclude 8–9. Petitioner opposes excluding page seven. Opp. to Mot. to Exclude 2–4. In our Final Written

Decision in IPR-350, we considered substantially the same arguments and excluded page seven. IPR-350 FWD 19–20. For the same reasons, we exclude page seven of Exhibit 1011 in this proceeding.

Patent Owner also requests exclusion of paragraphs 39–44 of Exhibit 1017, the Declaration of Dr. Lippman. Mot. to Exclude 9–15. In our Final Written Decision in IPR-350, we considered substantially the same arguments directed to exclusion of parallel testimony of Dr. Lippman in that proceeding and denied the request. IPR-350 FWD 25 & n.5. For the same reasons, we deny Patent Owner’s request to exclude paragraphs 39–44 of Exhibit 1017 in this proceeding.

Patent Owner further requests that we exclude Irman Web Pages (Ex. 1010). Mot. to Exclude 2–8. In our Final Written Decision in IPR-350, we considered and denied a request from Patent Owner to exclude this reference in that proceeding under Federal Rules of Evidence 802 and 901. IPR-350 FWD 16–18. Patent Owner’s argument was essentially the same for both authenticity and hearsay: the date stamp¹ at the lower left corner of the Irman Web Pages document was not shown to be a reliable indicator of the date on which the document had been archived by Internet Archive, either because the statement itself was hearsay introduced by Petitioner for the truth of the matter asserted (the archive date) or because Petitioner failed to introduce an authenticating affidavit from Internet Archive showing that the document was archived on that date. IPR-350 FWD 16–18. As we explained in the final written decision, at the hearing in IPR-350, Patent

¹The date stamp reads: [web.archive.org/web/19990508121919/http://www.ovation.com/irman/index.html](http://www.ovation.com/irman/index.html)

Owner could not articulate any reason to suspect that the date stamp applied by Internet Archive was unreliable and conceded that obtaining a standard affidavit from Internet Archive would have been sufficient to overcome an authentication objection. *Id.* We then introduced an unsigned copy of Internet Archive's standard affidavit, concluding that it would not have added significantly to the record. *Id.* at 17–18.² We then concluded, based on the evidence presented, that Irman Web Pages was reliable and authentic. *Id.*

In this proceeding, Patent Owner again challenges the Internet Archive date stamp as either inauthentic or hearsay. Mot. to Exclude 2–8. Patent Owner does not appear to be arguing that Irman Web Pages was not available on the Internet. Rather, Patent Owner argues that Petitioner has not proved that the Internet Archive date stamp is a reliable indicator of the date on which Irman Web Pages actually was archived and, thus, Petitioner has not proved that Irman Web Pages is what it purports to be, i.e., a document archived on May 8, 1999. *Id.* at 6. As to Internet Archive's standard affidavit, Patent Owner now argues that it would not have been sufficient to authenticate Irman Web Pages. Mot. to Exclude 5–6. Patent Owner argues that an answer to an Internet Archive frequently asked

² In its PO Estoppel Brief, at 6, Patent Owner asserts that it did not have a full and fair opportunity to address Internet Archive's standard affidavit because we *sua sponte* introduced it as an exhibit and expunged Patent Owner's objections to the exhibit. Patent Owner neglects to state we expunged its objections because they were submitted without authorization, in violation of our rules. IPR-350, Paper 39, 2. Patent Owner did not seek reconsideration of the IPR-350 Final Written Decision under 37 C.F.R. § 42.71(d).

question states that the standard affidavit itself indicates only that it is a true and correct copy of Internet Archive's records and does not establish the date on which a document was available on the Internet. *Id.* at 6 (citing Ex. 2121, 1).

According to Federal Rule of Evidence 901(a), “[t]o satisfy the requirement of authenticating or identifying an item of evidence, the proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is.” We recognize that “Testimony of a Witness with Knowledge,” such as an Internet Archive standard (or non-standard) affidavit, is one example of evidence that satisfies the authentication requirement. *See* FED. R. EVID. 901(b)(1).

