

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION**

**IRIDESCENT NETWORKS, INC.,**

**Plaintiff,**

**v.**

**AT&T MOBILITY, LLC,**

**Defendant.**

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**CIVIL ACTION NO. 6:16-CV-01003-RWS**

**MEMORANDUM OPINION AND ORDER**

This claim construction opinion construes the disputed claim terms in United States Patent No. 8,036,119 (“the ’119 Patent”). Plaintiff Iridescent Networks, Inc. (“Plaintiff”) alleges that Defendant AT&T Mobility, LLC (“AT&T”) and Defendant-Intervenor Ericsson Inc. (“Ericsson”) infringe certain claims of the ’119 Patent. Plaintiff filed an opening claim construction brief (Doc. No. 119), to which Defendants filed a responsive brief (Doc. No. 128), and Plaintiff filed a reply (Doc. No. 131). The parties additionally submitted a Joint Claim Construction Chart pursuant to P.R. 4-5(d). (Doc. No. 134.) On July 13, 2017, the Court held a claim construction hearing. Upon consideration of the parties’ arguments, and for the reasons stated herein, the Court adopts the constructions set forth below.

**OVERVIEW OF THE PATENTS**

Plaintiff contends that “[u]sing the distributed controller and portal architecture of the ’119 Patent, AT&T’s network ensures a high quality of service connection for its customers, facilitating next-generation services like Voice Over LTE (‘VoLTE’ or ‘HD Voice’) and Video Over LTE (‘ViLTE’) calling.” (Doc. No. 119, at 1.) The ’119 Patent is entitled “System and

Method of Providing Bandwidth on Demand.” ’119 Patent. The disclosure of the ’119 Patent relates generally to communications systems, and specifically to an improved system and method of providing guaranteed bandwidth on demand for an end user and/or enterprise. ’119 Patent at 1:19–22. Claim 1 is representative of the claimed invention and recites:

1. A method for providing bandwidth on demand comprising:
  - receiving, by a controller positioned in a network, a request for a high quality of service connection supporting any one of a plurality of one-way and two-way traffic types between an originating end-point and a terminating end-point, wherein the request comes from the originating end-point and includes at least one of a requested amount of bandwidth and a codec;
  - determining, by the controller, whether the originating end-point is authorized to use the requested amount of bandwidth or the codec and whether the terminating end-point can be reached by the controller;
  - directing, by the controller, a portal that is positioned in the network and physically separate from the controller to allocate local port resources of the portal for the connection;
  - negotiating, by the controller, to reserve far-end resources for the terminating end-point; and
  - providing, by the controller to the portal, routing instructions for traffic corresponding to the connection so that the traffic is directed by the portal based only on the routing instructions provided by the controller, wherein the portal does not perform any independent routing on the traffic, and wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated bearer path that includes a required route supported by the portal and dynamically provisioned by the controller, and wherein control paths for the connection are supported only between each of the originating and terminating end-points and the controller and between the portal and the controller.

’119 Patent at 7:43–8:7.

## CLAIM CONSTRUCTION PRINCIPLES

“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) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313–14; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003). Claim language guides the Court’s construction of claim terms. *Phillips*, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Other claims, asserted and unasserted, can provide additional instruction because “terms are normally used consistently throughout the patent.” *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). “[T]he 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.’” *Id.* (quoting *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court

generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at 1325. For example, “[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’” *Globetrotter Software, Inc. v. Elan Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). The well-established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during

prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002); *see also Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 994 (Fed. Cir. 2003) (“The disclaimer . . . must be effected with ‘reasonable clarity and deliberateness.’”) (citations omitted). “Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover.” *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Omega Eng’g, Inc.*, 334 F.3d at 1324.

