

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

D&M HOLDINGS INC. d/b/a THE D+M
GROUP, D&M HOLDINGS U.S. INC.,

Plaintiffs,

v.

SONOS, INC.,

Defendant.

Civil Action No. 16-141-RGA

MEMORANDUM OPINION

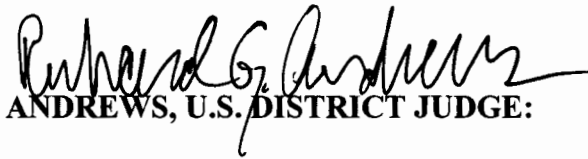
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Attorneys for Defendant

August 3, 2017


ANDREWS, U.S. DISTRICT JUDGE:

Presently before the Court is the issue of claim construction of multiple terms in U.S. Patent Nos. 7,734,850 (“the ’850 patent”), 6,539,210 (“the ’210 patent”), 6,469,633 (“the ’633 patent”), 8,755,667 (“the ’667 patent”), 6,473,441 (“the ’441 patent”) and 7,987,294 (“the ’294 patent”). The Court has considered the Parties’ Joint Claim Construction Brief and the additional letter briefing submitted after the Markman hearing. (D.I. 92, 100, 102) . The Court heard oral argument on June 21, 2017. (D.I. 101) (“Hr’g Tr.”).

I. BACKGROUND

This patent infringement lawsuit began when Plaintiffs requested leave to add counterclaims in a related action filed by Defendant against Plaintiffs on October 21, 2014. (Civ. Act. No. 14-1330, D.I. 81). The Court granted leave but severed these infringement counterclaims into the instant case. (Civ. Act. No. 14-1330, D.I. 100). Plaintiffs asserted nine patents in their counterclaims. (D.I. 1). Defendant moved to dismiss seven of these counterclaims pursuant to Federal Rule of Civil Procedure 12(b)(6) for failure to state a claim. (D.I. 9). On April 18, 2017, the Court granted Defendant’s motion in part, finding that U.S. Patent Nos. 7,343,435 and 7,305,694 are directed to abstract ideas and that Plaintiffs had failed to plausibly allege infringement of U.S. Patent No. 7,995,899 (“the ’899 patent”). (D.I. 58). Plaintiffs were given leave to amend as to the ’899 patent. (*Id.* at 23). Plaintiffs filed an amended complaint on May 1, 2017. (D.I. 65).

II. LEGAL STANDARD

“It 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 v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). “[T]here is no magic formula or

catechism for conducting claim construction.’ Instead, the court is free to attach the appropriate weight to appropriate sources ‘in light of the statutes and policies that inform patent law.’”

SoftView LLC v. Apple Inc., 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324) (alteration in original). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). Of these sources, “the specification 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 term.” *Phillips*, 415 F.3d at 1315 (internal quotation marks omitted).

“[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312–13 (citations and internal quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court’s construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony,

dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317–19 (internal quotation marks omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

“A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GMBH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (citation and internal quotation marks omitted).

III. CONSTRUCTION OF DISPUTED TERMS

A. The Patents-In-Suit

The ’850 patent is directed to methods for resuming interrupted data stream transfers.

Claim 1 is representative and reads as follows:

1. A method of resuming an interrupted data stream transfer comprising:
 - obtaining *recovery state information*, including a stored compression block boundary position and a stored file boundary position of the interrupted data stream transfer;
 - resuming the data stream transfer by requesting a compressed data stream starting with the stored compression block boundary position;
 - advancing through the resumed data stream transfer to reach the stored file boundary position by decompressing data from the stored compression block boundary position to the stored file boundary position;
 - once the file boundary position has been reached, decompressing and de-archiving data after the file boundary position; and
 - storing the de-archived data in a destination filesystem.

(’850 patent, claim 1) (disputed term italicized).

The '210 patent is directed to methods and systems for identifying and matching broadcast signals with signal information. Claim 1 is representative of the method claims and reads as follows:

1. A method of identifying signal sources, comprising:
 - selecting a communication medium from a *plurality of communication media*, to supply a signal;
 - storing medium selection data identifying the communication medium;
 - obtaining the signal from a signal source via the communication medium; and
 - accessing at least one database from a data source separate from the signal source to obtain *signal information about the signal source*.

('210 patent, claim 1) (disputed terms italicized). Claim 44 is representative of the apparatus claims and reads as follows:

44. An apparatus for identifying signal sources, comprising:
 - means for selecting a communication medium from a *plurality of communication media*, including at least *broadcast signals* received from an antenna and packetized signals received via a packet-based network, to supply a signal;
 - means for storing medium selection data identifying the communication medium, including first and second medium selection data for receiving the signal from the signal source via first and second communication media, respectively;
 - means for obtaining the signal from a signal source via the communication medium;
 - means for accessing at least one database from a data source separate from the signal source to obtain signal information about the signal source;*
 - means for outputting the signal from the signal source as received via the first communication medium in response to selection by a user; and
 - means for automatically switching to the second communication medium for receipt of the signal in response to detection of deterioration of the signal.*

('210 patent, claim 44) (disputed terms italicized).

The '633 patent contains three independent claims: claims 1-3. Claim 1 is representative and reads:

1. An apparatus controlling at least one electrical device, comprising:
 - a display device to display representations of controls for a currently selected device and one of video signals from the currently selected device and a representation of the currently selected device;
 - a remote control transmitter, including a user interface consisting of only a cursor moving control and buttons to select one of icons and text displayed on said*

display device and what is displayed at a cursor position, to transmit a user generated signal indicating selection of a position on said display device corresponding to a selected control representation;

a remote control receiver to receive the user generated signal from said remote control transmitter;

a processor, coupled to said remote control receiver, to determine the position on said display device selected by the user generated signal and control operations corresponding thereto; and

a device controller, coupled to said processor and the at least one electrical device, to control operation of the at least one electrical device in accordance with the control operations corresponding to the position selected by the user generated signal.

('633 patent, claim 1) (disputed term italicized).

The '667 patent is directed to a system and methods for inputting text using an on-screen display. Claim 1 of the '667 patent reads:

1. A method of inputting text associated with a recording, comprising:
 - playing the recording on a video screen;
 - during playback of the recording, detecting a first text character entered by a keyboard;
 - in response to detection of the first text character, determining whether a title of the recording is previously stored, and then only if the title of the recording is not previously stored, entering a text input mode*, wherein in text input mode playback of the recording is continued on at least a portion of the video screen, and wherein the first text character is displayed on the video screen;
 - if text input mode is entered, then during the text input mode, receiving subsequent text characters entered by the keyboard and displaying the subsequent text characters on the video screen; and
 - if text input mode is entered, then storing the first text character and subsequent text characters as text associated with the recording.

('667 patent, claim 1) (disputed term italicized).

The '441 patent is directed to a system for streaming video signals. Claim 1 is representative and reads:

1. An apparatus for simultaneously reproducing multiple recordings from storage devices for transport on a network, comprising:
 - buffers to receive stored signals from the multiple recordings, each recording containing stored signals encoded at one of a plurality of bit rates;
 - a control unit, coupled to said storage devices, to receive requests to reproduce the multiple recordings and to control playback of the stored signals by the storage devices;

a real-time pump, coupled to said buffers and said control unit, to detect the one of the bit rates used to encode the stored signals on each of the multiple recordings and to output transport stream packets, each transport stream packet based on the stored signals from one of the multiple recordings; and

a network interface, coupled to said control unit and said real-time pump, to receive the transport stream packets in corresponding queues and to output over the network multiplexed packet isochronous signals corresponding to the stored signals on the multiple recordings requested to be reproduced, each stream of the packet isochronous signals on the network having an average bit rate of the one of the bit rates used to encode the stored signals corresponding thereto.

('441 patent, claim 1) (disputed terms italicized).

The '294 patent is directed to a system for streaming video signals. Claim 1 is representative and reads:

1. A method for providing a multimedia system including a plurality of networked multimedia devices, the method including the steps of:
 - discovering the plurality of devices on a computer network;
 - defining at least two groups, each group being representative of a networked multimedia system including two or more devices;
 - providing, for each group, a system control interface for receiving, from a control device, a system control signal indicative of an operational change to the group, wherein each group has a relative group leader configured to:
 - (i) receive the system control signal; and
 - (ii) in response to the system control signal, define respective corresponding device control signals, and *provide those device control signals to the devices thereby to implement the operational change across the group;*
 - defining at least one zone, the zone being representative of a networked multimedia system including two or more groups;
 - providing, for the zone, a system control interface for receiving, from a control device, a zone control signal indicative of an operational change to the zone, wherein the zone has a relative zone leader configured to:
 - (i) receive the zone control signal; and
 - (ii) in response to the zone control signal, define respective corresponding device control signals, and *provide those device control signals to the devices thereby to implement the operational change across the zone.*

('441 patent, claim 1) (disputed terms italicized).

B. Disputed Terms

1. “recovery state”/“recovery state information”
 - a. *Plaintiffs’ proposed construction*: “Data that identifies a current compression block boundary, an archive block boundary and a file boundary”
 - b. *Defendant’s proposed construction*: “No construction necessary – plain and ordinary meaning”
 - c. *Court’s construction*: “Information including at least the last compression block boundary and the last file boundary.”

This term appears in the '850 patent. Defendant contends that this term does not need to be construed and further objects to Plaintiffs’ proposal to the extent that it includes an “archive block boundary,” arguing that this limitation does not appear in the claims or specification. (D.I. 92 at 12). I disagree on the first point. The existence of this dispute between the parties is evidence that this term should be construed. As to the second point, I agree with Defendant that none of the claims expressly define the “recovery state” to include an “archive block boundary.” Claim 1 specifies that the “recovery state information” includes “a stored compression block boundary position and a stored file boundary position.” Claim 10 specifies that the “recovery state information” is obtained by “detecting” a compression block boundary, an archive block boundary, and a file boundary in the compressed data stream, but then goes on to specify that “the recovery state includes the compression block boundary position and the file boundary position.” The use of the word “includes” indicates that the “recovery state” must include both of these pieces of information, but does not preclude other information from being included in the “recovery state.”

The specification provides a slightly different description of “recovery state information.” According to the specification, during download, a client will maintain “current state information that identifies the position of the last compression block boundary and the last archive block boundary.” ('850 patent at 3:50-53). The specification further provides that “[i]f the client reaches

a file boundary, it saves the current state information as the recovery state.” (*Id.* at 3:59-61). This, however, is only one embodiment, described as “[o]ne example of a method for determining a recovery state.” (*Id.* at 3:48). Therefore, it seems clear to me that the “recovery state” includes at least the last compression block boundary position and the last file boundary position detected during the data stream transfer. I decline to import the added limitation of an “archive block boundary” into the meaning of this term simply because it appears in a preferred embodiment in the specification. A “recovery state” could include an “archive block boundary,” but it seems clear to me that it is not required.

Finally, I think using the word “data” in this construction introduces the potential for confusion given the fact that the term relates to a data stream transfer but the “recovery state” is comprised of information that is not the data being transferred. I see no reason to use “data” here when “information” conveys the necessary meaning and, in fact, is the word used throughout the patent when describing the “recovery state information.” Therefore, I will construe this term to mean, “Information including at least the last compression block boundary and the last file boundary.”

2. “plurality of communication media”

- a. *Plaintiffs’ proposed construction*: “No construction necessary – plain and ordinary meaning”¹
- b. *Defendant’s proposed construction*: “A plurality of different types of communication media (e.g., broadcast and packet-based network) for providing the same signal from the same signal source”
- c. *Court’s construction*: “plurality of different types of communication media, such as broadcast and packet-based network”

¹ In letter briefing submitted after the Markman hearing, Plaintiffs stated that their understanding of the plain and ordinary meaning of this term is “a plurality of different types of communication media.” (D.I. 100 at 3). I fail to see how this addresses the issues raised at the hearing, since the only dispute is about what constitutes “different types of communication media.”

This term appears in the '210 patent. The parties have two disputes with respect to this term. First, the parties dispute whether the “plurality of communications media” can include a plurality of media sources of the same general type, such as different FM radio stations or different TV stations. (D.I. 92 at 13-14; Hr’g Tr. at 39:3-10). Second, the parties dispute whether the plurality of media must all provide the same signal from the same source. (D.I. 92 at 15).

I agree with Defendant that “communication media” refers to different types of communication media. This is made clear in both the claims and the specification. For example, claim 44 includes a “means for selecting a communication medium from a plurality of communication media, including at least broadcast signals received from an antenna and packetized signals received via a packet-based network, to supply a signal.” This indicates that the patentee understood “broadcast signals received from an antenna” to be one type of communication medium and “packetized signals” to be another type. There are similar statements in the specification. (*See, e.g.*, '210 patent at Abstract; 6:48-57). The specification also distinguishes between choosing a communications medium, such as a broadcast signal, and selecting the specific signal source, i.e., by tuning an AM/FM tuner. (*Id.* at 4:22-29). It seems clear to me, therefore, that in the context of this patent, different radio stations or TV stations are not different communications media.

As to the “same signal source” limitation Defendant wishes to include, I agree with Plaintiffs that this is not supported by the intrinsic evidence. Claim 44 makes clear that there must be two communication media that provide the same signal from the same signal source and, therefore, this limitation is already present within this claim. Claim 1, on the other hand, does not make any reference to a second communication medium, nor is a second communication medium required to perform the claimed method. I can find nothing in the intrinsic evidence to support

limiting the term to require that the plurality of communications media all provide the same signal from the same signal source. Therefore, I will construe this term to mean “plurality of different types of communication media, such as broadcast and packet-based network.”

3. “broadcast signals”

- a. *Plaintiffs’ proposed construction*: “No construction necessary – plain and ordinary meaning”²
- b. *Defendant’s proposed construction*: “Signals that are simultaneously transmitted with the same information to multiple recipients, as opposed to packetized signals received via a packet-based network”
- c. *Court’s construction*: “Signals that are simultaneously transmitted with the same information to multiple recipients, as opposed to packetized signals received via a packet-based network”

This term appears in the ’210 patent. Plaintiffs object to the negative limitation in Defendant’s proposed construction regarding packet-based signals because the “distinction is already present in the dependent claims.” (D.I. 92 at 26). At oral argument Plaintiffs argued that packet-based signals are a type of broadcast signals. (Hr’g Tr. at 40:22-41:16). Plaintiffs’ only evidence in support of conflating these two types of signals is the language of claims 2, 4, and 12, which Plaintiffs contend show that the patentee knew how to draw an explicit distinction when such a distinction was intended (D.I. 92 at 26-27).

Defendant counters by presenting substantial extrinsic evidence that indicates that this term has a well understood meaning to one of skill in the art, which corresponds precisely with the first part of their proposed construction. (D.I. 92 at 27-28). Plaintiffs have failed to point to any

² In letter briefing submitted after the Markman hearing, Plaintiffs stated that their understanding of the plain and ordinary meaning of this term is “an unaddressed signal receivable by two or more devices (such as a radio signal) or an addressed signal sent over a network with two or more participants (such as a multicast satellite signal).” (D.I. 100 at 2). I decline to consider this new proposal as it is unsupported by the intrinsic evidence, does not comport with the plain and ordinary meaning evidenced by the extrinsic evidence, and introduces a number of terms, none of which appear in the patent, that themselves may need construction, such as “unaddressed signal,” “addressed signal,” and “multicast satellite signal.”

evidence in the patent itself that would indicate the patentee intended for the term to have anything other than its plain and ordinary meaning. Furthermore, there is substantial evidence in the patent itself that the patentee considered packet based signals to be distinct from broadcast signals. (*See, e.g.,* '210 patent at Abstract; 1:17-20; 1:43-45; 2:38-40; 3:11-21; 6:48-51, claim 44). Plaintiffs have made clear, however, that they intend to argue that packet-based signals are a form of broadcast signals; therefore I will adopt Defendant's proposed construction, including the negative limitation. Plaintiffs are prohibited from arguing that packet-based signals are a form of broadcast signals.

4. "signal information about the signal source"

- a. *Plaintiffs' proposed construction:* "Information about the signal source obtained using the signal, that is not encoded into the signal."
- b. *Defendant's proposed construction:* "Information about the signal source obtained using the signal, that is not encoded into the signal; information about the content is not information about the signal source."
- c. *Court's construction:* "Information about the signal source obtained using the signal, that is not encoded into the signal; information about the content is not information about the signal source."

This term appears in the '210 patent. The parties disagree only about whether "information about the signal source" includes information about the content of the signal. A plain reading of this term indicates that the information at issue is specifically information about the "signal source," which, it seems to me, would include things such as the call letters and frequency of an FM radio station, for example, but not information about the content, such as the name and artist of a song played by the radio station. Plaintiffs point to a statement in the specification that "the computer display may include signal information, such as call letters and frequency, as well as album and track titles." (D.I. 92 at 31). This does not further their argument, however, as the term at issue is "signal information about the signal source," not simply "signal information." The

claims indicate that the “signal information about the signal source” is obtained from a “database from a data source separate from the signal source.” (’210 patent, claim 1). The specification indicates that information obtained from these databases about the signal source includes frequency, call letters, geographical location, programming format, and genre. (*Id.* at 4:38-43; 5:38-40). Plaintiffs suggest that genre represents information about the signal’s content, but even the most cursory examination of the specification shows that genre, as used in the patent, refers to the genre of the station (e.g., adult alternative), not the genre of the song being played. (*Id.* at Fig. 45). I will adopt Defendant’s proposed construction.

5. “means for accessing at least one database from a data source separate from the signal source to obtain signal information about the signal source”
 - a. *Plaintiffs’ proposed construction*: “Function: Accessing at least one database from a data source separate from the signal source to obtain signal information about the signal source; Structure: Broadcast signal receiver controlled by a processor, the processor programmed to perform the disclosed algorithm as recited in the abstract, Col. 3:8-4:21, Col. 4:55-6:7 and depicted in Figure 2, and equivalents.”³
 - b. *Defendant’s proposed construction*: “Function: Accessing at least one database from a data source separate from the signal source to obtain signal information about the signal source; Structure: A general purpose computer having software executing an algorithm in accordance with the following disclosure: J.A. at Ex. B-1 at 4:29-5:10; Fig. 2.”
 - c. *Court’s construction*: “Function: Accessing at least one database from a data source separate from the signal source to obtain signal information about the signal source; Structure: computer having software executing an algorithm in accordance with the following disclosure: ’210 patent at 4:29-5:10; Fig. 2.”

This term appears in the ’210 patent. The parties agree that this is a means-plus-function term and the parties also agree on the function. The parties disagree as to whether the structure is comprised of a “broadcast signal receiver” or a “general purpose computer.” This structure must

³ Plaintiffs’ initial proposed construction identified only “the specification” and “Figure 2” as support for their proposed structure. (D.I. 92 at 36). Plaintiffs provided specific references given here in response to a request from the Court at oral argument. (D.I. 100 at 2).

be disclosed in the specification and it must perform the claimed function. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351 (Fed. Cir. 2015). Here, the claimed function includes accessing at least one database. As an initial matter, I note that Plaintiffs have cited well over half of the specification as support for their proposed structure, and most of this disclosure has nothing to do with “accessing at least one database.” Plaintiffs’ first citation (Col. 3:8-4:21) is simply a recitation of all of the hardware components comprising the system with which the invention is practiced. What this portion of the specification discloses is that, “The system 20 has an overall construction of a computer with audio 22 and video 24 subsystems.” (’210 patent at 3:22-23). Plaintiffs point to the statement that, “[t]he minimum requirement is a broadcast signal receiver controlled by a processor with both program and data storage,” as support for their proposal that the structure is a “broadcast signal receiver.” (D.I. 92 at 36). I am not persuaded that this statement discloses that the broadcast signal receiver performs the specified function.

According to the specification, the databases are accessed by “[s]ystem 20.” (’210 patent at 5:1-2). As noted above, the system is simply “a computer with audio 22 and video 24 subsystems.” (*Id.* at 3:22-23). The broadcast signal receiver Plaintiffs refer to is a component of the audio or video subsystem, not the system itself. (*Id.* at 3:36-62). Therefore, I reject Plaintiffs’ proposal that the structure is a “broadcast signal receiver.” It seems clear to me that the claimed function is performed by a computer.⁴ In fact, the problem with Plaintiffs’ proposed structure is revealed within their own proposal, calling for the “broadcast signal receiver” to be controlled by a processor, with the processor performing the algorithm. Plaintiffs concede in their proposed structure that it is the processor that performs the disclosed function and that the processor is distinct from the broadcast signal receiver.

⁴ At oral argument, Defendant indicated that it did not object to using the term “computer” in lieu of “general purpose computer.” (Hr’g Tr. at 19:17-24).

The only portion of the specification that discloses the function of “accessing at least one database” is that cited by Defendant. Therefore, I will adopt Defendant’s proposed construction with the exception of the phrase “general purpose.”

6. “means for automatically switching to the second communication medium in response to detection of deterioration of the signal”
 - a. *Plaintiffs’ proposed construction*: “Function: Automatically switching to the second communication medium for receipt of the signal in response to the detection of deterioration of the signal; Structure: Broadcast signal receiver controlled by a processor, the processor programmed to perform the disclosed algorithm as recited in the Abstract, Figs. 1-2, Col. 3:8-4:21, Col. 6:31-65 and as depicted in Figure 2, and equivalents.”
 - b. *Defendant’s proposed construction*: “Function: Automatically switching to the second communication medium for receipt of the signal in response to the detection of deterioration of the signal; Structure: No algorithm – term is indefinite.”
 - c. *Court’s construction*: “Function: Automatically switching to the second communication medium for receipt of the signal in response to the detection of deterioration of the signal; Structure: None, term is indefinite”

This term appears in the ’210 patent. The parties agree that this is a means-plus-function term and they agree on the function. As an initial matter, I reject Plaintiffs’ proposal that the structure that performs this function is a “broadcast signal receiver” for the same reasons given above in the discussion of the “means for accessing” term. The specification discloses that the structure that performs the function of “switching” is the CPU, not the broadcast signal receiver. (’210 patent at 6:61-63 (“If signal deterioration is detected, CPU switches to an alternate medium for the same signal source.”)). Therefore, as with the previous term, the structure is a computer. For this disclosure to be sufficient, however, it “must be of ‘adequate’ corresponding structure to achieve the claimed function.” *Williamson*, 792 F.3d at 1352.

I find this term is indefinite because there is no disclosure of any sort of algorithm for how the “switching” is accomplished. The portions of the written specification cited by the parties and

flowchart of Figure 2 disclose only that “switching” occurs. For example, Figure 2 is a flowchart that indicates that if the signal deteriorates, a switch should be made to an alternate signal source. What is completely absent from that flowchart is any indication of how that switching occurs. The same is true of the written disclosure. Plaintiffs point to a portion of the specification which discloses that “the software executing in CPU identifies signal information for a signal source that can be obtained via a different communication medium whenever possible for the currently selected signal source.” (’210 patent at 6:54-57). The specification then states that the signal condition is monitored and, if the signal deteriorates, the CPU switches to the alternate communication medium. (*Id.* at 6:57-63). This does not disclose a mechanism for “switching.” Rather, it discloses an algorithm for monitoring signal condition and detecting signal deterioration. This is not the claimed function. Since the specification fails to disclose an algorithm for performing the claimed function, I find that this term is indefinite under 35 U.S.C. § 112, ¶6.

7. “a remote control transmitter, including a user interface consisting of only a cursor moving control and buttons to select one of the icons and text displayed on said display device and what is displayed at a cursor position”
 - a. *Plaintiffs’ proposed construction:* “No construction necessary – plain and ordinary meaning”
 - b. *Defendant’s proposed construction:* “A remote control transmitter, separate and distinct from the display device, with a user interface having only (i) a cursor moving control and (ii) buttons to select one of icons and text displayed on the display device and what is displayed at a cursor position; the remote control transmitter does not have any other buttons or controls.”
 - c. *Court’s construction:* “A remote control transmitter, separate and distinct from the display device, with a user interface having only (i) a cursor moving control and (ii) buttons to select one of icons and text displayed on the display device and what is displayed at a cursor position.”

This term appears in the ’633 patent. Plaintiffs argue that there is nothing in the patent that limits the claimed apparatus such that the “remote control transmitter” and “display device” must

be separate and distinct components. (D.I. 92 at 48). Plaintiffs further argue that if these components were separate and distinct, the apparatus would not be operable and that there are disclosed embodiments in which the two components are physically connected. (*Id.*). I disagree. Contrary to Plaintiffs' assertion, the only embodiments disclosed in the patent provide for a remote control device that is a separate component from the display device. (*See, e.g.*, '633 patent at Fig. 1, 2:25-36, 3:5-10, 4:21-33, 5:43-50). It seems to me that if an embodiment in which the components are separate and distinct would not be operable, as Plaintiffs suggest, the invention itself would necessarily be inoperable. Furthermore, a physical connection between the two components of the device does not turn the components into a single integrated device. A remote control is separate and distinct from the television it controls, regardless of the fact that the two devices interact and could be considered components of the same apparatus. The specification clearly discloses that the invention is a handheld controller with a small number of buttons that is remote from the display device. (*Id.* at 2:47-3:10). Therefore, I will adopt Defendant's proposed construction as to the "separate and distinct" limitation.

The parties also dispute whether the phrase "user interface consisting of only" limits the remote to the specified controls and buttons. A natural reading of this phrase indicates that it is the "user interface," which is part of the remote control transmitter, that is limited to "consisting of only." Since the parties have not asked me to construe "user interface," I decline to opine on whether the remote control transmitter may have additional buttons or controls that are not properly considered part of the "user interface." Therefore, I will not include this additional limitation. I construe this term to mean, "A remote control transmitter, separate and distinct from the display device, with a user interface having only (i) a cursor moving control and (ii) buttons to

select one of icons and text displayed on the display device and what is displayed at a cursor position.”

8. “text input mode” terms

- a. *Plaintiffs’ proposed construction*: “No construction necessary – plain and ordinary meaning”
- b. *Defendant’s proposed construction*: “In response to detecting the first text character entered by the keyboard, determining whether a title of the recording is previously stored, and then only if the title of the recording is not previously stored, entering a text input mode without a user selecting options from a menu.”
- c. *Court’s construction*: “entering text input mode without a user selecting options from a menu”

These terms appear in the ’667 patent. The parties do not dispute the meaning of the language surrounding the phrase “entering text input mode,” and, in fact, Defendant’s proposed construction merely parrots the claim language at issue, adding only the limitation “without a user selecting options from a menu.” Plaintiffs object to the inclusion of this negative limitation.

As an initial matter, I reject Plaintiffs’ suggestion that the negative limitation Defendant seeks to impose excludes preferred embodiments. (D.I. 92 at 62). Both of the embodiments Plaintiffs cite relate to situations in which the title of the track being played has already been entered into the database. (’667 patent at 4:24-39). In contrast, the method claims at issue are only performed when “the title of the recording is not previously stored.”

Defendant argues that its proposed negative limitation is supported by the prosecution history, in which the patentee disclaimed menu-driven text input. (D.I. 92 at 63-64). I agree with Defendant that the patentee distinguished menu-driven prior art in order to overcome a rejection. During prosecution, the applicant made clear that this invention did not involve navigating a menu and repeatedly distinguished “entering a text input mode” from navigating a menu. (D.I. 50-1 at 35-36; 62-64). The applicant clearly and repeatedly argued that the prior art taught “menu

commands, not text input,” and that “menu navigation . . . is very different” from the text input limitations. (*Id.* at 63). The applicant further argued that these menu commands “are not analogous” to the text input recited in the claims. (*Id.* at 63-65).

Plaintiffs contend that “any ambiguity as to whether the inventor’s statements constituted a disclaimer” are resolved by the fact that the ’667 patent discloses embodiments involving menu navigation. (D.I. 92 at 67). This is not a persuasive argument. Prosecution history disclaimer can lead to the very situation Plaintiffs seem to suggest is impossible— a specification with unclaimed embodiments that were disclaimed during prosecution to overcome prior art. This is of no moment here, however, as Plaintiffs fail to provide any citation to these purported embodiments within the ’667 patent’s specification. I have read the ’667 patent in its entirety and I cannot find the reference to menu navigation “between ‘detection of [a] first key character’ and ‘entering a text input mode’” that Plaintiffs allude to. The word “menus” appears once in the entire patent in the context of the CPU monitoring for keyboard input: “If activation of any character key is detected during playback of the DVD contents, i.e., anytime during playback of video or menus from the DVD, CPU enters a data input mode for the title of the DVD using the on-screen display capability provided by the video processor.” (’667 patent at 3:59-63). It seems clear from the language of the claims and the prosecution history that what the patentee invented is a method for inputting text related to a recording by entering characters on a keyboard without navigating menus. Therefore, I will construe “entering a text input mode” to mean “entering text input mode without a user selecting options from a menu.”

9. “a real-time pump . . . to detect the one of the bit rates used to encode the stored signals on each of the multiple recordings and to output transport stream packets”

- a. *Plaintiffs' proposed construction*: "A component of a multimedia device that detects the encoded bit rates of the stored signals and outputs multimedia stream packets"⁵
- b. *Defendant's proposed construction*: "A component of a video pump that detects the one of the bit rates used to encode the stored signals on each of the multiple recordings and that outputs video stream packets (with or without audio)."
- c. *Court's construction*: "A component of a video pump that detects the one of the bit rates used to encode the stored signals on each of the multiple recordings and that outputs video stream packets (with or without audio)."

This term appears in the '441 patent. Plaintiffs object to the inclusion of the word "video" in Defendant's proposed construction. (D.I. 92 at 69). Plaintiffs contend that although the patentee used the term "video" throughout the specification, the invention is not limited to video signals and includes devices that receive and output audio-only signals. (*Id.* at 70). I disagree. The specification makes clear that this invention is directed to video devices. The title of the patent is "Multi-Channel Video Pump." ('441 patent). The specification indicates that, "The present invention is directed to streaming video signals and, more particularly, for an apparatus for simultaneously streaming user-specified video files encoded at varying bit rates over a single network." (*Id.* at 1:11-14). The word "audio" appears in the specification only twice. First, the specification discloses that the purpose of the video pump "is to retrieve MPEG audio/video streams from various storage devices." (*Id.* at 2:64-66). Second, the specification indicates that the video pump retrieves and distributes "isochronous data including both audio and video," and that "this data will subsequently be referred to as either video or simply as data." (*Id.* at 3:6-11). Contrary to Plaintiffs' assertions, I do not think these references disclose that the invention may be an audio-only device. Rather, when the patent discusses "audio/video streams," it seems clear that it is referring to data streams that include both audio and video, not data streams including

⁵ Plaintiffs initially argued that this term should have its plain and ordinary meaning. (D.I. 92 at 69). In post-hearing letter briefing, Plaintiffs proposed this new construction. (D.I. 100 at 3).

only one or the other. The specification also discloses that the “real-time pump” of claim 1 is one of the “four main functional components” of the video pump. (*Id.* at 4:28-30). The specification is replete with references to video data types, video device components, and video file standards. On the other hand, similar references to audio data types, audio components, and audio file standards are completely absent from the specification. At oral argument, Plaintiffs admitted that there was nothing in the specification “that specifically affirmatively discloses audio only.” (Hr’g Tr. at 95:9-10). Plaintiffs’ proposal to use “multimedia,” a term the never appears in the patent, instead of “video,” it seems to me, will only cause confusion at trial as Plaintiffs have made clear they intend to argue that “multimedia” can encompass audio-only. Therefore, I will adopt Defendant’s proposed construction. Plaintiffs are prohibited from arguing that the “real-time pump” can output audio-only streams.

10. “output over the network multiplexed packet isochronous signals”

- a. *Plaintiffs’ proposed construction:* “Output over the network a plurality of separate signals as a combined signal, the separate signals each having a constant bit rate.”⁶
- b. *Defendant’s proposed construction:* “Simultaneously transmitting over the network a plurality of separate signals as a single combined signal, the separate signals each having a constant bit rate”
- c. *Court’s construction:* “Simultaneously transmitting over the network a plurality of separate signals as a single combined signal, the separate signals each having a constant bit rate.”

This term appears in the ’441 patent. The parties agree on the meaning of isochronous signals and the inclusion of “constant bit rate” in the construction. (D.I. 92 at 75). The only dispute is whether the “combined signal” is a single signal and whether the transmission is “simultaneous.”

⁶ Plaintiffs initially argued that this term should have its plain and ordinary meaning. (D.I. 92 at 74). In post-hearing letter briefing, Plaintiffs proposed this new construction. (D.I. 100 at 3).

Plaintiffs contend that a “multiplexed” signal need not consist of a plurality of separate signals. (*Id.* at 77). Plaintiffs cite to a technical dictionary defining “multiplex” as “to transmit two or more signals over a single channel” as support for their argument that the plain and ordinary meaning of “multiplex” is “combining one or more signals into a signal for transmission.” (*Id.*). It is not at all clear to me how Plaintiffs think this dictionary definition supports their position. I think the extrinsic evidence cited by both parties supports the conclusion that the plain and ordinary meaning of “multiplex” necessarily involves combining at least two signals into a single signal. (D.I. 92 at 76-77).

Plaintiffs further would omit “simultaneously” from the construction. I am not persuaded that this should be omitted. Transmitting the combined signal over a single channel necessarily results in simultaneous transmission of the individual signals that were combined to form the single signal. Based on the evidence presented by both parties, I think Defendant’s proposed construction represents what a person skilled in the art would understand this term to mean and Plaintiffs have not pointed to any intrinsic evidence that would suggest that the patentee intended for it to have any other meaning. I will adopt Defendant’s proposed construction.

11. The “providing control signal” terms

- a. *Plaintiffs’ proposed construction*: “No construction necessary – plain and ordinary meaning”
- b. *Defendant’s proposed construction*: “Provide [or providing] the respective corresponding device control signals over the network to each of the devices in the group [or zone], including the leader, to implement the operational change across the group [or zone].”
- c. *Court’s construction*: “plain and ordinary meaning”

These terms appear in the ’294 patent. The parties’ dispute centers on whether the group (or zone) leader must be part of the group (or zone) and, therefore, must receive the control signals

that are provided to each device in the group. It seems to me from examining the specification that the group leader is a member of the group, but that the control signals are not necessarily provided to the group leader. There is ample disclosure in the specification to support the idea that the group leader is part of the group. (*See, e.g.*, '294 patent at Fig. 2, Fig. 7, Fig. 9, 2:17-25, 6:32-57, 8:31-34, 10:19-37). The specification makes clear that the situation is different for zones and zone leaders, however: "In some embodiments the zones representative of all parent and child systems are provided by a common leader wireless speaker subsystem, regardless of whether that wireless speaker subsystem is included in each and every child system." (*Id.* at 15:23-27). In other words, a zone leader need not be part of every zone it leads.

The fact that the group leader is a member of the group does not, however, necessarily require that the group leader be provided with the control signals. The specification discloses an embodiment in which the control signals are delivered to the group leader, which is characterized as "redundancy [which] balances with simplicity." (*Id.* at 11:19-20). This is redundant in that "the group exists within and shares the hardware of the leader wireless speaker subsystem." (*Id.* at 6:56-57). Messages sent to the "group," therefore, "are received by the network interface of the leader wireless speaker subsystem." (*Id.* 6:58-60). This is only one embodiment, however, and the specification states, "In other embodiments wireless speaker subsystem 201 [the leader] implements the operational change without the need for a device control signal to be sent from device 208 [the group] to wireless speaker subsystem 201 [the leader]." (*Id.* 11:20-23). The parties note that some of the claims explicitly require the control signals to be provided to "each of the multimedia players," which Plaintiffs do not dispute would require the signals to be provided to the group leader. (D.I. 92 at 89). Since the specification discloses an embodiment in which the group leader does not provide control signals to itself and because some claims explicitly require

this limitation, I decline to adopt a construction in which all claims are so limited. I will construe these terms to have their plain and ordinary meaning.

IV. CONCLUSION

Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion suitable for submission to the jury.