Nevertheless, there are other examples that suffice. Specifically, a document can be authenticated with evidence of “Distinctive Characteristics and the Like. The appearance, contents, substance, internal patterns, or other distinctive characteristics of the item, taken together with all the circumstances.” Rule 901(b)(4). Petitioner argues that Irman Web Pages includes such distinctive characteristics, including the Internet Archive logo and header at the top of the exhibit and an Internet Archive date-stamped URL affixed to the bottom of the exhibit. *Opp. to Mot. to Exclude* 5–6. Patent Owner does not dispute that Irman Web Pages is a true and correct copy of an Internet Archive record. Petitioner further argues (and we confirmed) that following the date-stamped Internet Archive URL verifies that the web page exists on Internet Archive's servers. *Id.* at 7. Moreover, an answer to another Internet Archive frequently asked question explains how its time stamps correspond to its record keeping:

The Internet Archive assigns a URL to each archived page on its site in the format [http://web.archive.org/web/\[Year in yyyy\]\[Month in mm\]\[Day in dd\]\[Time code in hh:mm:ss\]/\[Archived URL\]](http://web.archive.org/web/[Year in yyyy][Month in mm][Day in dd][Time code in hh:mm:ss]/[Archived URL]). Thus, the Internet Archive URL <http://web.archive.org/web/19970126045828/http://www.archive.org/> would be the URL for the record of the Internet Archive home page (<http://www.archive.org/>) archived on January 26, 1997, at 4:58 a.m. and 28 seconds (1997/01/26 at 04:58:28).

Ex. 2121, 4 (brackets in original). Unless Internet Archive deviated from its normal practice in archiving Irman Web Pages, Irman Web Pages presumably was archived on May 8, 1999, the date indicated by the time stamp. Ex. 1010, 1. The archived document itself bears a 1998 copyright logo purportedly affixed by Evation.com, which is consistent with the time stamp added by Internet Archive. *Id.* at 3.

Patent Owner does not dispute that Irman Web Pages is an authentic copy of an Evation.com web site archived, at some point, by Internet Archive. The issue is whether it was archived on May 8, 1999 (and prior to the filing date of the '682 patent). Consistent with our finding in the IPR-350 Final Written Decision, at 17–18, we find that the distinctive characteristics on Irman Web Pages, including the logo and time stamp from Internet Archive, in light of Internet Archive's explanation of its record keeping, constitute evidence sufficient, under Rule 901(b)(4), to support a finding that Irman Web Pages is a copy of an Evation.com web page archived by Internet Archive on May 8, 1999. The fact that the Evation.com copyright date closely predates the Internet Archive time stamp is further evidence showing Irman Web Pages' authenticity. Moreover, we find the evidence to be sufficient under Rule 901(b)(4) even in the absence of an affidavit under Rule 901(b)(1).

Regarding hearsay, we conclude that the date-stamp in the Internet Archive URL is reliable. The reasoning in *In re Epstein*, 32 F.3d 1559 (Fed. Cir. 1994), is instructive. In that case, the Federal Circuit analyzed whether certain abstracts of software containing statements of “release” and “first installation” dates, statements that constituted hearsay, evidenced dates of public use. *Id.* at 1565. The Federal Circuit acknowledged that the Board, in an *ex parte* appeal, is not bound by the Federal Rules of Evidence. *Id.* at 1565–66. Nevertheless, the Federal Circuit took a common-sense approach to evaluating whether the statements in the abstracts were reliable and trustworthy, the issue at the root of Patent Owner’s concerns regarding authenticity and hearsay. *Id.* Specifically, the Federal Circuit explained that “nothing on the face of the documents . . . suggests the information has been altered in any way,” and that to find the documents unreliable would be to assume that the authors had engaged in false or misleading advertising, an assumption that the *Epstein* court would not make. *Id.* at 1566. Rather, “because the abstracts appear on their face to be accurate and reliable, and because appellant has failed to proffer any evidence to support his arguments to the contrary, [the Federal Circuit] assume[d] the truthfulness of the various assertions in the abstracts.” *Id.*

