**IN THE UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF DELAWARE**

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| SUOMEN COLORIZE OY, | ) | |
| | ) | |
| Plaintiff, | ) | |
| | ) | |
| v. | ) | Civil Action No. 12-715-CJB |
| | ) | |
| VERIZON SERVICES CORP., | ) | |
| VERIZON ONLINE LLC, and | ) | |
| VERIZON DELAWARE LLC, | ) | |
| | ) | |
| Defendants. | ) | |

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**MEMORANDUM OPINION**

December 23, 2014
Wilmington, Delaware

**BURKE, United States Magistrate Judge**

In this action filed by Plaintiff Suomen Colorize Oy ("Plaintiff") against Defendants Verizon Services Corporation, Verizon Online LLC and Verizon Delaware LLC (collectively, "Defendants"), Plaintiff alleges that Defendants infringe United States Patent No. 7,277,398 ("the '398 patent"). (D.I. 1 at ¶¶ 12, 20) Presently before the Court is the matter of claim construction. The Court adopts constructions for the disputed terms as set forth below.

## I. BACKGROUND

### A. The Parties

Plaintiff is a Finnish business entity with its principal place of business in Louhikkotie 12 A A, Vantaa, Finland. (*Id.* at ¶ 1) It is a technology innovation company and the assignee of the '398 patent. (*Id.* at ¶¶ 11, 13)

Defendants are wholly owned subsidiaries of Verizon Communications Inc. (*Id.* at ¶¶ 3-5) Verizon Services Corporation is a Delaware corporation with its principal place of business in Arlington, Virginia. (*Id.* at ¶ 3) Verizon Online LLC is a Delaware limited liability company with its principal place of business in Ashburn, Virginia. (*Id.* at ¶ 4) Verizon Delaware LLC is a Delaware limited liability company with its principal place of business in Wilmington, Delaware. (*Id.* at ¶ 5) In the course of their business, Defendants "make, use, offer for sale and/or sell a communications . . . service called FiOS." (*Id.* at ¶ 6) The television component of FiOS services is called FiOS TV; this television component contains an electronic program guide. (*Id.* at ¶ 15)

### B. The Asserted Patent

Plaintiff asserts only the '398 patent, a patent entitled "Method and Terminal for Providing Services in Telecommunication Network[.]" (D.I. 1, ex. 1)[1] The patent is based on U.S. Appl. No. 09/462,761 and was issued on October 2, 2007. (*Id.*) The '398 patent contains 23 claims. (*Id.*, cols. 6:42-10:24) The asserted claims are independent claim 1 and dependent claims 2, 11, and 12, all of which are dependent on claim 1. (D.I. 99 at 1 n.1; '398 patent, cols. 6:42-7:43)

The '398 patent relates to a process for creating and displaying an electronic program guide, or "EPG." (D.I. 99 at 1-2; D.I. 102 at 1; *see also* '398 patent)[2] EPGs are often provided with cable and satellite television services, and may also be found on some television sets and digital video recorders. (D.I. 100, exs. 3 & 6) They provide viewers with an onscreen listing of available channels and program data; these listings can sometimes be interactive (an "interactive program guide" or "IPG"), such that the user can select a program to watch from the scrolling listings. (D.I. 100, exs. 3, 4 & 6 (cited in D.I. 99 at 1-2))

The subject matter of the '398 patent is about using certain data (what the patent refers to as "identification and control data") to create an onscreen EPG. ('398 patent, Abstract & col. 2:14-18; D.I. 99 at 2; D.I. 102 at 1) The identification and control data comes from the "service multiplex[.]" ('398 patent, col. 6:51-53) The precise meaning of "service multiplex" is disputed,

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[1] The '398 patent is found in various portions of the record, including as an exhibit to Plaintiff's Complaint, (D.I. 1, ex. 1). Further citations will simply be to the "'398 patent."

[2] The term "EPG" is not found in the '398 patent, but both parties use the term in their briefs to describe the functionality claimed in the patent. (D.I. 99 at 1-2; D.I. 102 at 1-2; *see also* '398 patent)

but the parties generally agree that it can contain both the actual programs to be displayed on the screen as well as electronic information regarding those programs, such as information identifying the program title, or information about the location at which the program can be found. (D.I. 99 at 2; D.I. 102 at 3; '398 patent, col. 6:41-62) In the '398 patent, the identification and control data is used to form "selection data," which is transmitted to the customer separately from the service multiplex. ('398 patent, col. 2:27-35; D.I. 99 at 2; D.I. 102 at 1)

### C. Procedural Posture

Plaintiff commenced this action on June 5, 2012. (D.I. 1) This matter was assigned to the Court on June 13, 2012, and on July 27, 2012, the parties consented to have the Court conduct all proceedings in this case including trial, the entry of final judgment, and all post-trial proceedings. (D.I. 10)

The parties submitted their Amended Joint Claim Construction Chart on June 3, 2013. (D.I. 98) This Chart identified three agreed-upon constructions and six disputed terms or phrases. (*Id.*, ex. A) Thereafter, the parties filed simultaneous opening and responsive claim construction briefs. (D.I. 99, 102, 109, 110) The parties then submitted a letter to the Court stating that they had agreed upon the construction of one previously-disputed term. (D.I. 119) The Court held a *Markman* hearing to hear argument on the five disputed terms or phrases on July 30, 2013. (D.I. 120, hereinafter "Tr.")

## II. STANDARD OF REVIEW

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. U.S.A., Inc.*, 868 F.2d 1251, 1257

(Fed. Cir. 1989). The proper construction of claim terms is a question of law for the Court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). The Court should generally give 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 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, but rather should endeavor to reflect their "meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321.

To that end, the Court should look first and foremost to the language of the claims, 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." *Id.* 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 asserted and unasserted, can also be valuable" in discerning the meaning of a particular 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 particular 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 Court should look to other intrinsic evidence. For example, the Court 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." *Id.* at 1316. In that case, "the inventor's lexicography governs." *Id.* Even if the specification does not contain a special definition of the term-at-issue, 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 term." *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). In addition to the specification, 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, making the claim scope narrower than it would otherwise be." *Phillips*, 415 F.3d at 1317 (citations omitted).

Extrinsic evidence, "including expert and inventor testimony, dictionaries, and learned treatises[,]" can also "shed useful light on the relevant art." *Id.* (internal quotation marks and citations omitted). Dictionaries (especially technical dictionaries) may be useful in this process because they typically provide "the accepted meanings of terms used in various fields of science and technology[.]" *Id.* at 1318. However, the United States Court of Appeals for the Federal Circuit has cautioned that "heavy reliance on [a] dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification." *Id.* at 1321. 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.* at 1317 (internal quotation marks and

citations omitted); *accord Markman*, 52 F.3d at 981.

In utilizing these resources during claim construction, courts 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.'" *Shire Dev., LLC v. Watson Pharms., Inc.*, 746 F.3d 1326, 1330 (Fed. Cir. 2014) (quoting *Phillips*, 415 F.3d at 1316).

## III. DISCUSSION

### A. Agreed-upon Constructions

As noted above, the parties have reached agreement with respect to construction of four terms or phrases in the '398 patent. (*See* D.I. 98, ex. A at 1; D.I. 119) The Court adopts these agreed-upon constructions, and includes them as its own (listed as constructions 1-4) in the Order accompanying this Memorandum Opinion. *Research Found. of State Univ. of N.Y. v. Mylan Pharms., L.P.*, C.A. No. 09-184-JJF-LPS, 2010 WL 1911589, at *2 (D. Del. May 12, 2010).

### B. Disputed Terms or Phrases

The parties set out five disputed terms or phrases for the Court's review. The Court takes up the disputes in the order in which they were argued.

