IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PERSONAL AUDIO, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 17-1751-CFC-CJB
	)	
GOOGLELLC,	)	
	)	
Defendant.	)	

REPORT AND RECOMMENDATION

In this action filed by Plaintiff Personal Audio, LLC ("PA" or "Plaintiff') against Google LLC ("Google" or "Defendant"), PA alleges infringement of United States Patent Nos. 6,199,076 (the '"076 patent") and 7,509,178 (the '"178 patent" and collectively with the '076 patent, "the asserted patents"). Presently before the Court is the matter of claim construction. The Court recommends that the District Court adopt the constructions as set forth below.

I.   BACKGROUND

A.   The Asserted Patents

The asserted patents are related and share a common specification. *(See* D.I. 147, ex. A (hereinafter, the '"076 patent"); *id,* ex. B (hereinafter, the '"178 patent"); D.I. 38 at ¶ 30; D.I. 159 at 1 n.1)[1] The '076 patent is entitled "Audio Program Player Including a Dynamic Program Selection Controller" and was issued on March 6, 2001 from U.S. Appl. No. 08/724,813, which was filed on October 2, 1996. ('076 patent) The '178 patent, entitled "Audio Program

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[1]   In light of this, the Court will typically only cite to one of the two patents when citing to p01iions of the patents' common specification.

Distribution and Playback System," is a divisional of the application that led to the '076 patent, and was issued on March 24, 2009. ('178 patent)

The asserted patents are directed to an audio program player that automatically plays a predetermined schedule of audio program segments (e.g., songs) from a program library. (D.I. 38 at ,r,r 31, 33; '076 patent, col. 2:6-8; D.I. 159 at 1) The claimed player further allows a listener to dynamically alter the sequence and content of the audio program segments presented. (D.I. 38 at ,r,r 31, 33; '076 patent, cols. **1**:7-9, **1**:64-2:3, 2:44-47, 2:55-58) The Abstract of the patents explains that "a host system organizes and transmits program segments to client subscriber locations" (i.e., to players). ('076 patent, Abstract) The audio program player may be implemented by a conventional laptop or desktop computer equipped with, *inter alia:* (l) a sound card connected to a speaker; and (2) a modem connected to the Internet that downloads the program information from the remote server and uploads program selections and preferences as well as usage data. *(Id.,* cols. 4:32-5:45)

B. Procedural History

On September 15, 2015, PA filed this action against Google in the United States District Court for the Eastern District of Texas ("Eastern District of Texas"), alleging infringement of the asserted patents. (D.I. 1 at ,r,r 1-4) Prior to filing the instant lawsuit, PA had asserted the '076 patent and '178 patent in six other litigations in the Eastern District of Texas. (D.I. 128 at ,r 7) In one of these litigations, *Personal Audio, LLC v. Apple, Inc.,* Civil Action No. 9:09CV1 1 1 (the *"Apple* litigation"), the Eastern District of Texas Court issued multiple orders in which it construed ce1iain terms of the asserted patents, (D.I. 160 (hereinafter, "Sano Deel."), exs. 1-3), and further discussed the meaning of claim terms in connection with opinions relating to the

defendant's motion for summary judgment of indefiniteness and motions for judgment as a matter of law, *(id.,* ex. 16; D.I. 147 (hereinafter, "Almeroth Deel."), ex. C).

In conjunction with the *Apple* litigation, an *ex parte* reexamination proceeding was instituted by the United States Patent and Trademark Office ("PTO") with respect to ce1iain claims of the '076 patent, and an *inter partes* reexamination proceeding was instituted by the PTO with respect to the '178 patent. *(See* D.I. 147, ex. Z at 3-4) The reexamination examiners ultimately confirmed the relevant claims of the '076 patent, and the reexamination proceeding for the '178 patent was eventually terminated as a result of the conclusion of the *Apple* litigation. *(Id.)*

Sho1ily after PA initiated this action in the Eastern District of Texas, the case was stayed, at Google's request, pending *inter partes* review ("IPR") proceedings (the "IPR proceedings") involving certain claims of both asserted patents, which had been instituted by the Patent Trial and Appeal Board ("PTAB") of the PTO. *(See* D.I. 234 at 4) Those proceedings concluded by September 2016. (Almeroth Deel., exs. G, H) With respect to the '076 patent, the PTAB found that: (1) claims 1 and 4 were unpatentable; and (2) Google had not proven that claims 2, 3, 14 and 15 were unpatentable. *(Id.,* ex. G at 57; D.I. 23 at 1) As for the '178 patent, the PTAB found that: (1) claims 1-4, 9 and 13 were unpatentable; and (2) Google had not proven that claims 5-8, 14-17, 28 and 29 were unpatentable. (Almeroth Deel., ex.Hat 44; D.I. 23 at 1) The parties filed cross-appeals with respect to those decisions to the United States Court of Appeals for the Federal Circuit, and the Federal Circuit ultimately affirmed the PTAB's conclusions in all respects. *Google LLC v. Personal Audio, LLC,* 743 F. App'x 978 (Fed. Cir. 2018).

In January 2017, the Eastern District of Texas Court lifted the stay, (D.I. 31), but the case was thereafter transferred to this District in December 2017, (D.I. 103). Upon transfer here, the case was assigned to the Vacant Judgeship docket on December 13, 2017, and was referred to the Court "for handling through case-dispositive motions[,]" including "deciding non-dispositive matters and making recommendations as to the resolution of dispositive matters." (Docket Item, December 13, 2017) The case has since been re-assigned to District Judge Colm F. Connolly, with the substance of the referral to the Comi remaining the same. (Docket Item, September 10, 2018)

The parties completed initial briefing on claim construction on July 18, 2018. (D.I. 146; D.I. 159; D.I. 176; D.I. 186) The Court held a *Markman* hearing on August 1, 2018. (D.I. 250 (hereinafter, "Tr.")) Following the hearing, on August 7, 2018, Google submitted a supplemental letter brief to address caselaw newly disclosed by PA during the *Markman* hearing. (D.I. 202)

II.   STANDARD OF REVIEW

A.   General Claim Construction Principles

It is well-understood that "[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention." *Corning Glass Works v. Sumitomo Elec. US.A., Inc.,* 868 F.2d 1251, 1257 (Fed. Cir. 1989). Claim construction is a generally a question of law, although subsidiary fact finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.,* 135 S. Ct. 831, 837-38 (2015).

The Court should typically assign claim terms their "ordinary and customary meaning[,]" which is "the meaning that the term[s] would have to a person of ordinary skill in the art ['POSITA'] in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips v. AWH Corp.,* 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (citations omitted). However, when determining the ordinary meaning of claim terms, the Court should not extract and isolate those terms from the context of the patent; rather it should endeavor to reflect their "meaning to the ordinary artisan after reading the entire patent." *Id* at 1321; *see also Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.,* 815 F.3d 1314, 1320 (Fed. Cir. 2016).

In proceeding with claim construction, the Court should look first and foremost to the language of the claims themselves, because "[i]t is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips,* 415 F.3d at 1312 (internal quotation marks and citations omitted). For example, the context in which a term is used in a claim may be "highly instructive." *Id* at 1314. In addition, "[o]ther claims of the patent in question, both asse1ied and unasse1ied, can ... be valuable" in discerning the meaning of a paiiicular claim term. *Id.* This is "[b]ecause claim terms are normally used consistently throughout the patent, [and so] the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Id.* Moreover, "[d]ifferences among claims can also be a useful guide[,]" as when "the presence of a dependent claim that adds a paiiicular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id* at 1314-15.

In addition to the words of the claims, the Comi should look to other intrinsic evidence. For example, the Comi should analyze the patent specification, which "may reveal a special definition given to a claim term ... that differs from the meaning [that term] would otherwise possess" or may reveal an intentional disclaimer of claim scope. *Id.* at 1316. Even if the specification does not contain such revelations, it "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed te1m." *Id.* at 1315 (internal quotation marks and citation omitted). That said, however, the specification "is not a substitute for, nor can it be used to rewrite, the chosen claim language." *SuperGuide Corp. v. DirecTV Enters., Inc.,* 358 F.3d 870, 875 (Fed. Cir. 2004). And a court should also consider the patent's prosecution history, if it is in evidence, because it "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution[.]" *Phillips,* 415 F.3d at 1317.

Extrinsic evidence, "including expe1i and inventor testimony, dictionaries, and learned treatises[,]" can also "shed useful light on the relevant art[.]" *Id.* (internal quotation marks and citations omitted). Overall, while extrinsic evidence may be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id.* (internal quotation marks and citations omitted); *accord Markman v. Westview Instruments, Inc.,* 52 F.3d 967, 981 (Fed. Cir. 1995).

In utilizing these resources during claim construction, comis should keep in mind that "[t]he construction that stays true to the claim language and most naturally aligns with the

patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC*

v. Marposs Societa 'per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

> **B. Principles for Construction of Means-Plus-Function Limitations**

35 U.S.C. § 112, **¶** 6 ("Section 112, paragraph 6")2 provided as follows:

> An element in a claim for a combination may be expressed as a
> means or step for performing a specified function without the
> recital of structure, material, or acts in support thereof, and such
> claim shall be construed to cover the corresponding structure,
> material, or acts described in the specification and equivalents
> thereof.

The "means-plus-function" technique of claim drafting is a "convenience" that allows a patentee

to express a claim limitation in functional terms "without requiring the patentee to recite in the

claims all possible structures" that could perform that function. *Med. Instrumentation &*

Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1211 (Fed. Cir. 2003). In exchange for getting

the benefit of this drafting convenience, however, patentees must disclose, in the written

description of the patent, a corresponding structure for performing the claimed function. *Noah*

Sys, Inc. v. Intuit Inc., 675 F.3d 1302, 1318 (Fed. Cir. 2012); *see also Elekta,* 344 F.3d at 1211

("[T]he price that must be paid for use of that convenience is limitation of the claim to the means

specified in the written description and equivalents thereof.") (citation omitted). A patentee

satisfies this requirement "only if the specification or prosecution history *clearly links or*

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2 The Comi here refers to the version of Section 112 as it existed prior to the
passage of the Leahy-Smith America Invents Act ("AIA"). Although the structure of Section
112 changed after the AIA's passage, those changes are applicable only to any patent application
filed on or after September 16, 2012. *See Alcon Research Ltd. v. Barr Labs., Inc.,* 745 F.3d
1180, 1183 n.1 (Fed. Cir. 2014). Because the applications at issue here were filed before that
date, the Court refers to the pre-AIA version of Section 112.

associates that structure to the function recited in the claim." *In re Aoyama,* 656 F.3d 1293, 1297 (Fed. Cir. 2011) (emphasis added) (quoting *Elekta,* 344 F.3d at 1210); *see also Elekta,* 344 F.3d at 1220 ("The public should not be required to guess as to the structure for which the patentee enjoys the right to exclude. The public instead is entitled to know precisely what kind of structure the patentee has selected for the claimed functions, when claims are written according to section 112, paragraph 6."). "If the specification does not contain an adequate disclosure of the structure that corresponds to the claimed function, the patentee will have failed to particularly point out and distinctly claim the invention as required by ... section 112, [paragraph 2], which renders the claim invalid for indefiniteness." *Blackboard, Inc. v. Desire2Learn Inc.,* 574 F.3d 1371, 1382 (Fed. Cir. 2009) (internal quotation marks and citation omitted).[3]

Construing a means-plus-function limitation is a two-step process. The first step is determining the claimed function of the limitation. *Williamson v. Citrix Online, LLC,* 792 F.3d 1339, 1351 (Fed. Cir. 2015); *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.,* 248 F.3d 1303, 1311 (Fed. Cir. 2001). The second step is identifying the corresponding structure disclosed in the specification and equivalents thereof. *Williamson,* 792 F.3d at 1351; *Medtronic, Inc.,* 248 F.3d at 1311.