The facts introduced in this proceeding, considered as a whole, similarly indicate reliability. For example, as explained above, an answer to an Internet Archive frequently asked question shows that, according to Internet Archive’s regular business practices, the date stamp on an archived web page indicates the date and time on which such document was archived. Ex. 2121, 4. Patent Owner argued at length at the hearing that because Internet Archive relies on third-party web crawlers to collect documents to

be archived, we cannot trust the date stamp applied by Internet Archive. *See, e.g.*, Tr. 27:12–30:19. Patent Owner, however, has pointed to no evidence to suggest that third party web crawlers manipulate or misrepresent the dates on which they collect documents for archiving. Moreover, the archived Irman Web Pages document itself includes a copyright date of 1998. Ex. 1010, 3. This evidence is consistent with the subsequent date stamp applied by Internet Archive, giving us additional confidence that Internet Archive’s time stamp is reliable. As explained in the IPR-350 Final Written Decision, at 18, Patent Owner admits that nothing about Irman Web Pages itself suggests that the Internet Archive date stamp is unreliable. Patent Owner has echoed that admission in this proceeding. Tr. 37:15–23. In other words, there is no evidence that either Evation.com, the author of Irman Web pages, or a web crawler acting for Internet Archive misrepresented dates.

After weighing all of the evidence, we find, by a preponderance of the evidence, that Irman Web Pages is sufficiently reliable to satisfy the residual exception to hearsay articulated in Federal Rule of Evidence 807. To qualify for the residual exception under Rule 807, four requirements must be met: (1) the statement has equivalent circumstantial guarantees of trustworthiness; (2) it is offered as evidence of a material fact; (3) it is more probative on the point for which it is offered than any other evidence that the proponent can obtain through reasonable efforts; and (4) admitting it will best serve the purposes of these rules and the interests of justice. FED. R. EVID. 807(a). As explained above, the Internet Archive’s date stamp, in light of the Evation.com copyright notice, has circumstantial guarantees of trustworthiness. The date stamp is offered as evidence of a material fact,

i.e., a date on which Irman Web Pages was publicly available. The Internet Archive's answers to frequently asked questions evidence Internet Archive's practice of affixing a date stamp on each archived page indicating the date on which the page was archived. As explained in the IPR-350 Final Written Decision, a standard affidavit from Internet Archive likely would not have added materially to this information, confirming only that Irman Web Pages is one of its records, an issue not in dispute. Thus, the date stamp and other corroborating evidence likely are more probative on the point for which they are offered than any other evidence that the proponent could obtain through reasonable efforts. Finally, in consideration of the evidence showing reliability, and the lack of any evidence suggesting otherwise, we are persuaded that admitting Irman Web pages, and the Internet Archive date stamp, will best serve the purposes of the Federal Rules of Evidence and the interests of justice. Patent Owner's request to exclude Irman Web Pages is denied.

C. Claim Construction

The Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1279–81 (Fed. Cir. 2015). Claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

In the Decision to Institute, we preliminarily construed claim terms as reproduced in the table below:

Claim Phrase	Claim Construction in the Decision to Institute
“computer” (claims 1, 28, 62)	any machine capable of receiving input, processing, storing, and outputting data
“network” (claim 1)	an interactive computer network, such as the internet
“audio information from the network via the computer” (claim 1)	audio information received from the computer that the computer has downloaded from the network
“configured to respond to signals received from the computer” (claims 25, 52)	configured to take an action as a result of signals received from a computer

During trial, Patent Owner disputed our construction of “configured to respond to signals received from the computer.” PO Resp. 6–18. We address this term below. The parties do not dispute our other preliminary constructions. We adopt those constructions based on the full record.

Patent Owner also proposed a construction for “audio signal processing circuitry.” *Id.* at 18–21.