#### 1. "service information"

"Service information" is not a term used in the patent's specification; it appears only in the preamble to claim 1. Defendants propose that this term be construed as "[d]igital data describing the delivery system, content and scheduling/timing of broadcast data streams." (D.I. 98, ex. A at 1) Plaintiffs asserts that this term need not be construed, but that if the Court disagrees, the term should be afforded its plain and ordinary meaning, "based on [Plaintiff's]

proposed construction of [the term] 'service[.]'" (*Id.*) During oral argument, Plaintiff suggested that this plain meaning amounted to "information about the service[.]" (Tr. at 9)

The parties' threshold dispute is whether the preamble is limiting. Plaintiff argues that it is not. (Tr. at 10) Defendants admit that "where the preamble doesn't add a step to the claim, it's not limiting[,]" but argue that the preamble here *may* be limiting, depending on the Court's decision as to other claim construction issues. (Tr. at 28); *see also Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F.3d 1354, 1358 (Fed. Cir. 2010) (noting that, as a general matter, the preamble does not limit the claims, but may do so if it recites essential structure or steps, or if it is necessary to give life, meaning and vitality to the claim). In Defendants' view, if the Court does not adopt their proposed construction of "selection data" (a term discussed further below), then the preamble of claim 1 would be limiting, because Defendants' proposed construction of "service information" would "add the step of providing information to a customer." (Tr. at 33) If, on the other hand, the Court adopts Defendants' construction of the term "selection data," a term found in the body of the claim, then Defendants acknowledge that the preamble would "not add a step to the claim"—because, in Defendants' view, the step of providing information to a customer would already be a part of the claim. (Tr. at 28; D.I. 109 at 18)

As discussed below, the Court will adopt a construction of "selection data" that is in line with Defendants' proposal. In light of the Court's conclusion in that regard, there is no real dispute here between the parties for the Court to resolve, since neither side believes the term at issue is limiting as to claim 1, nor that it requires construction. (*See, e.g.*, Tr. at 32 (Defendants' counsel noting that "I don't think there would be a need to construe service information if you adopt our construction of selection data.")) In such a circumstance, the Court declines to

construe the term. *See, e.g., Select Retrieval LLC v. Amerimark Direct LLC*, Civil Action No. 1:11-cv-00812-RGA, 2014 WL 1092387, at *3 (D. Del. Mar. 14, 2014) ("[A]s the preamble does not limit the claim, its construction is not necessary, and the Court need not, and elects not to, construe it here."); *L'Oreal S.A. v. Johnson & Johnson Consumer Cos., Inc.*, Civil Action No. 12-98-GMS, Civil Action No. 12-99-GMS, 2013 WL 3788803, at *1 n.2 (D. Del. July 19, 2013) (declining to construe a term from a preamble that was not limiting).

**2. "multiplexing"**

Plaintiff next propose that the term "multiplexing" means "[i]nterleaving two or more data signals together[.]" (D.I. 98, ex. A at 3) Defendants counter that "multiplexing" means "[t]o create a multiplex; see proposed definition of 'service multiplex[.]'"[3] (*Id.*)

In the briefing and at oral argument, the parties focused on disputes relating to "service multiplex," and mostly ignored the meaning of "multiplexing." (*See, e.g.*, D.I. 99 at 19-20; D.I. 102 at 11-12) Plaintiff proposed that the term be construed, but even in its own opening brief, it did not offer robust support for its proposed construction. (D.I. 102 at 11-12) Plaintiff relies primarily on one portion of the '398 patent's specification to support its definition. (D.I. 102 at 12) That portion states that "multiplexing makes it possible to receive several services simultaneously, for example file transfer and program monitoring, etc." ('398 patent, col. 3:24-26) Defendants, for their part, do not address the term "multiplexing" in their opening or responsive claim construction briefs at all. (D.I. 99, 109) They also did not offer any arguments in support of their construction or against Plaintiff's proposed construction at oral argument. (Tr.

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[3] As discussed in the next section, Defendants offer a construction of "service multiplex" as follows: "[a] stream of all the digital data carrying one or more services within a single physical channel[.]" (D.I. 98, ex. A at 4)

at 41-60)

The Court concludes that, overall, Defendants' proposed construction is weaker than Plaintiff's. Defendants' construction of "multiplexing" would read the element out of the claim entirely. Claim 1 already requires "form[ing] a service multiplex[,]" which does not differ in any apparent way from Defendants' proposal: "to create a multiplex[.]" ('398 patent, col. 6:46; D.I. 98, ex. A at 3) Thus, Defendants' construction would render "multiplexing" meaningless. Plaintiff's construction, on the other hand, is generally consistent with the patent specification, including the portion cited above. ('398 patent, col. 3:24-26)

Plaintiff does not provide an explanation for its use of the word "interleaving[,]" but it appears to be sourced in part from Plaintiff's expert, Adam Goldberg, who stated in Plaintiff's technology tutorial that "multiplexed . . . mean[s] that numerous audio video streams are interleaved together . . . ." (D.I. 108) Although the Scheduling Order states that a technology tutorial may not be used to argue claim constructions, (D.I. 18 at ¶ 10), it nonetheless appears that Plaintiff's use of the word "interleaving" is not meaningfully contested, and its use here generally comports with how other courts have construed the terms "multiplexed" or "multiplexing" (albeit in different patents). *See, e.g.*, *OPTi Inc. v. nVidia Corp.*, No. Civ.A.2:04-CV-377TJW, 2006 WL 1133331, at *10 (E.D. Tex. Apr. 24, 2006) (construing "multiplexed" to involve "carry[ing] more than one type of specific information in a time interleaved manner"); *Oki Am., Inc. v. Advanced Micro Devices, Inc.*, No. C 04-03171 CRB, 2006 WL 335369, at *15-18 (N.D. Cal. Feb. 14, 2006) (noting that "multiplexing" can have several meanings, at least one of which involves "interleaving"); *Orbsak, LLC v. Gen. Instrument Corp.*, No. 99 C 6684, 2002 WL 172446, at *3 (N.D. Ill. Feb. 4, 2002) (noting that the court had

previously construed "'multiplexing' to 'involve interleaving multiple signals onto a single carrier.'").

Thus, the Court will adopt Plaintiff's proposed construction of "multiplexing": "interleaving two or more data signals together."

**3. "service multiplex"**

Defendants offer a construction of "service multiplex" as follows: "[a] stream of all the digital data carrying one or more services within a single physical channel[.]" (D.I. 98, ex. A at 4) Plaintiff asserts that "service multiplex" is properly construed as "[a] stream or streams of all the digital data carrying one or more services." (*Id.*) The constructions are largely similar, with two differences: Defendants assert that the "service multiplex" must (1) take the form of a single stream and (2) be confined to a single physical channel; Plaintiff's construction could encompass multiple streams on multiple channels.

The term "service multiplex" appears 19 times in the claims of the '398 patent. Its use in claim 1 is representative:

> **1.** A method for providing a customer with service information via a terminal connected to a telecommunication network, the method comprising:
>
> multiplexing a plurality of service data in a frame format to form a *service multiplex* for service transmission, whereby identification and control data of the service data are located in at least one part of the multiplexed frames to be transmitted with the respective service data;
>
> forming selection data for the selection of the service data on the basis of the identification and control data located in the *service multiplex*;
>
> transmitting the selection data separately, without the actual service

data of the *service multiplex*, to the customer terminal for displaying the selection data; and

in response to the user selecting a service displayed on a display unit, identifying the selected service on the basis of said identification and control data associated with the selected service and transmitted in mutiplexed frames, and providing the customer with the identified service from the *service multiplex*.

('398 patent, col. 6:42-62 (emphasis added)). The term does not appear in the specification. Yet although that is the case, the way that the specification does describe the related terms "multiplexing" or "multiplexed frame" makes clear that the common portion of the parties' proposed constructions here—requiring that a "service multiplex" includes "digital data carrying one or more services"—is appropriate. (*See, e.g.*, '398 patent, col. 3:24-25 (specification teaching that "multiplexing makes it possible to receive several services simultaneously"); *id.*, col. 3:50-51 (specification explaining that "a conventional multiplexed frame . . . [is] compris[ed] [of] several different services")). The Court thus turns to the points of dispute between the parties.

