

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

BigBand Networks, Inc.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	Civ. No. 07-351-LPS
	:	
Imagine Communications, Inc.,	:	
	:	
Defendant.	:	
	:	

---

Peter P. Chen, Esquire of Latham & Watkins LLP, Menlo Park, California.  
James L. Day, Esquire of Latham & Watkins LLP, San Francisco, California.  
Jack B. Blumenfeld, Esquire, Karen Jacobs Loudon, Esquire, and Jeremy A. Tigan, Esquire, of  
Morris, Nichols, Arsht & Tunnell LLP, Wilmington, Delaware.

Attorneys for Plaintiff.

John W. Thornburgh, Esquire, Thomas Millikan, Esquire and Frank J. Albert, Esquire, of Fish &  
Richardson P.C., San Diego, California.  
Douglas E. McCann, Esquire, of Fish & Richardson P.C., Wilmington, Delaware.

Attorneys for Defendant.

---

**MEMORANDUM OPINION**

March 24, 2011  
Wilmington, Delaware



**Stark, District Judge:**

This is a patent infringement case brought by Plaintiff BigBand Networks, Inc. (“BigBand”) against Defendant Imagine Communications, Inc. (“Imagine”). BigBand asserts that Imagine infringed upon four patents: U.S. Patent Nos. 6,999,477 (the ‘477 Patent), 6,937,619 (the ‘619 Patent), 7,058,087 (the ‘087 Patent), and 7,395,321 (the ‘321 Patent). The parties briefed their respective positions on claim construction, and the Court conducted *Markman* hearings on the disputed claim terms on October 13, 2009, before now retired Judge Joseph J. Farnan, Jr. (*see* Transcript of October 13, 2009 *Markman* hearing) (D.I. 145) (hereinafter “*Markman I Tr.*”), and again on February 4, 2011, before the undersigned (*see* Transcript of February 4, 2011 *Markman* hearing (D.I. 255) (hereinafter “*Markman II Tr.*”). This Memorandum Opinion provides constructions of the disputed terms.

### **BACKGROUND**

All four patents-in-suit relate to increasing video data transmitted over existing infrastructures. (D.I. 118 at 2) Specifically, the patents-in-suit relate to two technologies. The ‘477 Patent relates to a type of video technology called switched digital video (“SDV”). (*Id.*) The ‘619, ‘087, and ‘321 patents all relate to video compression. (*Id.*)

The ‘477 Patent, or the switched digital video patent, allows a cable television operator to offer more channel choices over an existing distribution infrastructure. (*Id.* at 3) Switched digital video technology allows an operator to send to a neighborhood only the channels that are being watched in that neighborhood instead of having to send all of the available channels, as had previously been required. (*Id.* at 4) This allows a cable operator to offer more channels than can fit the bandwidth of the system at one time because the odds of all the channels being watched at

once in a single neighborhood is very slim. (*Id.*)

The '619, '087, and '321 Patents (collectively “the rate shaping patents”) relate to what is known as rate shaping or prioritized bit rate conversion. That technology relates to a method of selectively compressing video streams so that more data or channels can be transmitted across a single cable. (*Id.* at 6) Such compression allows a cable television provider to offer increased channel options over an existing cable system. (*Id.*)

Thus, the essence of all four patents is to increase the amount of data that can be offered without having to change the physical infrastructure of system. (*See Markman I* Tr. at 12) Such technology has become increasingly important as cable television providers have wanted to provide their customers with more channels and services, including high definition video.

#### **LEGAL STANDARDS**

“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) (internal quotation marks omitted). Construing the claims of a patent presents a question of law. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-78 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 388-90 (1996). “[T]here is no magic formula or catechism for conducting claim construction.” *Phillips*, 415 F.3d at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources “in light of the statutes and policies that inform patent law.” *Id.*

“[T]he words of a claim are generally given their ordinary and customary meaning . . . [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.”

*Id.* at 1312-13 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). The patent 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.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent . . . .” *Id.* (internal citation omitted).

It is likewise true that “[d]ifferences among claims can also be a useful guide . . . . For example, 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 (internal citation omitted). This “presumption 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. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. It bears emphasis that “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope

using words or expressions of manifest exclusion or restriction.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted), *aff’d*, 481 F.3d 1371 (Fed. Cir. 2007).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman*, 52 F.3d at 980. The prosecution history, which is “intrinsic evidence,” “consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history 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.” *Id.*

A court also may rely on “extrinsic evidence,” which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries “endeavor to collect the accepted meanings of terms used in various fields of science and technology.” *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of ordinary skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Id.* Nonetheless, courts must not lose sight of the fact that “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.*

Overall, while extrinsic evidence “may be useful” to the court, it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19.

Finally, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.”

*Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007). If possible, claims should be construed to uphold validity. *See In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984).<sup>1</sup>

---

<sup>1</sup>The parties stipulated to the meaning of several terms that had previously been in dispute. The phrases “bandwidth limited media,” “bandwidth limited medium,” “limited bandwidth media,” and “available bandwidth” are accorded their ordinary meaning, “with the understanding that the term ‘bandwidth’ as used in those claims is not limited to a specific frequency spectrum or frequency range.” (D.I. 126 at 1) Additionally, the parties agreed that the phrase “dependencies of the selected basic media data units” shall mean “which other basic media data units, if any, the selected basic media data units depend upon and which other basic media data units, if any, depend upon the selected basic media data units.” (*Id.*)

Moreover, at the February 4, 2011 *Markman* hearing, the parties agreed that they were amenable to the following constructions offered by the Court in an attempt to harmonize and resolve the parties’ competing proposals: (i) the term “selecting basic media data units to be modified, in response to the modification priority of each basic media data unit” (as used in Claim 1 of both the ‘087 and ‘321 Patents) shall mean “choosing which basic media data units to modify, in response to their modification priorities;” and (ii) the term “selecting basic media data units to be modified, in response to the modification priority” (as used in Claim 1 of the ‘619 Patent) shall mean “choosing which basic media data units to modify, in response to their modification priorities.” (*See Markman II* Tr. at 67-69) The Court agrees that such language is supported by the claim language and intrinsic evidence, and will therefore construe the terms in such manner.

## CONSTRUCTION OF THE DISPUTED TERMS

### I. '477 Patent Terms

#### A. End-User/End Users

The terms “end-user” and “end-users” are used extensively throughout the ‘477 Patent and will be construed in the same manner as one another. The main dispute between the parties is whether the term “end-user” refers to just hardware or software, or instead refers to a person or persons using hardware or software.

BigBand contends that “end-user” should be construed as “hardware or software for requesting and receiving service conveying packets.” (D.I. 118 at 10) BigBand argues that the language of the specification requires such a finding because it refers to “end-users, such as set top boxes and the like.” (*Id.* (citing ‘477 Patent, col. 1 line 47)) BigBand also looks to language from the patent requiring that “end-users” be “coupled” to the system and be able to send and receive information. (*Id.* at 10-12)

Imagine, however, argues that “end-user” should be construed to mean “person or persons using hardware and/or software.” (D.I. 116 at 28)<sup>2</sup> Imagine contends that its construction takes the ordinary meaning of the term into account and also recognizes that the specification distinguishes between “end-user” and “end-user equipment.” (D.I. 127 at 30-33)

In evaluating the term “end-user,” the Court looks at the entirety of its uses throughout the ‘477 Patent. The patent is long and has numerous references to “end-user,” some of which

---

<sup>2</sup>While Imagine originally countered that “end-user” is a readily understood term and should be given its ordinary meaning (*see* D.I. 116 at 28; *see Markman II* Tr. at 23), Imagine later withdrew this proposal (*see Markman II* Tr. at 24).

seem inconsistent. Based on the various uses of the term throughout the patent, the Court concludes that a combination of BigBand's and Imagine's proposed constructions is appropriate.

BigBand's construction is supported by an example of an "end-user" provided in the specification. In particular, the specification provides a specific example of an "end-user" as a "set top box." ('477 Patent, col. 1 lines 46-47) ("Each service group includes a plurality of end-users, such as set top boxes and the like . . .") A set top box fits well within BigBand's proposed construction as hardware, as opposed to a person. Also, throughout the asserted claims, the '477 Patent calls for the "end-users [to be] coupled to the system via a bandwidth limited medium." (E.g., '477 Patent, col. 27 lines 16-17 (Claim 1)) This language seems to require the "end-user" to be literally, and physically, connected to the system through a medium that has bandwidth or the ability to transmit data. (See D.I. 118 at 11-12; D.I. 130 at 1) Such a connection is not possible by a person, but is possible by hardware or software. (See *id.*)

In addition, the claims require that an "end-user" be able to receive information, and the specification further describes the "end-user" also sending data. (See D.I. 118 at 10-11 & n.4; D.I. 130 at 3; *Markman I* Tr. at 20; *Markman II* Tr. at 21-22) Specifically, the specification calls for an "end-user" to be able to send "data over MPEG transport . . . in the up stream direction." ('477 Patent, col. 20 lines 47-48) As BigBand argues, the ability to use such a process to send data as described is limited to mechanical devices and not humans, requiring that an "end-user" be hardware or software.

On the other hand, as Imagine emphasizes, another portion of the specification uses the terms "end-user" and "end-user equipment." Imagine argues that because both terms are used, "end-user" cannot refer to equipment, but instead must refer to a person or persons using

equipment. (D.I. 127 at 31; *see also Markman II* Tr. at 25) Generally, different terms are presumed to have different meanings. *See Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008). While the presence in the patent of the term “end-user equipment” is helpful to Imagine, its weight is limited, as the term appears only in the detailed description of preferred embodiments, a section of the specification in which the term “end-user” is not mentioned. Thus, the overall relationship between “end-user equipment” and “end-user” as used in the ‘477 Patent is ambiguous.

The ‘477 Patent also refers to information being “displayed” to an “end-user.” Specifically, Imagine emphasizes the following portion of the specification: “[i]f the service can be provided to the end-user, step 418 is followed by steps 422 and 414 of providing the service to the service group of the end-user and *displaying the service to the end user*, during at least one session.” (‘477 Patent, col. 25 lines 7-10) (emphasis added) To Imagine, this statement only makes sense in the context of *displaying to a person*, because there is no value in displaying information to software or hardware. (D.I. 127 at 31; *see Markman II* Tr. at 25-26) The Court agrees with Imagine that this statement in the specification supports a construction of “end-user” which would include people.<sup>3</sup>

In sum, both parties have demonstrated that the ‘477 Patent is not entirely consistent in how it uses the term “end-user.” Sometimes the patent uses “end-user” to refer to hardware and software, while sometimes the same term is used to refer to people using such hardware or

---

<sup>3</sup>Imagine further noted that other claims of the ‘477 Patent refer to “end-user behavior pattern,” suggesting that “end-user” must be construed to include people, because people, not machines, exhibit behavior patterns. (*See Markman I* Tr. at 11; *Markman II* Tr. at 26) (citing to Claims 4, 24 & 41 of the ‘477 Patent)

software. Accordingly, the Court will construe the term “end-user/end-users” to mean “hardware and/or software for requesting and receiving service conveying packets, or a person(s) using hardware and/or software.”

## **B. Router**

The next term to be construed is “router.” Claim 1 is representative of the ‘477 Patent’s use of the term “router”: “a router, operative to receive service conveying packets and to provide to each group of end-users group associated service conveying packets.” (‘477 Patent, col. 27 lines 18-20 (Claim 1))

BigBand argues that “router” does not require construction because it is essentially defined by the claim language. (*See* D.I. 118 at 15; D.I. 130 at 5-6; *Markman II* Tr. at 28-29) In the alternative, BigBand argues that “router” should be construed to mean “component or components that can be configured to receive service conveying packets and to provide each group of end-users group associated service conveying packets.” (D.I. 118 at 15; D.I. 130 at 5-6; *Markman II* Tr. at 29)

Imagine, however, submits that “router” should be construed to mean “a device that interconnects networks and routes packets to selected groups of users.” (D.I. 116 at 20) Imagine opposes BigBand’s construction on the grounds that it would have the effect of reading the term “router” out of the claim. (*Id.* at 25)

The Court concludes that it must construe the term “router.” The parties do not agree on its meaning, and their dispute appears to be material. *See O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) (stating sometimes “the ‘ordinary’ meaning of a term does not resolve the parties’ dispute, and claim construction

requires the court to determine what claim scope is appropriate in the context of the patents-in-suit”). Also, in light of the complex technology involved here, claim construction is appropriate to help the jury understand the meaning of the patent claims it will be asked to consider. *See AFG Indus., Inc. v. Cardinal IG Co., Inc.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001) (“It is critical for trial courts to set forth an express construction of the material claim terms in dispute, in part because the claim construction becomes the basis of the jury instructions, should the case go to trial. It is also the necessary foundation of meaningful appellate review.”) (internal citation omitted). Three components of the term “router” must be evaluated: the physical nature, the location within the system described by the patent, and the actions taken.

The first component of the term “router” is its physical nature, or what it constitutes. BigBand argues that a “router” is a “component or components,” while Imagine argues that it is “a device.” BigBand contends that the patent does not contain any limitations on the physical nature of a “router” that would limit it to “*a*” single device. Moreover, at the most recent *Markman* hearing, Imagine conceded that there is no meaningful distinction between using the word “device” as opposed to “component,” nor is Defendant opposed to using either such word in the singular or plural. (*See Markman II* Tr. at 37, 41) In the Court’s view, the patent does not limit “router” to a single device or discrete piece of hardware. For these reasons, the Court concludes that the first constituent element of the term “router” is “a component or components.”

The second issue is the location of the “router” within the overall system, specifically whether it must be located to connect different networks. BigBand argues that Imagine improperly seeks to limit “router” to a device that “interconnects networks,” yet there is no requirement of multiple networks in the claim language, the patent specification, or the file

history. (See D.I. 118 at 16-17; D.I. 130 at 5) Imagine counters that, while admittedly it is a “less important” point, Imagine’s construction as a device that “interconnects networks” is appropriate, for that is what the “router” does. (*Markman I* Tr. at 65, 69-70; D.I. 127 at 24-25; see also *Markman II* Tr. at 33-34, 41-42)<sup>4</sup> Nowhere in the patent is there a clear disavowal of the use of a “router” within a single network.<sup>5</sup> Consequently, the Court will not construe “router” to be limited to a router that interconnects multiple networks.

The third issue is the function of a “router.” A “router,” as asserted by BigBand, “can be configured to receive service conveying packets and to provide to each group of end-users group associated service conveying packets.” (D.I. 118 at 15; D.I. 130 at 4) Imagine states that a “router” “routes packets to selected groups of users.” (D.I. 116 at 20-21; D.I. 127 at 21)

Although greatly contested, the parties’ proposed constructions are not particularly divergent, in that both state that a “router” routes certain information – “packets.” (*Markman II* Tr. at 42, 46) BigBand contends that Imagine’s construction improperly suggests that all information that comes to a “router” must be distributed to an end-user. (D.I. 118 at 17)

BigBand therefore argues that its alternate construction would be appropriate, for its proposed

---

<sup>4</sup>For example, Imagine noted: “We think the interconnecting networks is correct and supported by the patent which talks about networks throughout, but that is much less important than the routing piece of it.” (*Markman II* Tr. at 41-42)

<sup>5</sup>As BigBand points out:

For example, Figure 10a illustrates one embodiment of the patented invention. The figure includes a “Broadband Multimedia Router” that has input lines coming in on the left and output lines on the right with no suggestion that there are different networks on one side or the other. Indeed, the “router” in this figure is a component in a single network, not an interface between multiple networks.

(D.I. 118 at 16-17)

language is taken almost directly from Claim 1.<sup>6</sup> (*Markman II* Tr. at 29) The Court agrees and will thus adopt BigBand’s broader construction of the third “router” component.

In sum, the Court construes the term “router” to mean “one or more components that can be configured to receive service conveying packets and to provide each group of end-users group associated service conveying packets.”

### **C. Session Manager**

The final disputed term from the ‘477 Patent is “session manager.” The term “session manager” appears in Claim 1 and then is claimed with essentially the same framework throughout the relevant claims. Claim 1 states:

[A] session manager, coupled to the router, said session manager providing routing instructions to said router, for dynamically selecting group of associated service conveying packets out of the received service conveying packets . . .

(‘477 Patent, col. 27 lines 21-25 (Claim 1))

BigBand initially argued that no construction is needed for this term because its ordinary meaning is clear from the context of its use in the claims. Alternatively, BigBand’s proposed construction is “hardware and/or software that handles requests from a variety of media sources, such as application servers, end-users, and additional modules.” (D.I. 118 at 18-20; *Markman II* Tr. at 42-44) Imagine counters that ordinary meaning is not applicable. (D.I. 127 at 27) Instead, Imagine contends that its proposed construction – “hardware and/or software that instructs the router which group of users should receive which session” – properly accounts for the

---

<sup>6</sup>Claim 1, for example, refers to “a router, operative to receive service conveying packets and to provide to each group of end-users group associated service conveying packets . . . .” (‘477 Patent, col. 27 lines 18-20)

specification and the claim language. (*Id.* at 28-29)

The Court concludes that “session manager” must be construed. The parties have a material dispute as to its meaning. *See O2 Micro*, 521 F.3d at 1361. This is illustrated by the fact that both parties looked to experts to define the term and these experts reached different conclusions. (*See* D.I. 120; D.I. 128)

The Court finds BigBand’s proposed construction appropriately broad in light of the claim language and specification. By contrast, Imagine’s proposal is too limiting. As BigBand points out, providing instructions to the router is only one of many tasks that the specification explicitly provides for the “session manager” to perform. (*See, e.g.*, ‘477 Patent, col. 10 lines 46-48; *id.* col. 11 lines 7-14; D.I. 118 at 19-20) However, the Court agrees with Imagine that BigBand’s construction is made too vague by its incorporation of the word “handles.” (*See* D.I. 127 at 29; *Markman II* Tr. at 45) Thus, the Court will substitute the phrase “makes decisions about” into BigBand’s construction.

Thus, the Court construes “session manager” to mean “hardware and/or software that makes decisions about requests from a variety of media sources, such as application servers, end-users, and additional modules.”

## **II. Rate Shaping/Prioritized Bit Rate Conversion Patents**

The rate shaping patents, the ‘619, ‘087, and ‘321 Patents, are all closely related to each other. The specifications for the three patents largely overlap. The parties present two claim construction disputes relating to the rate shaping patents.

### **A. Multiplexing**

The term “multiplexing” is used in Claim 1 of each of the three rate shaping patents.

(‘619 Patent, col. 18 line 9; ‘087 Patent, col. 18 line 5; ‘321 Patent, col. 16 line 9) The term is used in a similar fashion in all three patents. An example of its use is “multiplexing the modified selected basic media data units and non-selected basic media data units to provide the multiplexed sequence.” (‘087 Patent, col. 18 lines 5-7)

BigBand contends that the term multiplexing does not need construction and should be interpreted based on its ordinary meaning. (*Markman II* Tr. at 50) Again, the Court concludes that construction is required to resolve the parties’ disputes.

In the alternative, BigBand proposes that multiplexing be construed to mean “creating an output based on multiple inputs.” Imagine proposes “combining two or more signals into a single aggregate signal.” Hence, the parties present two disputes: whether the term must deal with “signals” as opposed to an “input” and “output,” and whether there must be aggregation of the signals/inputs. (*See* D.I. 116 at 11-15; D.I. 118 at 25-26; D.I. 127 at 9-14; D.I. 130 at 9-15) On both disputes, Imagine advocates a narrower scope: that multiplexing be limited just to “signals” and that it require aggregation of such signals.

In the Court’s view, the limitations sought by Imagine are not located within the patent. Although there are portions of the specification (including figures) that use the concept of “signals,” that limitation is not carried over into the claim language.<sup>7</sup> Generally, limitations in the specification are not to be read into the claim. *See Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1331 (Fed. Cir. 2004). As for whether there must be aggregation of multiple signals, Imagine’s position is counter to the claim language, which includes the step of “receiving *at least*

---

<sup>7</sup>Imagine is not necessarily “wedded” to the word “signals.” (*Markman II* Tr. at 60, 63)

*one* basic media data unit sequence.” (‘321 Patent, col. 15 lines 61-63) (emphasis added)<sup>8</sup>

Both parties also cite to technical dictionaries; however, within the dictionaries there is no consistent approach to whether the data involved in multiplexing must be a signal and whether aggregation is required. For example, in *The Authoritative Dictionary of IEEE Standards Terms*, which both parties cited, there are three definitions, only one of which uses aggregation and signals (the other two refer to “channels”). (D.I. 117 at Ex. I at 716 (2000))

The Court will adopt BigBand’s construction of multiplexing, which properly captures the context of the term, but does not import limitations into it that are not required by the claim language. Thus, the Court will construct “multiplexing” to mean “creating an output based on multiple inputs.”

#### **B. Basic media data blocks**

The term “basic media data blocks” appears only once in the rate shaping patents, in Claim 1 of the ‘619 Patent. The claim states: “determining modification priorities for a plurality of basic media data blocks out of the received basic media data units.” (‘619 Patent, col. 17 lines 61-63 (Claim 1)) BigBand contends that “basic media data blocks” has an identical meaning to

---

<sup>8</sup>For example, Claim 1 of the ‘321 Patent provides:

1. Computer implemented method for generating a multiplexed sequence, the method comprising the steps of:

receiving at least one basic media data unit sequence;

....

(‘321 Patent, col. 15 lines 61-63)

“basic media data units,” a term that is used throughout the patents. (D.I. 118 at 30)<sup>9</sup> Imagine counters that the term is indefinite, or alternatively could be construed to mean “macroblocks.” (D.I. 116 at 15)

“[D]ifferent claim terms are *presumed* to have different meanings.” *Helmsderfer*, 527 F.3d at 1382 (emphasis added); *see also Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1373 (Fed. Cir. 2004) (“[T]he use of both terms in close proximity in the same claim gives rise to an inference that a different meaning should be assigned to each.”); *Ethicon Endo-Surgery v. United States Surgical Corp.*, 93 F.3d 1572, 1580 (Fed. Cir. 1996) (“If the terms ‘pusher assembly’ and ‘pusher bar’ described a single element, one would expect the claim to consistently refer to this element as either a ‘pusher bar’ or a ‘pusher assembly,’ but not both, especially not within the same clause.”) (emphasis added). This presumption is particularly strong here, as the two different terms appear in the same claim phrase. (See ‘619 Patent, col. 17 lines 58-63 (Claim 1)) (“A method for generating a multiplexed sequence, the method comprising the steps of . . . determining modification priorities for a plurality of *basic media data blocks* out of the received *basic media data units*”) (emphasis added)

Nonetheless, the Court finds several factors overcome the presumption that the one stray reference to “basic media data blocks” means something different than the multiple references to “basic media data units.”

First, there is the structure of the claims. As BigBand explained, “in every other independent claim of [the ‘619 Patent] and of virtually all the independent claims of all three rate

---

<sup>9</sup>BigBand acknowledges that while the phrase “basic media data blocks” appears in Claim 1 of the ‘619 Patent, it does not appear in any other claim, the patent specification, file history, or in either of the two other rate shaping patents. (D.I. 118 at 30)

shaping patents, there is a step of the equivalent of determining the modification priorities . . . of basic media data units of the input stream of basic media data units. That’s the way it’s phrased in virtually every other independent claim. This is the only place where there’s a reference to modification priorities of basic media data blocks.” (*Markman I* Tr. at 45-46) Contrary to Imagine’s argument that the claim would “make no sense if the two terms have the same meaning” (D.I. 116 at 15), BigBand’s construction is entirely sensible. Indeed, BigBand’s construction simply aligns the structure of Claim 1 of the ‘619 Patent with other claims in the other two rate shaping patents.

Second, the specification of the ‘619 Patent also supports BigBand’s proposed construction. Here, again, BigBand’s explanation is persuasive:

[T]he term “basic media data units” in other claims and in the specification is used in the same way that “basic media data blocks” is used in claim 1 of the ‘619 Patent. The other independent claims, claims 56 and 110, are structurally similar, but the corresponding claim limitation refers to basic media data “units” rather than basic media data “blocks.” Further, the patent specification describes the claim using almost identical language, but refers to basic media data “units” rather than basic media data “blocks,” suggesting that both words refer to the same thing.

(D.I. 130 at 18; *see also Markman I* Tr. at 46-48)

Next is BigBand’s expert’s declaration, which states, “[t]he Rate Shaping Patents are meant to operate in general on ‘basic media data units’ and a ‘basic media data unit sequence.’” (D.I. 120 ¶¶ 23, 25) This supports the conclusion that one having ordinary skill in the art would recognize the one use of “basic media data blocks” to merely be a variation on “basic media data units.”

Additionally, common sense is in BigBand's favor. It appears that Claim 1 of the '619 Patent is not a model of precise and careful claim drafting. But, the Federal Circuit has recognized that "it is not unknown for different words to be used to express similar concepts, even though it may be poor drafting practice." *Bancorp Servs.*, 359 F.3d at 1373. Here, the drafting appears to be at least sufficiently clear to permit a person of ordinary skill in the art to understand the two terms to share the same meaning.<sup>10</sup>

Finally, it is also the case that the patent provides no support for Imagine's alternative construction, to construe "block" to mean "macroblock." As BigBand points out, Imagine's proposed construction is not supported by the specification and "creates problems with dependent claims, such as claim 52, which explicitly discloses that a macroblock is just one possible basic media data unit." (D.I. 130 at 19)

Thus the Court will construe "basic media data blocks" to mean "basic media data units."

### **CONCLUSION**

An Order, consistent with this Memorandum Opinion resolving the parties' claim construction disputes, will be entered.

---

<sup>10</sup>The Court recognizes that Imagine contends that Claim 1 of the '619 Patent should be declared invalid for indefiniteness. (D.I. 127 at 15) The Court does not have before it a case-dispositive motion regarding validity, nor the full record that would accompany any such motion. The Court does not mean today's decision to pre-judge any subsequent assessment of validity issues.

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

BigBand Networks, Inc., :  
 :  
 Plaintiff, :  
 :  
 v. : Civ. No. 07-351-LPS  
 :  
 Imagine Communications, Inc., :  
 :  
 Defendant. :  
 :

---

**ORDER**

At Wilmington, this 24th day of March 2011:

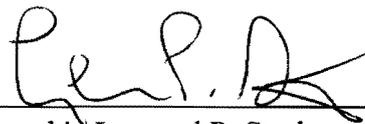
For the reasons set forth in the Memorandum Opinion issued this same date,

IT IS HEREBY ORDERED that the following claim terms and/or phrases as used in U.S. Patent Nos. 6,999,477, 6,937,619, 7,058,087, and 7,395,321 are construed as follows:

1. The term “**selecting basic media data units to be modified, in response to the modification priority of each basic media data unit**” (as used in Claim 1 of the ‘087 Patent and Claim 1 of the ‘321 Patent) means “choosing which basic media data units to modify, in response to their modification priorities.”
2. The term “**selecting basic media data units to be modified, in response to the modification priority**” (as used in Claim 1 of the ‘619 Patent) means “choosing which basic media data units to modify, in response to their modification priorities.”
3. The term “**end-user/end-users**” (as used in Claims 1, 2, 3, 4, 7, 18, 19, 24, and 26

of the '477 Patent) means "hardware and/or software for requesting and receiving service conveying packets, or a person(s) using hardware and/or software."

4. The term "**router**" (as used in Claims 1, 2, 3, 4, and 7 of the '477 Patent) means "one or more components that can be configured to receive service conveying packets and to provide each group of end-users group associated service conveying packets."
5. The term "**session manager**" (as used in Claims 1, 2, 3, and 4 of the '477 Patent) means "hardware and/or software that makes decisions about requests from a variety of media sources, such as application servers, end-users, and additional modules."
6. The term "**multiplexing**" (as used in Claim 1 of the '619 Patent; Claim 1 of the '087 Patent; and Claim 1 of the '321 Patent) means "creating an output based on multiple inputs."
7. The term "**basic media data blocks**" (as used in Claim 1 of the '619 Patent) means "basic media data units."



---

Honorable Leonard P. Stark  
UNITED STATES DISTRICT JUDGE