1. *“configured to respond to signals received from the computer”*

Patent Owner contends that we should construe “configured to respond to signals received from the computer,” recited in claims 25 and 52, to mean “configured to answer or reply to the computer, *i.e.*, send a responsive communication back to the computer.” PO Resp. 7.

We start with the ordinary meaning of “respond.” In the Decision on Institution, at 9, we considered a dictionary definition advanced by Patent

Owner (cited to again in the PO Resp., at 12). According to WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 1935 (unabridged 1993) (Ex. 2103), "respond" means, *inter alia*, "2 : to say something in return : make an answer" and "3 : to show some reaction to a force or stimulus . . . : react in response." Patent Owner only cited to definition 2, "to say something in return : make an answer." As the dictionary shows, however, the ordinary meaning also is broad enough to encompass definition 3, "to show some reaction to a force or stimulus . . . : react in response," which corresponds to our preliminary construction.

We next look to the Specification of the '682 patent to discern whether the patentee intended a more narrow meaning of "respond," keeping in mind the Federal Circuit's "caution[] against reading limitations into a claim from the preferred embodiment described in the specification, even if it is the only embodiment described, absent clear disclaimer in the specification." *In re Am. Acad. Of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004). Patent Owner points us to two passages in the Specification. In the first, Ex. 1001, 1:58–2:3, the Specification states that if a computer system "responds" to a control signal from a sound reproduction system, the sound reproduction system determines that the computer system is in a responsive state. Patent Owner infers from this description that the computer system must be sending an answer or reply; otherwise the sound reproduction system would not be able to determine that the computer system is in a responsive state. PO Resp. 10–11. Patent Owner argues that this is the only use of the word "respond" in the Specification; thus, it is a "valuable guidepost" for understanding how a skilled artisan would have understood the claim language "configured to respond." *Id.* at 11–12.

In the second passage cited by Patent Owner, the Specification describes a computer program that directs AM/FM tuner 12 (shown in Figure 1, above, as part of the sound reproduction system) to identify the strongest radio signals, which the computer program assigns as presets. Ex. 1001, 9:21–48. Patent Owner argues that this passage describes an answer or reply from the sound reproduction system to the computer. PO Resp. 12–13.

Neither of these passages suggests that “respond” should be construed narrowly. The first passage does not describe the behavior at issue in the claim, a sound reproduction system responding to a computer. Rather, it describes a computer responding to a sound reproduction system. To the extent that it implicitly describes an answer or reply (a matter of debate), it nevertheless gives no indication that the term “respond” should be limited to such usage. Rather, it describes an example. As to the second passage, it does not use the word “respond”; thus, it is of limited value in ascertaining how the patentee intended the word “respond” to be understood. Moreover, the second passage, like the first, carries with it no indication that the example it describes was intended to be limiting. At most, Patent Owner’s evidence shows that “respond” can be read broadly enough to encompass its interpretation. Patent Owner has introduced no persuasive evidence, however, suggesting that “respond” is limited to its interpretation.

Patent Owner also argues that, under the doctrine of claim differentiation, “respond” should be construed more narrowly to avoid claims 25 and 52 having the same scope as claims 1 and 28, respectively. PO Resp. 8–9. Claim 1 recites “audio signal processing circuitry located within the housing for processing audio signals for reproduction.” Claim 28

recites “one or more speakers for reproducing audio signals processed by the audio signal processing circuitry.” Patent Owner argues that this language in claims 1 and 28 already requires a sound reproduction system configured to take an action (processing audio signals) as a result of signals received from a computer. *Id.* at 9.

Petitioner argues that claims 1 and 28 do not require a computer and, specifically, do not require that the speakers play music from a computer. Reply 3. Petitioner contends that the audio signal processing circuitry could be configured to process audio signals from sources other than a computer and still be consistent with the language of claims 1 and 28. *Id.* at 4. We agree with Petitioner. Claims 1 and 28, by their terms, do not require audio signal processing circuitry that processes audio signals from a computer. Patent Owner concedes that “[t]he computer is not an element of [claim 1].” Tr. 52:19–20. Thus, even under our preliminary construction, claims 1 and 28 are broader than claims 25 and 52, respectively. Thus, the doctrine of claim differentiation does not compel the narrow construction advanced by patent owner.

Moreover, claim differentiation “is not a rigid rule but rather is one of several claim construction tools.” *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1376 (Fed. Cir. 2009); *accord ERBE Elektromedizin GmbH v. Canady Tech. LLC*, 629 F.3d 1278, 1286 (Fed. Cir. 2010) (“Claim differentiation may be helpful in some cases, but it is just one of many tools used by courts in the analysis of claim terms.”). As explained above, the plain meaning of the claims and the Specification, two other tools we must use, make clear that “respond” is not limited to sending an answer or reply to the computer. *Cf. Autogiro Co. of Am. v. United States*, 384 F.2d 391, 404

(Ct. Cl. 1967) (“If a claim will bear only one interpretation, similarity will have to be tolerated.”).

Patent Owner further argues that other claims use the term “in response to” when referring to taking an action as a result of signals received and that, by implication, “respond” must mean something different. PO Resp. 14–18. For example, according to Patent Owner, “to respond” is an infinitive verb phrase while “in response to” is a complex prepositional phrase—two different parts of speech. *Id.* at 14–15 n.3. We agree with Petitioner, however, that “respond” and “in response to” are the same term, expressed as different parts of speech according to how the term fits with the words around it. Reply 8. Patent Owner admits that “in response to” is used broadly to include taking an action as a result of signals received from a computer. PO Resp. 15. The broad use of substantially the same term, “in response to,” is further evidence that “configured to respond” should be construed broadly as well. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (“[T]he context in which a term is used in the asserted claim can be highly instructive.”).

In sum, based on our consideration of the full record, we maintain our construction of “configured to respond to signals received from the computer,” namely “configured to take an action as a result of signals received from a computer.”

2. “*audio signal processing circuitry*”

The term “audio signal processing circuitry” appears in independent claims 1 and 28 (challenged in IPR-350) and 55. Patent Owner contends that “audio signal processing circuitry” does not include circuitry that

merely performs amplification, i.e., amplifiers. PO Resp. 19. In our Final Written Decision in IPR-350, we construed this term based on nearly identical arguments and substantially the same evidence. Specifically, we rejected Patent Owner’s argument that “audio signal processing circuitry” excludes amplifiers, and construed the term to mean “circuitry that modifies an audio signal.” IPR-350 FWD 10–12. Patent Owner’s arguments are no more persuasive in this proceeding. We adopt the same construction in this proceeding for the reasons stated in IPR-350.

D. Obviousness over WinAmp, Irman Web Pages, and Altec Lansing Manual

Petitioner asserts that claims 25, 26, 52, 53, 55–61, and 75 of the ’682 patent would have been obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual. Pet. 16–24.

1. The Level of Ordinary Skill in the Art

The declarants for Petitioner and Patent Owner essentially agree that a person of ordinary skill in the art would have had a bachelor’s degree in electrical engineering and several years (e.g., three years) of experience with audio systems. *Compare* Lippman Decl., Ex. 1017 ¶ 19, *with* Stevenson Decl., Ex. 2120 ¶ 21.

2. Overview of WinAmp, Irman Web Pages, and Altec Lansing Manual

WinAmp describes a software package for playing MP3 digital audio files on a computer. Ex. 1009, 12. According to WinAmp, the WinAmp

software plays MP3 files stored on the computer and also streams music from the Internet. *Id.* at 17–19.

Irman Web Pages describes an infrared receiver that connects to a computer. Ex. 1010, 1. The receiver receives signals from various remote controls and converts the signals into computer commands for controlling software executing on the computer. *Id.* Irman Web Pages lists the WinAmp software package as an example of software that can be controlled by a remote control through the receiver. *Id.*

Altec Lansing Manual describes a powered speaker system, the ADA310W, that is plugged into an audio card of a personal computer, either through a universal serial bus (“USB”) cable or through a stereo audio cable connecting the computer’s analog output to the speaker system’s analog input. Ex. 1011, 3–5. According to Altec Lansing Manual, the speaker system accepts digital and analog audio data. *Id.* at 6. If the computer and the ADA310W are connected using a USB cable, the computer can control all of the speaker functions. *Id.* at 3. The ADA310W includes a subwoofer and two separate satellite speakers. *Id.* at 4–5. The computer connects to the subwoofer, which connects to the satellite speakers. *Id.* The speaker system also includes a remote control. *Id.* at 6. The signal from the remote control is received at an IR receiver on one of the satellite speakers. *Id.*

Petitioner generally contends that the Altec Lansing ADA310W speaker system could have been connected to a computer equipped with WinAmp software and an Irman receiver and, in this configuration, the WinAmp software on the computer could have been controlled by a remote control through the Irman receiver. Pet. 14–15. This would result in a system with two remote controls: one for the computer, through the Irman

receiver, and one for the ADA310W. *Id.* Petitioner proposes that, “in order to, for example, reduce clutter and duplication,” it would have been obvious for a person of ordinary skill in the art to combine the functions of the two remote controls into one remote control, which would have interfaced with the ADA310W. *Id.*

3. Disposition of Claims 1 and 28 in IPR-350

As explained above, in IPR-350, we held that independent claims 1 and 28 are unpatentable as obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual. While claims 1 and 28 are not challenged in this proceeding, each of claims 25, 26, 52, and 53 depends from one of these independent claims. Several of the arguments for patentability raised by Patent Owner as to the challenged claims are directed to the alleged failure of Petitioner to prove the unpatentability of the underlying independent claims. These arguments are substantially the same as the arguments raised, and found to be unpersuasive, in IPR-350.

Petitioner advances substantially the same evidence in this proceeding to show that the underlying limitations of claims 1 and 28 would have been obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual. Pet. 14–18, 19–22. Based on that evidence, in the IPR-350 Final Written Decision, we found that each limitation of claims 1 and 28 is taught in one or more of WinAmp, Irman Web Pages, and Altec Lansing Manual and concluded that a skilled artisan would have combined those references to arrive at claims 1 and 28. IPR-350 FWD 20–21. For the same reasons, we find, in this proceeding, that each limitation of claims 1 and 28 is taught in one or more of WinAmp, Irman Web Pages, and Altec Lansing Manual and

conclude that a skilled artisan would have combined them to arrive at claims 1 and 28.

Patent Owner argues that WinAmp, Irman Web Pages, and Altec Lansing Manual teach away from Petitioner's proposed combination and that Dr. Lippman's testimony to the contrary was driven by admitted hindsight. PO Resp. 24–35 (citing Exs. 2104, 2120 ¶¶ 45–54). Patent Owner made these same arguments with respect to claims 1 and 28 in IPR-350, citing to substantially the same evidence. *See* IPR-350, Paper 20, 33–41 (citing to Exs. 2015, 2026 ¶¶ 64–72³). We considered these arguments in detail in IPR-350 and concluded that they were unpersuasive. IPR-350 FWD 22–26. We conclude that Patent Owner's arguments in this proceeding are unpersuasive for the same reasons given in IPR-350.

Patent Owner further argues that the amplifiers identified in Altec Lansing Manual are not “audio signal processing circuitry.” PO Resp. 38. As explained in Section II.C.2 above, and in the IPR-350 Final Written Decision, at 10–12, “audio signal processing circuitry” does not exclude amplifiers.

Patent Owner also contends that, even if the amplifiers are “audio signal processing circuitry,” the amplifiers are not located within the same housing as the circuitry identified as the claimed “control circuitry,” as recited in claims 1 and 28, and it would not have been obvious to locate

³ IPR-350, Exhibit 2015 is the transcript of the deposition of Dr. Lippman in IPR-350. Exhibit 2104, relied upon by Patent Owner in this proceeding, is the same deposition transcript. IPR-350, Exhibit 2026 ¶¶ 64–72 is declaration testimony of Dr. Stevenson that includes testimony substantially the same as Exhibit 2120 ¶¶ 45–54 in this proceeding.

them within the same housing. PO Resp. 38–41, 42–43. We considered, and rejected, these arguments based on substantially the same evidence in IPR-350. IPR-350 FWD 27–28. We remain unpersuaded by these arguments for the same reasons.

Patent Owner argues that page seven of Altec Lansing Manual does not correspond to the same system as the rest of the manual. PO Resp. 41–42. As explained in Section II.B above, we exclude page seven. Nevertheless, as explained in the IPR-350 Final Written Decision, at 28–29 (addressing substantially the same argument), pages 4–6 of Altec Lansing Manual also show audio processing circuitry and the ability to control the speaker system with a remote control. Thus, Patent Owner’s argument is not persuasive.

In sum, in IPR-350, we held that claims 1 and 28 would have been obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual. We considered substantially the same evidence and arguments in this proceeding regarding the limitations of claims 1 and 28 in evaluating the patentability of dependent claims 25, 26, 52, and 53. For the reasons stated in the IPR-350 Final Written Decision, we find that each limitation of claims 1 and 28 is taught in one or more of WinAmp, Irman Web Pages, and Altec Lansing Manual, and conclude that a skilled artisan would have combined those references to arrive at claims 1 and 28.

4. Claim 55

Independent claim 55 is substantially the same, in most respects, as claim 1. However, where claim 1 recites a connection that includes signal paths configured to “(i) receive audio information from the computer

corresponding to the digital music files stored on the computer and audio information from the network via the computer, and (ii) transmit to the computer signals for controlling the computer,” claim 55 thereafter adds “(iii) receive signals from the computer.” Also, where claim 1 recites “a connector,” claim 55 recites “a connector located at least partially within the housing.”

For the limitations of claim 55 that overlap with those of claim 1, Petitioner cites substantially the same evidence. Pet. 22–26. The PO Response applies the arguments addressed above for claims 1 and 28 (teaching away, lack of “audio signal processing circuitry located within the housing,” and applicability of page seven of Altec Lansing Manual) to the commensurate language in claim 55. PO Resp. 22, 25, 38. Those arguments are unpersuasive when applied to claim 55 for the same reasons.

Regarding a connection that includes signal paths configured to “(iii) receive signals from the computer,” Petitioner introduces evidence that the speaker described in Altec Lansing Manual is connected to a computer with a USB cable and that the speaker is controlled by the computer using signals received from the computer over the USB cable. Pet. 25. Petitioner’s evidence further shows that the speaker automatically turns on in response to the receipt of an audio signal from the computer, and, thus, the connection is configured to receive signals from the computer. *Id.*

Regarding “a connector located at least partially within the housing,” Patent Owner argues that the control circuitry described in Altec Lansing Manual would have been located in the subwoofer while the connector identified by Petitioner would have been located within a satellite speaker, which would be a different housing. PO Resp. 43–45. We are not

persuaded. As we explained in the IPR-350 Final Written Decision, at 28 (addressing whether the audio signal processing circuitry and the control circuitry are in the same housing), the control circuitry taught in Altec Lansing Manual is not limited to the IR receiver positioned on the satellite speaker, but rather includes circuitry in the subwoofer that receives commands from the remote control via the IR receiver (e.g., circuitry that receives a signal from the remote to control the volume of the subwoofer). Moreover, as we explained in the IPR-350 Final Written Decision, the location of the particular circuitry would have been a predictable design choice, with the circuitry performing the same intended function regardless of whether it is located in the subwoofer or a satellite speaker. *Id.*

In view of the foregoing, we find that each limitation of claim 55 is taught in one or more of WinAmp, Irman Web Pages, and Altec Lansing Manual. We have considered Petitioner's evidence of a reason to combine these references as well as Patent Owner's responsive evidence. That evidence is summarized above for claims 1 and 28. Upon consideration of all of the evidence, we conclude that a skilled artisan would have combined WinAmp, Irman Web Pages, and Altec Lansing Manual in a manner that results in claim 55 for the same reason. Accordingly, Petitioner has shown, by a preponderance of the evidence, that claim 55 would have been obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual.

5. *Claims 25, 26, 52, and 53*

Claim 25 depends from claim 1. Claim 52 depends from claim 28. Both claims 25 and 52 recite "wherein the sound reproduction system is configured to respond to signals received from the computer."

Petitioner introduces evidence that Altec Lansing Manual describes a speaker that automatically turns on when it receives a music signal from an attached computer. Pet. 15, 19, 22. Petitioner also introduces evidence that the speaker can adjust a function, such as volume, in response to a command over a USB connection. *Id.* Petitioner contends that this disclosure teaches a speaker configured to respond (automatically turn on or adjust a function) to signals (music signals or USB signals) received from the computer. *Id.*

Relying on its proposed construction of “configured to respond to signals received from the computer,” Patent Owner argues that Altec Lansing Manual does not teach that the speakers reply or answer back to the computer in response to receiving a control or music signal. PO Resp. 36–38.

In Section II.C.1 above, we construed “configured to respond to signals received from the computer” to mean “configured to take an action as a result of signals received from a computer.” As explained above, the term does not require that the sound reproduction system be configured to answer or reply to the computer, or to send a responsive communication back to the computer.

Based on our claim construction, we find that a sound reproduction system configured to turn on when it receives an audio signal is a sound reproduction system configured to take an action as a result of signals received from a computer. Likewise, a sound reproduction system configured to adjust a function, such as volume, when it receives a signal received over a USB connection is a sound reproduction system configured to take an action as a result of signals received from a computer. In either case, we find that Altec Lansing Manual teaches a “sound reproduction

system [that] is configured to respond to signals received from the computer.”

Claims 26 and 53 depend from claims 25 and 52, respectively. We have considered Petitioner’s evidence and arguments for claims 26 and 53, *see* Pet. 19, 22, and find that the additional limitations of these claims are taught in WinAmp, Irman Web Pages, and Altec Lansing Manual for the reasons stated in the Petition. Patent Owner does not direct arguments to claims 26 and 53 specifically.

We conclude that a skilled artisan would have combined WinAmp, Irman Web Pages, and Altec Lansing Manual for the reasons given for claims 1 and 28, above.

For the foregoing reasons, after consideration of the full record, we conclude that Petitioner has shown, by a preponderance of the evidence, that claims 25, 26, 52, and 53 would have been obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual.

6. Claims 56–61 and 75

Claims 56–61 and 75 depend from claim 55. We have considered Petitioner’s evidence and argument for claims 56–61 and 75, *see* Pet. 27–28, and find that their limitations are taught in one or more of WinAmp, Irman Web Pages, and Altec Lansing Manual for the reasons stated in the Petition. We conclude that a skilled artisan would have combined WinAmp, Irman Web Pages, and Altec Lansing Manual for the reasons given for claim 55. Patent Owner does not direct arguments to claims 56–61 and 75 specifically. Accordingly, on the full record, Petitioner has shown, by a preponderance of

the evidence, that claims 56–61 and 75 would have been obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual.

III. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that claims 25, 26, 52, 53, 55–61, and 75 are unpatentable as obvious over WinAmp, Irman Web Pages, and Altec Lansing Manual.

IV. ORDER

For the reasons given, it is

ORDERED that, based on a preponderance of the evidence, claims 25, 26, 52, 53, 55–61, and 75 of U.S. Patent No. 8,401,682 B2 are unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *granted-in-part*; page seven of Exhibit 1011 is excluded; Patent Owner's Motion to Exclude otherwise is *denied*; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to this proceeding seeking judicial review of it must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2014-00343
Patent 8,401,682 B2

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