**a. The DVB Specification reflects the meaning of "service multiplex" to one of skill in the art.**

Defendants argue that their construction should be adopted here because it largely mirrors the definition of "multiplex" found in a document entitled "Digital Video Broadcasting (DVB) Specification for Service Information (SI) in DVB systems" (hereinafter, the "DVB Specification"). (D.I. 99 at 19-20; Tr. at 45-47; D.I. 104 at SCO00000083) This October 1996 document was submitted by the patentee during prosecution to the United States Patent & Trademark Office ("PTO"). (D.I. 104 at SCO00000083) The patentee submitted the DVB Specification in response to the Examiner's enablement rejection, which in turn related to "how

to form selection data on the basis of identification and control data located in a service multiplex[.]" (*Id.* at SCO00000078) The DVB Specification's definition of "multiplex" reads: "[a] stream of all the digital data carrying one or more services within a single physical channel." (*Id.* at SCO00000090)

Plaintiff, however, asserts that the enablement rejection that prompted the patentee to submit the DVB Specification involved a dispute only as to "identification and control data[.]" (Tr. at 38-39, 56, 64) Thus, according to Plaintiff, how the DVB Specification defines "service multiplex" is irrelevant here. (*Id.*)

The Court finds greater strength in Defendants' argument. When the patentee submitted the DVB Specification, he stated that he did so because the document "show[s] an example of identification and control data *located in a service multiplex* at the time of invention." (D.I. 104 at SCO00000079 (emphasis added)). The very next sentence of the patentee's submission explains that the DVB Specification "show[s] that the terminology used in the specification of the present application is *common industry terminology* that would be readily appreciated by a person skilled in the art." (*Id.* (emphasis added)) To the Court, this is a strong indication that, at a minimum, the "terminology" being referred to in this sentence included those terms (such as "service multiplex") that were being referenced in the prior sentence. (*Id.*) Indeed, it would have been important for the Examiner to have a clear understanding of the meaning the patentee was ascribing to the term "service multiplex," as that term appears repeatedly in the patentee's submission explaining why the enablement rejection should be overcome. (*Id.* at SCO0000078-79) All of this convinces the Court that the patentee's goal in submitting the DVB Specification was in part to make sure the Examiner understood not only what "identification and control data"

meant when used in "common industry" parlance, but also what the term "service multiplex" meant as well. (*Id.*)

The fact that DVB Specification defines the term "multiplex," and not "service multiplex[,]" (*id.* at SCO00000090), does not detract from the Court's conclusion. (*See* Tr. at 54-55 (Plaintiff's counsel arguing that the DVB standard only defines "multiplex[,]" and that "*service* multiplex" is "probably" not the "same thing[.]") (emphasis added)) The DVB Specification defined "multiplex" as a stream of digital data "carrying one or more *services*[.]" (D.I. 104 at SCO00000090 (emphasis added)) As Defendants note, (Tr. at 59), this indicates that the term "multiplex" as used in the DVB Specification amounts to a "collection of services[,]" and that it is not meaningfully different from the term "service multiplex" as used in the patentee's response to the Examiner and in the patent-in-suit.[4]

For these reasons, the Court will treat the DVB Specification as compelling intrinsic evidence of the meaning of the claim term to one of skill in the art at the time of patenting. *See Phillips*, 415 F.3d at 1317 ("The prosecution history, which we have designated as part of the 'intrinsic evidence,' consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.") (citing *Autogiro Co. of Am. v.*

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[4] The DVB Specification provides one additional indication that the term "multiplex" defined therein refers to the "service multiplex" of the claims. A "multiplex" as described in the DVB Specification contains "Program Specific Information" ("PSI"), which in turn provides information regarding the services in the multiplex in which it is contained. (D.I. 104 at SCO00000093) Likewise, the "service multiplex" of the '398 patent contains "identification and control data" that provides information regarding the services in the service multiplex in which it is contained. (*See, e.g.*, '398 patent, col. 6:45-50) Thus, the structure of the "multiplex" in the DVB specification mirrors that of the "service multiplex" in the claims.

*United States*, 384 F.2d 391, 399 (Ct. Cl. 1967)).[5]

**b. A "service multiplex" is a single stream.**

The parties' first dispute with regard to the term "service multiplex" relates to its structure—they agree that it must consist of at least one "stream," but disagree regarding whether it can take the form of more than one stream. The word "stream" does not appear in the patent itself. It does appear in the DVB Specification, however, which indicates that a "multiplex" is "[a] *stream* of all the digital data carrying one or more services within a single physical channel." (D.I. 104 at SCO00000090 (emphasis added))

The Court turns first to the claims, and claim 1 sets forth that a "service multiplex" is formed by "multiplexing a plurality of service data." ('398 patent, col. 6:45-46) As discussed above, the Court adopted Plaintiff's proposed construction for the term "multiplexing," which is "interleaving two or more data signals together." The parties have also agreed that "service data" is "[t]he actual service or services (for example, programs)[.]" (D.I. 98, ex. A at 1) Taking all of this together, this means that the "service data" forms the "data signals" that are multiplexed to create the "service multiplex." The fact that the services (e.g., programs) are interleaved "together" supports Defendants' construction that the result (the "service multiplex") consists of

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[5] Plaintiff provides one other argument, not addressed above, as to why the Court should not rely on this definition in the DVB Specification. It argues that because the DVB Specification was identified in the prosecution history in 2006—over six years from the filing date of the patent application—its definitional language should be disregarded. (Tr. at 43) This argument is wholly undermined by the fact that *the patentee* explicitly relied upon the DVB Specification's language in making his enablement argument, in order to "show that the terminology used [in the patent application] . . . would be readily appreciated by a person skilled in the art." (D.I. 104 at SCO00000079). In relying on the DVB Specification in this way, the patentee saw no issue with the fact that six years had passed since the application had been filed.

one stream, as opposed to multiple streams.[6]

During oral argument, Plaintiff attempted to rebut Defendants' single-stream argument, primarily by citing to evidence showing that the *source* of data that is ultimately contained in the service multiplex may consist of multiple streams. (*See, e.g.*, Tr. at 42 ("[Y]ou can have a stream or streams all multiplexed together which is one of the distinctions in our competing claim constructions that we believe it is a stream or streams.")). That question, however, is not implicated in the dispute here, which addresses whether the service multiplex *itself*, not the source data, exists in anything other than single-stream form. The nature of the source data was already addressed in the Court's construction of "multiplex," which makes clear that the data may *originate* as two or more streams, but that those streams are then interleaved together.[7]

Thus it appears from the patent, the DVB Specification, and the definitions of other key claim terms, that a "service multiplex" must be a single stream.

**c. A "service multiplex" includes all the digital data carrying one or**

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[6] The meaning of the term "interleaving" in the context of data transmission was explored in *Oki Am., Inc. v. Advanced Micro Devices, Inc.*, No. C 04-03171 CRB, 2006 WL 335369, at *15 n.3 (N.D. Cal. Feb. 14, 2006). There, the court provided a "useful analogy" for the meaning of the term:

> One might imagine a two lane road on which cars travel side by side. If the cars each represent[] a unit of data, this two-lane road would allow parallel transmission. However, if the two-lane road merges into a single lane, the cars will have to enter the single lane in an alternating manner, one at a time, to avoid collision. This merger is analogous to interleaving.

*Id.* (internal quotation marks and citations omitted).

[7] This construction is also consistent with the examples set forth by Plaintiff both at oral argument and in its technology tutorial. (*See, e.g.*, Tr., ex. 1, Plaintiff's *Markman* Presentation ("Plaintiff's *Markman*") at 23; D.I. 108 at 16).