Although “less significant than the intrinsic record in determining the legally operative meaning of claim language,” the Court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

In patent construction, “subsidiary fact finding is sometimes necessary” and the court “may have to make ‘credibility judgments’ about witnesses.” *Teva v. Sandoz*, 135 S.Ct. 831, 838 (2015). In some cases, “the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or

the meaning of a term in the relevant art during the relevant time period.” *Id.* at 841. “If a district court resolves a dispute between experts and makes a factual finding that, in general, a certain term of art had a particular meaning to a person of ordinary skill in the art at the time of the invention, the district court must then conduct a legal analysis: whether a skilled artisan would ascribe that same meaning to that term *in the context of the specific patent claim under review.*” *Id.* (emphasis in original). When the court makes subsidiary factual findings about the extrinsic evidence in consideration of the “evidentiary underpinnings” of claim construction, those findings are reviewed for clear error on appeal. *Id.*

## DISCUSSION

The parties dispute the meaning of the following claim terms, which are set forth herein:

### I. “a high quality of service connection” (Claims 1, 11)

Claim Term	Plaintiff’s Proposal	Defendants’ Proposal
<p><b>“a high quality of service connection”</b> (Claims 1, 11)</p>	<p>“a connection in which one or more quality of service parameters, including bandwidth, latency, and/or packet loss, are assured from end-to-end based on the requirements of the application”</p>	<p>“a connection that assures connection speed of at least approximately one megabit per second and, depending on the application, packet loss requirements that are about <math>10^{-5}</math>, and latency requirements that are less than one second”</p>

With respect to the term “a high quality of service connection,” the parties dispute whether “high quality of service” merely signifies an assured connection that is distinctive from the “best effort” prior art, or whether the term, coined by the patentee, connotes specific requirements with respect to the service connection. Specifically, Plaintiff argues that “[t]here is no one-size-fits-all ‘high quality of service connection’ because the parameters and values change according to the application,” and that this is not a term of degree because the specification discloses only either a “best effort” connection or a “high quality of service” connection. (Doc. No. 119, at 7; Doc. No. 131, at 1.) Defendants respond that “this term

presents a simple issue of whether the patent or its prosecution history provides some standard of measuring the term of degree (“high”) and, if so, what that standard is.” (Doc. No. 128, at 6.)

As an initial matter, the parties substantially agree that while the term “quality of service” is a term of art that would be understood by a person of ordinary skill in the art, the term “high quality of service” is not a known term of art, but rather a term coined by the patentee. The Court must therefore look to the use of the term “high quality of service” as it is used by the patentee in the context of the ’119 Patent to decipher its meaning.

Here, the majority of the parties’ dispute surrounds Figure 3 of the ’119 Patent:

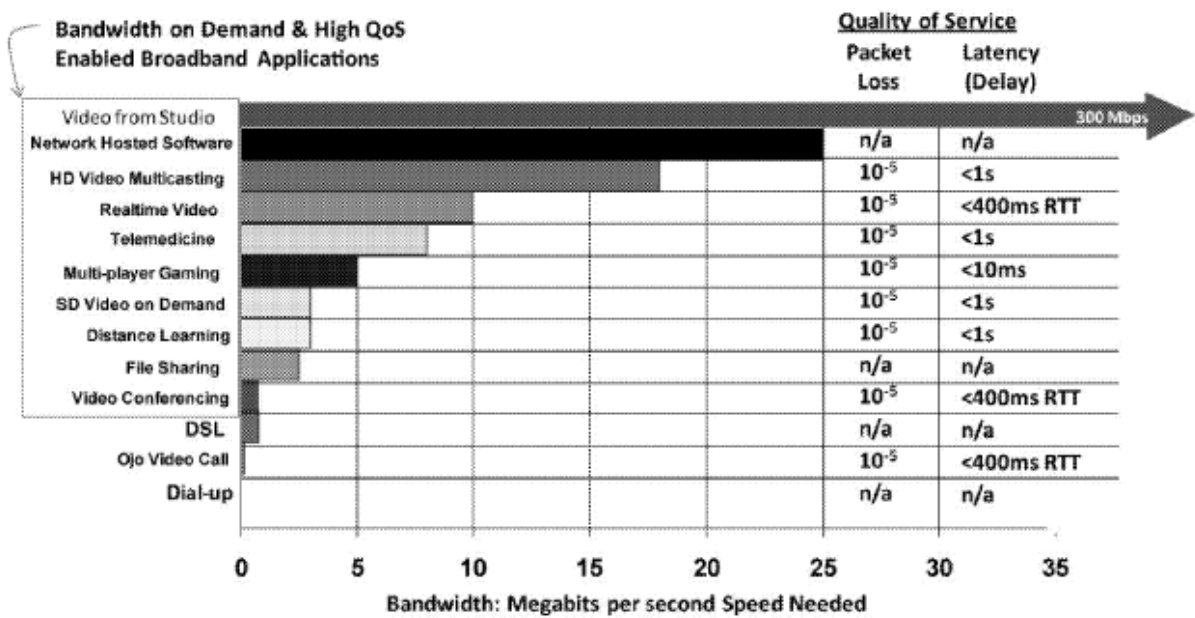


FIG. 3

(’119 Patent, Fig. 3.)

Figure 3 of the ’119 Patent sets forth several applications identified as “Bandwidth on Demand & High QoS Enabled Broadband Applications.” *See* ’119 Patent, Fig. 3 (highlighting in box: Video from Studio, Network Hosted Software, HD Video Multicasting, Realtime Video, Telemedicine, Multi-player Gaming, SD Video on Demand, Distance Learning, File Sharing,

Video Conferencing). Figure 3 gives exemplary “High QoS” applications with bandwidth shown ranging from approximately 1 Megabit per second to 300 Megabits per second. (’119 Patent, Fig. 3.) Figure 3 similarly shows “Quality of Service” values for packet loss and latency, including as to applications that are not indicated as being “High QoS” applications.

While Plaintiff relies on Figure 3 to broadly interpret the term “high quality of service” based on assurance of the “service parameters” illustrated in this figure, Figure 3, as illustrated in the patent alone, is not the full extent of the intrinsic record. Here, in response to an indefiniteness rejection by the Examiner, the patentee stated the following during prosecution:

As illustrated by the boxed set of applications on the left side of Fig. 3, *high QoS (quality of service) may be viewed in the present application* as having speeds varying from approximately 1–300 megabits per second, packet loss requirements that are typically about  $10^{-5}$ , and latency requirements that are typically less than one second. These are commonly used parameters and, as illustrated in Fig. 3, often vary somewhat based on the type of application.

(Doc. No. 128, Ex. A, July 22, 2009 Amendment and Response to Office Action at 7–8 (emphasis added).)

This description by the patentee of “high QoS (quality of service)” in the prosecution history reveals the patentee’s intent in using the term “high quality of service” and provides clear guidance on the disclosures of Figure 3. Specifically, with respect to the illustrated parameters, the patentee makes clear that bandwidth varies from “approximately 1–300 megabits per second, packet loss requirements . . . are typically about  $10^{-5}$ , and latency requirements . . . are typically less than one second.” *Id.* Further, the patentee notes that these parameters vary “based on the type of application.” *Id.* Although Figure 3 illustrates that not all applications are necessarily sensitive to packet loss and latency, the parameters set forth during prosecution nonetheless serve to “provide some standard for measuring” this term of degree. *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1367 (Fed. Cir. 2010) (citation and internal quotation marks omitted). Moreover, the patentee’s clear statement outweighs any inconsistencies in Figure 3 that might



arise from a strict interpretation of the Figure to set forth clear parameters for “high quality of service” (particularly to whatever extent “DSL” can be interpreted as being an “application” rather than merely an example of bandwidth). Indeed, this Court does not interpret patent figures for exact measurement or strictly limiting parameters. *See, e.g., Application of Olson*, 212 F.2d 590, 592 (C.C.P.A. 1954); *Hockerson-Halberstadt, Inc. v. Avia Group Int’l, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000) (“it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue”).

Accordingly, the Court construes the term “a high quality of service connection” to mean “a connection that assures connection speed of at least approximately one megabit per second and, where applicable based on the type of application, packet loss requirements that are about  $10^{-5}$  and latency requirements that are less than one second.”

**II. “includes at least one of a requested amount of bandwidth and a codec” (Claims 1, 3, 4)**

<b>Claim Term</b>	<b>Plaintiff’s Proposal</b>	<b>Defendants’ Proposal</b>
<p><b>“includes at least one of a requested amount of bandwidth and a codec”</b></p> <p>(Claims 1, 3, 4)</p>	<p>“includes a requested amount of bandwidth, or a codec, or both”</p>	<p>“includes at least one requested amount of bandwidth and at least one codec”</p>

The parties dispute whether the phrase “includes at least one of a requested amount of bandwidth and a codec” is conjunctive or disjunctive. Plaintiff contends that “[t]he specification of the ’119 Patent teaches that the claimed ‘request’ need not always include both a required amount of bandwidth and a codec.” (Doc. No. 119, at 15.) Defendants respond that Defendants’

proposed construction “is the ordinary meaning of this conjunctive term, and is consistent with the patent’s specification and the prosecution history.” (Doc. No. 128, at 13.) In response, Plaintiff argues that the specification “merely says that if a voice and/or video codec is present, the controller handles ‘negotiation’” and “only says that the controller ‘ensures interoperability’ of video codec type and bandwidth and says nothing about what the ‘request’ includes.” (Doc. No. 131 at 5–6 (citing ’119 Patent at 4:67–5:1 & 5:27–33).)

In relevant part, Claim 1 recites:

1. A method for providing bandwidth on demand comprising:
  - receiving, by a controller positioned in a network, a request for a high quality of service connection supporting any one of a plurality of one-way and two-way traffic types between an originating end-point and a terminating endpoint, wherein the request comes from the originating end-point and includes *at least one of a requested amount of bandwidth and a codec; . . . .*
  - determining, by the controller, whether the originating end-point is authorized to use *the requested amount of bandwidth or the codec* and whether the terminating end-point can be reached by the controller;

(’119 Patent, Claim 1) (emphasis added).

While the claim phrase recites “bandwidth *and* a codec,” it also expressly begins with “at least one of...” and later recites “the requested amount of bandwidth *or* the codec.” (’119 Patent, Claim 1) (emphasis added). Thus, the plain language of claim 1 recites that the request includes either a “bandwidth” or “a codec” or both.

In support of their conjunctive argument, Defendants primarily rely upon *SuperGuide Corp. v. DirecTV Enterprises, Inc.*, in which “at least one of a desired program start time, a desired program end time, a desired program service, and a desired program type” was construed to require a selection from each category. 358 F.3d 870, 886 (Fed. Cir. 2004). In *SuperGuide*, however, the court noted that “[e]very disclosed embodiment teaches that the user must choose a value for each designated category.” *Id.* at 887. Here, by contrast, the specification appears to disclose that a codec might not necessarily be requested: “The Controller 800 will receive the

request, including bandwidth required and *if video, a video codec . . .*” ’119 Patent at 5:49–55; compare *id. with id.* at 5:29–33. Instead, the specification uses the term “codec” with reference to “video and/or voice” (*id.* at 4:66–5:3) and “video compression methods” (*see id.* at 3:31–45). Moreover, the separate usage of “at least one of” in claim 6 corresponds to a disclosure in which the specification uses the phrase “any combination of or single element of.” *Id.* at 6:61–64; *see Digital-Vending Servs. Int’l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270, 1275 (Fed. Cir. 2012) (finding that term was “presumed to have the same meaning throughout all of the claims in the absence of any reason to believe otherwise”).

Similarly, Defendants reliance on this Court’s decision in *Stragent LLC v. BMW North America LLC* is also unavailing. No. 6:11-CV-278, 2013 WL 3367295, at \*4 (E.D. Tex. July 3, 2013). In *Stragent*, the court found that an “at least . . . and” phrase denoted a conjunctive list. *Id.* However, unlike *Stragent* where the disputed term recited “at least,” here, the claim plainly recites “*at least one of.*” (’119 Patent, Claim 1) (emphasis added).

Defendants also rely on the prosecution history in support of their conjunctive argument. During prosecution, the Examiner issued a rejection of the then-recited limitation of “either a specific bandwidth or a codec type” based, in part, on a disclosure in the “Ooghe” reference of a request for a specific amount of bandwidth. (Doc. No. 119, Ex. 12, Jan. 22, 2009 Final Office Action at 5.) The patentee responded by cancelling all of the original application claims and adding new claims reciting “wherein the request [. . .] includes at least one of a requested amount of bandwidth and a [video] codec.” (Doc. No. 128, Ex. A, July 22, 2009 Response to Office Action at 2 & 5 (application claims 22 and 41).)

Despite this change in claim language from “either . . . or” to “at least one of,” Defendants have not identified any definitive statements by the patentee that would warrant a

conjunctive interpretation. Likewise, the amendment of application claim 2 changing “at least one of [X] and [Y]” to “at least one of [X] or [Y],” in response to an office action stating that the examiner “expected OR,” reinforces an understanding that the phrase “at least one of” indicates a disjunctive list. (*See id.*, Ex. B, Aug. 5, 2008 Amendment at 3; *see also id.*, Ex. H, Nov. 4, 2008 Amendment and Response to Office Action at 6.)

Defendants’ argument effectively reads out “at least one of” in favor of the word “and.” But the claim language, the specification, and the prosecution do not support such a reading. Rather, as explained herein, the intrinsic evidence suggests the phrase “includes at least one of a requested amount of bandwidth and a codec” is disjunctive. Accordingly, the Court construes the phrase “includes at least one of a requested amount of bandwidth and a codec” to mean “includes a requested amount of bandwidth, or a codec, or both.”

**III. “dynamically provisioned by the controller” (Claim 1)**

<b>Claim Term</b>	<b>Plaintiff’s Proposal</b>	<b>Defendants’ Proposal</b>
<b>“dynamically provisioned by the controller”</b>  (Claim 1)	“provisioned by the controller in response to the request”	No construction necessary; plain and ordinary meaning applies

The parties dispute whether “dynamically provisioned by the controller” means the provisioning occurs in response to a request, or whether there can be a connection set up in advance as part of the end-to-end connection. Plaintiff argues that construction is necessary because “Defendants seek to leave the dynamic provisioning untethered from the request, apparently attempting to read this provision on a dedicated line configured in advance of a quality of service request.” (Doc. No. 119, at 20.) Defendants respond that Plaintiff’s proposal

“excludes embodiments where a pre-defined path that had not previously been assigned is provided, or made available, to an endpoint in response to the request.” (Doc. No. 128, at 27.)

In relevant part, claim 1 recites:

... wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated bearer path that includes a required route supported by the portal and *dynamically provisioned by the controller*, and wherein control paths for the connection are supported only between each of the originating and terminating end-points and the controller and between the portal and the controller.

(’119 Patent, Claim 1) (emphasis added).

While the specification distinguishes the prior art “dedicated lines” as “not allow[ing] for dynamic bandwidth allocation and utilization” (’119 Patent at 3:27–28), Plaintiff itself submits a dictionary definition of “dedicated line” as meaning “[a] communications channel that permanently connects two or more locations.” (Doc. No. 119, Ex. 13, Microsoft Press Computer Dictionary 137 (1997).) Thus, the fact that the ’119 Patent distinguishes a “dedicated line,” does not foreclose that pre-defined paths could be made available to particular end-points in response to particular requests.

Therefore, the Court finds no basis to exclude the use of pre-existing connections, so long as such connections are provided to an end-point in response to a request. Accordingly, the Court construes the term “dynamically provisioned by the controller” to mean “provisioned to an end-point by the controller in response to the request.”

**IV. “wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated bearer path that includes a required route supported by the portal and dynamically provisioned by the controller” (Claim 1)**

Claim Term	Plaintiff’s Proposal	Defendants’ Proposal
“wherein the connection extending from the originating end-	“wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated	“wherein the connection extending from the originating end-point to the terminating end-point is (1) provided by a dedicated bearer path

<p><b>point to the terminating end-point is provided by a dedicated bearer path that includes a required route supported by the portal and dynamically provisioned by the controller”</b></p> <p>(Claim 1)</p>	<p>bearer path that includes a required route (1) supported by the portal and (2) dynamically provisioned by the controller”</p>	<p>that includes a required route supported by the portal and (2) dynamically provisioned by the controller”</p>
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With respect to the recited wherein clause, the parties dispute whether the claimed “supported” and “provisioned” actions modify the “required route” or the entirety of the “connection.” Plaintiff argues that its interpretation, which directs the modification of “required route” only, is more natural and “is also consistent with the specification, which depicts an embodiment in which the controller dynamically provisions a required route that is part of—but not necessarily coextensive with—the overall connection between originating and terminating end points.” (Doc. No. 119, at 22–23.) Defendants argue that disclosures in the ’119 patent disclose that all provisioning is done by the controller and therefore contend that the entire end-to-end connection is “provisioned” by the controller. (Doc. No. at 23–24.)

Claim 1 recites:

*... wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated bearer path that includes a required route supported by the portal and dynamically provisioned by the controller, and wherein control paths for the connection are supported only between each of the originating and terminating end-points and the controller and between the portal and the controller.*

(’119 Patent, Claim 1) (emphasis added).

Regarding the plain language of claim 1, the “doctrine of the last antecedent” states that “[r]eferential and qualifying words and phrases, where no contrary intention appears, refer solely

to the last antecedent, which consists of the last word, phrase, or clause that can be made an antecedent without impairing the meaning of the sentence for purposes of statutory construction.” *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1336 (Fed. Cir. 2008) (emphasis omitted; internal citations and quotation marks omitted). Relatedly, the “rule of punctuation,” provides that where the modifier is set off from two or more antecedents by a comma, the comma indicates the drafter’s intent that the modifier relate to more than the last antecedent. *See id.* “[T]he doctrine of the last antecedent and its corollary, the rule of punctuation, . . . are more guidelines than absolute rules.” *Id.*; *see Demko v. U.S.*, 216 F.3d 1049, 1053 (Fed. Cir. 2000) (last antecedent rule inapplicable where it “creates absurd or otherwise conflicting results”) (citation omitted). Here, based on the express claim language, both the doctrine of the last antecedent and the rule of punctuation would dictate that only the “required route” is modified because the “required route” is the last antecedent and is not set off by a comma.

In addition, the context of the remainder of the claim is consistent with applying the doctrine of the last antecedent. For example, requiring “the connection extending from the originating end-point to the terminating end-point” to be “dynamically provisioned” would seemingly be at odds with the separately recited limitation of “negotiating, by the controller, to reserve far-end resources for the terminating end-point.” (’119 Patent, Claim 1.) Indeed, Defendants have not shown any contrary intent or evidence that any exception to these rules would apply in this instance.

In relevant part, the specification provides that “the Controller 800 inter-works with network protocols to dynamically provision a dedicated path, including required route and bandwidth, on demand through the network.” ’119 Patent at 5:64–67. While this disclosure could

be read to mean that the “dedicated path” that is “dynamically provision[ed]” corresponds to the recited “connection extending from the originating end-point to the terminating end-point,” it could also be read to as meaning that a “required route” is “dynamically provision[ed]” (as part of “a dedicated path”). Thus, this ambiguous disclosure in the specification does not overcome the express language of the claim.

Moreover, although Defendants have cited a disclosure that provides “all provisioning . . . is managed at the controller . . .” (’119 Patent at 6:59-60), this disclosure does not amount to disclosure that the entire end-to-end connection is necessarily “provisioned” by the controller. *Id.* at 6:59–60; *see id.* at 7:21–23 (“handles all functions . . . necessary for the broadband services to be dynamically connected and managed with quality”) (emphasis added); *see also id.* at 2:54–55 (“Quality assurance requires managing the services end to end . . .”). Similarly, Defendants’ reliance on the prosecution history is unpersuasive. In the portion of the prosecution history cited by Defendants, the patentee relied upon “end-to-end connection management . . . with a controller that provides ‘end-to-end quality assurance,’” not end-to-end dynamic provisioning. (Doc. No. 128, Ex. A, July 22, 2009 Amendment and Response to Office Action at 9.)

Therefore, for the reasons set forth herein, the Court construes “wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated bearer path that includes a required route supported by the portal and dynamically provisioned by the controller” to mean “wherein the connection extending from the originating end-point to the terminating end-point is provided by a dedicated bearer path that includes a required route (1) supported by the portal and (2) dynamically provisioned by the controller.”

**V. “far-end resources” (Claim 1)**

<b>Claim Term</b>	<b>Plaintiff’s Proposal</b>	<b>Defendants’ Proposal</b>
<b>“far-end resources”</b>	No construction necessary; plain	“resources of a node located at the



(Claim 1)	and ordinary meaning applies.	terminating end of the connection”
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Finally, with respect to the term “far end resources,” the parties dispute whether “far end resources” must be at the terminating end of the connection. Plaintiff contends that Defendants’ proposal “excludes preferred embodiments where ‘far end resources’ are not at the very farthest end of the connection.” (Doc. No. 119, at 26.) Defendants argue that “[t]he claims are clear that the term ‘far-end resources’ is used to contrast from those resources available for use by the originating end-point *at the originating end of the connection*, and instead refer to those resources available for use by the terminating end-point *at the far end, or terminating end, of the connection.*” (Doc. No. 128, at 28–29.) Plaintiff replies that both end points use all of the resources of the connection. (Doc. No. 131, at 10.)

Here, nothing in the intrinsic record requires the “far end resources” be located *at* the terminating end of the connection. To support their argument that the “far end resources” must be at the terminating end, Defendants rely on dependent claim 8, which recites, “negotiating, by the controller, to reserve far-end resources on the terminating end-point.” (’119 Patent, Claim 8.) However, this language that the far-end resources are reserved *on* the terminating end-point, does not demonstrate that “far-end resources” was intended to refer to resources *at* the terminating end-point. Moreover, claim 8 further recites that negotiating to reserve “far-end resources” includes “negotiating with another controller associated with the terminating end-point,” not *at* the terminating end-point.

In sum, nothing in the intrinsic record requires such a limiting construction that the “far-end resources” be *at* the terminating end. Therefore, the Court construes “far-end resources” to mean “resources of a node located at, or associated with, the terminating end of the connection.”

## VIII. Agreed Constructions

Finally, the parties submitted the following agreed constructions:

<b>Term</b>	<b>Agreed Construction</b>
“originating end-point” (Claims 1, 7, 11)	“an originating point relative to the entire connection that does not constitute an intermediate point in the connection but rather is one of the two sides engaged in the connection”
“terminating end-point” (Claims 1, 11)	“a terminating point relative to the entire connection that does not constitute an intermediate point in the connection but rather is one of the two sides engaged in the connection”
“the connection” (Claims 1, 11)	“the high quality of service connection”
“control paths for the connection” (Claims 1)	“paths that carry control signaling for the high quality of service connection”
“wherein control paths for the connection are supported only between each of the originating and terminating end-points and the controller and between the portal and the controller” (Claim 1)	“wherein control paths for the connection are supported only 1) between the originating end-point and the controller; 2) between the terminating end-point and the controller; and 3) between the portal and the controller”
“the request” (Claims 1, 3, 4)	“the request that is received by the controller”
“bandwidth” (Claim 1)	“data rate”

The Court, having reviewed the parties’ agreed constructions, as well as the asserted patents’ claims, specifications, and prosecution histories, finds the parties’ agreed constructions appropriate and construes the terms as set forth above.

### **CONCLUSION**

For the foregoing reasons, the Court adopts the constructions set forth above.

So ORDERED and SIGNED this 18th day of July, 2017.

  
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JOHN D. LOVE  
UNITED STATES MAGISTRATE JUDGE