When a patentee claims a computer-implemented invention and invokes means-plus-function limitations, the United States Court of Appeals for the Federal Circuit has "consistently required that the structure disclosed in the specification be more than simply a general purpose

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[3]   Section 112, paragraph 2 provided that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2.

computer or microprocessor." *Aristocrat Techs. Aust!. Pty Ltd. v. Int'! Game Tech.,* 521 F.3d 1328, 1333 (Fed. Cir. 2008). This requirement seeks to avoid "pure functional claiming[,]" *id.,* and mandates that the patent must disclose sufficient algorithmic structure[4] or some other description explaining how the computer performs the claimed function, *see id.* at 1332-37; *Blackboard, Inc,* 574 F.3d at 1383-85; *Finisar Corp. v. DirecTV Grp., Inc.,* 523 F.3d 1323, 1340 (Fed. Cir. 2008) (explaining that a patentee is permitted "to express that algorithm in any understandable terms including as a mathematical formula, in prose, [] or as a flow chart, or in any other manner that provides sufficient structure") (internal citation omitted). The Federal Circuit has identified a "narrow exception" to this requirement; no algorithm need be disclosed "when the function 'can be achieved by any general purpose computer without special programming.'" *Ergo Licensing, LLC v. CareFusion 303, Inc.,* 673 F.3d 1361, 1364-65 (Fed. Cir. 2012) (quoting *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d 1303, 1316 (Fed. Cir. 2011)). For example, "a general-purpose computer is sufficient structure if the function of a term such as 'means for processing' requires no more than merely 'processing,' which any general-purpose computer may do without special programming." *Id.* at 1365. The Federal Circuit has emphasized that "[i]t is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed." *Id; see also Alfred E. Mann Found. for Sci. Research v. Cochlear Corp.,* 841 F.3d 1334, 1342 (Fed. Cir. 2016).

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[4] An algorithm is "'a step-by-step procedure for accomplishing a given result[.]'" *Alfred E. Mann Found. for Sci. Research v. Cochlear Corp.,* 841 F.3d 1334, 1342 (Fed. Cir. 2016) (citation omitted).

III. DISCUSSION

The parties currently have disputes regarding ten terms or sets of terms (hereinafter,

"terms").[5] This Report and Recommendation addresses the first three terms, in the order in

which the paiiies addressed them at the *Markman* hearing. The other seven terms will be

addressed in a forthcoming Report and Recommendation(s).

A. "file"

The claim term "file" appears in all asserted claims of the patents-in-suit. The use of the

disputed term in claim 1 of the '178 patent is representative. Accordingly, this claim is

reproduced below, with the disputed term highlighted:

> **1.** An audio program player comprising:
> a communications port for establishing a data communications link
> for downloading a plurality of separate digital compressed audio
> *program.files* and a separate sequencing.file from one or more
> server computers,
> a digital memory unit coupled to said communications port for
> persistently storing said separate digital compressed audio program
> *files* and said separate sequencing.file, said sequencing.file
> containing data specifying an ordered sequence of a collection of
> said separate digital compressed audio *program.files,*
> an audio output unit including at least one speaker or headset for
> reproducing said audio program.files in audible form perceptible to
> a listener,
> one or more manual controls for accepting commands from said
> listener, and
> a processor for continuously delivering a succession of said audio
> *program.files* in said collection to said audio output unit in said
> ordered sequence specified by said sequencing.file in the absence
> of a program selection command from said listener, and for
> discontinuing the reproduction of the currently playing audio

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[5]   The parties originally submitted an additional set of terms for claim construction:
"player"/"audio program player"/"programmed digital computer[,]" which are found in all
asserted claims of the patents-in-suit. *(See, e.g.,* D.I. 159 at 2; D.I. 176 at 14) During the
Markman hearing, however, the parties agreed that these terms may be given their plain and
ordinary meaning, and the Court therefore will not fmiher construe them. (Tr. at 174-75)

program.file and instead continuing the reproduction at the
beginning of a listener-selected one of said audio *program.files* in
said collection in response to a program selection command from
said listener.

('178 patent, cols. 45:60-46:18 (emphasis added))

The parties' competing proposed constructions for "file" are set out in the chart below:

Term	Plaintiff's Proposed Construction	Defendant's Proposed Construction
file	any collection of data that is stored and manipulated as a unit or, alternatively: a collection of data that is stored and manipulated as a unit by a file management or database system	a collection of data that is stored and manipulated as a named unit by a file-management system

(D.I. 146, Appendix A at Ref. 1; D.I. 176 at 14) As reflected in these proposals, the parties have

two disputes with respect to the term "file": (1) whether the term refers to a collection of data

that must be stored and manipulated *by a.file-management system* (Google's position) or may

alternatively simply be stored and manipulated by either a file-management system *or* a database

system (PA's position); and (2) whether, as Google suggests, the "file" must be *named. (See* D.I.

159 at 9; Tr. at 11-12) Google argues that while it is undisputed that "file" and "data" must

mean two different things, (D.I. 186 at 13; *see also, e.g.,* '076 patent, 46:18 (claim 1 reciting

"means for receiving and storing *a.file of data")* (emphasis added)), PA's "broad construction"

improperly conflates "file" and "data[,]" (D.I. 159 at 10-11). During the *Markman* hearing,

Google's counsel explained that with respect to this term, "the key issue that is really going to

drive the construction is to make sure that a file is construed as something different from data."

(Tr. at 11) And in Google's view, the only way to do that is to require that a "file" be a *named*

collection of data stored and manipulated as a unit by *afile-management system. (Id.* at 11-13 ("[A] file is distinguished by the fact that it is also named and stored in a file-management system whereas data that is not a file cannot be stored in a file-management system."); *see id.* at 20)

The Court will first assess Google's proposed "file-management system" limitation. As to that limitation, the Court is not persuaded that, in the context of these patents, a "file" must be limited to something (i.e., data) stored and manipulated only by a file-management system. This is so for four reasons.

First, despite Google's argument to the contrary, the Court does not understand PA's alternative proposed construction for "file" (i.e, "a collection of data that is stored and manipulated as a unit by a file management or database system") to mean the same thing as "data" and to thus improperly conflate "file" and "data." PA does not simply propose to construe "file" to mean "data." Instead, its proposal adds additional parameters: (1) there must be a *collection* of data; (2) such collection must be stored and manipulated *as a unit;* and (3) such storing and manipulation is by *afile-management system or a database system. (See id.* at 23-24 (PA's counsel explaining that its proposal amounts to more than just "unstructured" data, instead encompassing a block of data that is stored and manipulated by a database system (or file-management system)))

Second, it is undisputed that the patents nowhere use the term "file-management system" in describing the invention. *(See* D.I. 146 at 3; Tr. at 14) And thus, as PA puts it, Google "ignores that the patents teach storing and accessing files and the data within files without ever

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teaching that a file-management system is necessary." (D.I. 146 at 4)[6] Moreover, while the

patents do not include the phraseology "file-management system," they do refer to "database[s]"

that "store[]" "file[s]." *(See, e.g.,* '076 patent, cols. 5:66-6:2, 6:34-44; D.I. 146 at 4)

Third, the patents refer to database tables as files, which (as PA asse1is) indicates that the

construction for "file" should encompass data structures that are stored and manipulated by

database systems. (D.I. 146 at 3-4; D.I. 176 at 14; Tr. at 7-8, 25) For instance, in discussing the

preferred embodiment, the patents refer to a particular table (Table 301) that is stored in a

database as a "file":

> The [program] selections made by and uploaded from the
> [individual] subscriber take the form of a *file* (sequence) of 32 bit
> integers, each integer (ProgramID) designating a particular
> program segment. This *file of integers* is placed in a *relational
> database Requested Table seen at 301* in Fig. **4** ***. . . .*** The Program
> Segment records in the Programs Table **303** are relationally linked
> using the ProgramID key to other tables including[] the Requested
> Table **301** discussed above.

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6   During oral argument, Google's counsel argued that while the patents did not
expressly use the term "file-management system," there are "examples of file-management
systems" therein. (Tr. at 14) To that end, counsel asse1ied that the patents refer to the notion of
a file transfer protocol ("FTP") as the means for downloading files to the player, and that such a
protocol deals only with files, not just any collection of data. *(Id.* at 13-14; *see, e.g.,* '076 patent,
col. 5:47-51 ("The host server **101** provides a FTP server interface ... which provides file
transfer protocol services to the player **103[.]"**)) Google did not make this point in its briefing,
(see D.I. 159; D.I. 186), though Google's expe1i did briefly mention it in his declaration, *(see*
D.I. 162 at **,r** 18 (explaining that the POSITA would not understand "file" in the context of
"receiving and storing" to mean any unit of data, especially given the patents' numerous
references to the FTP server as being the tool that downloads files to the player)). However, it is
not entirely clear from Google's limited arguments on this point whether a FTP actually *is* a
"file-management system," or instead simply constitutes instructions for transferring files. *(See,
e.g., id.* at 7 n.l (Google's expe1i stating that FTP is "a fast, application-level protocol widely
used for copying files to and from remote computer systems on a network using TCP/IP, such as
the Internet"); Tr. at 14 (Google's counsel responding that "[y]es[,]" FTP is the file-management
system but then adding "[w]ell, it's a system that deals only with files")) And so the Court is not
convinced that it should limit the construction of "file" to requiring a file-management system on
the basis of these references to "FTP" in the patents' specifications.

('178 patent, col. 17:15-61 (emphasis added))7 And earlier, the patents explain that at step 219,

"the selections made by the user at **217** as well as the contents of the usage log recorded at **215**

are uploaded to the server as a requested.file *(seen at **301** in Fig. **4).''** *(Id.,* col. 9:50-52

(emphasis added)) Additionally, the patents describe another database table ("Table 307") as a

"file" which is formed from segments added to Table 301:

> The Program_Segment records in the Programs Table **303** are *relationally linked* using the ProgramID key to *other tables* including ... *Schedule Table **307*** which contains the recommended sequence of program segments for the next playback session[.]

(Id., col. 17:58-64 (emphasis added))

> The programs, advertising and announcement segments which are added to the Request Table **301** to form the *Schedule Table **307*** are determined by a matching procedure **342** which may be better understood by first considering the content of the data structures which provide data utilized to make those selections.

(Id., col. 18:37-42 (emphasis added))

> As described in more detail later in connection with FIGS. **4** and **5,** the sequence of program segments to be presented to the user is formed into a *schedule file (seen at **307** in Fig. **4)*** consisting of a sequence of program segment identification numbers which are used to compile a sequencing file, called the selections file, illustrated at **351** in FIG. **5,** which contains more detailed information about the sequence of events which occur during playback.