**more services within a "single physical channel."**

The parties' second dispute is whether the service multiplex must be within a single physical channel. The DVB Specification suggests that it must—indicating that a "multiplex" is "[a] stream of all the digital data carrying one or more services within *a single physical channel.*" (D.I. 104 at SCO00000090 (emphasis added))[8]

Plaintiff responds, in significant part, by making the same argument that the Court has rejected above—that the DVB Specification's definition should not be used here, because in submitting the DVB Specification to the Examiner, the patentee was not suggesting that it shed light on the meaning of "service multiplex." (Tr. at 45) Otherwise, Plaintiff cites to no persuasive evidence indicating that its proposed construction is correct.

For example, at the *Markman* hearing, in asserting that a single channel limitation was not appropriate, Plaintiff's counsel argued that "radio, television [and] other audiovisual . . . services are on different physical channels" and that the "idea that they're somehow limited to one physical channel doesn't make sense" because "radio doesn't come on the same physical channel that broadcast television does[.]" (Tr. at 58) Thus, according to Plaintiff's theory, a "single physical channel" limitation could not be appropriate because the '398 patent supposedly teaches that these different types of services (existing on different channels) can be multiplexed. The specification, however, seems to indicate just the opposite: "[I]n connection with radio, television or other such services one multiplexed channel can be selected . . . even though the

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[8] Indeed, in the record copy of the DVB Specification that was provided to the Examiner, the word "channel" in the definition of "multiplex" is underlined, with an exclamation point written to the right of the underlined word. (D.I. 104 at SCO00000090)

channel comprises several services . . . ."[9] ('398, col. 1:55-58)

Likewise, Plaintiff's citation to Figure 1 of the DVB Specification is unhelpful. (*See* D.I. 102 at 12 (quoting D.I. 104 at SCO00000091)) The Court agrees with Defendants that the Figure's use of the term "bouquet" to refer to services contained in multiple multiplexes (and possibly, channels), separate from its use of the term "[m]ultiplexes[,]" provides "strong support for the idea that a multiplex and bouquet are separate things." (Tr. at 51; *see also* D.I. 109 at 20) Plaintiff has not provided any reason for the Court to connect the term "bouquet" as used in the DVB Specification to the "service multiplex" of claim 1.

**d. Conclusion**

Ultimately, the Court concludes that the construction proposed by Plaintiff has no support in the record. The intrinsic evidence cited by Defendants, particularly the DVB Specification, supports their proposed construction, as it "inform[s] the meaning of the claim language by demonstrating how the inventor understood the invention[.]" *Phillips*, 415 F.3d at 1317 (citations omitted). Accordingly, the Court construes "service multiplex" to mean "a stream of all the digital data carrying one or more services within a single physical channel."

**4. "identification and control data"**

Plaintiff proposes that this term, found in asserted claim 1, be construed to mean "[d]ata used to identify and/or configure services within the service multiplex[.]" (D.I. 98, ex. A at 5)

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[9] Plaintiff also presented two slides at the *Markman* hearing, emphasizing certain quoted passages from the specification that it believes demonstrates that "service multiplex" is not limited to a single physical channel. (Plaintiff's *Markman* at 27 (citing '398 patent, cols. 3:20-23 & 6:5-13)) While these portions of the specification indicate that multiple "services" from different networks can be multiplexed, it is unclear how this relates to the "single physical channel" dispute at issue here regarding "service multiplex."

Defendants propose "[d]ata located in the first part of the multiplexed frame which includes both: [1] identification data, i.e., service selection data such as title information used to identify a specific service; and [2] control data, i.e., data indicating the location and configuration of the service[.]" (*Id.*) The parties raise two disputes regarding this term: (1) whether the "identification and control data" must be located in the first part of a multiplexed frame, and (2) whether the term should be construed to require that both "identification data" and "control data" be present, or whether identification data and/or control data is sufficient.[10] (Tr. at 60-62; D.I. 109 at 15-16) The Court will address these disputes in turn.

As to the question regarding the location of the "identification and control data," the language of claim 1 provides some guidance. (Tr. at 62-63) As previously noted, claim 1 recites that "identification and control data . . . are located in at least one part of the multiplexed frames[.]" ('398 patent, col 6:47-49) Claim 1 also describes "identification and control data" as simply "located in the service multiplex[.]" (*Id.*, col. 6:52-53) Nothing in the claim language, then, supports Defendants' proposed limitation requiring the "identification and control data" to be located in the first part of each multiplexed frame. In fact, claim 1's reference to this kind of data being "located in *at least one part* of the multiplexed frames" suggests to the Court that the

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[10] In Plaintiff's answering brief, it alleges that Defendants had asserted that "identification data" is "'selection data,'" and that this assertion is "wrong." (D.I. 110 at 9-10) Defendants' proposed claim construction and the arguments made in support of that construction, however, always use the term "service selection data[,]" not "selection data." As Defendants' counsel explained at the *Markman* hearing, these two different terms were meant to capture two different concepts. (Tr. at 96) The concept that Defendants intended to capture with the term "service selection data" derives from the portion of Figure 1 of the '398 patent that shows "Identification data" as containing "[s]election data of services and transactions[.]" (*Id.*; *see also* '398 patent, FIG. 1) As this understanding appears consistent with Plaintiff's understanding of "identification data," i.e., "[d]ata used to identify . . . services within the service multiplex[,]" (D.I. 98, ex. A at 5), the Court finds that no dispute exists as to this point.

identification and control data does not, in fact, have to be located in a *particular* part of the frames.

Defendants' argument primarily relies on citations to the specification and prosecution history. (*See, e.g.*, D.I. 99 at 16) In the specification, for example, the "essential idea of the invention" is described, in part as follows: "The essential idea of the invention is that the identification and control part located at the beginning of the frame . . . is separated from the multiplexed frame of each desired service . . . ." ('398 patent, col. 2:27-29) Figure 1 in the patent also depicts a multiplexed frame where the identification and control data are located at the beginning of the frame; other portions of the specification point out this fact. (*Id.*, cols. 3:50-54, 4:15-17) In addition, the patentee also called out Figure 1 during prosecution, noting that the "identification and control portion" of the "program frame" in Figure 1 is contained within "first portion (1a) of the frame[.]" (D.I. 104 at SCO00000078)

Plaintiff counters by citing a description by the patentee during prosecution of "the presently claimed invention[.]" (*Id.* at SCO00000243) This description states that the "identification and control data . . . are located in at least one frame of the multiplexed frames[,]" and does not otherwise limit the location to the first part of a multiplexed frame. (*Id.*)

The Court finds that although there is intrinsic evidence supporting Defendants' argument—and even though one such reference is contained within a description of the "essential idea of the invention"—here, the explicit language of the claim and certain portions of the prosecution history point to a different conclusion. This is not a case, then, where the patentee "consistently and exclusively" disclosed one embodiment in such a way as to indicate that the embodiment was "clearly what the inventors of the [patent] conceived of." *Hologic, Inc. v.*

*SenoRx, Inc.*, 639 F.3d 1329, 1335-36, 1338 (Fed. Cir. 2011) (limiting the invention to one particular concept where the concept was "consistently and exclusively" disclosed in relation to a number of examples in the specification).[11] In light of this, and particularly in light of the language of the claim itself, which more closely tracks the broader understanding that Plaintiff proposes, the Court will issue a construction of "identification and control data" that does not place limits on the location of that data within the service multiplex.

The next dispute addresses whether "identification and control data" should be construed as requiring both identification data and control data be present, or whether identification data and/or control data is sufficient.

In the language of the claims, the term "identification and control data" always appears as such. (*See, e.g.*, '398 patent, col. 6:47; *id.*, col. 6:52) That is, neither the term "identification data" nor "control data" is used separately from the single, unified phrase "identification and control data." Each party believes that the patent's use of this phrase supports its position. Plaintiff argues that if "the patent applicant intended two separate components to necessarily comprise identification and control data, he would have claimed: identification data and control data." (D.I. 102 at 15 (emphasis omitted)) Defendants argue that the use of the word "and" in the phrase "identification and control data" is significant, because the patentee could alternately have chosen "identification *or* control data" to connote an either/or meaning. (D.I. 99 at 16 (emphasis added))

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[11] Indeed, the main focus of the "essential idea of the invention" statement appears to be the fact that the identification and control data is "separated from the multiplexed frame" and "used to form the selection data." ('398 patent, col. 2:27-35) The *position* of the identification and control data within the frame reads as if it is merely an aside to the main statement regarding the essential idea of the invention.

Defendants are correct that the claim language supports their construction. *See, e.g.*, *Motorola Mobility LLC v. Int'l Trade Comm'n*, 553 F. App'x 971, 975 (Fed. Cir. 2014) ("[T]he claim uses the term 'and' and not 'or' . . . thereby indicating a conjunctive requirement within the claim."); *Network Appliance Inc. v. Sun Microsystems Inc.*, No. C-07-06053 EDL, 2008 WL 4193049, at *31 (N.D. Cal. Sept. 10, 2008) ("The inventor chose to use the language 'and,' which has a conjunctive meaning, rather than 'or.' [The] proposed construction, however, replaces 'and' with 'and/or,' which disregards the plain claim language."); *see also TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1376 (Fed. Cir. 2008) (holding that the use of "and" indicates that both elements must be present); *cf. Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1361-63 (Fed. Cir. 2008) (holding that "and" meant "or" because its context within the claim required that construction, and because to hold otherwise would render several dependent claims meaningless). Nothing in the claims themselves indicates that the patentee did not intend to use the conjunction "and" with its ordinary meaning.

The specification also supports Defendants' interpretation. As Defendants note, Figure 1 depicts "control data" followed by "identification data" in a multiplexed frame, and contains "separate descriptions" for each of the two terms. (D.I. 99 at 17) Although Figure 1 does not itself unify "identification data" and "control data" under a separate heading of "identification and control data," the specification does, confirming that the "identification data" and "control data" shown in Figure 1 come together to "compris[e] the identification and control data." ('398 patent, col. 4:9-17) And though, as Plaintiff notes, (D.I. 102 at 15 (citing '398 patent, col. 3:58-63)), the specification (like the claims) refers to "identification and control data" as a single concept, Plaintiff fails to point to an instance where the discussion of that single concept would

necessarily exclude either identification data or control data.[12]

Plaintiff does not contest the remainder of Defendants' construction. The Court will adopt a modified version of Defendants' construction, and construe "identification and control data" as "data that includes both: (1) identification data, i.e., service selection data such as title information used to identify a specific service; and (2) control data, i.e., data indicating the location and configuration of the service."

**5. "selection data"**

Plaintiff proposes that this term be construed to mean "[p]rogram menu data (for example, the selection menu data, the EPG data, or both)[.]" (D.I. 98, ex. A at 6) Defendants propose "[t]he interactive program guide; i.e., data regarding the services of a service provider to be displayed to the user for the selection of a service[.]" (*Id.*) The dispute here is over whether (1) all data in the "selection data" must be displayed to the user; such that (2) such data amounts to an interactive program guide. (D.I. 109 at 13-15; D.I. 110 at 6 & n.8).

**a. The claim language supports Defendants' proposed construction.**

The Court turns first to the claim language. Here, viewing asserted claim 1 by way of example, it is clear that the claim language closely associates the term "selection data" with data that is displayed to a customer and that is used for selection of a service. For example, the preamble of the claim recites that the method at issue is utilized to "provid[e] a customer with

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[12] Moreover, it is worth noting that at one point in his response to the Examiner's enablement rejection, the patentee referred to a dispute regarding what was meant by "identification and control data[,]" and, in doing so, used the phrase "identification data and control data" to refer to that particular claim term. (D.I. 104 at SCO00000080 (quotation marks omitted)) The usage of that phraseology, although limited, suggests a term that necessarily includes both identification data and control data.

service information via a terminal" connected to a communications network. ('398 patent, col. 6:41-43) The claim goes on to recite that the method at issue: (1) comprises in part "forming selection data for the selection of the service data[;]" (2) that the selection data is transmitted to the customer terminal "for displaying the selection data[;]" and (3) that a "user" thereafter "select[s] a service displayed on a display unit[.]" (*Id.*, col. 6:50-58) This language clearly indicates that "selection data" is displayed and is used for selecting a service, though it does not unequivocally indicate that this the exclusive, required function of all such data (i.e., that data cannot be considered "selection data" unless it meets these requirements).

The story is the same when one turns to the specification. Time and again, the specification links reference to "selection data" to data displayed to a user for selection of a service (though the specification, again, never emphatically states that this is a required characteristic of all such data). For example, the Background of the Invention states that the "invention relates to a method for providing a customer with services . . . in which . . . different selection data regarding available services is presented to the customer for selecting a service." ('398 patent, col. 1:8-12; *see also id.*, col. 2:10) Later, the specification teaches that "[t]he essential idea of the invention" involves the use of identification and control data that is "used to form the selection data of the service to be displayed to the user." (*Id.*, col. 2:27-35) Elsewhere in the specification, the patentee addresses the "terminal[,]" of the invention, which is "characterized" as "arranged to display the selection data of the service[.]"[13] (*Id.*, col. 2:14-16; *see also id.*, Abstract ("The terminal is designed to display the selection data of the service[.]");

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[13] The specification also refers to "[a] program menu, in other words the program *selection data*[.]" (*Id.*, col. 3:12-16 (emphasis added))

*id.*, col. 1:13-18; *id.*, col. 4:42-43)

If the claim language and the specification strongly suggest that Defendants' proposed construction is the correct one, in the Court's view, the prosecution history eliminates any doubt. This is most manifestly demonstrated in portions of the prosecution history in which, as Defendants argue, the patentee clearly and affirmatively equated the term "selection data" with the terms "selection menu," "IPG," and "EPG." For example, at various points in the prosecution history, the patentee responded to the Examiner's prior rejection of certain proposed claims (including what became claim 1) as being anticipated by a particular prior art reference ("Coleman"). (D.I. 104 at SCO00000242-43) In doing so, at one point the patentee affirmatively described the "presently claimed invention" as involving a number of phases. (*Id.* at SCO00000243) In describing what occurs in the second and third phases, the patentee referenced the "the *selection data* for the selection of the service (i.e., the *selection menu* or the *EPG*) [that] is formed on the basis of the identification and control data located in the service multiplex" and the "*selection data* based on the identification and control data (i.e., the *selection menu* or the *EPG*) [that is] transmitted separately, without the actual service data of the service multiplex, to the customer terminal *for displaying the selection data*." (*Id.* (emphasis added)) At another point, again distinguishing the present invention from Coleman, the patentee equated a "selection menu" with an "IPG." (*Id.* at SCO00000262 (explaining that "Coleman . . . discloses a method and apparatus for providing an *interactive program guide (IPG)* for television programs, movies and other services available over a broadcast network. . . . Thus, Coleman . . . discloses a method for providing a *selection menu* for services available over a broadcast network . . . .") (emphasis added))

Thus, even to the extent that the full ordinary and customary meaning of the claim language here could permit a reading of "selection data" to include data that need not be displayed to the user for the selection of a service, the above-referenced statements of the patentee during prosecution amount to an explicit and unmistakable disavowel of such claim scope. *See Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1095 (Fed. Cir. 2013). Taken together, these references in the prosecution history amount to a clear statement from the patentee that, as Defendants argue, "selection data" *is* the data that is displayed to the user for selecting a service—in other words, the data that makes up an interactive program guide from which the user selects programming. (D.I. 109 at 14)

The Court does not find persuasive Plaintiffs' assertion that no such finding should be made because, in at least certain portions of the prosecution history set out above, when the "[E]xaminer equated prior art 'IPG,' [or] 'EPG,' [to] the term 'selection data' . . . the patentee merely responded by using the same language." (D.I. 110 at 7) Even if it were the case that the patentee was simply adopting terminology previously used by the Examiner (and it is not clear to the Court that this is what was occurring), then the patentee was certainly doing so affirmatively, in a concerted attempt to overcome the Examiner's anticipation rejection. In such circumstances, the doctrine of prosecution history disclaimer is applicable. *Biogen Idec, Inc.*, 713 F.3d at 1097 n.6 (noting that where a case deals "not only with applicants letting stand an examiner's narrow characterization of a claim term, but also their adoption of that characterization to overcome the examiner's . . . rejection" it amounts to clear disclaimer).

**b. Claim differentiation does not bar Defendants' proposed construction.**

Plaintiff also makes a claim differentiation argument based on Claims 3 and 13. First, Plaintiff looks to claim 3, which recites a "service directory" that "comprises the selection data and by which the services are presented on a display unit." (Tr. at 102-105; '398 patent, col. 7:1-3) Second, Plaintiff raises claim 13, which recites "[a] method of using a terminal of a telecommunication network . . . comprising the steps of: [1] selecting a service to be transmitted to said terminal in a multiplexed form; [2] *displaying the selection data* of the service . . . ." (Tr. at 102-105; '398 patent, col. 7:44-50 (emphasis added)) It suggests that such language makes it "abundantly clear that when the patentee intended something to be displayed, he was explicit." (Tr. at 102; *see also* D.I. 110 at 6)

The doctrine of claim differentiation "stems from 'the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.'" *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1368 (Fed. Cir. 2005) (citation omitted). Thus, ordinarily "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Phillips*, 415 F.3d at 1315. The Federal Circuit has noted, however, that "claim differentiation only creates a presumption that each claim in a patent has a different scope; it is not a hard and fast rule of construction." *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1368 (Fed. Cir. 2000) (internal quotation marks and citation omitted). When a patentee "cho[oses] several words in drafting a particular limitation of one claim, but fewer (though similar) words in drafting the corresponding limitation in another, [it] does not mandate different interpretations of the two limitations[.]" *Id.* This is particularly true where the specification and prosecution history are sufficiently clear to "overcome" the "presumption

arising from the doctrine of claim differentiation[.]" *Id.*

The Court does not find that the doctrine of claim differentiation requires a construction consistent with Plaintiff's proposal here. First, although claim 3 and claim 13 express the "displaying" concept with slightly more precision than does claim 1, there are additional limitations that differentiate claims 3 and 13 from claim 1. *See, e.g.*, *Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1363 (Fed. Cir. 2000) (holding that the district court did not violate the doctrine of claim differentiation when it imported an explicit limitation from a dependent claim into an independent claim, because the dependent claim still contained an additional limitation that resulted in a narrower scope). Claim 3 includes the additional requirement of a "service directory[.]" '398 patent, col. 6:66-7:3. Claim 13 is an independent claim that includes a step that is not included in claim 1, "selecting a service to be transmitted to said terminal in a multiplexed form[,]" and omits claim 1's requirements of "multiplexing" and "transmitting[.]" *Id.*, col. 7:44-62. Thus, regardless of which construction is applied, claims 3 and 13 do not become coextensive with claim 1.

Moreover, even if the presumption of claim differentiation did apply, the Court finds that the clear teachings of the specification and prosecution history discussed above rebut that presumption. *See, e.g.*, *Biogen Idec, Inc.*, 713 F.3d at 1097 ("[W]here found, prosecution history disclaimer can overcome the presumption of claim differentiation."); *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011) ("[A]ny presumption created by the doctrine of claim differentiation will be overcome by a contrary construction dictated by the written description or prosecution history . . . .") (internal quotation marks and citations omitted); *accord Simplification LLC v. Block Fin. Corp.*, 593 F. Supp. 2d 700, 711 (D. Del. 2009) (finding

that the claim differentiation presumption was "trump[ed]" by the "prosecution history and specification"). Accordingly, the doctrine of claim differentiation does not prevent the Court from construing the term "selection data" as requiring display to the user.

Accordingly, the Court construes "selection data" as "the interactive program guide; i.e., data regarding the services of a service provider to be displayed to the user for the selection of a service."

**6. "on the basis of"/"forming . . . on the basis of . . ."**

The final piece of claim language at issue here is also from claim 1, and incorporates many of the terms already addressed above: "forming selection data for the selection of the service data on the basis of the identification and control data located in the service multiplex[.]" ('398 patent, col. 6:51-53) Plaintiff proposes that this phrase be given its "[p]lain meaning" based on its other proposed constructions, along with a construction one other phrase: "on the basis of[.]" (D.I. 98, ex. A at 7) Plaintiff proposes that "on the basis of" be construed to mean "[e]stablished in part from[.]" (*Id.*) Defendants, for their part, ask the Court to construe the phrase as a whole to mean "[s]eparating the identification and control data located in the service multiplex from the multiplexed frame of each desired service and using it to form selection data." (*Id.*)

Based on the parties' arguments at the *Markman* hearing, there appears to be only one real dispute between them as to this phrase.[14] It relates to the way in which identification and

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[14] In their briefing, the parties addressed two issues at length regarding this phrase, neither of which actually appear to be disputed. First, Plaintiff believed that Defendants' primary argument as to this phrase was that selection data must be formed *purely or exclusively* from identification and control data. (*See* D.I. 110 at 4) Defendants, however, made clear that they did not intend to argue that such "purity" was required by their proposed construction. (*See* Tr. at

control data is used to "form[] selection data[.]" Defendants argue that there must be "direct usage[.]" (Tr. at 157; *see also id.* at 153-55; D.I. 99 at 13 (Defendants asserting that "identification and control data is *directly and physically accessed* from the multiplex to create selection data") (emphasis added)) Plaintiff, by contrast, believes that no such "direct usage" is required by the claim. (Tr. at 138) This dispute is perhaps best illustrated by an example (frequently referenced by the parties) of a type of "usage" of identification and control data that would be captured by Plaintiff's construction, but not Defendants' construction: the "manual entry" or "manual[] input" of information and control data to form selection data. (*Id.* at 155; *id.* at 156 (Defendants arguing that when "some operator goes and looks at what the [information and control] data is and types it in[,]" such use would not be covered by claim 1); *id.* at 164)

**a. The claims and specification support Defendants' proposed construction.**

Defendants' construction is based on the following language in the specification:

> The *essential idea of the invention* is that the identification and control part located at the beginning of the frame and comprising data regarding the location and size of the program in the frame, the provider address and optionally specification data regarding the necessary equipment and service identification data *is separated from the multiplexed frame of each desired service*, and that this identification and control data of the frames *is used to form the selection data* of the service to be displayed to the user.

('398 patent, col. 2:27-35 (emphasis added)) It appears to be undisputed that when Defendants refer to the concept of "direct usage" of identification and control data, they are referring to the the "separat[ion] from the multiplexed frame" element addressed in this portion of the

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143) Second, Defendant argued at length that "selection data is *formed by using* the identification and control data[.]" (D.I. 99 at 8 (certain emphasis in original)) Plaintiff, however, agrees that identification and control data must be "used to form" selection data. (D.I. 110 at 1)

specification. (Tr. at 138, 155, 164) Plaintiff argues, however, that no such limitation should be read into this claim term. (D.I. 110 at 1-2)

When a patent's specification describes the "invention" as a whole as containing a certain feature, it is likely "that the statement will support a limiting definition of a claim term." *C.R. Bard, Inc. v. United States Surgical Corp.*, 388 F.3d 858, 864 (Fed. Cir. 2004). This is particularly true where the specification contains numerous statements that the "invention" contains the feature at issue. *See Honeywell Int'l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006). But even where it is clear that the specification refers to the invention as a whole, and states that the invention contains a certain feature, such statements do not "automatically limit the meaning of claim terms in all circumstances[.]" *Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394, 1398 (Fed. Cir. 2008) (internal quotation marks and citation omitted). Instead, such statements must be "read in the context of the entire specification and prosecution history." *Id.* For example, even if a patent's abstract and summary indicate that a limitation is proper, but that limitation excludes a preferred embodiment, a construction utilizing that limitation would "not represent the full scope" of the claims. *MEMS Tech. Berhad v. Int'l Trade Comm'n*, 447 F. App'x 142, 150-51 (Fed. Cir. 2011).

Here, the Court concludes that "separat[ion] from the multiplexed frame" language does refer to the invention as a whole.[15] The quoted language above appears within the section of the

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[15] In reference to this language, Plaintiff argues that Defendants have "improperly read[] into the patent claim an element from an *illustrative embodiment* in the written description." (D.I. 110 at 2 (emphasis added)) Yet Plaintiff does not explain how it concluded that this language refers to an element from an "embodiment" of the invention, rather than a description of the invention as a whole. The language quoted above from the specification describes it as the latter, not the former.

specification entitled "Brief Summary of the Invention" and is prefaced by a statement that the feature is an "essential idea of the invention[.]" ('398 patent, cols. 1:33, 2:27) And unlike the portion of this language described earlier in relation to "identification and control data," the "separat[ion]" language is consistent with the claims, the prosecution history, and the remainder of the specification. This language is in harmony with that of claim 1, which refers to the "selection data" as being "transmitt[ed] . . . *separately*, without the actual service data of the service multiplex[,]" (*id.* at 6:54-56 (emphasis added)). Indeed, Plaintiff points to no embodiment in the specification that would be *excluded* if the "separat[ion] from the multiplexed frame" feature were required. (*Cf.* Tr. at 149 (Defendants' counsel arguing that "nothing later in the patent . . . would be read out of the patent" if the Court adopted the "separating" language in Defendants' proposed construction))

In addition to the language of the specification, the Court must also consider the parties' arguments based on the prosecution history. *Netcraft Corp.*, 549 F.3d at 1400. Defendants argue that their proposed claim construction is "reinforc[ed]" by elements of the prosecution history. (D.I. 99 at 9) Most notable are the patentee's statements regarding the multiple rejections of the invention as being anticipated by Coleman. (*Id.* at 11-12)

In 2003, the patentee responded to a PTO rejection, and attempted to distinguish claim 1 and other pending claims from Coleman. The patentee did so by first explaining what he believed Coleman disclosed, which he described as follows:

> [A] method and apparatus for providing an interactive program guide (IPG) for television programs, movies and other services available over a broadcast network. The IPG data is input to an IPG data processor *via an operator interface, comprising typically a workstation with a keyboard or other input means*. . . . Then the IPG data is packetized and input to a multiplexer together with data

> packet streams from N different services. The packet stream multiplex, including the IPG data, is output from the multiplexer and transmitted to the customer terminals via a communication network. . . . Thus, Coleman et al. discloses a method for providing a selection menu for services available over a broadcast network, *wherein the data for selection menu is first formed manually, typically by typing with a keyboard*, and then the selection menu is integrally multiplexed with the distributed services. . . . The method of Coleman et al. is a slow and cumbersome method for creating the selection menu, whereby it is difficult to update the selection menu to reflect any possible changes in the services available through the multiplex.

(D.I. 104 at SCO00000262 (emphasis added)) As noted above, the concept of manual entry is vital to this claim construction dispute, as it is meant to be captured by Plaintiff's proposed construction, and excluded by Defendants' proposed construction.

Additional responses from the patentee in 2005 and 2006 were even clearer. (*See* D.I. 99 at 12) First, in 2005, the patentee addressed the anticipation rejection by stating the following:

> The *presently claimed invention* is directed to methods and apparatuses for providing customer service information wherein selection data is formed from data already created for and inserted into a service multiplex for identification and control purposes. As a consequence, the selection data according to the claimed invention, is *automatically generated* from the service multiplex and the selection data is also inherently applicable for identifying and locating a selected service on the received service multiplex as the latter contains similar identification and control data.
>
> [The] [p]ending claims [] are novel and patentable because the primary reference Coleman et al. fails to teach *forming selection data from the identification and control data located in the service multiplex*. To the contrary, *Coleman explicitly teaches that it is necessary to input IPG data through an operator interface.*

(D.I. 104 at SCO00000215 (emphasis added)) This passage contains two concepts important to Defendants' argument here. First, it states that the "presently claimed invention" is "directed to[,]" *inter alia*, "automatic[] generat[ion]" of selection data from the service multiplex—a

concept captured by Defendants' construction. Second, it clearly juxtaposes the "automatic[] generat[ion]" of selection data in the "presently claimed invention" to the manual input called out in Coleman, and states that this improvement is part of what makes the pending claims "novel and patentable[.]"

Later, in 2006, after yet another rejection, the patentee sought once again to distinguish Coleman from the claimed invention. (*Id.* at SCO00000184-85) The patentee noted that in Coleman, the IPG data is input "via an operator interface, comprising typically a workstation with a keyboard or other input means[.]" (*Id.* at SCO00000184) The patentee explained that "in the present invention the selection data is formed on the basis of data already created from the service multiplex for identification and control purposes of service transmission." (*Id.* at SCO00000185) The patentee then continued by distinguishing the claimed invention as one where "selection data . . . may be *automatically generated* from the service multiplex[.]" (*Id.* (emphasis added)) This feature was then contrasted to Coleman, where "IPG data . . . is not automatically created—it is input manually."[16] (*Id.*) Overall, the language in the patentee's 2006 response is not quite as clear (as compared to the prior 2005 response) because the patentee uses the phrase "may be" immediately before "automatically generated[.]" (*Id.*) But the use of "may be" makes sense in context: The patentee distinguished his invention as using identification and control data that already exists in the service multiplex, such that the selection data then *may be*

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[16] In this same 2006 response, the patentee also added the claim that would ultimately became dependent claim 10. (D.I. 104 at SCO000000183) Dependent claim 10 states: "A method according to claim **1**, further comprising forming *automatically* the selecti[o]n data for selection of the service on the basis of the identification and control data located in the service multiplex." ('398 patent, col. 7:35-38 (emphasis added)) This claim forms part of the basis for Plaintiff's claim differentiation argument, discussed below.

generated automatically rather than input manually. (*Id.*) If, in contrast, the identification and control data did not already exist, the selection data could not be generated automatically. Viewed as a whole, this once again demonstrates that the patentee understood his invention not to encompass the manual entry of selection data.[17]

Plaintiff, in support of its construction, relies in part on the patentee's statements during prosecution regarding U.S. Patent No. 6,005,562 ("Shiga"), a portion of the prosecution history that was also cited by Defendants. (*See* D.I. 102 at 18-19 & n.32; D.I. 99 at 12-13 (citing D.I. 104 at SCO00000046)) Plaintiff argues that the patentee distinguished Shiga as teaching, unlike the claimed invention, that selection data is "formed purely and directly" from information and control data. (D.I. 102 at 18-19) Plaintiff essentially argues that the patentee, in distinguishing Shiga, *disclaimed* any right to an invention that forms selection data "purely and directly" from information and control data. (*Id.*) But a review of the patentee's response at issue shows that he did not distinguish his claimed invention from Shiga in this way. (D.I. 104 at SCO00000046) The patentee distinguished Shiga because it did not separate the identification and control data

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[17] In their briefing regarding this dispute, Defendants also point to certain other portions of the patent's specification and prosecution history, which they believe "confirm[] the meaning" of the phrase at issue. (D.I. 99 at 8-12 (citing '398 patent, Abstract, cols. 2:9-13, 2:14-18, 4:6-17 & 5:25-29; D.I. 104 at SCO00000021, SCO00000289, SCO00000257, SCO00000261, SCO00000250-54 & SCO00000242-43)) These citations simply support the conclusion that selection data is "formed by using" the identification and control data located in the service multiplex. (D.I. 99 at 8) As noted *supra*, there is no dispute as between the parties as to that issue. (*See* D.I. 110 at 1) The "separat[ion] from the multiplexed frame" element provides an example of *how* selection data could be formed by using the identification and control data in the service multiplex, but Defendants fail to explain why the "formed-by-using" requirement set out in these citations necessitates such a limitation. (*See id.* (Plaintiff arguing that "selection data . . . can be formed, in part, from identification and control data[,]" but that the question to be addressed is "*how* the identification and control data is used in the forming step") (emphasis added))

from the service multiplex, as required by the claims: "[T]he EPG data [in Shiga] is transmitted *with the program data*. Clearly, Shiga does not disclose *forming selection data* for the selection of the service data on the basis of the identification and control data[.]" (*Id.* (emphasis added)) Accordingly, Plaintiff's position that the prosecution history supports its proposed claim construction lacks any basis in the record presented.

In sum, the patentee repeatedly and consistently disavowed any claim scope that would encompass manual entry of the type disclosed in the Coleman reference. *See Biogen*, 713 F.3d at 1096 ("[W]hen the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent, the doctrine of prosecution history disclaimer narrows the meaning of the claim consistent with the scope of the claim surrendered.") As a result, Plaintiff's proposed construction, which would encompass manual entry of selection data, is unsupported by the record.

**b. Claim differentiation does not preclude Defendants' proposed construction.**

Plaintiff presents one final argument regarding this claim term. It asserts that Defendants "inappropriately conflate[]" terms such as "formed from" and "automatically generated" with the words "on the basis of" that are used in this phrase. (D.I. 110 at 5) In doing so, Plaintiff argues, Defendants have violated the doctrine of claim differentiation. (*Id.* at 5-6) Plaintiff points to five unasserted claims in the '398 patent and argues that those claims "should be read to have separate and distinguishable meanings" from the meaning of claim 1. (D.I. 110 at 5).

The first four claims that Plaintiff cites to are easily distinguished,[18] but dependent claim

[18] This includes claims 13, 15, 18, and 20. (*See* D.I. 110 at 5) Claim 13 is addressed above; in short, it is a separate independent claim that includes an additional step that claim 1

10 presents a much more difficult claim differentiation issue. (*See* D.I. 110 at 5) Claim 10 depends from claim 1, and recites "[a] method according to claim **1**, further comprising *forming automatically* the selecti[o]n data for selection of the service on the basis of the identification and control data located in the service multiplex[.]" ('398 patent, col. 7:35-38 (emphasis added)). The Federal Circuit has stated that "where the limitation that is sought to be 'read into' an independent claim already appears in a dependent claim, the doctrine of claim differentiation is at its strongest." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004). The presumption that an independent claim does not have a limitation that is introduced for the first time in a dependent claim is "especially strong" when "the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim[.]" *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003). Here, Plaintiff argues that the limitation of "forming automatically" is the only difference between dependent claim 10 and independent claim 1.

Defendants argue that even if the presumption of claim differentiation is implicated, it

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lacks ("selecting"), and omits two steps that are present in claim 1 ("multiplexing" and "transmitting"). Plaintiff does not explain how Defendants' proposed construction would render claims 1 and 13 coextensive. Claim 15 depends from claim 13 and can be distinguished for the same reasons.

Claim 18 is an independent claim that claims "combined service selection data" rather than "selection data." (*Id.*, col. 8:8-36) The "combined service selection data" is "automatically derived from" the identification and control data. (*Id.*, col. 8:21-22) Independent claim 20 uses the same language. (*Id.*, col. 8:50-52) Again, Plaintiff does not explain how this language is asserted to have the same meaning as Defendants' proposed construction. And even if it did, claims 18 and 20 contain other differences from claim 1. For example, claim 18 is a system claim, rather than a method claim, and claim 20 contains additional limitations regarding how the "combined service selection data" is displayed and processed. (*Id.*, col. 8:7-10, 8:54-67)

cannot "overcome clear statements in the specification and prosecution history." (D.I. 109 at 9 n.6) Indeed, the Federal Circuit has held that the doctrine of claim differentiation cannot "broaden claims beyond their correct scope." *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1480 (Fed. Cir. 1998). The "presumption attendant to claim differentiation" can be rebutted by a clear disavowal of claim scope by the patentee during prosecution. *Seachange*, 413 F.3d at 1368-75. In *Seachange v. C-COR, Inc.*, 413 F.3d 1361 (Fed. Cir. 2005), for example, the Federal Circuit addressed two independent claims with "identical" limitations other than the disputed claim language. *Id.* at 1369. The court held that because of the patentee's statements during prosecution to distinguish a prior art reference, the patentee had disavowed the broader scope of the second independent claim, leaving both independent claims with identical scope. *Id.* at 1373-75.

Similarly, in *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362 (Fed. Cir. 2000), the Federal Circuit addressed an independent claim for food packaging that included a "back panel" that was "relatively stiff[.]" *Kraft Foods*, 203 F.3d at 1366-68 & n.2. A second independent claim also included a "'protecting back panel,'" but lacked an express stiffness limitation. *Id.* The patent described all embodiments as including the stiffness limitation, and the patentee distinguished the patented invention from the prior art on that basis during prosecution. *Id.* Based on the language in the specification and content of the prosecution history, the lower court had concluded that the second claim should be construed to include the omitted stiffness limitation, despite the fact that the claim limitations would then share the same scope. *Id.* The Federal Circuit affirmed, stating that "the written description and prosecution history overcome any presumption arising from the doctrine of claim differentiation." *Id.*

The calculation here is similar in many respects to the Federal Circuit decisions in *Seachange* and *Kraft Foods*. The specification makes clear that the instant phrase in claim 1 requires "separat[ion] from the multiplexed frame[,]" and using that separated identification and control data to form selection data. And the prosecution history further supports this conclusion, as the patentee unmistakably disavowed any claim scope that would encompass manual entry of identification and control data to form selection data—by, on several occasions, contrasting the manual entry feature of the prior art with the present invention. In the end, the Court concludes that the specification and prosecution history are sufficiently clear in demonstrating the "correct scope" of claim 1. *Kraft*, 203 F.3d at 1368 (internal quotation marks and citation omitted). Accordingly, even if Defendants' construction would render the scope of claim 1 and claim 10 coextensive, broadening the scope of claim 1 to account for the presumption of claim differentiation would be inappropriate. *Id.*

The Court therefore construes the term "forming selection data for the selection of the service data on the basis of the identification and control data located in the service multiplex" to mean "separating the identification and control data located in the service multiplex from the multiplexed frame of each desired service and using it to form selection data."

## IV. CONCLUSION

The Court will construe the disputed claim terms of the '398 patent consistent with this Memorandum Opinion. An appropriate Order follows.

**IN THE UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF DELAWARE**

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| SUOMEN COLORIZE OY, | ) | |
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| Plaintiff, | ) | |
| | ) | |
| v. | ) | Civil Action No. 12-715-CJB |
| | ) | |
| VERIZON SERVICES CORP., | ) | |
| VERIZON ONLINE LLC, and | ) | |
| VERIZON DELAWARE LLC, | ) | |
| | ) | |
| Defendants. | ) | |

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**ORDER**

At Wilmington, this **23rd day of December, 2014,** for the reasons set forth in the Memorandum Opinion issued on this date, **IT IS HEREBY ORDERED** that the claim language of U.S. Patent No. 7,277,398 is construed as follows:

1. "terminal" means "a terminal can be a computer, a set-top box or the like by which the data can be displayed."
2. "service" means "radio and television programs, videos and various other services in audiovisual or text form are, for example, services."
3. "service data" means "the actual service or services (for example, programs)."
4. "frame" means "digital packet."
5. "multiplexing" means "interleaving two or more data signals together."
6. "service multiplex" means "a stream of all the digital data carrying one or more services within a single physical channel."
7. "identification and control data" means "data that includes both: (1) identification

data, i.e., service selection data such as title information used to identify a specific service; and (2) control data, i.e., data indicating the location and configuration of the service."

8. "selection data" means "the interactive program guide; i.e., data regarding the services of a service provider to be displayed to the user for the selection of a service."

9. "forming selection data for the selection of the service data on the basis of the identification and control data located in the service multiplex" means "separating the identification and control data located in the service multiplex from the multiplexed frame of each desired service and using it to form selection data."

Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE