

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

QPSX DEVELOPMENTS  
5 PTY LTD.

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vs.

CASE NO. 2:07-CV-118-CE

CIENA CORPORATION, ET AL.

**MEMORANDUM OPINION AND ORDER**

**I. BACKGROUND**

On April 9, 2007, plaintiff QPSX Developments 5 Pty Ltd. (“Plaintiff”) filed suit against, among others, defendant Ericsson, Inc. (“Defendant”), alleging infringement of U.S. Patent No. 5,689,499 (the “’499 Patent”). Plaintiff presently asserts Claim 1 – 3 of the ’499 Patent. The asserted claims of the ’499 Patent were previously construed in *QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 and 401.

**II. THE PATENT-IN-SUIT**

The ’499 Patent describes a method for the transfer of information through switches within an Asynchronous Transfer Mode (“ATM”) network. ATM is a connection oriented technology where a connection is first established between two endpoints before the exchange of data actually begins. ATM is also a network protocol that defines how information in fixed-sized segments called “cells” is handled and transferred within the network. An ATM cell contains 53 bytes – a 5 byte header and a 48 byte payload, which contains the actual information. A set of cells make up a frame or packet of data.

A connection between the source and the destination must be established in order to transfer information across an ATM network. This connection is called a “virtual connection,”

which is established over existing physical structures, such as telephone cables or fiber optic cables. The “virtual connection” can be characterized in terms of a “virtual path” (VP) and a “virtual channel” (VC). The actual physical structure, sometimes called a transmission path, may contain several virtual paths. In turn, one virtual path may consist of a group of virtual channels.

Each virtual path is assigned a unique Virtual Path Identifier (“VPI”). Each virtual channel is assigned a unique Virtual Channel Identifier (“VCI”). Each cell’s header contains a VPI and a VCI which indicates to the ATM switch the VP and VC to which the cell belongs.

An ATM switch typically has multiple input and output ports. Switching occurs at both the VP and the VC levels. The ATM switch reads and updates the VPI and/or VCI label of a cell entering an input port before transferring that cell to the appropriate output port. This takes time and can cause congestion when many cells enter the ATM switch. Therefore, a buffer is used to help relieve the congestion by temporarily storing cells. However, buffers have a limit on how much they can store. If that limit is reached, then the buffer will overflow. As a result, cells are lost and data corruption results.

The ’499 Patent provides, among other things, a method for detecting the threat of buffer overflow and discarding entire frames or packets, instead of individual cells. When the threat of buffer overflow is detected, cells are not allowed through the device unless at least one cell from that same frame has already entered the buffer. As a result, an entire frame is discarded if none of its cells have entered the buffer. By discarding an entire frame, only that frame would need to be retransmitted. In comparison, discarding individual cells would result in the corruption of multiple frames, and would require the retransmission of all of those corrupted frames.

Claim 1 of the patent, which is the only independent claim being asserted, recites:

A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which **cells** on that connection can be transmitted, **but also have no constraint on said rate save that inherent on said virtual path connection**, said method comprising the steps of:

storing cells arriving for transmission on said virtual path in a buffer **for transmission of cells on said virtual path in conformance with said constraint on said rate**;

**detecting whether buffer overflow is threatened by the storage of further cells arriving for transmission on said virtual path**; and,

**while buffer overflow is threatened, admitting for storage in said buffer cells only on such of said virtual channel connections on which the previous cell admitted was not indicated by the header of said previous cell as being end of transmission on said virtual channel**; and,

at all times not admit for storage in said buffer any cells on said virtual channel connections for which since the previous indication of said end of transmission on said virtual channel connection there has been any rejection of cells for storage.

'499 Patent at 14:18–42 (emphasis indicates disputed terms).

### III. GENERAL PRINCIPLES GOVERNING CLAIM CONSTRUCTION

“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.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

To ascertain the meaning of claims, the court looks to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which

they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This court’s claim construction decision must be informed by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the *claims* of a patent define the invention to which the patentee is entitled the right to exclude.” 415 F.3d at 1312 (emphasis added) (*quoting Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law

flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to and intended to be read by others skilled in the particular art. *Id.*

The primacy of claim terms notwithstanding, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314-17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The 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.

*Phillips*, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the

PTO understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*

*Phillips* rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319-24. The approach suggested by *Texas Digital*—the assignment of a limited role to the specification—was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id.* at 1320-21. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.* What is described in the claims flows from the statutory requirement imposed on the patentee to describe and particularly claim what he or she has invented. *Id.* The definitions found in dictionaries, however, often flow from the editors’ objective of assembling all of the possible definitions for a word. *Id.* at 1321-22.

*Phillips* does not preclude all uses of dictionaries in claim construction proceedings.

Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

#### IV. AGREED CONSTRUCTIONS

Claim Term	Agreed Construction
“virtual channel connection”	“logical connection characterized by the unidirectional flow of ATM cells, each cell containing a unique combination of virtual channel identifier (“VCI”) and virtual path identifier (“VPI”) for a given link in the connection”
“virtual path connection”	“logical connection for aggregating VCCs having ATM cells containing a unique VPI for a given link in the connection.”
“buffer”	“physical device for storage of data, or a logical division thereof”
Final step of Claim 1	“at all times, if there has been any rejection of cells from a particular frame on a virtual channel connection since the receipt of a cell on that virtual channel connection that contains an end of transmission indication, not admit any other cells from that particular frame arriving on the virtual channel connection for storage in said buffer”
“where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted”	This phrase, which appears in the preamble of Claim 1, states a limitation on the claim

## V. CLAIM TERMS IN DISPUTE

The court will first address Defendant's contention that the Federal Circuit's decision in *O2 Micro International Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351 (Fed. Cir. 2008), requires this court to construe every term in dispute even if the court rejects Defendant's proposed construction and determines that the term at issue needs no further construction. In *O2 Micro*, the Federal Circuit held that the district court erred by assigning the term "only if" its plain and ordinary meaning because that definition "failed to resolve the parties' dispute." *Id.* at 1361. The parties disputed whether "only if" allowed for exceptions, but the district court did not answer this question, ruling that the phrase had "a well-understood definition." *Id.* Then, in the absence of an authoritative construction, the parties argued the scope of the claim term to the jury. When the Federal Circuit remanded the case, it explained that "[w]hen the parties raise an actual dispute regarding the proper scope of the claims, the court, not the jury, must resolve that dispute." *Id.* at 1360.

In *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010), however, the Federal Circuit rejected Defendant's contention that *O2 Micro* stands for the proposition that every term in dispute must be given a specific construction – i.e., something more than an ordinary meaning construction. In *Finjan*, the Federal Circuit confirmed that a court can resolve a claim construction dispute by rejecting a narrow claim construction and concluding that no additional construction is required:

Unlike *O2 Micro*, where the court failed to resolve the parties' quarrel, the district court rejected Defendants' construction, which required an IP address. Later, at trial, it prevented the jury from reconstruing the term by stopping Defendants' expert, Dr. Dan Wallach, from repeating to the jury that the asserted claims require an IP address.... In this situation, the district court was not obligated to provide additional guidance to the jury.



In short, courts are free to reject overly narrow constructions and rely instead on the plain and ordinary meaning of the claim language.

**a. “But Also Have No Constraint on Said Rate Save That Inherent on Said Virtual Path Connection”**

Representative Claim Language	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted, <b>but also have no constraint on said rate save that inherent on said virtual path connection</b> , said method comprising the steps of:	“Inherent” is broad enough to include the physical capacity of the VPC. No additional construction is needed.	“but also have no constraint on the rate of transmission of cells on any VCC, except for the rate limitation allocated to the VPC by the user/network traffic contract”

**i. The Parties’ Proposed Constructions**

The preamble of Claim 1 includes the following phrase, with the disputed portion shown in italics: “where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted, *but also have no constraint on said rate save that inherent on said virtual path connection.*” Plaintiff contends that the court need only construe the term “inherent” in this phrase and argues that “inherent” is broad enough to include the physical capacity of the VPC. Plaintiff’s proposed construction aligns with Judge Ward’s construction of this phrase in the previous litigation of the ’499 Patent. *QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 10 (“Read in the context of the specification, the term “inherent” is broad enough to include the physical capacity of the VPC.”).

Defendant, on the other hand, argues that this phrase should be construed to mean “but also have no constraint on the rate of transmission of cells on any VCC, except for the rate

limitation allocated to the VPC by the user/network traffic contract.” Defendant’s proposed construction asks the court to replace the broad constraint recited in the claims (i.e., “inherent”) with a specific constraint pulled from an example explained in the specification of the ’499 Patent (i.e., “user/network traffic contract”). The patent describes that example as follows:

It will also be possible for a user to obtain a VP connection under contract with the network in an identical manner to that of a VC connection when the assurance that traffic on the VP connection would not exceed that set rate would be obtained in an identical manner to that for a VC connection.

’499 Patent at 2:50-55.

## **ii. Analysis**

The defendants in the first trial of the ’499 Patent argued the same construction defendant Ericsson now proposes. *QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 9-10. Judge Ward rejected this proposed construction, stating the following:

The defendants urge additionally that the rate inherent on the virtual path connection should be construed to mean the limitation allocated by the user/network traffic contract. This argument is rejected. Read in the context of the specification, the term “inherent” is broad enough to include the physical capacity of the VPC.

*Id.* at 10. Judge Ward’s conclusion is supported by the specification of the ’499 Patent, which recites:

*It will also be possible* for a user to obtain a VP connection under contract with the network in an identical manner to that of a VC connection when the assurance that traffic on the VP connection would not exceed that set rate would be obtained in an identical manner to that for a VC connection.

’499 Patent at 2:50-55 (emphasis added). This language, which Defendant relies on for its proposed construction, states that such a constraint is *possible* – not that such a constraint is necessary or required. Indeed, the patent provides a different example in Column 13:

Various cell flow shaping methods, to achieve particular traffic parameters, may be applied to the VC cell flows to the apparatus 56. The implementation of the preferred apparatus 56 described herein uses, by way of example and not by way of limitation, unshaped VC cell flows reflecting the practice on Local Area Networks (LANs) *where no bandwidth restrictions are placed on data input rates other than those set by the capacity of the physical layer transmission*. Within the apparatus implementation described the bandwidth restriction is set by that allowed for the VPs carrying the VC data flows.

'499 Patent at 13:42-52 (emphasis added). This section explains that it is possible that the only imposed constraint is the constraint imposed by the capacity of the physical layer transmission.

Considering this, the court rejects Defendant's attempt to limit the scope of the claim language by reading a specific preferred embodiment into the claims. *DSW, Inc. v. Shoe Pavilion, Inc.*, 537 F.3d 1342, 1348 (Fed. Cir. 2008) (“[W]hen claim language is broader than the preferred embodiment, it is well settled that claims are not to be confined to that embodiment.”). Rather, the court adopts Plaintiff's proposed construction of this phrase because, as Judge Ward previously found, when read in conjunction with the specification, the term “inherent” is broad enough to encompass the physical capacity of the VPC. As such, the court construes the term “inherent” as used in “but also have no constraint on said rate save that inherent on said virtual path connection” to be broad enough to include the physical capacity of the VPC. No additional construction is needed.

**b. “In Conformance With Said Constraint on Said Rate”**

<b>Representative Claim Language</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
<p>A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted, but also have no constraint on said rate save that inherent on said virtual path connection, said method comprising the steps of:</p> <p>storing cells arriving for transmission on said virtual path in a buffer for transmission of cells on said virtual path <b>in conformance with said constraint on said rate;</b></p>	<p>This phrase modifies “transmission” as opposed to “storing.” No additional construction is needed.</p>	<p>No construction is needed. To the extent that there is a question about what word(s) this phrase modifies, it modifies “storing.”</p>

The first step in Claim 1 states the following, where the disputed portion at issue in this subsection is shown in italics: “storing cells arriving for transmission on said virtual path in a buffer for transmission of cells on said virtual path *in conformance with said constraint on said rate.*” The parties’ dispute centers on whether cells must be *stored* “in conformance with said constraint on said rate,” as Defendant contends, or simply *transmitted* in conformance with that rate, as Plaintiff argues. Defendant’s proposed construction has previously been considered and rejected in the first litigation of the ’499 Patent. In particular, Judge Ward stated:

[T]he defendants propose that the phrase “when in accordance [sic, conformance] with said constraint on said rate” modifies, and thus limits, the word “storing,” as opposed to the word “transmission.” The plaintiff contends that the syntax of the claim language requires the phrase to modify “transmission” and not “storing.” Given the claim language, the plaintiff has the better argument. The limitation requires that cells arriving for transmission on the virtual path are stored in a buffer “for transmission of cells on said virtual path in conformance with said constraint on said rate.” In the context of the patent, the word “rate” suggests a transmission rate, not a storage rate. As a result, the court holds that the rate constraint portion of this phrase modifies “transmission” as opposed to “storing.”

*QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 10-11.

The court agrees with Judge Ward and, therefore, concludes that, in accordance with the claim syntax, the phrase “in conformance with said constraint on said rate” modifies, and thus limits, the word “transmission.”

**c. “Buffer for Transmission of Cells on Said Virtual Path”**

<b>Representative Claim Language</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
<p>A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted, but also have no constraint on said rate save that inherent on said virtual path connection, said method comprising the steps of:</p> <p>storing cells arriving for transmission on said virtual path in <b>a buffer for transmission of cells on said virtual path</b> in conformance with said constraint on said rate;</p>	<p>“Buffer” has an agreed construction. A specific buffer is not required for each virtual path. No additional construction is needed.</p>	<p>“an individual buffer for transmission of cells on that virtual path”</p>

**i. The Parties’ Proposed Constructions**

The first step in Claim 1 states the following, where the disputed portion at issue in this subsection is shown in italics: “storing cells arriving for transmission on said virtual path in *a buffer for transmission of cells on said virtual path* in conformance with said constraint on said rate.” Plaintiff argues that no construction is necessary because the parties agree on the construction for “buffer,” and an individual buffer is not required for each virtual path. Defendant, however, contends the claim language does require a specific, individual buffer for each virtual path.

## ii. Analysis

Defendant is proposing a construction that was previously considered and rejected by Judge Ward. In the previous litigation, Judge Ward stated:

For the first part [“storing cells arriving for transmission on said virtual path in a buffer for transmission of cells on said virtual path”], the defendants propose “storing cells arriving for transmission on the VPC in the buffer for that VPC.” The dispute is whether a specific buffer is required for each virtual path. The court agrees with the plaintiff that the plain language of the claim requires “a buffer,” and not “a buffer for that VPC.” Accordingly, the court rejects the defendants’ attempt to limit this claim element.

*QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 10. Judge Ward’s analysis is supported by both the claim language and the specification.

First, although the specification states that “[t]he apparatus 56 *contains a buffer for each VPI*,” that statement merely describes the preferred embodiment of the invention. ’499 Patent at 12:5-7 (emphasis added). Nothing in the intrinsic record, however, indicates that the patentee disavowed other possible embodiments. Second, Claim 1 requires “a buffer,” whereas unasserted Claim 5 requires “a common buffer.” Defendant correctly concludes from this distinction that the patentee knew how to claim a common buffer, but chose not to do so in Claim 1. Defendant, however, fails to recognize that the patentee likewise knew how to claim an “individual buffer,” but chose not to do so in Claim 1. Instead, the patentee chose to claim “a buffer,” which is broader than either “a common buffer” (as recited in Claim 5) or “an individual buffer” (as proposed by Defendant). As such, the court rejects Defendant’s attempt to limit the scope of the phrase “a buffer for transmission of cells on said virtual path” to require an individual buffer for each virtual path.

The court agrees with Plaintiff that, in light of the parties’ agreed construction of “buffer,” the claim language “a buffer for transmission of cells on said virtual path” needs no further construction.

**d. “Detecting Whether Buffer Overflow is Threatened...”**

<b>Representative Claim Language</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
<p>A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted, but also have no constraint on said rate save that inherent on said virtual path connection, said method comprising the steps of:</p> <p>storing cells arriving for transmission on said virtual path in a buffer for transmission of cells on said virtual path in conformance with said constraint on said rate;</p> <p><b>detecting whether buffer overflow is threatened by the storage of further cells arriving for transmission on said virtual path;</b> and,</p>	<p>No additional construction is needed beyond the agreed constructions.</p>	<p>“determining whether storage of further cells arriving for transmission on said virtual path poses an actual threat of buffer overflow”</p>

**i. The Parties’ Proposed Constructions**

The second step of Claim 1 recites: “detecting whether buffer overflow is threatened by the storage of further cells arriving for transmission on said virtual path.” Plaintiff argues that the phrase at issue needs no construction beyond the agreed constructions for its only technical terms, “buffer” and “virtual path connection.” According to Plaintiff, the remaining terms are ordinary English words that require no further explanation.

Defendant, however, argues that its construction of the “detecting” step is based on arguments made during the reexamination of the ’499 Patent. To overcome a rejection on the

grounds that the claims of the '499 Patent were anticipated by the "Turner Reference," Plaintiff explained that:

[A] buffer reservation may fail even when the buffer is nearly empty because slots in the buffer are allocated (reserved), but not occupied. A failed buffer reservation is not an indication that arrival of further cells may threaten to overflow the buffer, but only an indication that all active channels cannot be guaranteed the ability to simultaneously transmit at their peak rate. Therefore, *a failed buffer reservation system has no relation to whether there is an actual threat of buffer overflow and cannot reasonably be considered a detection of a threat of buffer overflow.*

Exhibit F at 37, attached to Defendant's Responsive Claim Construction Brief. According to Defendant, this explanation demonstrates that Plaintiff was able to overcome the § 102(b) rejection because it convinced the Board of Patent Appeals and Interferences that the claimed '499 Patent method detects "an actual threat" of buffer overflow. Following this logic, Defendant argues that the fact that the buffer at issue here may reach a certain predetermined capacity would not be enough to determine whether there is an actual threat of overflow. As such, Defendant argues that its proposed construction is correct in light of the prosecution history of the '499 Patent – i.e., "determining whether storage of further cells arriving for transmission on said virtual path poses *an actual threat* of buffer overflow."

## **ii. Analysis**

In the first litigation of the '499 Patent, Judge Ward construed the detecting step in accordance with Plaintiff's proposed construction:

In light of the parties' constructions of the technical terms, the court concludes that no additional construction of this phrase is appropriate. In doing so, the court rejects the defendants' efforts to restrict the "detecting" step to a particular manner of detecting, such as detecting "a selected level of occupancy less than the maximum capacity." As the plaintiff observes, dependent claims 2 and 3 call out additional limitations that restrict the manner in which the detecting step must be performed.



*QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 13. Defendant, however, contends that arguments made during the reexamination proceedings instituted after Judge Ward issues his claim construction order require a different construction in this case. But Defendant's argument ignores the relevant "buffer reservation" context in which the reexamination comments were made.

During the reexamination, Plaintiff distinguished Claim 1, specifically the "detecting" step, from a series of references referred to as the "Turner References," which disclose a "buffer reservation system." In the Turner system, slots in a buffer are reserved to guarantee transmission at a peak rate. Because this system is based on reserving a block of buffer slots to guarantee a rate, the admit/reject decision has no relation to the actual occupancy of the buffer. Cells can be rejected when the buffer is almost empty, and cells can be admitted when the buffer is almost full. That is, as Plaintiff successfully argued during the reexamination, a reservation system does not detect an "actual threat" of buffer overflow. Nowhere did Plaintiff argue that a threshold cannot be used to determine an actual threat of buffer overflow. Indeed, as Plaintiff notes in its briefing, such an argument would exclude the preferred embodiment of Figure 9, which uses a threshold in Step 110 to determine a threat of buffer overflow. *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (finding that a claim interpretation that excludes a preferred embodiment is "rarely, if ever, correct"). Furthermore, Defendant's proposal would also render meaningless Claim 3, which adds a "threshold level" to the detecting step of Claim 1. Considering this, the court rejects Defendant's proposed prosecution history disclaimer and the "an actual threat" language it draws therefrom.

The court agrees with Judge Ward and Plaintiff’s previous analysis of this term. As such, the court concludes that no additional construction is needed beyond the constructions the parties have already agreed to.

**e. The “Admitting” Step**

Representative Claim Language	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which cells on that connection can be transmitted, but also have no constraint on said rate save that inherent on said virtual path connection, said method comprising the steps of:</p> <p>storing cells arriving for transmission on said virtual path in a buffer for transmission of cells on said virtual path in conformance with said constraint on said rate;</p> <p>detecting whether buffer overflow is threatened by the storage of further cells arriving for transmission on said virtual path; and,</p> <p><b>while buffer overflow is threatened, admitting for storage in said buffer cells only on such of said virtual channel connections on which the previous cell admitted was not indicated by the header of said previous cell as being end of transmission on said virtual channel;</b> and,</p>	<p>No additional construction is needed beyond the agreed constructions.</p>	<p>“While buffer overflow is threatened, admitting to the buffer only cells on a virtual channel connection for which the previous cell admitted did not contain an end of transmission indicator.”</p>

**i. Analysis**

The third step of Claim 1 recites: “while buffer overflow is threatened, admitting for storage in said buffer cells only on such of said virtual channel connections on which the previous cell admitted was not indicated by the header of said previous cell as being end of transmission on said virtual channel.” Plaintiff argues that no additional construction of this phrase is needed beyond the parties’ agreed constructions.

Defendant, however, proposes that the court construe this phrase to mean “while buffer overflow is threatened, admitting to the buffer only cells on a virtual channel connection for which the previous cell admitted did not contain an end of transmission indicator.” Defendant argues that its proposed construction does not change the meaning of the claim language, but merely provides clarity to the claim. The court rejects Defendant’s contention that its proposed construction does not change the meaning of the claim language. Defendant’s contention is belied by the fact that its proposed construction would change “cells only” to “only cells.” In the actual claim, “only” modifies “on such of said virtual channel connections,” whereas in Defendant’s proposed construction it modifies “cells.” Furthermore, the court disagrees with Defendant’s contention that its proposed construction will provide clarity to the claim language. As such, the court rejects Defendant’s proposed construction.

After analyzing the parties’ proposed constructions for this term in the prior litigation, Judge Ward stated:

The plaintiff contends that no construction is needed because the technical terms (“virtual channel,” “cells,” “buffer,” “header,” (appears in the agreed definition of “cells”), and “end of transmission” (synonymous with “end of frame indicator”) have been defined, and the other terms need no further construction. ... After considering the parties’ submissions, the court agrees with the plaintiff that no additional construction is warranted.

*QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 13-14.

The court agrees with Judge Ward and, therefore, concludes that this phrase needs no additional construction apart from the parties’ agreed constructions.

**f. “Buffer Overflow” and “Buffer Overload”**

Representative Claim Language	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p><u>Claim 1</u></p> <p>detecting whether <b>buffer overflow</b> is threatened by the storage of further cells arriving for transmission on said virtual path; and,</p> <p><u>Claim 2</u></p> <p>A method according to claim 1, wherein the detection of threatened <b>buffer overload</b> is made on the assessment of the number of unoccupied locations in said buffer at the time of arrival of a cell for said transmission.</p>	<p>The terms “buffer overflow” and “buffer overload” mean the same thing and need no additional construction in light of the agreed construction of “buffer.”</p>	<p>“discarding cells because there is insufficient capacity in the buffer to store the cells”</p>

**i. The Parties’ Proposed Constructions**

Claim 1 uses the phrase “buffer overflow” in the second and third steps, and Claims 2 and 3 each use the phrase “buffer overload.” The parties have agreed that a “buffer” is a “physical device for storage of data, or a logical division thereof.” The parties also agree that the two terms “overload” and “overflow” have the same meaning. Considering this, Plaintiff argues that the terms “buffer overflow” and “buffer overload” mean the same thing and need no additional construction in light of the agreed construction of “buffer.”

Defendant, however, contends that the terms should be construed to mean “discarding cells because there is insufficient capacity in the buffer to store the cells.” Defendant notes that, although there is no dispute that “overload” and “overflow” mean the same thing in the context of the ’499 Patent, they are, in fact, different words. As such, Defendant contends that the jury may be confused by the different uses of “overload” and “overflow,” concluding that the words describe two different events. To clarify the issue and avoid such jury confusion, Defendant proposes a construction that it argues captures the terms’ relevant shared meaning and eliminates any potential ambiguity.

**ii. Analysis**

In the previous litigation, Judge Ward agreed “with the plaintiff that the terms ‘buffer overflow’ and ‘buffer overload’ need no additional construction, in light of the agreed construction of ‘buffer.’” *QPSX Devs. 5 Pty Ltd. v. Juniper Networks, Inc.*, No. 2:05-CV-268-TJW, Dkt. No. 268 at 11. The current agreed construction of “buffer” is identical to the agreed construction from the prior litigation, and the court agrees with Judge Ward’s conclusion that “buffer overflow” and “buffer overload” need no further construction in light of the parties agreed definition of “buffer.” During the claim construction hearing, however, the parties agreed to the following construction for “buffer overflow” and “buffer overload”: “as used in the asserted claims, ‘buffer overload’ should be understood to mean ‘buffer overflow.’” As such, the court adopts the parties’ agreed construction.

**g. “Cells”**

<b>Representative Claim Language</b>	<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
<p>A method for supporting a plurality of virtual channel connections within a single virtual path in a digital communications network operating in the Asynchronous Transfer Mode (ATM), where said virtual channel connections have no guarantees of rate at which <b>cells</b> on that connection can be transmitted, but also have no constraint on said rate save that inherent on said virtual path connection, said method comprising the steps of:</p> <p>storing <b>cells</b> arriving for transmission on said virtual path in a buffer for transmission of <b>cells</b> on said virtual path in conformance with said constraint on said rate;</p>	<p>“Fixed size segments of information used in an ATM network, each having a header field (containing a VCI, a VPI, and an end of frame indicator) and a payload field.”</p>	<p>“fixed sized segments of information, each comprising fifty-three octets of information, arranged as a five octet header and a forty-eight octet information field”</p>

**i. The Parties’ Proposed Constructions**

Each of the asserted claims uses the term “cell” or “cells.” Plaintiff argues that the court should construe these terms to mean “fixed size segments of information used in an ATM

network, each having a header field (containing a VCI, a VPI, and an end of frame indicator) and a payload field.” Defendant, on the other hand, argues that “cell” should be construed to mean “fixed sized segments of information, each comprising fifty-three octets of information, arranged as a five octet header and a forty-eight octet information field.”

Plaintiff’s proposed construction of “cells” is the construction that the parties to the prior litigation of the ’499 Patent agreed to. Defendant argues that Plaintiff’s proposed construction is incorrect because it requires that the header contain a VCI (virtual channel indicator), a VPI (virtual path indicator), and an end-of-frame indicator. According to Defendant, although the header includes a VCI and VPI, there is no support in the claim or the specification for requiring that each cell must include an end-of-frame indicator. The specification merely provides that each cell, in addition to the VCI and VPI, must contain a Payload Type Indicator (PTI), which, according to Defendant, *may* have an end-of-frame indicator. *See* ’499 Patent at 6:33-47. Defendant argues that Table 1 from the specification identifies numerous types of ATM cells, only some of which are indicated as being end-of-frame. Defendants contend that the text associated with that table explains that only a cell that is the “last of a transmission sequence” will be marked so as to identify it as the end of a transmission. ’499 Patent at 6:44-47. Considering that not all cells must have an end-of-frame indicator, Defendant argues that Plaintiff’s proposed construction should be rejected because it improperly adds a limitation to the claim.

In reply, Plaintiff argues that Defendant’s complaint regarding Plaintiff’s proposed construction arises from Defendant’s technical misconception of the specification language on which it relies. In particular, Plaintiff argues that Defendant incorrectly asserts that only the last cell of a frame must have an end-of-frame indicator in its header. According to Plaintiff, the

end-of-frame indicator is a bit or a flag that indicates whether a cell is “the last of a transmission sequence,” and the indicator provides a “yes” or “no” answer to that question. ’499 Patent at 6:44-47. As such, Plaintiff argues that each cell in a sequence has such an indicator or flag, but that indicator is turned “on” only in the final cell of the sequence. As such, Plaintiff contends that its proposed construction is in no way inaccurate – i.e., all cells have a header containing a VCI, a VPI, and an end-of-frame indicator.

Defendant proposes a construction from the specification’s description of the preferred embodiment, which states: “With ATM all information to be transferred...is in the form of fixed sized segments called cells.... [E]ach cell comprises fifty three (53) octets of information, arranged as a five octet header 10 and a forty eight (48) octet information field.” ’499 Patent at 6:28-32. Plaintiff does not argue that this construction is incorrect; it merely argues that it provides no assistance to the jury in understanding the claim language.

## **ii. Analysis**

When the term “cell” is read in the context of the claims, the court concludes that the Plaintiff is correct that Defendant’s proposed construction will not assist the jury in understanding the claim language. Rather than tie the construction of “cell” to the terms at issue in the claims – i.e., virtual channel, virtual path, and end of frame indicator – Defendant’s proposed construction focuses on the size of an ATM cell, which is not discussed in the claims. The Plaintiff’s proposed construction, however, will assist the jury in understanding the role of “cells” in relation to the various terms actually at issue in the claim language. Furthermore, as Plaintiff has explained, the specification language does not indicate that, within the context of the invention, some cells will not have a end-of-frame indicator – rather, it explains that all cells will have such an indicator, but that the indicator will be activated only in the final cell of a sequence.

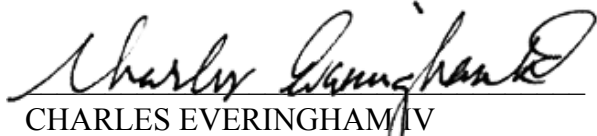
As such, the court adopts Plaintiff's proposed construction because it accurately construes "cell" and will assist the jury in applying the term to the infringement and validity evidence.

## **VI. CONCLUSION**

The court adopts the constructions set forth in this opinion for the disputed terms of the '499 Patent. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the court.

It is so ORDERED.

SIGNED this 28th day of March, 2011.

  
CHARLES EVERINGHAM IV  
UNITED STATES MAGISTRATE JUDGE