United States District Court,
E.D. Texas, Tyler Division.

FENNER INVESTMENTS, LTD,
v.
3COM CORP.

Civil Action No. 6:08-CV-61

May 26, 2009.

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MEMORANDUM OPINION AND ORDER

JOHN D. LOVE**, United States Magistrate Judge.**

This claim construction opinion construes the disputed terms in U .S. Patent Nos. 5,842,224 ("the '224 patent") and 7,145,906 ("the '906 patent"). In the above-styled cause of action, Plaintiff Fenner Investments Ltd. ("Fenner") accuses Defendants Extreme Networks, Inc. and Enterasys Networks, Inc. (collectively "Defendants") of infringing claims 3, 8, and 12 of the ' 224 patent and claims 9, 10, 19, and 20 of the '906 patent. The parties have submitted a number of claim terms for construction. Fenner filed an Opening Claim Construction Brief, (Doc. No. 207), and a Reply Claim Construction Brief, (Doc. No. 217). Defendants jointly filed a Responsive Claim Construction Brief, (Doc. No. 209), and a Revised Responsive Claim Construction Brief, (Doc. No. 239). Fenner has also filed a Response to Defendants Revised Responsive Claim Construction Brief. (Doc. No. 244.) A *Markman* hearing was held on April 23, 2009. For the reasons stated herein, the Court adopts the constructions set forth below.

OVERVIEW OF THE PATENTS

Fenner owns a family of patents related to network communications. The patents at issue in this case, the '224 patent and '906 patent, are children of U.S. Patent No. 5,095,480. Both patents have related claims and

borrow extensively from the specification of the '480 patent. The patents cover methods and apparatuses for source filtering data packets between networks of differing media. Packet switched networks operate by converting a stream of data into chunks called packets, then sending those packets to the appropriate destination.

The patents describe solutions to certain problems associated with sending packets between interconnected networks. In the prior art, data packets were routed by using network addresses with hierarchical structure signifying the physical location of a computer. When a computer moved from one network to another-because, for example, the user is on a plane-the computer would need to receive a new address signifying the computer's new location. *See* '224 patent at 10:52-67. FN1 This could lead to frequent switching of network addresses, thus making it difficult to efficiently route data packets. ' 224 patent at 2:22-36. FN2 The patents solve this problem by assigning a logical address to each device. ' 224 patent at 2:37-40. This address is processed without regard to the particular physical location of the device, thus there is no need to change addresses when a computer moves from one network to another. ' 224 patent at 4:59-611.

FN1. Although the Court will focus on the '224 patent, because the '224 patent and '906 patent are children of the '480 Patent, most, if not all, of the '224 patent citations provided herein appear verbatim in the '906 patent.

FN2. The problem is similar to moving a home telephone number. A phone number has a hierarchical structure based on geographic location. The area code identifies a general geographic area, the first three digits identifies a subset of that area, and the final four numbers identify the particular phone within that subset. When an individual moves from one city to another, he needs to contact the phone company to sign up for a new home phone number. Afterward, if he does not inform others of his new phone number, some people will not know how to contact him.

In practice, every data packet contains a header which specifies, among other things, physical address information and logical address information. Data packets are routed by controllers which maintain source and destination address directories. '224 patent at 7:14-22. In one aspect, the patents teach a method of address filtering in the packet routing process using a logical address rather than a physical address. The patents also teach a method for accessing a routing table directory wherein reversible arithmetic code compression is applied to the logical address to compute a directory address index. '224 patent at 4:45-49. As generally described in Fig. 4, when a controller receives a data packet header, it isolates the logical source and destination addresses and disregards the physical address information. '224 patent at 11:1-9. It then uses arithmetic code compression to generate two directories-one for source addresses and one for destination addresses. ' 224 patent at 17:40-41. Based on the information contained in these directories and the packet header, the controller determines which destinations, are to receive the packet, *i.e.* it destination filters the packet. '224 patent at 11:54-59. Alternatively, the controller determines which destinations are protected from receiving packets from particular sources, *i.e.* it source filters the packet. '224 patent 13 :1-6.

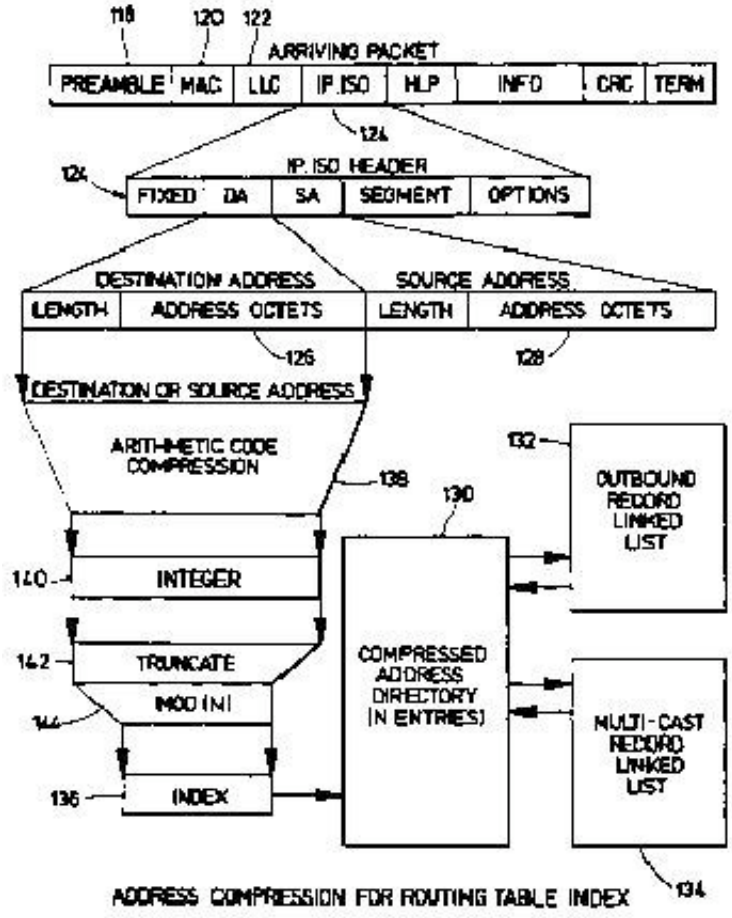


FIG. 4

Most of the terms in dispute appear in claim 8 of the '224 patent:

In a communication system having a plurality of data networks interconnected for communicating packets of data, a controller for interconnecting a first data network of the plurality of data networks to at least a second data network of the plurality of data networks comprising:

means for receiving a data packet, the data packet including a physical media address for identifying a physical device for routing the data packet in physical media and a source address for logically identifying a sender of the data packet independent of the sender's physical media address;

means for looking up in a directory table stored at the controller using the source address source filtering information associated with the source address; and

means for filtering the data packet in response to the source filtering information.

Claim 12 depends on claim 8 and relates to destination addresses rather than source addresses, and claim 3 of the '224 patent is a method counterpart of claim 8. Plaintiff also asserts claims 9 and 10 of the '906 patent, and their method counterparts claims 19 and 20. See, for example, claim 9:

A packet switching node comprising:

a least three IEEE 802 media access controller (MAC) communications ports, each communications port having associated with it a MAC address;

circuitry for,

if a first MAC address contained in a MAC source address field of a packet received on one of the at least three communications ports has a stored association with one of the three least communications ports at which it was received, and if source address filtering information is associated with the first MAC address contained in the received packet, filtering the received packet according to the source filtering information;

if the node has no stored association between the first MAC address and one of the at least three communications ports at which it is received, associating the first MAC address with the one of the at least three communications ports at which the packet was received and, if source address filtering information is associated with the first MAC address, filtering the received packet according to the source filtering information;

if a second MAC address contained in a MAC destination address field of the received packet has stored association with one of the least three communications ports, causing the packet to be forwarded out the one of the at least three communications with which the second MAC is associated if allowed by the source filtering information associated with the first MAC address; and

if the second MAC address contained in the received packet does not have a stored association with any one of the least three communications ports, forwarding the received packet from each one of the at least three communications ports except the one of the at least the communications ports at which the packet was received if allowed b the source filtering information associated with the first MAC address.

APPLICABLE LAW

"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)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.;* C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed.Cir.2004); Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1267 (Fed.Cir.2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See* Phillips, 415 F.3d at 1314; C.R. Bard, Inc., 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. Phillips, 415 F.3d at 1312-13; Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1368 (Fed.Cir.2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. Phillips, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id*. Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id*. Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a dependent claim adds a limitation to an

independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314-15.

Claims "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. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)); Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed.Cir.2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. Phillips, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id*. Also, the specification may 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. But, " '[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.' " Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998) (quoting 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 patent applicant may also define a term in prosecuting 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 doctrine of prosecution disclaimer is well established and prevents a patentee from recapturing through claim interpretation specific meanings disclaimed during the prosecution of the patent. *See* Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1223 (Fed.Cir.2003). The prosecution history must show that the patentee "clearly and unambiguously" disclaimed or disavowed the proposed interpretation during the patent's prosecution to obtain claim allowance. Middleton, Inc. v. 3M Co., 311 F.3d 1384, 1388 (Fed.Cir.2002). "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.1998). "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 extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.' " Phillips, 415 F.3d at 1317 (quoting C.R. Bard, Inc., 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition is entirely unhelpful to a court. *Id*. Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*.

The patents in suit may contain means-plus-function limitations that require construction. Where a claim limitation is expressed in "means plus function" language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. s. 112, para. 6. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed.Cir.1997). In relevant part, 35 U.S.C. s. 112, para. 6 mandates that "such a claim limitation 'be construed to cover the corresponding structure ... described in the specification and equivalents thereof.' " *Id*. (citing 35 U.S.C. s. 112, para. 6). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited

in the [limitations]." *Id*.

Construing a means-plus-function limitation involves multiple inquiries. "The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation." Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., 248 F.3d 1303, 1311 (Fed.Cir.2001). Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id*. A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id*. Moreover, the focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id*.

DISCUSSION

The parties dispute a number of claim terms, but several of these disputes are related.

I. Logical Address Terms FN3

FN3. The term "logical address" appears in claim 3 of the '224 patent, the terms "source address" and "source address for logically identifying the sender of the data packet" appear in claim 8 of the '224 patent, and the term "destination address for logically identifying a recipient of the data packet" appears in claim 12 of the '224 patent.

No	Claim Term	Plaintiff's Proposal	Defendants' Proposal
1	Logical address	An address assigned within a computer network; examples include IP addresses *In the alternative:* A fixed and unique identifier of a connection to the internet represented by a series of numbers that is processed without regard for the physical location of the connection	A fixed, unique, and unchanging identifier of a connection to the internet represented by a series of numbers that has no internal structure to suggest network connection location
8	Source address	Address of origin	A fixed, unique, and unchanging identifier that has no internal structure to suggest network connection location and that is assigned to the host sending the data packet
9	Source address for logically identifying the sender of the data packet	A source address (as construed herein) for logically identifying the sender of the data packet	A fixed, unique, and unchanging identifier that has no internal structure to suggest network connection location and that is assigned to the host sending the data packet
10	Destination	The address where something is sent	A fixed, unique, and unchanging

address for logically identifying a recipient of the data packet	that logically identifies a recipient of the data packet	identifier that has no internal structure to suggest network connection location and that is assigned to the host receiving the data packet.

During the hearing, the parties essentially agreed on the scope of these terms, but disagreed as to the best way to explain that scope to the jury. The parties agree that a logical address is a fixed, unique identifier that is assigned by a computer network. *See* '224 patent at 10:52-11:9. The parties also agree that, although a logical address may have some sort of structure, it is processed by the claimed invention without regard for that structure. *Markman* Hr'g Tr. 70:20-71:8, Apr. 23, 2009; *see* '224 patent 11 :4-9. For example, a phone number has a hierarchical structure based on geographic location. The area code identifies a general geographic area, the first three digits identifies a subset of that area, and the final four numbers identify the particular phone within that subset. However, a phone number may be used simply as an identifier without regard to that structure. When a store such as Home Depot uses that phone number to keep track of a customer's buying habits, it does so without regard to the hierarchical structure of the phone number. The parties disagree as to the best way to explain this concept to the jury.

In light of the parties' substantive agreement, the Court tried to reach an agreed construction between the parties at the hearing, but no agreement was reached. Plaintiff proposes that a logical address "is processed without regard for the physical location of the connection," and Defendants propose that a logical address "has no internal structure to suggest network connection location." However, because of the parties' agreement that a logical address may contain structure even though the claimed invention processes the logical address without regard for that structure, there is no claim scope dispute for the Court to resolve. *See* O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1362 (Fed.Cir.2008). Although both parties try to capture the agreement in their proposals, both proposals would needlessly confuse the jury by describing how a logical address is used, rather than what it is. There is no need to include this concept in the Court's construction because the parties may not interpret this term in a manner that is inconsistent with their agreement, as embodied in this opinion. Thus, the Court rejects both parties' proposals.

Next, the parties dispute whether a logical address is "unchanging." Defendants propose that a logical address must be "fixed, unique, and unchanging," even though this limitation is not present in the claim language. Defendants point to the specification to support their position. The patent identifies certain problems in the prior art associated with mobile users in interconnected communication networks. In a system of interconnected networks, each network may have a different protocol for routing packets between physical devices. '224 patent at 10:58-62. When one device (the source) attempts to send a packet to another (the destination), it sends a packet to a physical address associated with the particular physical device with which it is trying to communicate. '224 patent at 10:35-51. If that destination device moves to a different network, its physical address may need to be changed to comply with the protocols of the new network. *See* '224 patent at 10:52-67. This may lead to frequent switching of network addresses, thus making it difficult to efficiently route data packets. '224 patent at 2:22-36. The claimed invention solves this problem by assigning a logical address to each device, which is "fixed, unique, and unchanging." '224 patent at 2:38-40. This logical address refers to a connection to the communication system, not a particular physical device. Thus, by relying on logical addresses rather than physical addresses, data packets can be efficiently routed even to a device whose physical address frequently changes. *See* '224 patent at 10:52-11:9. (explaining the distinction between physical and logical addresses).

Plaintiff agrees that a logical address must be fixed, unique, and unchanging during a connection, but argues that it need not be unchanging "for all time." *Markman* Hr'g Tr. 77:3-7, Apr. 23, 2009. That is, the phrase "fixed, unique, and unchanging" is used to distinguish physical addresses which must change every time a device moves between networks. This phrase should not be read more broadly to imply that, once assigned, a logical address must always refer to one and only one particular physical device. Such an interpretation would conflate the difference between a logical address and a physical address. In other words, Plaintiff argues that, if a device is disconnected from the network, and later re-connected, it may be assigned a different logical address that is fixed, unique, and unchanging, for the duration of the connection. Plaintiff's argument is well taken.

Because the specification distinguishes physical addresses by describing logical addresses as "fixed, unique, and unchanging," '224 patent at 2:38-40, the Court will construe the term "logical address" as "fixed, unique, and unchanging." Nonetheless, this construction does not imply that a logical address is fixed, unique, and unchanging for all time. Such an interpretation would conflate the difference between a physical address and a logical address, and would be inconsistent with the requirement that a logical address be assigned within a network to represent a connection to the network rather than a particular physical device. *See* '224 patent at 10:52-11:9. Therefore, the Court will construe the term "logical address" as "a fixed, unique, and unchanging identifier assigned within a network of interconnected computers for source to destination packet delivery." FN4 The parties may not interpret this term in a manner that is inconsistent with this opinion. *See* Aloft Media, LLC, 2009 WL 803133 at n. 2.

FN4. The Court rejects the parties' proposals insofar as they require a logical address to identify "a connection to the internet" or be "represented by a series of numbers." These two limitations are not present in the claim language or the specification. Rather, a logical address may identify a connection to a network of interconnected computers not necessarily connected to the internet. '224 patent at 2:37-45. In addition, the specification mentions at least one embodiment which does not require a logical address to be represented by a series of numbers. '224 patent at 16:55-57.

With regard to the remaining address terms, Defendants attempt to inject their proposed construction of "logical address" into the constructions of these terms. Having rejected Defendants' proposed construction of "logical address," the Court will not adopt Defendants' proposed constructions of these terms. At the hearing, both parties agreed that destination addresses and source addresses are logical addresses. *Markman* Hr'g Tr. 82:20-83:3, Apr. 23, 2009. The claim language itself clearly expresses that these addresses are logical addresses. *See* '224 patent claim 8 ("a source address for logically identifying a sender of the data packet independent of the sender's physical media address"). In light of this claim language, the Court finds that the remaining address terms would be readily understood by a lay jury. Therefore, the Court will not construe these terms. *See* O2 Micro Int'l Ltd., 521 F.3d at 1362; Fenner Inv. Ltd. v. Microsoft Corp., No. 6:07-cv-8, 2008 WL 3981838 at (E.D.Tex. Aug.22, 2008) (finding that a court need not construe a disputed term as long as it has resolved the claim scope dispute between the parties).

II. MAC AddressFN5

FN5. The term "MAC address" appears in claims 9, 10, 19, and 20 of the '906 patent.

No	Claim	Plaintiff's Proposal	Defendants' Proposal

	Term		
14	MAC address	Physical address used by the media access controller (MAC) level defined by standards such as Ethernet, token ring, or FDDI	Fixed, unique, and unchanging identifier assigned to a host

Both parties acknowledge that, to one skilled in the art, the term "MAC address" typically refers to a unique serial number assigned by a manufacturer to a type of physical device called a media access controller ("MAC"). Defendants point out that the Fenner patents teach that a logical address-typically identified by a series of numbers-must be assigned to each node. Defendants argue that the '906 patent specifically teaches that this series of numbers can and should be a MAC address. In other words, defendants argue that the term "MAC address," as it appears in the claims of the '906 patent, refers to a logical address which happens to be represented by the same series of numbers as some physical address assigned to a MAC. Plaintiff argues that the term MAC address should be given the ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. Phillips, 415 F.3d at 1312-13.

All of the asserted claims of the '906 patent recite "a[t] least three IEEE 802 media access controller (MAC) communications ports, each communications port having associated with it a MAC address." Because the MAC address is associated with a MAC-a physical device-this address cannot be a logical address, which is an identifier of a connection to a communication system. As explained above, a logical address is not permanently associated with a particular physical device. Thus, the plain language of the claims counsels against Defendants' assertion that a MAC address is a logical address. Because nothing in the specification indicates that the patentee assigned a new meaning to the term "MAC address," the ordinary and accustomed meaning of the term as understood by one of ordinary skill in the art governs. Phillips, 415 F.3d at 1312-13. The Court adopts Plaintiff's proposed construction. FN6

FN6. At the hearing, Defendants argued that their construction should be adopted because the '906 patent is subject to a terminal disclaimer. However, the Defendants have not attached the PTO's explanation for the double patenting rejection, or the patentee's response. The mere existence of a terminal disclaimer, without further explanation, does not affect the Court's construction. Defendants also argue that unless their construction is adopted, the claims of the '906 patent must be found invalid for lack of written description. While Defendants may rely on this argument to contest validity, it does not affect the construction of this term.

III. Associated With TermsFN7

FN7. Term 3 appears in claim 3 of the '224 patent, terms 15, 18, and 19, appear in claims 9, 10, 19, and 20 of the '906 patent, term 19 appears in claims 9 and 19 of the '906 patent, and term 21 appears in claims 10 and 20 of the '906 patent.

No	Claim Term	Plaintiff's Proposal	Defendants' Proposal
3	Looking up, in a directory table stored at the node, source filtering information associated	Looking up, in a directory table stored at the node, source filtering information (as construed herein) associated	Retrieving source filtering information (as construed herein) contained in a record identified by a unique value created by arithmetically compressing, as distinct from

	with the first logical address	with the first logical address (as construed herein)	hashing, the first logical address (as construed herein)
15	Each communications port having associated with it a MAC address	Each communications port having associated with it a MAC address (as construed herein)	Each communications port is referenced in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, a MAC address (as construed herein)
18	Stored association with one of the three least communications ports	No construction needed.	Stored reference to the one of the at least three communications ports in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, a MAC address
19	If the source address filtering information is associated with the first MAC address	If the source address filtering information (as construed herein) is associated with the first MAC address (as construed herein).	If source address filtering information (as construed herein) is in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, the first MAC address (as construed herein)
21	Associated with a stored protection record indicating protection of that communications port from packets containing the first MAC address as a MAC source address	Associated with a stored protection record (as construed herein) of that communications port from packets containing the first MAC address (as construed herein) as a MAC source address (as construed herein).	Referenced in a stored protection record (as construed herein), identified by arithmetically compressing, as distinct from hashing, the first MAC address (as construed herein), indicating that the communications port is not allowed to forward packets containing the first MAC address as a MAC source address

Defendants argue that the word "associated" must be construed to refer to one particular directory access method-reversible arithmetic compression-because the patentee implicitly redefined that word. Plaintiff argues that the word "associated" ought to maintain its plain and ordinary meaning, and thus these terms need not be separately construed.

In general, courts must impose a "heavy presumption" in favor of the ordinary meaning of claim terms, which can only be overcome by statements of "clear disclaimer" expressly indicating "manifest exclusion or restriction." Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 913 (Fed.Cir.2004); Brookhill-Wilk 1, LLC v. Intuitive Surgical Inc., 334 F.3d 1294, 1301 (Fed.Cir.2003); *see also* Phillips, 415 F.3d at 1312-13. However, this "heavy presumption" does not arise when the patentee acts as his own lexicographer and gives a claim term a different meaning than the term would otherwise possess. *See* Irdeto Access, Inc. v. Echostar Satellite Corp., 383 F.3d 1295, 1301 (Fed.Cir.2004); *see also* Nystrom v. TREX Co., 424 F.3d 1136, 1145 (Fed.Cir.2005). In these situations, the inventor's lexicography governs. *Phillips,* 415F.3d at 1316. A patentee can implicitly redefine a claim term by consistently using that term in a particular way. *See* Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, 262 F.3d 1258, 1271 (Fed.Cir.2001) ("when a patentee uses a claim term throughout the entire patent specification, in a manner consistent with only a single meaning, he has defined that term 'by implication' "). Although, consistent usage may redefine a term, particular embodiments and examples appearing in the specification should not be read into the claims. Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998); *see also* Phillips, 415 F.3d at 1323.

In this case, the patents describe three prior art methods for searching large directories of addresses: sorted tables, tree structures, and hashing. '224 patent at 3:23-38. They also describe arithmetic compression, which is a method for reducing logical addresses to unique integer values that can be used to access a routing table directory more quickly. '224 patent at 4:45-49. For example, once a controller receives a packet, it identifies the source address and an arithmetic combiner associates a unique integer value with that address. '224 patent at 17:66-18:1. The patents explain that arithmetic compression is an improvement over the prior art methods of directory access because it allows for easily constructed tables, it can be used as soon as a first address is received, and it is reversible, *i.e.* the original address can be recovered from the arithmetically compressed integer value. '224 patent at 5:5-25.

While the patent specifications occasionally use the word "associated" to describe arithmetic compression, *e.g.,* '224 patent at 6:40-43; '906 patent at 6:47-51, the word is not consistently used in this manner. Plaintiff cites a number of passages from the specification of the '224 patent where the word "associated" is clearly given its plain and ordinary meaning. *See, e.g.* '224 patent at 10:54-55, 14:15-19, 29:27-28. In fact, the word "associated" is used to describe sorted tree structures, an alternative directory access method distinct from arithmetic compression. '224 patent at 3:26-30. Thus, this case is distinguishable from other cases in which the Federal Circuit has found implicit re-definition of a term by consistent usage. *Cf.* Bell Atl. Network Servs., Inc., 262 F.3d at 1271; Nystrom, 424 F.3d at 1145.

Defendants' also argue that the patentee expressly disclaimed any embodiment of the claimed invention that does not employ arithmetic compression. This argument is separate from the redefinition argument described above. None of the claims in which the "associated" terms appear explicitly mention arithmetic coding. For example, Claim 3, the claim in which term 3 appears, merely refers to "looking up source filtering information associated with the first logical address." This limitation makes no mention of arithmetic compression, and, on its face, is broad enough to encompass packet routing methods that do not employ arithmetic compression. Nonetheless, Defendants argue that the patent specification limits the scope of clam 3.

A patent specification may contain an intentional disclaimer of claim scope despite broadly worded claims. *See* Scimed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1345 (Fed.Cir.2001) (finding disclaimer of claim scope because the specification stated that "all embodiments of the present invention contemplated and disclosed herein" were more narrowly limited than the broadly worded claims). The Federal Circuit has found disclaimers where the specification describes features of "the present invention" as a whole, see Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295, 1308 (Fed.Cir.2007), or where the specification describes certain features as "critical" or distinguishable over the prior art. *See* Inpro II Licensing, S.A.R .L. v. T-Mobile USA, Inc., 450 F.3d 1350, 1354-57 (Fed.Cir.2006). In contrast, when the specification describes certain features as "preferable," or as examples, courts have found no disclaimer of claim scope. *See* Uniloc USA, Inc. v. Microsoft Corp., 290 Fed. Appx. 337, 345-47 (Fed.Cir.2008) (Michel, J., dissenting in part) (arguing that references to preferable and exemplary features should limit claim scope). Similarly, when a patentee sets out two different problems present in the prior art, the patentee may direct a claim to a solution for only one of those problems. *See* Resonate Inc. v. Alteon Websystems, Inc., 338 F.3d 1360, 1367 (Fed.Cir.2003) ("when the written description sets out two different problems present in the prior art, is it necessary that the invention claimed, and thus each and every claim in the patent, address both problems? We conclude that on the record in this case, the answer is no"); *see also* Honeywell Inc. v. Victor Company of Japan, 298 F.3d 1317, 1326-27 (Fed.Cir.2002).

The Court does not read *Verizon* and *Inpro II Licensing* to require courts to limit claim scope any time the patent specification contains the magic words "present invention." In this case, arithmetic compression is described as a feature of the "present invention." '224 patent at 4:46-47 ("the present invention employs are versible arithmetic code compression"); 5:65-66 ("[t]he present invention combines arithmetic coding FN8 with dynamic hashing"). However, the specification explains that arithmetic compression is a solution to only one of two problems identified in the prior art. As discussed above in section I, the first problem relates to the routing of data packets between interconnected networks. Prior art systems had difficulty keeping track of mobile users that move from one network to another because those systems rely on physical addresses. ' 224 patent at 2:22-36. The claimed invention solves that problem by assigning logical addresses to users. ' 224 patent at 2:37-39. The second problem relates to prior art directory access methods, *i.e*. sorted tables, tree structures, and hashing. ' 224 patent at 3:23-38. The specification explains that these methods cannot quickly manage a large number of logical addresses. *See generally* ' 224 patent at 3:23-4:36. Arithmetic compression is prescribed as a solution to this problem because it allows for "very fast" organization of directories. ' 224 patent at 5:30-34.

FN8. The patents use the terms "reversible arithmetic code compression," "arithmetic compression," and "arithmetic coding" interchangeably.

The "Summary of the Invention" section of the '224 patent explains that "the present invention relates to a system for routing a message ... which utilizes a message format that is structure-independent of the location of the message destination." '224 patent at 6:20-23. This description includes a solution to the mobile user problem, but omits any mention of the directory access problem or arithmetic coding. *See* Honeywell, Inc., 298 F.3d at 1326 (relying on a similar omission to construe a claim term). Later, in that same section, the patent states: "[a]nother aspect of the invention is an apparatus and method for implementing a routing table directory to provide for fast access times to look up routing information." '224 patent at 6:37-40. Thus, arithmetic coding is described as a way of implementing the invention with "fast access times," *i.e.,* a system which combines logical addresses and arithmetic compression is a preferred embodiment. Because the language of the claims at issue does not recite arithmetic compression, the Court sees no reason to import this limitation from the preferred embodiment. *See* Resonate Inc., 338 F.3d at 1367. This is particularly true for term 3, since claim 4-a dependent claim of claim 3-specifically recites arithmetic compression. *See* Phillips, 415 F.3d at 1314.

The prosecution history confirms this conclusion. During prosecution, the patentee distinguished prior art by explaining that claim 3 is directed toward filtering data packets based on logical addresses rather than physical addresses. '224 patent amendment dated Apr. 21, 1997 at 10-11 (Doc. No. 209-6). The patentee made no mention of arithmetic compression as a necessary element of the claimed invention. Later, in the patentee's Appeal Brief, he stated that "[t]he invention pertains, generally, to filtering data packets on interconnected data networks based on a logical address of the source of the data packet, rather than on a physical address," and described arithmetic compression as a means to "provide faster look-up of source filtering information." '224 patent Appeal Brief dated March 2, 1998 at 2-3. These statements confirm that the use of logical addresses and arithmetic compression are two distinct solutions to two distinct prior art problems. *See* Honeywell, Inc., 298 F.3d at 1327-28. Because a patentee is not precluded from separately claiming solutions to different prior art problems, the Court rejects Defendants' attempt to import a limitation of the preferred embodiment into the claims.

Furthermore, Defendants' proposed constructions for terms, 15, 18, 19, and 21 are largely inconsistent with

the Court's interpretation of the term "MAC address" as a physical address. For example, term 15 refers to an association between a communications port-a physical device-and a MAC address. As explained in section II above, a MAC address is a physical address, thus it cannot be arithmetically coded to a MAC. For all these reasons, the Court will not adopt Defendants' proposed constructions for terms 3, 15, 18, 19, and 21. These terms, when read in the context of the claims, will be readily understood by a jury. Thus, no construction is necessary.

IV. Means Plus Function TermsFN9

FN9. Terms 4, 10, and 11 appear in claim 8 of the '224 patent, and term 12 appears in claim 12 of the '224 patent.

The parties have agreed that four terms are to be construed according to 35 U.S.C. s. 112 para. 6. The parties agree on the functions of these terms, but disagree as to the corresponding structures. All of the structure identified by the parties appears in Figs. 2-5. Figs. 4 and 5 are more detailed representations of elements shown in Figs. 2 and 3. At the hearing, Defendants conceded that Fig. 4 does not disclose any necessary corresponding structure, and the specification explains that the "purpose of Fig. 5 is to introduce generic terminology for the associative memory of Figs. 2-4." '224 patent at 22:10-12. Thus, Figs. 4 and 5 do not contain any corresponding structure clearly linked to the claimed function. *See* Medtronic, Inc., 248 F.3d at 1311. Figs. 2 and 3 essentially disclose the same structures because they are alternative embodiments of the same switch-Fig. 2 demonstrates a parallel layout and Fig. 3 demonstrates a serial layout. '224 patent at 7:6-13. *See* Serrano v. Telular Corp., 111 F.3d 1578, 1583 (Fed.Cir.1997) ("Disclosed structure includes that which is described in a patent specification, including any alternative structures identified.") For ease of reading, the Court will focus on Fig. 2, but all of the constructions below contain structure from Figs. 2 and 3.

A. Receiving a Data Packet

No	Claim Term	Plaintiff's Proposal	Defendants' Proposal
4	Means for receiving a data packet	A Media Access Controller, such as MAC 38 of Fig. 2	Fig. 2 Source Address Shift Buffer 48, Destination Address Shift Buffer 50, and Delay Buffer FIFO 52 Fig. 3: Octet Register 104 and Octet Delay Buffer FIFO (unnumbered) FIG 5: Key Symbol Buffer 104

The parties agree that the function for this term is "receiving a data packet." Defendants argue that because the preamble to claim 8 recites "a controller for interconnecting a first data network of the plurality of data networks to at least a second data network of the plurality of data networks," any structure corresponding with this function must be included in a "controller" for interconnecting networks. Defendants argue that the only structure disclosed for interconnecting data networks are switch 38 of Fig. 2 and switch 96 of Fig. 3. Therefore, Defendants argue that the structure for receiving a data packet must be found in switch 38 or switch 96. As corresponding structure, Defendants point to various buffer elements of switch 38-elements 48, 50, and 52.

Plaintiff does not dispute that the structure corresponding with this term must be found in Switch 38 or

Switch 96. Plaintiff does dispute that the buffer elements identified by Defendants receive a data packet. Plaintiff contends that the buffer elements cannot be corresponding structure because they are not necessary for performing the recited function. *See* NOMOS Corp. v. Brainlab USA, Inc., 357 F.3d 1364, 1368 (Fed.Cir.2004). The specification explains that these elements only receive the packet header, which contains source and destination address information, not the entire packet. '224 patent at 13:42-46. Plaintiff argues that because the buffer elements do no perform the recited function, switch 38 as a whole must be the corresponding structure.

While Plaintiff accuses Defendants of designating unnecessary structure, Plaintiff has identified the same structure as Defendants, plus additional structure that does not perform the recited function. For example, neither party contends that source protect table 78 or protect record 80 receives a packet, and the specification explains that neither of these elements receive a packet. '224 patent at 13:56-58. And yet, because these elements are contained within switch 38, Plaintiff apparently argues that they are necessary for receiving a packet.

The problem with the parties' proposals for this term is that, although they agree that the corresponding structure must be found within switch 38, switch 38 does not receive data packets. Rather, switch 38 directs packets to the appropriate destination after examining the packet header. '224 patent at 13:1-5 ("MAC level switch 38 shown in Fig. 2 examines the source node address field of the incoming information [*i.e.* the packet header]"); 13:19-21 ("switch 38 ... processes address symbols"). When MAC 34 receives a packet, it transmits the packet header to switch 38. '224 patent at 13:7-8. Switch 38 examines the packet header to determine which of MACs 40, 42, 44, and 46 must receive the packet. '224 patent at 13:7-10. If, for example, the packet is addressed to MAC 42, MAC 42 receives the entire packet. Thus, contrary to Defendants' argument, the "controller" mentioned in the preamble of claim 8 is not limited to switch 38. The controller must include an element that receives data packets, *i.e.* MAC 34. Thus the structure corresponding with the function "receiving a data packet" is "media access controller 34 of Fig. 2 or media access controller (unnumbered) of Fig. 3, and equivalents thereof."

B. Looking Up in a Table Terms

No	Claim Term	Plaintiff's Proposal	Defendants' Proposal
10	Means for looking up in a directory table stored at the controller using the source address source filtering information associated with the source address	The means for looking up in a directory table are the source index and the source protect table (Figure 2-items 74 and 78).	Fig. 2: Source Address Index Table 68; Source Protect Table 78; Combine Table Output 72; Source Index 74; Zero Detect 90; Learned Address Logic 88 (as further described in Fig. 6 and including variations of the add key logic circuitry presented in Fig. 7 and Figs. 9-14, and including the symbol use count logic circuit as described in Fig. 8) Fig. 3: Source and Destination Index Tables 98; Address Record Memory 100; Arithmetic Computation 102; and Index Buffer 108 Fig. 4: Arithmetic Code Compression 138; and Compressed Address Directory 130
			Fig. 5: Key Index Table Memory 68'; Arithmetic

			Computation Logic 72'; Record Memory 78'; Record Index (Address) 74'; Learned Key Logic 88'; or, in the alternative, programmable devices implementing the logical functions of the dedicated circuitry of Fig. 5 as described above; or, in the alternative, the host system of Fig. 5 performing some or all of the processing performed by the dedicated circuitry of Fig. 5 as described above
12	Means for looking up, using the destination address, in a routing table information associated with the destination address for routing the data packet for delivery to the receiver	The means for looking up ... in a routing table is the routing index 76 and destination routing table 84 as shown in Figure 2.	Fig. 2: Learned Address Logic 88 (as further described in Fig. 6 and including variations of the add key logic circuitry presented in Fig. 7 and Figs. 9-14, and including the symbol use count logic circuit as described in Fig. 8); Destination index table 66; Combine Table Output 70; Route index 76; Destination Routing Table 84; and Zero Detect (unnumbered) Fig. 3: Source and Destination Index Tables 98; Arithmetic Computation 102; Address Record Memory 100; and Index Buffer 108 Fig. 4: Outbound Record Linked List 132; Arithmetic Code Compression 138; Compressed Address Directory 130 Fig. 5: Index Table Memory 68'; Arithmetic Computation Logic 72'; Record Index (address) 74'; Record Memory 78'; Learned Key Logic 88'; and Zero Detect 90; or, in the alternative, programmable devices implementing the logical functions of the dedicated circuitry of Fig. 5 as described above; or, in the alternative, the host system of Fig. 5 performing some or all of the processing performed by the dedicated circuitry of Fig. 5 as described above.

The primary dispute with regard to these terms is how to interpret the phrase "using the source/destination address." Defendants argue the Plaintiffs proposals ignore this claim language. Plaintiff claims that Defendants have identified unnecessary structure. The parties agree that at least some of the corresponding structure for both terms is found in Fig. 2, and they do not generally dispute how the embodiment shown in Fig. 2 works. See below:

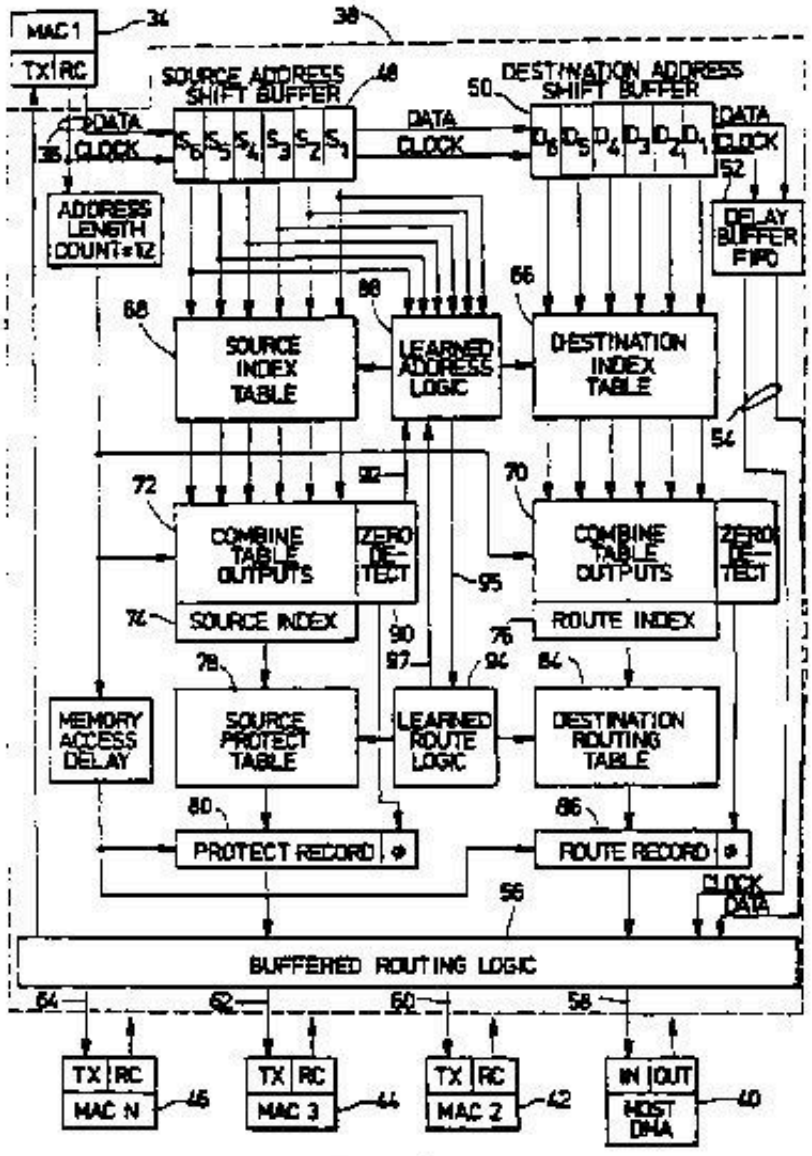


FIG. 2

After MAC 34 receives a data packet, switch 38 examines the packet header to determine which of MACs 40, 42, 44, 46 are to receive the packet. '224 patent at 13:7-10. Switch 38 maintains tables which keep track of the source addresses and destination addresses of packet headers it receives. However, rather than routing packets based only on these tables, it uses arithmetic code compression to assign unique integer values to each source or destination address stored in its tables. The source address is received by the source address shift buffer 48 and the destination address is received by the destination address shift buffer 50. '224 patent at 13:44-46. Thereafter, the two addresses are processed in the same way, albeit in different areas of switch 38. If the addresses are not already stored in the index tables 68 and 66, as indicated by a zero detect 90, then the addresses are stored in index tables 68 and 66. '224 patent at 14:6-9. The outputs of these tables are arithmetically combined by arithmetic combiners 72 and 70, to generate source index 74 and route index 76. '224 patent at 13:50-56. These indices are used as the addresses of sources and locations respectively, and compared to directory tables 78 and 84 to arrive at protect record 80 and route record 86, *i.e.* the source

filtering information. '224 patent at 13:56-62. Protect record 80 and route record 86 are processed by buffered routing logic 56 to determine which of MACs 40, 42, 44, 46 are to receive the packet and which are protected from receiving the packet. '224 patent at 13:62-65.

The operation of determining which MACs are protected from receiving a packet from particular sources is called source address filtering, '224 patent at 13:1-5, and is explained in the specification by way of reference to Fig. 1:

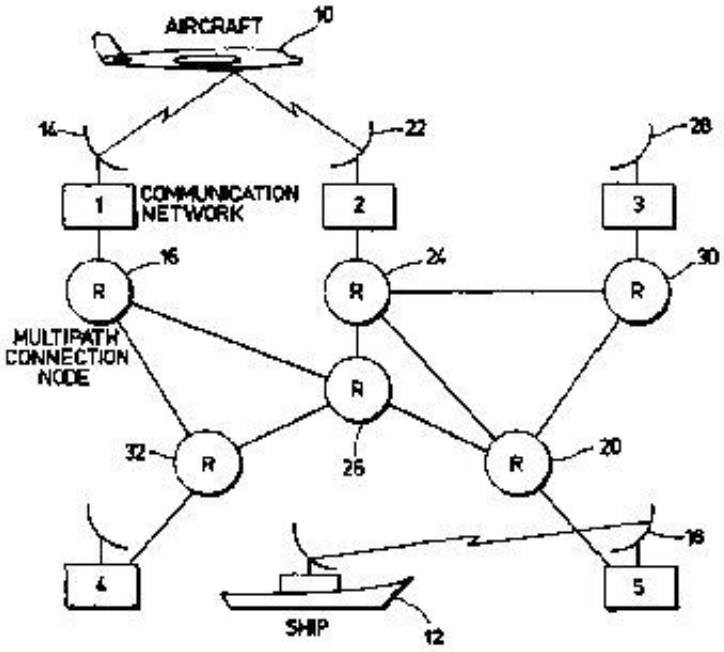


FIG.1

"Thus, in FIG. 1, if node 26 has received information from source nodes 16, 24 and 32, and it receives a data packet for node 20, the protect record 80 from the source protect table 78 and the route record 86 in FIG. 2, when processed by the buffered routing logic 56, will prevent node 26 from transmitting the information back to nodes 16, 24 and 32 but allow it to be transmitted to the destination node 20. Thus, the information from an incoming node or MAC 34 to a particular switch 38 may be transferred to the desired destination MAC 40, 42, 44 or 46 by the buffered routing logic 56 in the manner explained." '224 patent at 14:45-55.

With regard to term 10, the parties agree that the function is: "looking up in a directory table stored at the controller using the source address source filtering information associated with the source address." Plaintiff argues, and Defendants agree, that source index 74 and source protect table 78 correspond to the function "looking up, at a directory table ... the source address filtering information associated with the source address. (Doc. No. 207 p. 18.) Plaintiff apparently contends that this function is equivalent to the function of the claim term at issue. Defendants argue that additional structure is necessary to perform the function "using the source address." FN10

FN10. Although the parties claim to have agreed on the function of this term, they appear to have different

interpretations of what that function is. Plaintiff apparently argues that the function is: "looking up in a directory table, which is stored at the controller, the source filtering information associated with the source address." Defendants apparently argue that the function is: "looking up in a directory table, which is stored at the controller, the source filtering information associated with the source address, by using the source address."

The additional structure identified by Defendants as corresponding with the claim language "using the source address" consists of elements 68 and 72 of Fig. 2. As explained above, the source address is stored in the source address shift buffer 48 and source index table 68, and it is used by combiner 72 to generate source index 74. Thus, the possible structure corresponding to "using the source address" must be elements 48, 68, and/or 72. Buffer 48 merely stores the source address temporarily, and neither party contends that this element is corresponding structure. Because source index table 68 and combiner 72 are necessary for computing source index 74, '224 patent at 13:49-55, these elements are corresponding structure. *See* Medtronic, Inc., 248 F.3d at 1311.

At the hearing, Plaintiff argued that elements 68 and 72 cannot be corresponding structure because, although these elements are necessary for "using the source address," they are not necessary for "looking up in a directory table." *See* Asyst Techs., Inc. v. Empak, Inc., 268 F.3d 1364, 1371 (Fed.Cir.2001) ("An electrical outlet enables a toaster to work, but the outlet is not for that reason considered part of the toaster."). While Plaintiff is correct that elements 68 and 72 do not "look up," these elements are not superfluous structure-such as an electrical outlet-unrelated to the function of the term. The function for this term is not simply "means for looking up in a directory table," rather, the function is more than that and also encompasses an express requirement of using the source address, which entails any processing of the source address necessary to accomplish directory access.

Plaintiff also argues that combiner 72 is not corresponding structure because it relates to arithmetic compression, and the inclusion of combiner 72 as corresponding structure would require claim 8 to employ arithmetic compression. It argues that the doctrine of claim differentiation counsels against this construction because dependent claims 9 and 10 specifically recite arithmetic code compression. However, where the specification discloses only one structure for the corresponding function-in this case, "using the source address"-the doctrine of claim differentiation will not change the meaning of a means plus function term. *See* Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed.Cir.1991) (holding that the doctrine of claim differentiation yields to an interpretation mandated by s. 112 para. 6); *see also* Welker Bearing Co. v. PHD, Inc., 550 F.3d 1090, 1098-99 (Fed.Cir.2008). Accordingly, the Court rejects Plaintiff's arguments and finds that elements 68 and 72 are clearly linked in the specification to the corresponding function specified in the claim limitation.

The additional structure in Fig. 2 identified by Defendants is not corresponding structure. When switch 38 receives a new packet header, the source address is received in the source address shift buffer 48, and the source address from the previous packet header is shifted from the source address shift buffer 48 into learned address logic 88. '224 patent at 14:2-6. If the new source address is not already stored in the source index table 68, as indicated by a zero detect 90, then that source address is stored in both the source and destination address tables 68 and 66. '224 patent at 14:6-8. If, after a set time, that address is not confirmed by a subsequent transmission, learned address logic 88 deletes the address from tables 68 and 66. Thus, elements 90 and 88 relate to updating the source and destination address tables, not to the "looking up ..." function.

Because Fig. 3 is an alternative embodiment of the switch shown in Fig. 2, ' 224 patent at 7:6-13, those elements of Fig. 3 which correspond with the identified elements of Fig. 2 are also corresponding structure. Index table 98 corresponds with source index table 68. *See, e.g.,* '224 patent at 19:1. Arithmetic computation 102 corresponds with combine table outputs 72. '224 patent at 20:8-14. Index buffer 108 corresponds with source index 74. '224 patent at 15:13-15; 13:50-56; 23:66-24:2. The source bank of address record memory 100 corresponds with source protect table 78. *See generally* '224 patent 15 :11-22; 13 :56-65. At the hearing, Defendants conceded that Fig. 4 does not disclose any necessary corresponding structure, and the specification explains that the "purpose of Fig. 5 is to introduce generic terminology for the associative memory of Figs. 2-4." '224 patent at 22:10-12. Thus, Figs. 4 and 5 do not contain any corresponding structure clearly linked to the claimed function. *See* Medtronic, Inc., 248 F.3d at 1311.

To summarize, the structure corresponding to the function "looking up in a directory table stored at the controller using the source address source filtering information associated with the source address" is: source index table 68, combine table outputs 72, source index 74, and source protect table 78 of Fig. 2; and index table 98, arithmetic computation 102, index buffer 108, and the source bank of address record memory 100 of Fig. 3, and equivalents thereof.

With regard to term 12, the parties agree that the function is: "looking up, using the destination address, in a routing table information associated with the destination address for routing the data packet for delivery to the receiver." The arguments with regard to this term directly parallel the arguments with regard to term 10 above. As with term 10, Plaintiff omits structure for "using the destination address." The structure corresponding to this function is: destination table index 66, combine table outputs 70, route index 76, and destination routing table 84 of Fig. 2; and index table 98, arithmetic computation 102, index buffer 108, and the destination bank of address record memory 100 of Fig. 3, and equivalents thereof.

C. Filtering the Data Packet

No	Claim Term	Plaintiff's Proposal	Defendants' Proposal
11	Means for filtering the data packet in response to the source filtering information	The means for filtering the data packet is the buffered routing logic (Figure 2-item 56). The data is filtered in response to the source filtering information (as construed herein)	Fig. 2: Protect record 80 and Buffered Routing Logic 56 Fig. 3: Source Protect Record 110 and Buffered Routing Logic (unnumbered) Fig. 4: Multicast Record List 134 Fig. 5: Output Lines 519; Record Buffer 80'; and Delay Elemen t 515 or, in the alternative, programmable devices implementing the logical functions of the dedicated circuitry of Fig. 5 as described above; or, in the alternative, the host system of Fig. 5 performing some or all of the processing performed by the dedicated circuitry of Fig. 5 as described above

The parties agree that the function of this term is "filtering the data packet in response to the source filtering information." As explained above, protect record 80 is processed by buffered routing logic 56 to determine which of MACs 40, 42, 44, 46 are protected from receiving the packet. '224 patent at 13:62-65. Plaintiff points out that buffered routing logic 56 performs the source filtering, and that protect record 80 is source filtering information. Because source filtering information cannot perform the function of filtering the packet *in response to* source filtering information, protect record 80 cannot be corresponding structure. Defendants do not dispute this argument. As explained above, Fig. 3 discloses parallel corresponding structure, but Figs. 4 and 5 do not disclose corresponding structure. The structure corresponding to this function is buffered routing logic 56 of Fig. 2; and buffered routing logic (unnumbered) of Fig. 3, and equivalents thereof.

V. Agreed Terms

Prior to the hearing the parties agreed to the following constructions: the term "physical media address" will be construed as "address associated with the hardware of the physical media(as construed herein);" the term "physical media" will be construed as "communication layer which controls the underlying hardware technologies;" and the term "physical media address for identifying a physical device routing the data packet in physical media" will not be separately construed.

CONCLUSION

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table attached to this opinion as Appendix A.

So ORDERED.

APPENDIX A

Claim Language	No.	Term	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
3. In a communication system comprised of a plurality of data networks interconnected for communicating packets of data, a routing method comprising:					
receiving a data packet at a node connecting at least a first one of the plurality of data networks to	1	Logical address	An address assigned within a computer network; examples	A fixed, unique, and unchanging identifier of a connection to the internet represented by a series of numbers that has no internal	a fixed, unique, and unchanging identifier assigned within a

a second one of the plurality of data networks, the data packet including a physical address for identifying a device to which the data packet is to be routed and a first **logical address** for identifying a sender of the data packet independent of the sender's physical address;			include IP addresses	structure to suggest network connection location	network of interconnected computers for source to destination packet delivery
			In the alternative:		
			A fixed and unique identifier of a connection to the internet represented by a series of numbers that is processed without regard for the physical location of the connection		
!C$L1!C$examining the data packet for the first **logical addresses; looking up, in a directory table stored at the node, source filtering information associated with the first logical address;** and	!C$L2!C$2	!C$L3!C$Source filtering information	!C$L4-5!C$[AGREED]	!C$L6!C$Information used to determine whether to filter a packet based on the packet's source address	
	3	Looking up, in a directory table stored at the node,	Looking up, in a directory table stored at the	Retrieving source filtering information (as construed herein)	No construction necessary

		source filtering information associated with the first logical address	node, source filtering information (as construed herein) associated with the first logical address (as construed herein)	contained in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, the first logical address (as construed herein)	
filtering the data packet in response to the source filtering information.					
8. In a communication system having a plurality of data networks interconnected for communicating packets of data, a controller for interconnecting a first data network of the plurality of data networks to at least a second data network of the plurality of data networks comprising:					
means for receiving a data packet, the data packet including a **physical media address for identifying a physical device for routing the data packet in physical media** and a **source address for logically**	4	Means for receiving a data packet	The means for receiving a data packet is a Media Access Controller (Figure 2 items 38, 34, 40, 42, 44, 46).	Fig. 2 Source Address Shift Buffer 48, Destination Address Shift Buffer 50, and Delay Buffer FIFO 52	Fig. 2: media access controller 34,

identifying a sender of the data packet independent of the sender's physical media address;					
				Fig. 3: Octet Register 104 and Octet Delay Buffer FIFO (unnumbered)	Fig. 3: media access controller (unnumbered)
				FIG 5: Key Symbol Buffer 104	and equivalents thereof
	!C$L2!C$5	!C$L3!C$physical media address for identifying a physical device for routing the data packet in physical media	!C$L4-5!C$[AGREED]	!C$L6!C$No construction necessary	
	!C$L2!C$6	!C$L3!C$Physical media address	!C$L4-5!C$[AGREED]	!C$L6!C$Address associated with the hardware of the physical media (as construed herein)	
	!C$L2!C$7	!C$L3!C$Physical media	!C$L4-5!C$[AGREED]	!C$L6!C$Communication layer which controls the underlying hardware technologies	
	8	Source address	Address of origin	A fixed, unique, and unchangi ng identifier that has no internal structure to suggest network connection location and that is assigned to the host sending the data packet	No construction necessary
	9	Source address for logically identifying the sender of the data packet	A source address (as construed herein) for logically identifying the sender of the data packet	A fixed, unique, and unchanging identifier that has no internal structure to suggest network connection location and that is assigned to the host sending the data packet	No construction necessary
means for	10	Means for	The means	Fig. 2: Source Address	Fig. 2: source

looking up in a directory table stored at the controller using the source address source filtering information associated with the source address; and	looking up in a directory table stored at the controller using the source address source filtering information associated with the source address	for looking up in a directory table are the source index and the source protect table (Figure 2-items 74 and 78).	Index Table 68; Source Protect Table 78; Combine Table Output 72; Source Index 74; Zero Detect 90; Learned Address Logic 88 (as further described in Fig. 6 and including variations of the add key logic circuitry presented in Fig. 7 and Figs. 9-14, and including the symbol use count logic circuit as described in Fig. 8) Fig. 3: Source and Destination Index Tables 98; Address Recor d Memory 100; Arithmetic Computation 102; and Index Buffer 108 Fig. 4: Arithmetic Code Compression 138; and Compressed Addre ss Directory 130	index table 68, combine table outputs 72, source index 74, and source protect table 78, Fig. 3: index table 98, arithmetic computation 102, index buffer 108, and the source bank of address record memory 100 of Fig. 3, and equivalents thereof
			Fig. 5: Key Index Table Memory 68'; Arithmetic Computation Logic 72'; Record Memory 78'; Record Index (Address) 74'; Learned Key Logic 88'; or, in the alternative, programmable devices implementing the logical functions of the dedicated circuitry of Fig. 5 as described above; or, in the alternative, the host system of Fig. 5 performing some or all of	

				the processing performed by the dedicated circuitry of Fig. 5 as described above	
means for filtering the data packet in response to the source filtering information.	11	Means for filtering the data packet in response to the source filtering information	The means for filtering the data packet is the buffered routing logic (Figure 2-item 56). The data is filtered in response to the source filtering information (as construed herein).	Fig. 2: Protect record 80 and Buffered Routing Logic 56	Fig. 2: buffered routing logic 56,
				Fig. 3: Source Protect Record 110 and Buffered Routing Logic (unnumbered)	Fig. 3: buffered routing logic (unnumbered)
				Fig. 4: Multicast Record List 134	and equivalents thereof
				Fig. 5: Output Lines 519; Record Buffer 80'; and Delay Element 515 or, in the alternative, programmable devices implementing the logical functions of the dedicated circuitry of Fig. 5 as described above; or, in the alternative, the host system of Fig. 5 performing some or all of the processing performed by the dedicated circuitry of Fig. 5 as described above	
12. The controller of claim 8 wherein the data packet	12	Means for looking up, using the destination	The means for looking up ... in a routing table	Fig. 2: Learned Address Logic 88 (as further described in Fig. 6 and including	Fig. 2: destination table index 66, combine

includes a **destination address for logically identifying a recipient of the data packet** independent of the recipient's physical media address, and wherein the controller further includes **means for looking up, using the destination address, in a routing table information associated with the destination address for routing the data packet for delivery to the receiver.**	address, in a routing table information associated with the destination address for routing the data packet for delivery to the receiver.	is the routing index 76 and destination routing table 84 as shown in Figure 2.	variations of the add key logic circuitry presented in Fig. 7 and Figs. 9-14, and including the symbol use count logic circuit as described in Fig. 8); Destination index table 66; Combine Table Output 70; Route index 76; Destination Routing Table 84; and Zero Detect (unnumbered)	table outputs 70, route index 76, and destination routing table 84,
			Fig. 3: Source and Destination Index Tables 98; Arithmetic Computation 102; Address Record Memory 100; and Index Buffer 108	Fig. 3: index table 98, arithmetic computation 102, index buffer 108, and the destination bank of address record memory 100 of Fig. 3, and equivalents thereof
			Fig. 4: Outbound Record Linked List 132; Arithmetic Code Compression 138; Compressed Address Directory 130	
			Fig. 5: Index Table Memory 68'; Arithmetic	

				Computation Logi c 72'; Record Index (address) 74'; Record Memory 78'; Learned Key Logic 88'; and Zero Detect 90; or, in the alternative, programmable devices implementing the logical functions of the dedicated circuitry of Fig. 5 as described above; or, in the alternative, the host system of Fig. 5 performing some or all of the processing performed by the dedicated circuitry of Fig. 5 as described above	
	13	Destination address for logically identifying a recipient of the data packet	The address where something is sent that logically identifies a recipient of the data packet	A fixed, unique, and unchanging identifier that has no internal structure to suggest network connection location and that is assigned to the host receiving the data packet.	No construction necessary
9. A packet switching node comprising:					
at least three IEEE 802 media access controller (MAC) communications ports, **each communications port having associated with it a MAC address;**	14	MAC address	Physical address used by the media access controller (MAC) level defined by standards such as Ethernet, token ring, or FDDI	Fixed, unique, and unchanging identifier assigned to a host	Physical address used by the media access controller (MAC) level defined by standards such as Ethernet, token ring, or FDDI
	15	Each communications port having associated with it a MAC address	Each communications port having associated with it a MAC address (as construed	Each communications port is referenced in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, a MAC	No construction necessary

			herein)	address (as construed herein)	
circuitry for,					
!C$L1!C$if a first **MAC address** contained in a **MAC source address** field of a packet received on one of the at least three communications ports has a **stored association with one of the three least communications ports** at which it was received, and if **source address filtering information** is associated with the first **MAC address** contained in the received packet, filtering the received packet according to the **source address filtering information;**	!C$L2!C$16	!C$L3! C$MAC source address	!C$L4-5!C$[AGREED]	!C$L6!C$MAC address (as construed herein) of origin.	
	!C$L2!C$17	!C$L3!C$Source address filtering information	!C$L4-5!C$[AGREED]	!C $L6!C$Information used to determine whether to filter a packet based on the packet's source address	
	18	Stored association with one of the three least communications ports	No construction needed.	Stored reference to the one of the at least three communications ports in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, a MAC address	No construction necessary
if the node has no	19	If the source	If the source	If source address filtering	No

stored association between the first **MAC address** and one of the at least three communications ports at which it is received, **associating the first MAC address with the one of the at least three communications ports** at which the packet was received and, **if the source address filtering information is associated with the first MAC address,** filtering the received packet according to the **source address filtering information;**		address filtering information is associated with the first MAC address	address filtering information (as construed herein) is associated with the first MAC address (as construed herein).	information (as construed herein) is in a record identified by a unique value created by arithmetically compressing, as distinct from hashing, the first MAC address (as construed herein)	construction necessary
!C$L1!C$if a second **MAC address** contained in a **MAC destination address** field of the received packet has a **stored association with one of the at least three communications ports,** causing the packet to be forwarded out the one of the at least three communications ports with which the second MAC is associated if allowed by the	!C$L2!C$20	!C$L3!C$MAC destination address	!C$L4-5!C $[AGREED]	!C$L6!C$MAC address (as construed herein) to which something is sent	

source address filtering information associated with the first **MAC address;** and

if the second **MAC address** contained in the received packet does not have a **stored association with any one of the at least three communications ports,** forwarding the received packet from each one of the at least three communications ports except the one of the at least three communications ports at which the packet was received if allowed by the **source address filtering information** associated with the **first MAC address.**

10. A packet switching node comprising:

a least three IEEE 802 media access controller (MAC) communications ports, **each communications port having associated with it a MAC address;**

circuitry for,

determining if a first **MAC address** contained in a MAC

source address field of a packet received on one of the at least three communications ports does not have a **stored association with one of the at least three communications ports** at which it was received, and associating the first MAC address with the one of the at least three communications ports at which the packet was received;					
if a second **MAC address** contained in a **MAC destination address** field of the received packet has **a stored association with one of the at least three communications ports,** causing the received packet to be forwarded on the one of the at least three communications ports with which the second **MAC address** is associated unless the one of the at least three communications ports, with which the second **MAC address** is associated, is **associated with a**	21	Associated with a stored protection record indicating protection of that communications port from packets containing the first MAC address as a MAC source address	Associated with a stored protection record (as construed herein) of that communications port from packets containing the first MAC address (as construed herein) as a MAC source address (as construed herein).	Referenced in a stored protection record (as construed herein), identified by arithmetically compressing, as distinct from hashing, the first MAC address (as construed herein), indicating that the communications port is not allowed to forward packets containing the first MAC address as a MAC source address	No construction necessary

stored protection record indicating protection of that communications port from packets containing the first MAC address as a MAC source address; and

!C$L2!C$22!C$L3!C$Stored protection record	!C$L4-5!C$[AGREED]	!C$L6!C$Record containing information used to determine whether to filter a packet based on the packet's source address	

if the second **MAC address** contained in the received packet does not have **a stored association with any one of the least three communications ports,** forwarding the received packet on each one of the at least three communications ports, except the one of the at least three communications ports at which the packet was received, that are allowed by the **stored protection record** to forward packets having been received with the first MAC as a **MAC source address.**

19. A method for switching packets at a node having at least three IEEE 802

media access controller (MAC) communications ports, **each communications port having associated with it a MAC address,** comprising:

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if a first **MAC address** contained in a MAC source address field of a packet received on one of the at least three communications ports has **a stored association with one of the three at least three least communications ports** at which it was received, and if **source address filtering information** is associated with the first **MAC address** contained in the received packet, filtering the received packet according to the **source address filtering information;**

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if the node has no stored association between the first **MAC address** and one of the at least three communications ports at which it is received, associating the first

MAC address with the one of the at least three communications ports at which the packet was received and, **if the source address filtering information is associated with the first MAC address,** filtering the received packet according to the **source address filtering information;**

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if a second **MAC address** contained in a **MAC destination address** field of the received packet has **a stored association with one of the at least three communications ports,** causing the packet to be forwarded out the one of the at least three communications ports with which the second MAC is associated if allowed by the **source address filtering information** associated with the first MAC **address;** and

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if the second **MAC address** contained in the received packet does not

have **a stored association with any one of the at least three communications ports,** forwarding the received packet from each one of the at least three communications ports except the one of the at least three communications ports at which the packet was received if allowed by the **source address filtering information** associated with the first **MAC address.**

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20. A method for switching packets at a node having at least three IEEE 802 media access controller (MAC) communications ports, **each communications port having associated with it a MAC address,** comprising:

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determining if a first **MAC address** contained in a **MAC source address** field of a packet received on one of the at least three communications ports does not have a **stored association with one of the three least**

communications ports at which it was received, and associating the first **MAC address** with one of the at least three communications ports at which the packet was received;

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if a second **MAC address** contained in a **MAC destination address** field of the received packet has a **stored association with one of the least three communications ports,** causing the received packet to be forwarded on the one of the at least three communications ports with which the second MAC address is associated unless the one of the at least three communications ports, with which the second MAC address is associated, is associated with a stored protection record indicating protection of that communications port from packets containing the first **MAC address** as a **MAC source address;** and

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if the second

MAC address contained in the received packet does not have a **stored association with any one of the least three communications ports,** forwarding the received packet on each one of the at least three communications ports, except the one of the at least three communications ports at which the packet was received, that are allowed by the **stored protection record** to forward packets having been received with the first MAC as a **MAC source address.**

E.D.Tex.,2009.
Fenner Investments, Ltd. v. 3Com Corp.

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