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[7]   Google responds that these references are irrelevant to the construction of the claimed "files" because "the server-side 'database' of 32-bit integers relied on by PA has nothing to do with the 'files' that are received and stored by the player." (D.I. 186 at 13; *see also* D.I. 159 at 11) At a minimum, however, the above-referenced portions of the specification provide support for the idea that-at least as a general matter-a "file" is something that can be stored in a database system.

(Id., col. 12:9-16 (emphasis added)) In the Court's view, the patents' references to these structures as both database tables and files supports PA's argument that a file should be construed to mean data stored and manipulated as a unit by a file-management system *or* a database system.[8] *(See* Tr. at 25)[9]

Fourth and finally, the extrinsic evidence further supports that a "file" is not *always* something that is stored and manipulated by a file-management system. (D.I. 146 at 4) For example, in support of its argument, Google cites to a dictionary that defines "file" in a way mirroring Google's construction ("any collection of data that is stored and manipulated as a named unit by a file-management system"). (D.I. 147 at ¶ 39 & ex. M (citing *Academic Press Dictionary of Science & Technology* 826 (1st ed. 1992))) However, that same dictionary provides another definition for "file" that makes no mention of a "file-management system." *(Id.)* This alternative definition simply describes a "file" as "a collection of items with certain common aspects, organized for a specific purpose and stored or processed as a unit[.]" *(Id.)*

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[8] Google's position that server-side database structures have nothing to do with the "files" received and stored by the player seems to overlook the fact that the specification not only refers to Table 301 and Table 307 as both files and database tables, but also discloses that Table 307 is downloaded *by the player. (See, e.g.,* '076 patent, col. 18:29-31) Indeed, when pressed about PA's reliance on Table 307 in support of its proposed construction during the *Markman* hearing, Google seemed to have a different answer as to why Table 307 is not helpful to PA-there explaining that even if a file can "go into" a database system, it *also* must be "capable of being stored and managed by a file-management system." (Tr. at 19-20)

[9] Google asse1is that certain arguments that PA made during reexamination proceedings support Google's position that a "file" must be received and stored by a file-management system (and not simply by a database system). (D.I. 159 at 10 (citing D.I. 160, ex. 11 at 8 & *id.,* ex. 9 at 3); Tr. at 16; Google's Markman Presentation, Slide 16) This stretches the prosecution history too far. As PA retorts, in these pmiions of the prosecution history, PA was distinguishing the prior art on other bases; Google has not pointed to anywhere in the prosecution history where the patentee stated that a file could not be stored and manipulated by a database system. (Tr. at 9-10; PA's Markman Presentation, Slides 8-11)

Similarly, other dictionaries from the relevant time period do not require that a file be something that is only stored in and manipulated by a "file-management system." For example, one such dictionary defines "file" as "'a block of information stored on disk, tape, or similar media. A file may contain a program, a document, or a collection of data (such as a mailing list).'" *(Id.* at 38 & ex. J (quoting *Barron's Dictiona,y of Computer and Internet Terms* (5th ed. 1996))) Another dictionary defines "file" to mean:

> A complete, named collection of information, such as a program, a set of data used by a program, or a user-created document. A file is the basic unit of storage that enables a computer to distinguish one set of information from another. A file is the "glue" that binds a conglomeration of instructions, numbers, words, or images into a coherent unit that a user can retrieve, change, delete, save or send to an output device.

(Id. at 38 & ex. K (quoting *Microsoft Press Computer Dictionary* (3d ed. 1997)))[10] These dictionary definitions also help to underscore that a "file" is not something that must always be associated with a file-management system. (D.I. 146 at 4; Tr. at 7)

With regard to the parties' second dispute (that is, whether a file must constitute data that is a "named" unit), the Court will adopt that portion of Google's construction. In its opening brief, Google argued that the patent specification "confirms that 'files' must be identified by name, distinct from unnamed collections of data[,]" and it cited to numerous examples of the patents: (1) describing files as being requested, downloaded, or stored using a filename; and (2) making reference to named files. (D.I. 159 at 10; *see also* Tr. at 13-14) In its briefing, PA did not address this dispute at all. During the *Markman* hearing, PA only raised the issue in response

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[10] PA's expert points to a few more dictionary definitions for "file" that purportedly do not include reference to a "file-management system," (D.I. 147 at 38), but the attached po1iions of the dictionaries do not appear to include the pages that define "file[,]" *(id.,* exs. I, L).

to questioning from the Court. *(See, e.g.,* Tr. at 10) This all suggests that PA's opposition on this point is not especially strong.

PA ultimately explained that its hesitation with respect to the "named" limitation is that it is not sure what the scope of "named" is-for instance, does a file with an identifier amount to a "named" file? *(Id.* at 10-11, 23-24) Because this issue was not well-argued in the briefs, Google's response to PA's question (about what it means for a file to be "named") is unclear. In light of all of this, the Court will recommend adoption of the "named" pmiion of Google's construction, and to the extent that there are disputes down the line with respect to what "named" means, the parties may address those during the summary judgment stage of the case. *(See id.* at 10 (PA's counsel acknowledging that the "named" issue is one "probably [best] taken up on summary judgment"))

For all of the above reasons, the Court recommends that the term "file" be construed as "a collection of data that is stored and manipulated as a named unit by a file-management or database system."

B.   "sequencing file" terms

The terms "sequencing file" and "playback session sequencing file" appear in independent claims 1 and 14 of the '178 patent, respectively, while the term "file of data establishing a sequence" is part of the means-plus-function element "a means for receiving and storing a file establishing a sequence" of the independent claims of the '076 patent (collectively, the "sequencing file limitations" or the "sequencing file terms"). *(See, e.g.,* D.I. 146 at 4-5) The use of the disputed term in claim 1 of the '178 patent is representative. Accordingly, this claim is reproduced again below for ease of reference, with the disputed term highlighted:

1. An audio program player comprising:

a communications port for establishing a data communications link
for downloading a plurality of separate digital compressed audio
program files and a separate *sequencing file* from one or more
server computers,
a digital memory unit coupled to said communications p01i for
persistently storing said separate digital compressed audio program
files and said separate *sequencing file,* said *sequencing file*
containing data specifying an ordered sequence of a collection of
said separate digital compressed audio program files,
an audio output unit including at least one speaker or headset for
reproducing said audio program files in audible form perceptible to
a listener,
one or more manual controls for accepting commands from said
listener, and
a processor for continuously delivering a succession of said audio
program files in said collection to said audio output unit in said
ordered sequence specified by said *sequencing file* in the absence
of a program selection command from said listener, and for
discontinuing the reproduction of the currently playing audio
program file and instead continuing the reproduction at the
beginning of a listener-selected one of said audio program files in
said collection in response to a program selection command from
said listener.

('178 patent, cols. 45:60-46:18 (emphasis added))

The parties' competing proposed constructions for the "sequencing file" limitations are

set out in the chart below:

Term	Plaintiff's Proposed Construction	Defendant's Proposed Construction
"sequencing file" "file of data establishing a sequence" "playback session sequencing file"	a file of data that identifies the order in which audio program segments chosen by or for a user are to be played	A file that is received by the player, stored, and used by the processor to both control playback of each song in the ordered sequence and respond to control commands

(D.I. 146, Appendix A at Ref. 2) The parties' primary dispute with respect to the sequencing file

terms is whether the construction should include the following three limitations set out in

Google's proposal (hereinafter, the "use limitations"); these use limitations would require that a

sequencing file must always be: (1) received by the player; (2) stored by the player; and (3) used by the processor to both control playback of each song in the ordered sequence and respond to control commands. (D.I. 146 at 5; D.I. 159 at 4) Google, on the one hand, argues that its construction is mandated by the claim language and the prosecution history. (D.I. 159 at 4-9; D.I. 186 at 1-7; Tr. at 67-69) PA, on the other hand, asse1is that it is improper to import these use limitations into a construction for the sequencing file terms; it argues that to the extent that the use limitations are required by the claims, that is because the *surrounding claim language* makes this so-not because these limitations are *bound up in the definition of the sequencing file terms themselves.* (D.I. 146 at 5; Tr. at 32)

In assessing the respective arguments, it is helpful to first have an understanding of the bigger picture. In other words, why are the parties fighting about this? With its proposed construction, Google's position is that each reference to "sequencing file" in the claims "refers to the *same* 'sequencing file'"-meaning one single sequencing file is received by the player and stored by the player, and it is that file and *that file only* that is used to control playback of each song in the ordered sequence, and used to respond to control commands. (D.I. 186 at 1 (emphasis in original); *see also* D.I. 159 at 4-5; Tr. at 74-75) For its part, PA acknowledges that every claim requires "one sequencing file to be received, to be stored, and its sequence be referenced for use to control playback and to respond to commands[.]" (Tr. at 47; *see also id* at 49) Beyond that, however, PA asserts that the claims do *not* require that the received sequencing file and *only* that sequencing file be scanned and used in certain algorithmic steps (which steps will be discussed in detail in connection with the next set of terms addressed herein, the "means responsive" limitations). *(Id.* at 47; D.I. 146 at 2-3, 8-9) Instead, according to PA, the patents

allow for the *sequence* from that received sequencing file to be used to respond to control

playback-for example, after it has been copied onto another file. (Tr. at 46-48)[11]

The Court ultimately concludes that PA's proposed construction for the sequencing file

limitations is the correct one. To explain why this is so, the Comi will address, in turn, the claim

language, the patent specification and the prosecution history.

1.   Claim Language

PA argues that the sequencing file limitations should be construed based on what such a

file actually *is* (a file of data that identifies the order in which audio program segments chosen by

or for a user are to be played), instead of construing the term based on how a sequencing file may

be *used* (Tr. at 32) To that end, PA points out that the use limitations in Google's construction

are found explicitly in the surrounding claim language, where applicable. (D.I. 146 at 5; Tr. at

32)[12] Claim 1 of the '178 patent, for example, recites a sequencing file that is: (1) received by

the player (i.e., the player has a communications port for "downloading" the sequencing file); (2)

stored at the player; and (3) used to control playback (i.e., the player has a processor for

delivering audio program files "in said ordered sequence" specified by "said sequencing file"

and for "continuing the reproduction at the beginning of a listener-selected one of said audio

program files"). *(See* PA's Markman Presentation, Slide 36) In PA's view, the use limitations

included in Google's proposal should not be included in the construction for the sequencing file

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[11]   During the *Markman* hearing, PA explained that the "real battle" with respect to
these terms relates to the "means responsive" terms that will be taken up next, (Tr. at 46), and the
parties' dispute will be clearer in the discussion of that term set.

[12]   The Court notes that in the *Apple* litigation, the Eastern District of Texas Comi
used a similar rationale in construing the "sequencing file" terms in a manner similar to that
proposed here by PA. (D.I. 147, ex. D at 20-21)

limitations, because the claims recite them expressly where they are required, and because the patents make certain other references to sequencing files that are not limited in the manner suggested by Google's construction. (D.I. 146 at 5-6; Tr. at 32-33, 44-46)

Google, for its part, asserts that the claim language demonstrates that the same sequencing file received by the player must be stored by the player, used to control playback of each song in the ordered sequence and used to respond to control commands. (D.I. 186 at 1) In support, Google points out that the claims "recit[e] 'sequencing file' the first time the term appears in the claims, and then recit[e] *'said[] sequencing file'* in every other instance. Accordingly, each 'sequencing file' in the claims refers to the *same* 'sequencing file.'" *(Id.* (certain emphasis in original); *see also* D.I. 159 at 5 ("The references to 'said sequencing file' [in the claims] indicate that it is the same file that is subject to each aspect of the claim."))

When one looks carefully at the claim language, however, it becomes clear that the claims do more than simply make repeated references to "said sequencing file." For instance, as to the player recited in claim 1 of the '178 patent, certain steps require a processor for delivering audio program files *"in said ordered sequence* specified by said sequencing file in the absence of a program selection command from said listener[.]" ('178 patent, col. 46:11-13 (emphasis added)) Similarly, the player claimed in claim 14 of the '178 patent includes an "audio playback unit for automatically and continuously reproducing said audio program files in said collection *in the ordered sequence* specified by said playback session sequencing file[.]" *(Id.,* col. 48:28-32 (emphasis added)) And claim 1 of the '076 patent claims a player with a "means for receiving and storing *a file of data establishing a sequence"* and "means for continuously reproducing said program segments *in the order established by said sequence* in the absence of a control command[.]" ('076 patent, col. 46:18-19, 24-26 (emphasis added)) These references to the use

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of a "sequence" from the sequencing file do not explicitly require that the sequence may be found only on that sequencing file at the time the sequence is used. They simply require that the sequence itself is *originally found* on the sequencing file referenced in the claims.

With the claim language both: (1) otherwise including use limitations like the ones that Google seeks to include in the construction for the "sequencing file" limitations; and (2) seeming to require that, for some of the steps, "[a]ll you have to use is *the sequence* specified by that [received] sequencing file[,]" (Tr. at 49 (emphasis added); *see also id* at 103-04), that language thus appears to more closely support PA's proposal.

2. Patent Specification

PA also heavily relies on the specification in suppmi of its proposed construction. It cites to pmiions of the specification that purportedly demonstrate that in one embodiment, the player downloads a sequencing file (Table 307) and then uses the sequence from Table 307 to create a separate sequencing file ("Selections File 351") that was itself *not* received by the player from the host server. Instead, PA explains, Selections File 351 was *compiled directly on the player* from another sequencing file (i.e., Table 307).[13] (D.I. 146 at 2-3, 5-6; D.I. 176 at 1-3; Tr. at 33-34) PA argues that Selections File 351 is thus an example of a sequencing file that is not received by the player, but is nevertheless used by the player to influence playback; this shows, according to PA, that Google's construction (which requires that a "sequencing file" must always

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[13]   PA fmiher explains that its position here (that Selections File 351 is not downloaded to the player, and instead is created on the player) must be correct, because were both sequencing files (Table 307 and Selections File 351) downloaded by the player, this would lead to an unnecessary redundancy. In other words, "[i]f final Selections File 351 was downloaded ... there would be no reason to also redundantly download a separate Recommended Schedule Table 307." (D.I. 176 at 3; *see also* Tr. at 88 (PA emphasizing that it "doesn't make any sense at all" for the specification to be describing both sequencing files 307 and 351 as being downloaded to the player))

have been downloaded by the player) is incorrect. (D.I. 176 at 1 (PA contending that because this embodiment makes reference to a sequencing file that is not downloaded onto the player, it helps explain why "the naked term 'sequencing file' by itself does not have the[] limitations [suggested by Google]"); *see also* Tr. at 34)

For its part, Google agrees with PA that Table 307 and Selections File 351 are not both downloaded. (D.I. 186 at 3)[14] But what Google argued in its briefing was that: (1) Table 307 is not a "file" at all, but instead a "relational database[;]" and (2) Table 307 "resides on the server (Fig. 4) and *is not downloaded,* stored, or used on the player." *(Id.* at 2 (emphasis added)) Instead, Google's position was that "Selections File 351 *is plainly downloaded;* Table 307 *is not." (Id.* at 3 (emphasis added))[15] Google's position is wrong, for the reasons set out below.

First, the specification clearly refers to the structure that is Table 307 as, *inter alia,* a file.[16] At differing points, the specification names that structure as both a "schedule file" and a "Schedule Table[.]" *(See, e.g.,* '076 patent, cols. 12:5; 17:59)

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[14] Both parties' experts also agree at least on this point. PA's expert, Kevin C. Almeroth, Ph.D., explains that if Selections File 351 was compiled on the server and downloaded to the player, "there would be no reason to also download recommended Schedule File 307, for which the only disclosed purpose is to provide an initial recommended sequence for compiled Selections File 351." (D.I. 177 at ¶ 21) Google's expert, Ketan Mayer-Patel, Ph.D., similarly points out that "[a] person of ordinary skill in the art would understand that there is no need to download both Table 307 and Selections File 351." (D.I. 188 at ¶ 8)

[15] By the time of the *Markman* hearing, Google seemed to back away from the absolute position that Table 307 is not downloaded, contending instead that "[w]hether 307 is also downloaded is more of an open question" and that "the specification suffers from some lack of specificity" in that regard. (Tr. at 84)

[16] This point was also touched on above with respect to the "file" term.

Second, contrary to Google's position, the specification makes it very clear that Table

307 is indeed downloaded to (i.e., received by) the player. To that end, the specification

explicitly states that "the recommended Schedule Table **307** [] is *transferred to the subscriber,*

along with program segments, during the download transfer." (Id., col. 18:29-31 (emphasis

added); *see also id.,* col. 21:61-62 (referring to the *"output* Schedule Table **307")** (emphasis

added); *id.,* col. 27:15 (referring to the "Schedule **307** downloaded to the player"); PA' s

Markman Presentation, Slide 17) The specification also makes more implicit references to the

fact that Table 307 is received by the player. To that end, the patents refer to what must be Table

307-i.e., a file with a *recommended* sequence of program segments-as being downloaded to

the player.[17] For example, the specification explains that: (1) "the *recommended order* and the

identification of the program files making up an individual playback session *are stored in a*

session schedule file (to be described in detail in connection with FIG. **5)[;]"** and (2) the "player

103 *downloads the session schedule file[.]" (See id.,* col. 7:1-11 (emphasis added)) In the next

column, the specification indicates that "[t]he data *downloaded* includes a *recommended*

program sequence file which provisionally identifies the order in which downloaded program

segments are to be played[.]" *(Id.,* col. 8:39-41 (emphasis added))[18] Meanwhile, the

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[17]   It is clear from the specification that Schedule File/Table 307 "contains the
recommended sequence of program segments for the next playback session[.]" ('076 patent, col.
17:59-61 (emphasis added); *see also id.,* col. 18:29 (explaining that the host server adds various
program segments tailored to the subscriber's known preferences to "produc[e] the
recommended Schedule Table **307")** (emphasis added); D.I. 186 at 2 (Google acknowledging
that Schedule File/Table 307 "contains 'the recommended sequence of program segments for the
next playback session'"); Tr. at 35 (PA's counsel pointing out that Table 307 contains the
recommended sequence))

[18]   PA notes that the specification describes in detail what is being downloaded, and
in each case it refers to only a single sequencing file being downloaded that is either explicitly

specification never states that Selections File 351 is downloaded to the player from the server.

(See D.I. 176 at 2; Tr. at 35)

Third, the specification describes Selections File 351 as being *compiledfi·om* Table 307

and it strongly suggests that this compilation happens *on the player.* The specification states:

> As described in more detail later in connection with FIGS. **4** and **5,**
> the sequence of program segments to be presented to the user is
> formed into a schedule file (seen at **307** in FIG. **4)** consisting of a
> sequence of program segment identification numbers which are
> used to compile a sequencing file, called the selections file,
> illustrated at **351** in FIG. **5,** which contains more detailed
> information about the sequence of events which occur during
> playback.

('076 patent, col. 12:3-10) While it is true that this excerpt does not expressly say that the

compiling of Selections File 351 file takes place on the player, *(see* D.I. 159 at 5), the Court

agrees with PA that all signs point to that being the case.

For one thing, as explained above, everyone agrees that it would not make sense for two

sequencing files (both Table 307 and Selections File 351) to be downloaded to the player.

Additionally, as PA points out, Figure 4 seems to "describe[] all the different data structures that

are stored on the host server and created on the host server" and, while it discloses Table 307, it

does not disclose Selections File 351. (Tr. at 34-35; *see also* D.I. 176 at 2)

Moreover, the specification notes that Selections File 351 is compiled from Table 307, as

described above, and then further explains that Selections File 351 "follows" a sequence that is

created by the host server and downloaded to the player (i.e., Table 307):

> The playback operation itself continues from the designated
> playback point in the selections file (seen at **351** in FIG. **5)** which

_____

identified as Table 307, or described as containing a *recommended* sequence. (Tr. at 35; PA's
Markman Presentation, Slides 22-23) That seems correct.

> *follows a program sequence initially created by the host server and*
> *downloaded with the program segments themselves, and then*
> *(optionally) modified by the addition, deletion and re-sequencing*
> *of segment identifiers as discussed earlier in connection with step*
> ***211*** *in FIG.* ***2.***

('076 patent, col. 12:21-27 (emphasis added); *see also* PA's Markman Presentation, Slide 30; Tr.

at 37-38) The earlier discussion referenced in this passage (i.e., the discussion of step 211 of

Figure 2) explains that:

> The data downloaded [to the player] includes a *recommended*
> *program sequence file* which provisionally identifies the order in
> which downloaded program segments are to be played, with the
> initial selection and sequence being established based on user
> preference data by the download compilation processing
> mechanism seen at **151** at the server.
>
> Before a playback session begins, *as indicated at* ***211,*** the
> subscriber has the opportunity to *review and alter* the provisional
> program selections and sequence established as a default by the
> downloaded information from the server. Utilizing the
> programming data and a utility program previously supplied by the
> server, the subscriber may alter the selection and sequence of
> program materials to be played **....**
>
> At the request of the user, the sequence of programming defined by
> the program sequence file (the selections file illustrated at **351** in
> FIG. **5)** is then reproduced for the listener.

('076 patent, col. 8:39-57 (emphasis added)) Figure 2 of the patent, which depicts a flow chart of

the "information distribution functions" of the invention, *(see id.,* col. 4:1-3), in turn depicts
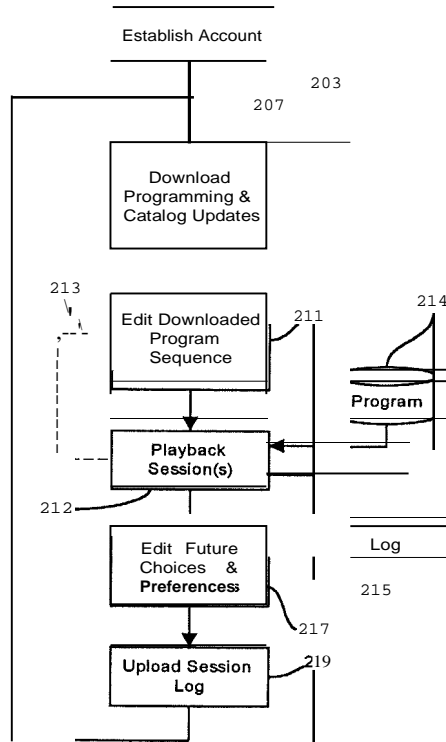
certain of these steps:

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Fig. 2

Taken together, these portions of the specification show that it is Table 307, with its

recommended sequence of programs, that is downloaded at step 207 of Figure 2. Following that

download, the subscriber may then *edit* (on the player) that *downloaded program sequence* (step

211 of Figure 2). What results from such editing is the final sequence of programming defined

in Selections File 351, which is ultimately "reproduced for the listener." *(Id.,* col. 8:54-57; *see*

also id., col. 12:21-27; D.I. 176 at 3 (PA noting that "Selections File 351 contains a final

sequence that is disclosed as being edited after Schedule Table 307 is downloaded. *See* Step 211

of Fig. 2[.]"))

In sum, the Court agrees with PA that the specification discloses: (1) a "sequencing file"

with a recommended sequence that is created on the host server and downloaded by the player;

and (2) another "sequencing file" containing the final sequence that is compiled from the first

sequencing file, after optional modification by the subscriber, on the player. This, in turn,

supports PA's proposal, which: (1) does not require a sequencing file to be something that in all

cases has been received by the player; and (2) does not limit the claims to requiring that the same

received sequencing file-and that file *only-must* be used to "control both playback of each

song in the ordered sequence and respond to control commands."

3. Prosecution History

Google contends that the prosecution histmy supports its construction. (D.I. 159 at 6; Tr.

at 68-69) To that end, the Federal Circuit has explained that "[t]he prosecution history limits the

interpretation of claim terms so as to exclude any interpretation that was disclaimed during

prosecution." *Southwall Techs., Inc. v. Cardinal JG Co.,* 54 F.3d 1570, 1576 (Fed. Cir. 1995).

Google's argument is premised on the following portions of the prosecution history, (D.I. 159 at

6-7):

> • During the reexamination proceeding for the '178 patent,
> the patent owner explained with respect to "sequencing
> file":
>
> **G. Proper Interpretation of "Sequencing File" in Light
> of Specification and Prosecution History**
>
> In light of the specification and file history excerpts quoted
> above, the claim term "sequencing file" (which appears in
> all '178 patent claims and was not a term of aii in 1996) is
> readily understandable to one of skill in the aii as *a file that
> is received by the player, stored, and used by the processor
> to both control playback of each song in the ordered
> sequence and respond to control commands.* [12:16-19;
> 12:27-28; 34:17-19] It is used to determine, for instance,
> what song is to be played next if the user wishes to skip
> forward or back or select a specific song. It is not simply a
> playlist, but rather a file of data that the player references
> when the player is deciding what audio segment to play in
> response to the presence or absence of a control command.
> (D.I. 160, ex. 11 at 8 (emphasis added))

- [T]he term "sequencing file" of independent claim 1 and the term "playback session sequencing file" of independent claim 14, when interpreted in light of the '178 patent specification and file history, should be interpreted to mean "a file that is received by the player and used by the processor to both control playback of each song in the ordered sequence and respond to control commands." *The claimed sequencing file is received by the player and used by the processor to both control playback of each song in the ordered sequence and respond to control commands.* [12:16-19, 34:17-23] *(Id.* at 5 (emphasis in original))

- During the reexamination for the '178 patent, the patentee explained that prior art "does not disclose that the <u>same</u> 'play list' the Examiner equates with the claimed 'sequencing file' is downloaded, persistently stored and used to playback similarly downloaded and persistently stored audio files in the way claim 1 requires." *(Id.,* ex. 12 at 11 (emphasis in original))

- During the reexamination for the '178 patent, Dr. Almeroth submitted a declaration explaining that the opposing expert's declaration "does not state that the 'import function' in the [prior art] discloses downloading a sequencing file and then using that file for playback by the [prior art system]." *(Id.,* ex. 13 at 7)

- During prosecution, the applicants of the '076 patent stated that "[i]n claims 1-17, as amended, applicants set forth *an audio program player* which stores a collection of individual program segments and *whichfurther receives and stores a file of data which specifies the order in which those program segments are scheduled to be reproduced by the player."* (D.I. 187, ex. A at 2 (emphasis added); *see also id.* at 3)

- During prosecution, the applicants of the '076 patent stated that "[c]laim 1 makes it clear that the stored 'program segments' are different from the 'file of data' which is<u> received and stored</u> and which establishes a sequence in which the <u>separately claimed program segments</u> are scheduled to be reproduced." *(Id.,* ex. B at 3 (emphasis in original); *see also id.* at 4, 5; *id.,* ex. C at 2, 5, 6, 7; *id.,* ex. D at 14, 16-17, 18-19, 24)

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At first blush, Google's prosecution history argument does appear to be compelling. But PA has two good responses to Google's argument.

First, PA asserts that in its prosecution history statements, PA was not intending to generally define any and all "sequencing file[s]." (D.I. 176 at 5) Rather, PA's statements above were "characterizing the use of a particular claimed sequencing file *as dictated by explicit limitations of a specific claim[.]" (Id.* (emphasis added)) To that end, PA points out p01tions of the prosecution history that at times seem to explain what a sequencing file is generally-i.e., a file containing data specifying an ordered sequence of a collection of the downloaded audio program files. (D.I. 177, ex. 3 at 5; *see also, e.g., id.,* Appendix A at 10 n.1 (during prosecution, patentee explaining that a sequencing file is "a file of data which establishes the sequence in which program segments are scheduled to be reproduced") (emphasis omitted)) And PA is also correct that other p01iions of the '178 patent's prosecution history do refer to the "claimed" sequencing file or the sequencing file "of independent claim 1" and "independent claim 14" of that patent-with the patentee there explaining that these specific *claimed* sequencing files should be interpreted to mean a file that has the use attributes identified in Google's proposed construction (and that are expressly found in surrounding limitations). For example, during reexamination proceedings for the '178 patent, the patentee referred to the "sequencing file" of the independent claims and explained that "[t]he *claimed* sequencing file is received by the player and used by the processor to both control playback of each song in the ordered sequencing and respond to control commands." (D.I. 177, Appendix A at 7)

As explained above, in the claims that contain the sequencing file terms, the surrounding claim language explicitly sets out the use requirements. And thus the prosecution history

statements highlighted by Google could reasonably be seen as being "directed to the combination of explicit limitations directed to the sequencing file found in the claims[.]" (D.I. 176 at 6; *see also* Tr. at 51-53, 57, 63) These statements may well not have been intended to define a "sequencing file" generally. The Court agrees with PA that while the prosecution history *could* be interpreted as Google argues here, one could also reasonably interpret it in line with PA's explanation. *See, e.g., Golight, Inc. v. Wal-Mart Stores, Inc.,* 355 F.3d 1327, 1332 (Fed. Cir. 2004) (finding no clear or express statement by the patentees defining "rotating" as requiring 360 degrees of rotation because while the relevant statements in the prosecution history could be "arguably subject to the interpretation [the defendant] gives them, [they can] also be reasonably understood as applying only to those claims [] that explicitly recite that rotation must be 'through greater than 360°.' ...   Because the statements in the prosecution history are subject to multiple reasonable interpretations, they do not constitute a clear and unmistakable depaiiure from the ordinary meaning of the term 'rotating.'")

Second, PA points to the IPR proceeding. During that process, Google submitted that the sequencing file limitations should be construed to mean "'file of data that identifies the order in which audio program segments are to be played and that may contain information about the sequence of events that occur during playback.'" (D.I. 147, ex. E at 8 (citations omitted)) Google never argued before the PTAB that the proper construction of these terms required the use limitations that it now seeks to import into its construction. (D.I. 146 at 6; Tr. at 32, 63) Yet here, Google argues that "[b]ased on [the patentee's] definitional statements and arguments during prosecution and reexamination, Plaintiff has *affirmatively and unequivocally* limited the claimed 'sequencing file' to the same file that is received from outside the player, stored in a non-volatile memory ('persistently stored'), and used to control playback and respond to

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commands." (D.I. 159 at 8 (emphasis added)) If the patentee's statements in the IPR proceeding

were so affirmative and unequivocal on the point at issue (i.e., the incorporation of the use

limitations into the "sequencing file" terms), how could Google have advanced a construction for

the terms in the IPR that did not include those limitations?

Google defends its differing proposals by noting that during the IPR proceeding, the

claim terms were to be interpreted according to their broadest reasonable interpretation ("BRI"),

in light of the patent specification in which they appear. *In re Cuozzo Speed Techs., LLC,* 793

F.3d 1268, 1275-79 (Fed. Cir. 2015), *aff'd, Cuozzo Speed Techs., LLC v. Lee,* 136 S. Ct. 2131

(2016).[19] But that fact would not justify Google's shifting positions in the two proceedings.

After all, for a statement to constitute prosecution history disclaimer, it must amount to a

clear and unmistakable disclaimer. (Tr. at 64; D.I. 176 at 8) This is true in both federal district

court proceedings and in IPR proceedings. *See, e.g., Arendi S.A.R.L. v. Google LLC,* 882 F.3d

1132, 1135 (Fed. Cir. 2018) (explaining, in an appeal of the PTAB's decision in an IPR

proceeding where the PTAB held that no prosecution disclaimer had occurred, that "a disclaimer

must be clear and unmistakable"); *Thorner v. Sony Comput. Entm 't Am. LLC,* 669 F.3d 1362,

1366-67 (Fed. Cir. 2012) (noting, in an appeal from a district court litigation, that "to constitute

disclaimer, there must be a clear and unmistakable disclaimer"). The Federal Circuit has

explained that "when a prosecution argument is subject to more than one reasonable

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[19]   Pursuant to a recent rule change, beginning on November 13, 2018, the PTAB
began to construe claims (including in IPR proceedings) using the same *Phillips* claim
construction standard that is used to construe claims in a civil action in federal district comi. *See*
Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before
the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (to be codified at 37
C.F.R. pt. 42). The PTAB thus utilized the BRI standard during the IPR proceeding relevant to
this case, but no longer uses that standard.

interpretation, it cannot rise to the level of a clear and unmistakable disclaimer." *Aylus*

Networks, Inc. v. Apple Inc., 856 F.3d 1353, 1363 (Fed. Cir. 2017) (internal quotation marks and

citation omitted). Therefore, if the patentee made statements regarding the sequencing file

limitations during prosecution that amount to *clear and unmistakable* disclaimer-meaning that

the *only reasonable interpretation* of such statements is that they served to import the use

limitations into the claim terms at issue-then Google could not have advanced the constructions

it did for these te1ms in the IPR proceeding (i.e., constructions that did not include those use

limitations). (D.I. 176 at 9; Tr. at 64-65)[20]

This all signals to the Court that the patentee's statements regarding these terms in the

prosecution history are subject to more than one reasonable interpretation. And thus, it indicates

that those statements were not clear enough to serve as the type of disclaimer Google now

suggests.

4. Conclusion

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[20] Moreover, when the PTAB construes claims under the BRI standard during an IPR proceeding, it is not as if the prosecution history is irrelevant. Indeed, the Federal Circuit has explained that during an IPR proceeding, when a claim is given its BRI in light of the patent specification, such "specification, together with [the patent's] prosecution history, constitutes intrinsic evidence to which the Board gives priority when it construes claims." *WesternGeco LLC v. ION Geophysical Cmp.,* 889 F.3d 1308, 1323 (Fed. Cir. 2018); *see also Arendi,* 882 F.3d at 1135 (explaining that, in appeal from IPR decision applying the BRI standard, "[i]n construing patent claims, a court should consult the patent's prosecution history so that the court can exclude any interpretation that was disclaimed during prosecution") (internal quotation marks and citation omitted); *cf Tempo Lighting, Inc. v. Tivoli, LLC,* 742 F.3d 973, 977 (Fed. Cir. 2014) (explaining, in an appeal of the PTAB's decision in an *inter partes* reexamination proceeding, "[a]dditionally, the prosecution history, while not literally within the patent document, serves as intrinsic evidence for purposes of claim construction. This remains true in construing claims before the PTO").

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In light of the above, the Court recommends that the sequencing file limitations be construed to mean "a file of data that identifies the order in which audio program segments chosen by or for a user are to be played."[21]

C. "means responsive" terms

The "means responsive" terms constitute three means-plus-function limitations in claims 1-3 of the '076 patent, governed by 35 U.S.C. § 112(6). *(See, e.g.,* D.I. 146 at 6; *id.,* Appendix A at Refs. 3, 4, 5) For ease of reference, the Court reproduces these claims below, with the disputed terms highlighted:

> **1.** A player for reproducing selected audio program segments comprising, in combination:
> means for storing a plurality of program segments, each of said program segments having a beginning and an end,
> means for receiving and storing a file of data establishing a sequence in which said program segments are scheduled to be reproduced by said player,
> means for accepting control commands from a user of said player,
> means for continuously reproducing said program segments in the order established by said sequence in the absence of a control command,
> means for detecting a first command indicative of a request to skip forward, and
> *means responsive to said first command for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence.*

('076 patent, col. 46:13-33 (emphasis added))

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[21] Google suggests that PA's reading of what a "sequencing file" refers to would render the term indefinite. (D.I. 186 at 2 n.2; Tr. at 83) Google may raise this argument during summary judgment, but at this time, the issue has not been fully briefed and is not yet ripe for resolution.

2. A player as set forth in claim **1** further comprising means for detecting a second command indicative of a request to skip backward, and
means responsive to a single one of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program.

(Id., col. 46:34-41 (emphasis added))

3. A player as set forth in claim **2** fmiher comprising *means responsive to the detection of two consecutive ones of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment.*

(Id., col. 46:42-48 (emphasis added))

The parties' competing proposed constructions for the "means responsive" limitations are

set out in the chmi below, with the main disputed points noted by bold, underlined language:

Term	Plaintiff's Proposed Construction	Defendant's Proposed Construction
"means responsive to said first command for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence" (hereinafter, "skip command") ('076 patent, claim 1)	Function; "in response to a 'Skip' command, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence." The structure corresponding to the claimed function is the following structure and equivalents thereof: A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269 and 235 and more	Function: In response to a ['Skip'/single 'Back'/two consecutive 'Back'/ 'Back'] command[s], discontinuing the [reproduction/translation] of the currently playing program segment and instead continuing the [reproduction/translation] at the beginning of [a program segment which follows said currently playing program in said sequence/said currently playing program/a program segment which precedes the currently playing program segment/the next program segment in said sequence].

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	fully described at column 15, lines 21 to 25 and column 34, line 28 to column 35, line 48. Specifically, this algorithm includes the following steps: 1. scanning forward in the **seguence established by the seguencing file** to locate the next Selection Record of the appropriate LocType; or, alternatively, 1. scanning forward in !!_ **seguencing file** to locate the next Selection Record of the appropriate LocType; 2. resetting the CurrentPlay variable to the record number of that Selection_Record; and 3. fetching and playing the program segment identified by the ProgramID contained in the new Selection Record.	Structure: A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269 and 235 and described at column 15, lines 21 to 25 and column 34, line 28 to column 35, line 48. Specifically, this algorithm includes the following steps: (1) scanning forward in the **received seguencing file** to locate the next Selection_Record of the appropriate LocType; (2) resetting the CurrentPlay variable to the record number of that Selection_Record; and (3) fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.
	A LocTyne is an identifier that indicates a characteristic of a selection record, for examnle , a nlayable content selection record.	**No construction necessan: for LocTyne₂ or alternatively:** **A LocTyne is a single byte character and an identifier that indicates a characteristic of a selection record.**
"means responsive to a single one of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program"	The function is "in response to a single 'Back' command, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program."	Function: In response to a ['Skip'/single 'Back'/two consecutive 'Back'/ 'Back'] command[s], discontinuing the [reproduction/translation] of the currently playing program segment and instead continuing the [reproduction/translation] at the beginning of ⌈a program

(hereinafter, "single skip back command") ('076 patent, claim 2)	The structure corresponding to the claimed function is the following structures and equivalents thereof: A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269 and 235 and more fully described at column 15, lines 49 to 59. Specifically, this algorithm includes the following steps: 1. if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment; and 2. playing the program segment from its beginning. **A LocTyne is an identifier that indicates a characteristic of a selection record, for examnle, a nlayable content selection record.**	segment which follows said currently playing program in said sequence/said currently playing program/a program segment which precedes the currently playing program segment/the next program segment in said sequence]. Structure: A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 267, 269, and 235 and described at column 15, lines 49 to 59. Specifically, this algorithm includes the following steps: (1) if the currently playing program segment has played for a predetermined amount of time **after the start time recorded in a usage log file,** resetting the playback position to the beginning of the program segment; and (2) playing the program segment from its beginning. **No construction necessan: for LocTyne, or alternatively:** **A LocTyne is a single byte character and an identifier that indicates a characteristic of a selection record.**
"means responsive to the detection of two consecutive ones of said second commands for discontinuing the reproduction of the currently playing program	The function is "in response to two consecutive 'Back' commands, discontinuing the reproduction of the currently playing program segment and instead continuing the	Function: In response to a ['Skip'/single 'Back'/two consecutive 'Back'/ 'Back'] command[s], discontinuing the [reproduction/translation] of the currently playing

segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment" (hereinafter, "double skip back command" ('076 patent, claim 3)	reproduction at the beginning of a program segment which precedes the currently playing program segment." The structure corresponding to the claimed function is the following structures and equivalents thereof: A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269,235,261,262, and 278 and more fully described at column 15, lines 49 to 59 and column 34, line 28 to column 35, line 53. Specifically, this algorithm includes the following steps: 1. in response to a first 'Back' command, if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment and playing the program segment from its beginning; 2. in response to a second 'Back' command, if the currently playing program segment has not yet played for said predetermined amount of time, scanning backward in the sequence established by the sequencing file to locate the previous Selection Record of the appropriate LocType; or, alternatively:	program segment and instead continuing the [reproduction/translation] at the beginning of [a program segment which follows said cmTently playing program in said sequence/said currently playing program/a program segment which precedes the currently playing program segment/the next program segment in said sequence]. Structure: A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 267, 269, 235,261,262, and 278 and described at column 15, lines 49 to 59 and column 34, line 28 to column 35, line 53. Specifically, this algorithm includes the following steps: (1) in response to a first "Back" command, if the currently playing program segment has played for a predetermined amount of time **after the start time recorded in a usage log file,** resetting the playback position to the beginning of the program segment, and playing the program segment from its beginning; (2) in response to a second "Back" command, if the currently playing program segment **is near its beginning,** scanning backward in the **received** sequencing file to locate the

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2. in response to a second 'Back' command, if the currently playing program segment has not yet played for said predetermined amount of time, scanning backward in a sequencing file to locate the previous Selection Record of the appropriate LocType; 3. resetting the CurrentPlay variable to the record number of that Selection_Record; and 4. fetching and playing the program segment identified by the ProgramID contained in the new Selection_ Record. **A LocTyne is an identifier that indicates a characteristic of a selection record, for examnle, a nlayable content selection record.**	previous Selection_Record of the appropriate LocType; (3) resetting the CurrentPlay variable to the record number of that Selection_Record; and (4) fetching and playing the program segment identified by the ProgramID contained in the new Selection Record. **No construction necessary for LocTyne, or alternatively:** **A LocTyne is a single byte character and an identifier that indicates a characteristic of a selection record.**

(D.I. 146, Appendix A at Refs. 3, 4, 5; D.I. 146 at 7; D.I. 186 at 12; Tr. at 124)

1.   Skip Command

With respect to the skip command, found in claim 1 of the '076 patent, the function for this means-plus-function term is not in dispute, and is reflected in the chart above. As for the corresponding structure for this term, the parties have two disputes. First, the parties dispute whether the same "received sequencing file" must itself be continuously used for playback control (as Google argues), or whether that received sequencing file can be used to obtain a sequence that is then used to create another sequencing file that is further acted on by the controls (as PA argues). *(See* D.I. 146 at 7; D.I. 159 at 17; Tr. at 90 (Google's counsel

explaining that the "main [] dispute" regarding this term is "whether the scanning forward to locate the next record in response to a user commanding a skip ... has to be in the *received* sequencing file") (emphasis added))[22] Second, the parties dispute whether the structure should include a definition of the term "LocType[,]" and if so, what that definition should be. (D.I. 146 at 11-13; D.I. 159 at 21-22)[23] The Court will take up these disputes in turn.

a. Must the scanning forward take place in the "received" sequencing file?

At the outset, the Court notes that both parties agree that the corresponding structure for the skip command includes scanning Selections File 351 in order to skip forward. *(See* D.I. 176 at 1; D.I. 146, Appendix A at Ref. 3; '076 patent, cols. 34:28-35:48) However, the parties disagree as to whether this file was compiled on the player from another downloaded sequencing file (PA's view) or was received from outside the player (Google's view). If Selections File 351 was received from outside the player, that supports Google's position that the same sequencing file is received by the player, stored, and scanned during playback. But if Selections File 351 was compiled on the player, that supports PA's position that the player does not have to keep referencing only one particular received sequencing file over and over, but can instead *use* the received file by accessing it and obtaining/copying its sequence, and then compiling another sequencing file with the copied sequence. In conjunction with their respective positions, PA asserts that the scanning forward step should be construed to require "scanning forward in *a* sequencing file" or, alternatively, "scanning forward in *the sequence established by the*

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[22]   The parties also have this dispute with respect to the the double skip back command, and the Court's resolution here will also apply to that term.

[23]   The parties have this dispute with respect to each of the means responsive limitations, and the Court's resolution here will also apply to the other two such terms.

sequencingjile[,]" (D.I. 146 at 7 (emphasis added)), whereas Google asserts that it should be construed such that the scanning forward step must occur in the same sequencing file that was "received" by the player, (D.I. 159 at 17).

As described above in connection with the "sequencing file" limitations, the embodiment described in the specification teaches that a sequencing file with a recommended sequence (Table 307) is created on the host server and downloaded to the player-and that another sequencing file containing the final sequence (Sequencing File 351) is created on the player, using the data of the received sequencing file to control playback. *(See* D.I. 176 at 2-3) The Court will not here repeat the analysis that led it to that conclusion, as that analysis has already been set out in some detail in the "sequencing file" section. It is simply worth noting that this conclusion strengthens PA' s position as to the correct outcome regarding this dispute.

The Comi also will assess three other arguments made in the parties' briefs with regard to this "received sequencing file" issue. The outcome as to each also supports PA's position.

First, PA rightly points out that the claim language "never requires only scanning or using the 'received sequencing file'" and instead simply refers to using the "sequence" from that file. (D.I. 146 at 8; *see also* Tr. at 48-49, 103) Indeed, claim 1 of the '076 patent recites, *inter alia,* "means for receiving and storing *a file of data establishing a sequence* in which said program segments are scheduled to be reproduced by said player," "means for continuously reproducing said program segments in the order *established by said sequence[,]"* and then-in response to a command to skip forward (the limitation at issue here): "means responsive to said first command for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program *in said sequence."* ('076 patent, col. 46:13-33 (emphasis added))

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Second, Google's argument regarding the import of the prosecution history seems off base. Google asserts that several of the patentee's statements in the prosecution history mandate its proposal. (Tr. at 90 (citing Google's Markman Presentation, Slide 22)) But PA retorts that Google's proposed construction is actually much more narrow than the import of the patentee's prosecution history statements. PA argues that during the prosecution history, when the patentee made statements to the effect that the claimed sequencing file is *"used* by the processor to both control playback of each song in the ordered sequence and respond to control commands[,]" (D.I. 177, ex. 3 at 5 (emphasis added)), the patentee did not mean that the processor must only continue to reference the actual received sequencing file, (D.I. 176 at 4; Tr. at 99-101). Rather, according to PA, "[a] processor can *use* the received sequencing file to control playback and respond to control commands by referencing the file ... *to obtain the sequence used for control and playback* but not continue to reference only that file." *(Id.* at 100-01 (emphasis added)) So under PA's reading, one can "use" the file by accessing it and obtaining its sequence (i.e., a sequence that will later be scanned), but one does not have to keep referencing only one particular sequencing file over and over. *(Id.* at 103)

The Court finds PA' s position to be reasonable and supported by portions of the file history. For example, during reexamination of the '178 patent, the patentee explained that:

> The '178 specification describes in detail *how* the exemplary
> preferred embodiment personal audio player implementation *uses*
> the sequencing file's *ordered sequence* of program segment
> identifiers to sequence events which occur during playback and to
> control the playback session and navigation within the playback
> session. Figure 5 shows an example non-limited preferred
> embodiment sequencing file and how the personal audio player
> processor dynamically uses the sequencing file to both control
> playback of each song in the ordered sequence and to change
> selections in response to listener-inputted control commands. For
> example, the '178 specification beginning at 34:14 et seq. describes

> how the audio player *uses* the downloaded sequencing file *format*
> and associated player processor to permit the listener to skip
> forward, backward, etc.

(D.I. 177, ex. 3 at 6 (emphasis added); PA's Markman Presentation, Slide 65) As PA notes, this explanation allows for the player to use the sequencing file's "ordered sequence" to control the playback session, but it does not necessarily require the received *file* to always be scanned as paii of that process. And the citation to column 34 of the '178 patent in the above excerpt also supports the idea that the player uses the *format* of the downloaded sequencing file-i.e., its *sequence-to* skip forward. (Tr. at 102; D.I. 177 at ,**ſ** 42)[24]

Third, PA made persuasive points about Google's positions during the IPR proceeding. For example, it is undisputed that Google submitted to the PTAB a construction for the term at issue that did not require scanning forward to happen in the "received" sequencing file. (D.I. 146 at 9; PA's Markman Presentation, Slide 69; D.I. 177, ex. 1 at 13-14; Tr. at 104) And it appears to also be undisputed that in the IPR, Google relied on prior art that did not directly scan the received sequencing file (a playlist in the prior art) to skip forward, and instead scanned data structures that were derived from the received sequencing file. (PA's Markman Presentation, Slides 70-74; D.I. 146 at 9; Tr. at 104-05) The PTAB invalidated claims based on this algorithm. (PA's Markman Presentation, Slide 74; D.I. 147, ex. G at 31-32) Yet Google's position in this

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[24]   This reading of the import of the prosecution history statement is in harmony not only with the claim language, but also with the embodiment described in the specification. With respect to playback, the specification explains that "[t]he playback operation itself continues from the designated playback point in *the selections file (seen at **351** in FIG. 5) which follows a program sequence initially created by the host server and downloaded* with the program segments themselves, and then (optionally) modified by the addition, deletion and re-sequencing of segment identifiers as discussed earlier in connection with step **211** in FIG. 2." ('178 patent, col. 12:27-33 (emphasis added)) This description aligns with PA's position that the downloaded sequencing file is used to control playback by providing the sequence for playback, and not necessarily by being continually scanned itself. (PA's Markman Presentation, Slide 67)

case is that the prosecution history makes it "clear that the [received] sequencing file does need to be referred to in connection with determining where to skip forward." (Tr. at 90; *see also* Google's Markman Presentation, Slides 22-24) Again, if the patentee's statements during prosecution were really clear and unmistakable and subject to no other reasonable interpretation than that proffered by Google in this case, then Google should have submitted the same construction to the PTAB in the IPR. The fact that it did not causes the Court to question the correctness of its proposal here.

For all of these reasons, the Court is persuaded that PA's construction is appropriate as to this issue. It thus recommends that the structure for the skip command not include Google's "received" sequencing file language.

b.   "LoeType"

The term "LocType" is used in the algorithmic structures for the means responsive terms. PA submits that these structures should include a statement defining "LocType," since that term's meaning is not otherwise readily asce1iainable. (D.I. 146 at 12; D.I. 176 at 14) To that end, PA explains that "'LocType' is not a term of art in the industry but rather a coined term where the patentee acted as its own lexicographer." (D.I. 146 at 12) According to PA, the patents demonstrate that structurally, LocType is a character identifier (letter or numbers) that identifies the characteristics of a given selection record pertaining to a program segment. *(Id.;* Tr. at 112-13) Fmiher, PA asse1is that such identifier should *not* be limited to a single byte character. (PA's Markman Presentation, Slide 95; Tr. at 114) In response, Google does not think that LocType needs to be construed. If the Court does intend to ascribe a definition to the term, Google does not dispute that a LocType "indicates a characteristic of a selection record"; however, Google argues that the term must be described as "a single byte character" because that

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is how the term is defined in the patent specification. (D.I. 186 at 12; Tr. at 123-24; *see also* D.I.

159 at 21-22)

      The portion of the patent specification that Google refers to is a good place to start the

Comi's analysis. It is reproduced below:

> To control subject and topic skipping, as well as hyperlink jumps,
> the selections file seen generally at **301** in FIG. **4** preferably takes
> the form of a sequence of records, each having the structure
> defined by the following Pascal record definition:

```
type Selection_Record =record
        LocType: Char;
        Location: Integer;
      end;
```

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where LocType is a single byte character having the values and meanings shown in the following

table:

LocType	Meaning
"S", "s"	Subject Announcement
"T", "t"	Topic Announcement
"P"' "p"	Programming content segment
"Q"' "q"	Adve1iising segment
"G", "g"	Glue (announcement) segment
"H"	Highlight start offset
"E"	Highlight end offset
"A"	Anchor staii offset
"M"	Bookmarked anchor staii
"B"	Anchor end offset
"L"	Linked segment
"R"	Rewind to identified location
"I"	Image identification
"J"	Image display start offset
"K"	Image display end offset
"C"	Accept comment
"V"	Accept value designation
"X"	Accept list termination
"Y"	Accept "Yes"/ "No"

('076 patent, cols. 31:63-32:33)

Google's argument seems correct: the patentee did appear to define "LocType" in the specification. And it seems to have done so by noting that a "LocType" is "a single byte character" that is part of the Selection_Record in the selections file, and that it has a paiiicular value. *(See* D.I. 159 at 21-22; D.I. 186 at 12) PA never really persuasively explains why "LocType" should *not* be construed in a manner that mirrors the very definition chosen by the patentee. It complains that Google did not suggest adding in "single byte character" to the construction until it filed its sur-reply brief, thus leaving PA without a "full opportunity to address" the dispute here. *(See* Tr. at 115) But in its responsive brief, Google *did* note that "[e]ven ifLocType were required to be construed," PA's construction would confuse the term's meaning because "[t]he specification explains that LocType is 'a single byte character' that is part of the Selection_Record in the selections file, which contains a value indicating one of almost 20 possible types ofrecords." (D.I. 159 at 21-22) PA could have directly responded to this argument in its reply brief, but it did not, instead inaccurately stating that "Defendant's response does not contest the merits of Plaintiff's construction." (D.I. 176 at 14)

In its briefing, PA primarily focused on what occurred in the IPR proceeding. (D.I. 146 at 12-13) In the IPR, Google represented that a LocType indicated a characteristic of a "'playable object[.]"' *(Id.* at 12 (quoting D.I. 147, ex. Z at 48)) In its decision to institute review on, *inter alia,* claim 1 of the '076 patent, the PTAB concluded that a prior art reference ("Chase") taught the steps of the algorithm corresponding to the "means responsive to said first command" described in the patent. (D.I. 147, ex.Eat 29-30) In its briefing here, PA seemed to be asse1iing that something about "Google's representation" to the PTAB, which led the PTAB to findthat

Chase invalidated claim 1, suggests that the Court should adopt PA's construction for LocType

(and not Google's proposal). (D.I. 146 at 12)

The problem for the Court is that after reading PA's brief, the Court does not understand

the argument that PA was making. That is, the Court cannot discern what it is about Google's

position in the IPR that was inconsistent with the patentee's definition of LocType in the

specification (i.e., that a LocType is a "single byte character").

During the *Markman* hearing, PA's counsel tried to further explain its position. There,

counsel focused on a different portion of the IPR record-one it had not referenced in its pre-

hearing briefing. During the hearing, PA's counsel argued that in the IPR proceeding, Google

advocated that a LocType could be a five byte character (i.e., not simply a single byte character).

(PA's Markman Presentation, Slide 98; *see also* Tr. at 114) But PA did not provide a sufficient

record to make it clear that Google had in fact taken this position in the IPR. Indeed, PA pointed

only to one slide of its *Markman* presentation in support, and that slide was unclear at best.

Moreover, as Google's counsel noted, (Tr. at 125), during the IPR proceeding, the claim terms

were to be interpreted according to their BRI.[25]

In the end, the Court recommends that the corresponding structures for the means

responsive terms reflect that a LocType is a single byte character, as Google has proposed in the

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[25]   During the *Markman* hearing, PA also for the first time argued that because the
term "LocType" is found in the structure for a means-plus-function term, the structural nature of
a LocType-i.e, whether it is a single byte character, or a multi-byte character-is not necessary
to the recited function and thus should not be included in any construction. (Tr. at 114-15; PA's
Markman Presentation, Slide 99) The Court declines to consider this argument since it was not
fairly raised by PA prior to the *Markman* hearing. *See, e.g., Horatio Washington Depot Techs.
LLC v. TOLMAR, Inc.,* Civil Action No. 17-1086-LPS, 2018 WL 5669168, at *7 n.4 (D. Del.
Nov. 1, 2018) (citing cases).

alternative. PA has not explained in a clear and understandable way why the specification's definitional statement in this regard is wrong.

2. Single Skip Back Command and Double Skip Back Command

With respect to both the single skip back command and the double skip back command, found in claims 2 and 3 of the '076 patent, respectively, the functions of these means-plus-function terms are not in dispute, and are reflected in the chart above. The first steps of the corresponding structures for these terms recite that "if the currently playing program segment has played for a predetermined amount of time [then the structure will be] resetting the playback position to the beginning of the program segment." However, the parties dispute whether the "predetermined ... time" is measured using a "start time recorded in a usage log file" (Google's position). (D.I. 159 at 19; Tr. at 93) The parties have an additional dispute regarding the corresponding structure for the double skip back command-i.e., whether the algorithm must determine whether "the currently playing program is *near its beginning"* (as Google argues), or whether the player just needs to assess whether the currently playing program has played for some predetermined amount of time (as PA argues). *(See* D.I. 159 at 19 (emphasis added); Google's Markman Presentation, Slide 35)

Taking up the latter dispute first, Google asserted in its initial claim construction brief that the specification discloses a single algorithm for determining whether a skip back command should restart the currently playing segment or transition to the beginning of the prior segment (i.e., the double back skip command):

> Note that, after any given segment has played for a predetermined amount of time, the BACK command should reset the playback to [the] beginning of the current segment or topic respectively, allowing the user to start the current segment or topic from the

> beginning *unless the playback point is already near the beginning,* in which case the transition is made to the prior segment.

('076 patent, col. 15:49-55 (cited in D.I. 159 at 19) (emphasis added by Google)) According to Google, this disclosure means that: (1) in response to a BACK command, if the currently playing program has played for a predetermined amount of time, playback should be reset to the beginning of the current program; (2) unless such command comes "near the beginning" of the current program, in which case playback should be reset to the previous program. *(See* D.I. 159 at 19-20)

In response, PA explained that this passage simply refers to the time interval from the beginning of the audio segment to the predetermined amount of time. (D.I. 176 at 11-12; Tr. at 118-19) In other words, according to PA, this passage is saying that if the BACK command occurs during the interval between the beginning of the segment and that predetermined amount of time, then the player will reset the playback to the prior segment. (D.I. 176 at 11-12; PA's Markman Presentation, Slide 106; Tr. at 118-19) But if the BACK command occurs after the predetermined amount of time has elapsed, the player will reset at the beginning of the current segment. (D.I. 176 at 11-12; PA's Markman Presentation, Slide 106; Tr. at 118-19)

Both positions seem possibly correct. That said, PA notes that both the Eastern District of Texas and the PTAB construed the structure corresponding to the double skip back command without reference to whether the currently playing program segment is near its beginning (instead, the relevant step in those constructions is identical to PA's proposal here). (Tr. at 116; PA's Markman Presentation, Slide 107) PA's expert also persuasively notes that PA's interpretation seems to be supported by the language of claims 5 and 6 of the '178 patent, respectively. (D.I. 177 at ¶ 63)

Because Google is the party seeking an additional limitation with respect to the structure, and because PA had the more persuasive arguments, the Court will side with PA. That is, the Court will not require the corresponding algorithm for the double skip back command to have to measure whether the currently playing program "is near its beginning."

The Comi next turns to the issue of whether the "predetermined ... time" is measured using a "start time recorded in a usage log file." Both parties seem to agree that responding to a listener's "skip back" command requires measuring the amount of time that a segment has been playing, in order to determine whether the currently playing segment should be restarted, or whether the prior segment should be restaiied. (D.I. 176 at 12; D.I. 186 at 9) According to Google, the specification reveals only one way to measure the "predetermined amount of time" that a song has been playing:

> The system responds *to BACK commands* by resetting the playback point to the desired point in the sequence *and recording the start time,* volume setting and new program segment ID in the *log file as indicated at **267.***

('076 patent, col. 15:55-59 (cited in D.I. 159 at 20) (ce1iain emphasis added by Google); *see also* D.I. 186 at 9-10) Step 267 describes responding to a back command including recording the staii time. ('076 patent, col. 15:23-24, 55-59) Therefore, Google asserts that either the structure for these functions uses "the staii time recorded in a usage log file" to determine whether a skip back command should restart the current segment or start the prior segment, or there is no structure for this function. (D.I. 186 at 10) PA's proposed structure does not include an algorithm for measuring time.

For its paii, PA responds that the invention utilizes usage logging primarily to maintain a record of listener behavior for future recommendations and accounting purposes-and *not* for

performing the claimed functions of the single skip back and double skip back commands. (D.I.
146 at 9; D.I. 176 at 12) And it is true that the patent does refer to usage log data as being
utilized for accounting of royalty payment records for amounts due to content providers, ('178
patent, cols. 12:2-8, 28:41-54), and for generating program recommendations, *(id.,* col. 24:46-
59). Thus, the big question is whether the specification clearly links usage logging to the single
skip back and double skip back commands. *See Medtronic, Inc.,* 248 F.3d at 1311 ("Structure
disclosed in the specification is 'conesponding' structure only if the specification [] clearly links
or associates that structure to the function recited in the claim.") (citation omitted).

The Court is not persuaded that recording the start time in a usage log file is necessary for
measuring whether the segment has played for a predetermined amount of time. The passage
that Google relies on describes responding to "BACK commands" by resetting the playback
point to the desired point in the sequence *and* recording the start time-these seem to be two
separate actions. (PA's Markman Presentation, Slide 85) PA also points out that the
specification teaches that with respect to usage logging, "it is unnecessary to record the end time
for the prior segment since it is the same value as the start time for the next segment." ('178
patent, col. 13:16-18) Therefore, according to PA, the usage log cannot be used to measure
whether you are within the predetermined time, since the end time is not recorded until the next
program segment begins. (PA's Markman Presentation, Slide 87; Tr. at 109)[26]

If the specification does not disclose usage logging as the corresponding structure for

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[26]   In its decision affirming the PTAB Final Written Decisions, the Federal Circuit
seemed to agree that there is no link between the usage logging and calculating the time played.
(PA's Markman Presentation, Slide 87a; Tr. at 109-10 (quoting *Google LLC,* 743 F. App'x at
982)).

measuring whether the predetermined amount of time has passed, where does this leave things? PA asse1is that determining the elapsed time of a program "was common among those skilled in the mi" and needs no further elaboration. (D.I. 176 at 12) It notes that the specification discloses a visual indicator showing the elapsed time of the program. ('178 patent, col. 12:43-58; *see also* D.I. 176 at 12) And during the *Markman* hearing, PA's counsel asserted that: (1) such indicators were common at the relevant time and were "embedded in the time sequencing information of the CD itself'; and (2) the algorithm does not need to recite further detail on this point, other than simply determining the amount of elapsed time. (Tr. at 110-11, 127)

The law requires a specification to "recite the particular structure that performs the function and to which the means-plus function claim is necessarily limited." *Aristocrat Tech.,* 521 F.3d at 1336. It seems problematic that the specification does not appear to recite structure for measuring whether the segment is within the predetermined amount of time when a back command is received. According to Google, in such a circumstance, the "relevant claims are indefinite." (D.I. 186 at 10; *see also* D.I. 202 at 2; Tr. at 95, 123)[27]

The Court is not yet prepared to recommend that the terms be found to be indefinite. Prior to opining on that question, the Comi would benefit from additional focused briefing on the extent to which the current structure for these functions is sufficient (including citations to analogous cases and expe1i testimony, if applicable). Google thus may wish to re-raise this definiteness argument during the summary judgment stage.

IV.   CONCLUSION

For the foregoing reasons, the Comi recommends that the District Comi adopt the

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[27]   Google does not cite to any expe1i testimony in support of this statement.

following constructions:

    1.   "file" should be construed to mean "a collection of data that is stored and manipulated as a named unit by a file-management or database system"

    2.   the "sequencing file" terms should be construed to mean "a file of data that identifies the order in which audio program segments chosen by or for a user are to be played"

    3.   For the term "means responsive to said first command for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence" the function is "in response to a 'Skip' command, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which follows said currently playing program in said sequence." The corresponding structure for this term is: "A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269 and 235 and more fully described at column 15, lines 21 to 25 and column 34, line 28 to column 35, line 48. Specifically, this algorithm includes the following steps:

            1.   scanning forward in the sequence established by the sequencing file to locate the next Selection_Record of the appropriate LocType;

            2.   resetting the CurrentPlay variable to the record number of that Selection_Record; and

            3.   fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.

            A LocType is a single byte character and an identifier that indicates a characteristic of a selection record."

4.   For the term "means responsive to a single one of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program" the function is "in response to a single 'Back' command, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of said currently playing program." The corresponding structure for this term is: "A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269 and 235 and more fully described at column 15, lines 49 to 59. Specifically, this algorithm includes the following steps:

    1.   if the currently playing program segment has played for a
            predetermined amount of time, resetting the playback
            position to the beginning of the program segment; and

    2.   playing the program segment from its beginning.

    A LocType is a single byte character and an identifier that indicates a
    characteristic of a selection record."

5.   For the term "means responsive to the detection of two consecutive ones of said second commands for discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment" the function is "in response to two consecutive 'Back' commands, discontinuing the reproduction of the currently playing program segment and instead continuing the reproduction at the beginning of a program segment which precedes the currently playing program segment." The corresponding structure for this term is: "A general purpose computer programmed to perform the algorithm that is illustrated in the flow chart of Figure 3 at items 269,235,261,262, and 278 and more fully described at column 15, lines 49 to 59 and

column 34, line 28 to column 35, line 53. Specifically, this algorithm includes the following
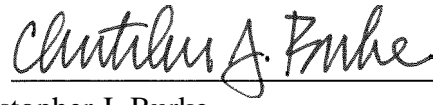
steps:

> 1.   in response to a first 'Back' command, if the currently playing program segment has played for a predetermined amount of time, resetting the playback position to the beginning of the program segment and playing the program segment from its beginning;
>
> 2.   in response to a second 'Back' command, if the currently playing program segment has not yet played for said predetermined amount of time, scanning backward in the sequence established by the sequencing file to locate the previous Selection_Record of the appropriate LocType;
>
> 3.   resetting the CurrentPlay variable to the record number of that Selection_Record; and
>
> 4.   fetching and playing the program segment identified by the ProgramID contained in the new Selection_Record.
>
> A LocType is a single byte character and an identifier that indicates a characteristic of a selection record."

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(l)(B), Fed. R.

Civ. P. 72(b)(l), and D. Del. LR 72.1. The parties may serve and file specific written objections

within fomieen (14) days after being served with a copy of this Report and Recommendation.

Fed. R. Civ. P. 72(b)(2). The failure of a party to object to legal conclusions may result in the

loss of the right to de nova review in the district comi. *See Henderson v. Carlson,* 812 F.2d 874,

878-79 (3d Cir. 1987); *Sincavage v. Barnhart,* 171 F. App'x 924,925 n.l (3d Cir. 2006).

The parties are directed to the Cami's Standing Order for Objections Filed Under Fed. R.

Civ. P. 72, dated October 9, 2013, a copy of which is available on the District Cami's website,

located at http://www.ded.uscourts.gov.

Dated: January 16, 2019

Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE