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

ACQIS LLC,	§	
	§	
Plaintiff,	§	**CAUSE NO. 6:13-CV-638**
	§	
vs.	§	**CONSOLIDATED LEAD CASE**
	§	CONSOLIDATED WITH
ALCATEL-LUCENT USA INC., et al.,	§	6:13CV639
	§	
Defendants.	§	

MEMORANDUM OPINION AND ORDER

This Memorandum Opinion construes the disputed claim terms in U.S. Patent Nos. 7,363,416 ("the '416 Patent"), 7,676,624 ("the '624 Patent"), 7,818,487 ("the '487 Patent"), 8,041,873 ("the '873 Patent"), RE41,294 ("the '294 Patent"), RE41,961 ("the '961 Patent"), RE42,814 ("the '814 Patent"), RE43,119 ("the '119 Patent"), RE43,171 ("the '171 Patent"), RE44,468 ("the '468 Patent"), and RE42,984 ("the '984 Patent") (collectively, "the patents-in-suit"). On February 12, 2015, the parties presented arguments on the disputed claim terms at a Markman hearing. For the reasons stated herein, the Court adopts the constructions set forth below.

Also before the Court is Defendants' Motion for Partial Summary Judgment of Invalidity on the Basis of Indefiniteness (Docket No. 151). After considering the briefing and oral argument, the Court **GRANTS-IN-PART** and **DENIES-IN-PART** Defendants' Motion.

BACKGROUND

Plaintiff ACQIS LLC ("ACQIS") alleges that Defendants Alcatel-Lucent USA Inc. and EMC Corporation infringe the eleven patents-in-suit owned by ACQIS. The patents-in-suit are

directed to using attached computer modules in a peripheral console. The console provides a platform (e.g., keyboard, mouse, display, and disk drive) adapted to receive a module having core computing hardware (e.g., CPU, memory, I/O, and hard drive). The module can be inserted into the console to form a complete PC.

The Court has already construed some of the terms at issue here in a previous case. See ACQIS LLC *v. Appro Int'l, Inc. et al.*, No. 6:09-cv-148, Docket No. 315 (E.D. Tex. Aug. 2, 2010) ("Appro"). The Appro case involved eight patents, including the '416 Patent and a number of patents related to the patents-in-suit.

APPLICABLE LAW

Claim Construction

"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) (en banc) (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 *Commc'ns 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.

"[C]laims 'must be read in view of the specification, of which they are a part.'" Id. (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[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)); see also 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.

The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." Teleflex, Inc., 299 F.3d at 1325. 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 Commc'ns, 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.").

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 are 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.

Summary Judgment

"Summary judgment is appropriate in a patent case, as in other cases, when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law." Nike, Inc. v. Wolverine World Wide, Inc., 43 F.3d 644, 646 (Fed. Cir. 1994); FED. R. CIV. P. 56(c). The moving party bears the initial burden of "informing the district court of the basis for its motion" and identifying the matter that "it believes demonstrate[s] the absence of a genuine issue of material fact." Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986). If the

moving party meets this burden, the nonmoving party must then set forth "specific facts showing that there is a genuine issue for trial." FED. R. CIV. P. 56(c); see also T.W. Elec. Serv., Inc. v. *Pac. Elec. Contractors Ass'n*, 809 F.2d 626, 630 (9th Cir. 1987).

A party seeking to invalidate a patent must overcome a presumption that the patent is valid. See 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2243 (2011); *U.S. Gypsum Co. v. Nat'l Gypsum Co.*, 74 F.3d 1209, 1212 (Fed. Cir. 1996). This presumption places the burden on the challenging party to prove the patent is invalid by clear and convincing evidence. Microsoft, 131 S. Ct. at 2243; U.S. Gypsum Co., 74 F.3d at 1212.

A claim is invalid for indefiniteness under 35 U.S.C. § 112 ¶ 2 if it fails to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. The party seeking to invalidate a claim as indefinite must show by clear and convincing evidence that the claim, viewed in light of the specification and prosecution history, does not "inform those skilled in the art about the scope of the invention with reasonable certainty." Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129, 2130 n.10 (2014).

AGREED CLAIM TERMS

In their Joint Claim Construction Chart (Docket No. 165-1, Ex. A) the parties agreed to the construction of the following terms:

Claim Term	Agreed Construction
"PCI bus" "Peripheral Component Interconnect bus" "(PCI) bus"	"industry standard computer bus known as the Peripheral Component Interconnect Local Bus"
"serial bit channel" "serial . . . channel" "channels . . . to transmit . . . as serial data"	"a path on which units of information are transferred serially from one component to another"
"serial bit stream"	"a flow of information in which units of information are transferred serially from one component to another"

DISPUTED CLAIM TERMS

A. "low voltage differential signal" or "LVDS"

ACQIS's Proposed Construction	Defendants' Proposed Construction
No construction necessary. Alternatively, "a signal represented by the difference in voltage between two lines, where the difference in voltage is low"	"a signal represented by the difference in voltage between two lines, where the difference in voltage is low, and not limited to any particular type of LVDS technology"

Asserted claims of the '624, '487, '873, '961, '814, '119, '171, '468, and '984 Patents contain the term "low voltage differential signal" or "LVDS."

The parties agree that "LVDS" refers to "low voltage differential signal" or "low voltage differential signaling." Docket No. 165-1, Ex. A at 1. However, the parties dispute whether the construction must include the phrase "not limited to any particular type of LVDS technology."

Id. Defendants argue that the patents expressly define LVDS as not being "limited to any particular type of LVDS technology." Docket No. 145 at 27 (quoting '873 Patent col.4 ll.1–3). ACQIS objects to Defendants' proposal, arguing that it is circular and would confuse a jury. Docket No. 129 at 9.

Defendants have not demonstrated that their proposed language is necessary. The agreed-upon portion of the parties' proposed constructions does not refer to any particular LVDS technology. Therefore, Defendants' proposed limitation would not bring anything new to the construction. Further, Defendants have failed to establish that the specification contains any lexicography commensurate with the limitation that Defendants have proposed. The Court construes "low voltage differential signal" or "LVDS" as **"a signal represented by the difference in voltage between two lines, where the difference in voltage is low."**

B. "differential signal . . . channel"

ACQIS's Proposed Construction	Defendants' Proposed Construction
No construction necessary. Alternatively, "a channel for carrying a signal, the signal being represented by the difference in voltage between two lines"	"interface channel that uses differential signaling and operates under a protocol different from that used by the PCI bus"

Asserted claims of all eleven patents-in-suit contain the term "differential signal . . . channel."

ACQIS submits that "differential signaling is a well-known method of transmitting information where the signal is represented by the voltage differential between two lines." Id. at 10. ACQIS argues that Defendants' proposal conflicts with certain claim terms and improperly relies on a circular definition. Id. at 10–11. Defendants respond that their proposal is "tied directly to an express statement of the present invention from the patents' specifications."

Docket No. 145 at 38 (emphasis omitted). According to Defendants, the specification and ACQIS's statements confirm that a key inventive aspect of the differential signal channel is its "non-PCI" nature. Id. (citing patent specifications and reexamination proceedings).

At the hearing, the parties agreed that the differential signal channel operates under a protocol that is different from a PCI bus protocol. Tr. Feb. 12, 2015, Docket No. 175 ("Hearing Transcript") at 75:16–77:8. Because the parties do not dispute the claim scope, there is no reason to include Defendants' "non-PCI" proposal in the construction. Additionally, ACQIS's proposal avoids confusion that could result from Defendants' circular construction. Accordingly, the Court construes "differential signal . . . channel" as **"a channel for carrying a signal, the signal being represented by the difference in voltage between two lines."**

C. "PCI bus . . . transaction" or "Peripheral Component Interconnect (PCI) bus transaction" or "(PCI) bus transaction"

ACQIS's Proposed Construction	Defendants' Proposed Construction
"digital command, address, and data information, in accordance with the PCI standard, for communication with an interconnected peripheral component"	"signals communicated over a PCI bus"

Asserted claims of all eleven patents-in-suit contain the term "PCI bus . . . transaction." In Appro, the Court construed "PCI bus transaction" as "a data signal communication with an interconnected peripheral component." Appro, Docket No. 602 at 11.

The parties agree that the construction in Appro should be reconsidered because it did not account for the PCI standard. Docket No. 129 at 12; Docket No. 145 at 21–22. ACQIS submits that its proposed construction is consistent with the use of "PCI" in the claims, the specification, and technical dictionaries. Docket No. 129 at 13. ACQIS urges that whereas Defendants propose referring to "signals," "a person of ordinary skill would understand that the information

transmitted in a 'PCI bus transaction' includes the command, address, and data information required of a PCI-standard based transaction." Id. at 14. Finally, ACQIS argues that Defendants' proposal of requiring transactions crossing a physical bus would "render some of the claims and embodiments described in the specification inoperable." Id. at 15. Defendants respond that ACQIS's proposal suffers from three flaws: "(1) it does not even require a PCI bus, or any bus at all; (2) it has nothing to do with a transaction, but would cover mere 'information . . . for communication,' regardless of whether any transaction even takes place; and (3) it rewrites the claims to cover 'digital commands, address, and data information'—instead of 'signals,' as provided for by the claims and specifications as well as this Court's prior ruling." Docket No. 145 at 20.

Defendants have failed to show that a PCI bus "transaction" necessarily implies the presence of a PCI "bus." Claim 24 of the '171 Patent, for example, recites in relevant part (emphasis added):

> 24. A method comprising:
> providing a computer module, the module comprising
> a central processing unit,
> a connection program,
> an integrated interface controller and bridge unit to output an encoded serial bit stream of address and data bits of [a] Peripheral Component Interconnect (PCI) bus transaction, the integrated interface controller and bridge unit coupled to the central processing unit without any intervening PCI bus, and
> a low voltage differential signal channel coupled to the integrated interface controller and bridge unit to convey the encoded serial bit stream of PCI bus transaction; . . . .

The specification of the '873 Patent likewise discloses:

> In the present invention, PCI control signals are encoded into control bits and the control bits, rather than the control signals that they represent, are transmitted on the interface channel. At the receiving end, the control bits representing control signals are decoded back into PCI control signals prior to being transmitted to the intended PCI bus.

'873 Patent col.5 ll.33–39. Thus, information in accordance with the PCI standard can be encoded and conveyed serially without the existence of an originating PCI bus.

As for the proper construction, the parties agree that "PCI" refers to an industry standard. ACQIS cites a PCI Local Bus Specification to support its proposed construction involving digital command, address, and data information. See Docket No. 129 at 15. Although a PCI bus transaction must include all information required by the PCI standard, ACQIS's extrinsic evidence does not clearly define a "transaction" as digital command, address, and data information. Accordingly, the Court construes "PCI bus . . . transaction" as **"information, in accordance with the PCI standard, for communication with an interconnected peripheral component."**

D. "encoded PCI bus transaction" or "encoded . . . Peripheral Component Interconnect (PCI) bus transaction" or "encoded . . . (PCI) bus transaction"

ACQIS's Proposed Construction	Defendants' Proposed Construction
No construction necessary. Alternatively, "assigning code to represent data for a bus transaction"	"PCI bus transaction translated into bits for parallel to serial conversion"

Asserted claims of all eleven patents-in-suit contain the term "encoded PCI bus transaction."

ACQIS argues that the Court should adopt the plain and ordinary meaning of the word "encoded" in its construction. Id. at 17. ACQIS argues that Defendants' proposal should be rejected because "[t]he claim language, while expressly discussing the encoded nature of the PCI bus transaction, does not claim parallel to serial conversion." Id. at 19. Defendants respond that discussion of "the present invention" in the specification and ACQIS's statements in reexaminations confirm that "encoding" requires using bits for parallel to serial conversion.

Docket No. 145 at 28–31. Defendants also emphasize that ACQIS's proposal reads "PCI" out of the claim. Id. at 33.

As discussed above for the term "PCI bus transaction," the claim language suggests that an encoded PCI bus transaction does not require any parallel-to-serial conversion at all. See '468 Patent Claim 37 ("A computer comprising: a central processing unit directly connected to a first [LVDS] channel to convey a first encoded serial bit stream of address and data bits of a [PCI] bus transaction."). Such a reading is supported by the specification, which discloses "encoding" in a context that is not tethered to parallel-to-serial conversion. See '873 Patent col.5 ll.34–48. Further, nowhere in the reexamination proceedings cited by Defendants did ACQIS state that parallel-to-serial conversion is always necessary.

Although ACQIS proposes that no construction is necessary, construction will assist a finder of fact in understanding the significance of the term "encoded" in the context of the communications set forth in the claims. Accordingly, the Court construes "encoded PCI bus transaction" as **"code representing a PCI bus transaction."**[1]

[1] The Court's construction amends ACQIS's proposed construction by changing the tense to match the surrounding claim language.

E. "Ethernet hub controller"

ACQIS's Proposed Construction	Defendants' Proposed Construction
"Ethernet device joining communication lines at a central location, providing a common connection to all devices on the network"	"a console component providing a central connection between Ethernet communication devices in which a transmission from any one device is received by all other devices"[2]

Asserted claims of the '416 and '873 Patents contain the term "Ethernet hub controller." In Appro, the Court construed the term "hub" as "a device joining communication lines at a central location, providing a common connection to all devices on the network." Appro, Docket No. 602 at 7.

ACQIS asks the Court to adopt its construction of "hub" from Appro with minor variations. Docket No. 129 at 20. ACQIS argues that Defendants' proposed construction is inconsistent with prosecution history of a related patent that identifies a "switching hub" as an example of an Ethernet hub controller. Id. Defendants respond that "'Ethernet hub controller' is different from 'hub,' . . . and the record establishes that an 'Ethernet hub controller' provides a central connection between Ethernet devices in which a transmission from any one device is received by all other devices." Docket No. 145 at 34. Further, Defendants argue that the claims, specifications, and extrinsic evidence all recognize that "hub controllers" and "switches" are different. Id. at 35. In support, Defendants submit evidence that under the Ethernet standard, whereas a "switch" passes transmissions to only the destination device or devices, a "hub" rebroadcasts every transmission to all devices. See Docket No. 146, Ex. 33 at 108 & Ex. 34 at 38–39.

[2] Defendants' briefing omits the word "communication" from their proposed construction. Compare Docket No. 145 at 34, with Docket No. 165-1, Ex. A at 3. This discrepancy is immaterial to the Court's analysis.

In Appro, defendant IBM proposed construing the term "hub" to mean "a computer networking device for collecting output data signals from two or more devices and rebroadcasting them to every other devices [sic] on the network." Appro, Docket No. 602 at 5. IBM argued that the plain meaning of "hub" does not include a switch. Id. at 6. The Court expressly rejected IBM's argument and IBM's proposed construction. See id. at 6–7. The Appro opinion also cited prosecution history of a related patent (U.S. Patent No. 7,328,297) that referred to "various types of Ethernet hub controllers (e.g. switching hub, passive hub or intelligent hub)." Id. at 7 (emphasis added).

Defendants have not justified setting aside the findings in Appro. The Court construes "Ethernet hub controller" as **"Ethernet device joining communication lines at a central location, providing a common connection to all devices on the network."**

F. "computer module" or "module"

ACQIS's Proposed Construction	Defendants' Proposed Construction
"an assembly for providing a computing function within a computer system as recited in a particular claim"	"a removable, user-portable computing package"

Asserted claims of the eleven patents-in-suit contain the term "computer module." In Appro, the Court construed "computer module" as "an assembly for providing a computing function within a computer system as recited in a particular claim." Appro, Docket No. 315 at 8.

ACQIS submits that here, like in Appro, the Court should reject any size limitation such as "user-portable." Docket No. 129 at 22. Defendants respond that their proposal of "user-portable" is different from the physical size restriction rejected in Appro. Docket No. 145 at 3–4. Defendants also emphasize that "[t]hrough hundreds of columns of specifications across all the

patents, through the original prosecution and then the reissue prosecution, there is no embodiment in which the module is not removable and portable." Id. at 7.

Whereas Appro addressed whether a size limitation should be imported into the claims, the parties here dispute whether a module must be "removable" and "user-portable." See Appro, Docket No. 315 at 6–7. The specification of the '487 Patent, as an example, discloses various "drawback[s] to having two separate computers," such as the cost of duplicate hardware and software and the inconvenience of transferring data between the two computers. See '487 Patent col.2 ll.14–39; id. at col.2 ll.15–39. Also, the "attached computer module" is disclosed in the specification as "facilitat[ing] the movement of the user's core computing power and environment to different work settings, which is a further advantage of the present invention." Id. at col.26 ll.63–67; id. at col.27 ll.38–41 ("Such connectors have specifically been designed to stand up to the rigors of repeated insertion and withdrawal.").

Defendants' proposed limitations are not easily defined and may introduce a fact question for the jury. In particular, the "user-portable" limitation introduces unnecessary ambiguity and will not be included. See Hearing Transcript at 54:20–23. Nevertheless, the patents' consistent emphasis that a module is "removable" warrants including that limitation in the claim construction. See VirnetX, Inc. v. Cisco Sys., Inc., 767 F.3d 1308, 1318 (Fed. Cir. 2014) (noting that the patentee "has not identified even a single embodiment that provides data security but not anonymity" and that "[t]he fact that anonymity is repeatedly and consistently used to characterize the invention strongly suggests that it should be read as part of the claim") (citation and internal quotation marks omitted). Whether a module is "removable" depends on the level of ordinary skill among a particular class of users. Anything can be considered removable depending on the user. For example, whereas a driver may consider a car key to be removable

from the ignition, a mechanic might consider the ignition itself to be removable. The question of removability is appropriate for a jury and need not be addressed as a matter of claim scope. See Markman v. Westview Instruments, Inc., 517 U.S. 370, 387 (1996) (recognizing a distinction between claim construction by a court and application of a construction by a jury); PPG Indus. v. Guardian Indus. Corp., 156 F.3d 1351, 1355 (Fed. Cir. 1998) ("[A]fter the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact.").

The Court construes "computer module" or "module" as **"a removable computing package for providing a computing function within a computer system as recited in a particular claim."**

G. "console"

ACQIS's Proposed Construction	Defendants' Proposed Construction
"a chassis that connects several components of the computer system"	"a device that supplies a module with a primary input, display, and power supply to form an operating computer system"

Asserted claims of the '416, '624, '487, '873, '961, '814, '119, '171, '468, and '984 Patents contain the term "console." In Appro, the Court construed "console" as "a chassis that connects several components of the computer system." Appro, Docket No. 315 at 9.

ACQIS argues that Defendants' proposal "reads limitations from preferred embodiments into the claims and renders language of other claims superfluous." Docket No. 129 at 26. Defendants respond that intrinsic and extrinsic evidence confirm that the console supplies components that are needed in combination with the module to form an operating computer system. Docket No. 145 at 8–9. Defendants also submit that a console need not "include an

input, display, or power supply." Id. at 8 n.9. Rather, Defendants contend, "the console must supply these elements (which may be external to the console) to the module." Id. (emphasis added).

In Appro, the defendants argued that a "console" must be "capable of operation as a computer only upon connection to a computer module." Appro, Docket No. 315 at 9. The Appro opinion concluded that "[b]ecause there is nothing in the claims that limits the functionality of a console, Defendants' proposal which imports a negative limitation into the claims is improper." Id.

Although the instant dispute was not before the Court in Appro, that construction remains correct. Defendants' proposed construction would render certain claim terms superfluous, and is therefore disfavored. See '873 Patent Claim 11 (requiring, among other things, "a power supply"); id. at col.4 ll.13–20 (discussing "multi-processing"). Additionally, the statements which Defendants suggest are limiting, Docket No. 145 at 10–13, are neither universal nor tethered to the claims at issue. Defendants provide no reason to deviate from the construction given in Appro. Accordingly, the Court construes "console" as **"a chassis that connects several components of the computer system."**

H. "enclosure"

ACQIS's Proposed Construction	Defendants' Proposed Construction
No construction necessary.	"a surrounding case that protects internal components from mechanical and environmental exposure"

Asserted claims of the '416, '624, '487, '873, '961, '814, and '119 Patents contain the term "enclosure."

ACQIS argues that "enclosure" is a "plain and ordinary term that a lay jury will easily be familiar with from everyday knowledge." Docket No. 129 at 27. Defendants respond that the specifications "uniformly disclose that the enclosure provides protection for the internal components from mechanical and environmental exposure." Docket No. 145 at 14.

Nothing in the claim language nor the specification demands that all enclosures have the characteristics identified by Defendants. Having rejected Defendants' argument, the Court finds that no further construction is necessary. See U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."). The Court construes "enclosure" to have its **plain meaning.**

I. "slot"

ACQIS's Proposed Construction	Defendants' Proposed Construction
"a space for receiving a computer module"	"a space that receives a module and guides the module into place"

Asserted claims of the '416, '624, '487, and '873 Patents contain the term "slot." In Appro, the Court construed this term as "a space for receiving a computer module." Appro, Docket No. 315 at 11.

ACQIS argues that "Defendants' construction improperly defines claim language based on one embodiment of the invention and should be rejected." Docket No. 129 at 29. Defendants emphasize that their proposed construction is consistent with the proposal and arguments presented by ACQIS in Appro. Docket No. 145 at 16. Defendants also submit that Appro addressed a different dispute, specifically, whether a "slot" is limited to receiving only a single computer module. Id.

In Appro, ACQIS stated that "to give full effect to the invention, a 'slot' both receives a module and guides the module into place." Appro, Docket No. 261 at 22; see Docket No. 146, Ex. 4 at 22; see id., Ex. 16, Tr. July 8, 2010 at 61:10–13 ("A slot is a space for receiving a module and providing guidance to a connector. That definition is supported by all of the embodiments that are described in the specification."); see also id. at 61:21–24 (similar). However, the Court in Appro neither adopted nor relied upon ACQIS's statements in that case. Thus, ACQIS's previous position does not bind ACQIS here. Instead, the function of guiding the module into place is a preferred feature of a "slot" in some embodiments and should not be imported as a limitation into the claims. Accordingly, the Court construes "slot" as **"a space for receiving a computer module."**

J. "hard disk drive"

ACQIS's Proposed Construction	Defendants' Proposed Construction
No construction necessary.	"a device that stores data on one or more spinning, rigid magnetic disks"

ACQIS submits that "hard disk drive" "is a plain and ordinary term that a lay jury will easily be familiar with from everyday use of a computer system." Docket No. 129 at 29. ACQIS argues that Defendants' proposal "only serves to add additional terms, such as rigid and spinning, that could be interpreted differently by different members of the jury." Id. at 30. Defendants respond that their proposal is confirmed by the prosecution history and by ACQIS's own extrinsic evidence. Docket No. 145 at 18. ACQIS replies: "The jury will be more certain of these plain words, than the Defendants' proposed construction, which is not how an ordinary person would refer to a simple 'hard disk drive.'" Docket No. 155 at 20.

The parties do not appear to dispute the meaning of the term "hard disk drive." Instead, ACQIS's primary contention is that Defendants' proposal will increase juror confusion by

introducing a number of new terms for the jury to interpret. The Court agrees. "Hard disk drive" is a term known to a person skilled in the art, and Defendants' construction does not add clarity to its plain and ordinary meaning. The Court construes "hard disk drive" to have its **plain meaning.**

INDEFINITENESS OF CLAIM TERMS

Defendants contend that five terms in the patents-in-suit render claims invalid for indefiniteness.

A. "similar in design"

Claims 6 and 26 of the '624 Patent and Claim 36 of the '873 Patent contain the term "similar in design." In Appro, the Court found that this term did not render the claims indefinite. Appro, Docket No. 315 at 13–16.

Defendants argue: "(a) the claims and specifications do not provide guidance as to specifically which aspects of the 'design' of a module should be evaluated; and (b) 'similar' in the context of the claims introduces a question of degree and subjectivity with no clear metric or guidepost to enable a person of skill in the art to judge what degree of difference falls inside the claims and what falls outside." Docket No. 151 at 3. Defendants submit that although Appro rejected an indefiniteness challenge as to this term, "the then-prevailing 'insolubly ambiguous' standard" relied upon by the Court "has since been abrogated." Id. at 3 n.4 (citing Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2124 (2014)).

ACQIS responds that: (1) its argument is that "the scope of 'similar in design' is limited by the common architecture of each module, not that design refers to a common architecture"; (2) Appro found "[t]he meaning of 'design' would be understood by one of skill in the art to refer to the 'electronic circuit configuration' operative to implement the processing operations of the

computer system"; and (3) "[f]or computer modules to maintain compatibility with a shared console and provide the functions discussed in the specification, they must share a similar design, i.e., an electronic circuit configuration operative to implement the processing operations of the computer system." Docket No. 157 at 3–4. ACQIS urges that "'[s]imilar in design' is a simple term that Defendants go to great lengths to make complicated." Id. at 5 (citing Abstrax, Inc. v. Hewlett-Packard Co., No. 2:14-cv-158, 2015 WL 156555, at *15 (E.D. Tex. Jan. 12, 2015)). ACQIS also submits a declaration by its expert, Thomas A. Gafford. See Docket No. 157-1 ("Gafford Decl.") at ¶ 10. ACQIS concludes that "when considered in light of the specification the meaning of 'similar in design' is objectively bounded by the common architecture of each module, the processing requirements set forth in the specification, the compatibility with the console, and the components required by each claim." Docket No. 157 at 5.

Claim 26 of the '624 Patent, for example, recites (emphasis added):

> 26. A computer system comprising:
>
> a console comprising a first coupling site and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing the coupling sites;
>
> a plurality of computer modules, each computer module coupled to one of the coupling sites through the connector and the slot, comprising
>
> a processing unit,
>
> a main memory coupled to the processing unit,
>
> a low voltage differential signal (LVDS) channel comprising two sets of unidirectional multiple serial bit channels which transmit data in opposite directions,
>
> an Ethernet controller coupled to the connector of the coupling site for communication to an external network through the console, and
>
> a first interface controller coupled [to] the LVDS channel for communicating an encoded serial bit stream of Peripheral Component Interconnect (PCI) bus transaction;
>
> wherein each of the computer modules is similar in design to each other and operates fully independent of each other.

In Appro, the Court applied the "insolubly ambiguous" standard to find that the term "similar in design" did not render the claims indefinite. Appro, Docket No. 315 at 13–16. The Supreme Court of the United States abrogated the "insolubly ambiguous" standard in Nautilus, stating that "a patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." Nautilus, 134 S. Ct. at 2129.

At the hearing, ACQIS suggested that "similar in design" is objectively anchored by similarity in module components or circuit design. Hearing Transcript at 84:7–15. However, ACQIS was unable to articulate any point at which components or circuitry would cease to be "similar." Instead, ACQIS's arguments suggest that the only base reference for similarity is actually "identity." See, e.g., id. at 84:14–15 ("The circuit design in those figures is the same. It is similar."); id. at 85:5–8 ("And then, finally, if you go to Figure 18 again, it is different components and different design. The things are connected fundamentally differently. They work differently there.").

The term "similar in design," as it appears in the claims identified by Defendants (Claims 6 and 26 of the '624 Patent and Claim 36 of the '873 Patent), fails to meet the "reasonable certainty" standard and renders those claims indefinite. See, e.g., Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1371–74 (Fed. Cir. 2014) (finding "unobtrusive manner" indefinite under Nautilus because the term had "too uncertain a relationship to the patents' embodiments" and because the embodiment cited by the plaintiff did not "provide a reasonably clear and exclusive definition, leaving the facially subjective claim language without an objective boundary"). In other words, the claims fail to "provide objective boundaries for those of skill in the art." Nautilus, 134 S. Ct. at 1371. The Court therefore **GRANTS** Defendants' Motion for

Partial Summary Judgment of Invalidity for Indefiniteness (Docket No. 151) with respect to "similar in design" and finds that Claims 6 and 26 of the '624 Patent and Claim 36 of the '873 Patent are **INVALID** for failing to satisfy 35 U.S.C. § 112 ¶ 2.

B. "fully independent"

Asserted claims of the '624, '487, and '416 Patents contain the term "fully independent." Defendants argue that "there is no disclosure anywhere in the Asserted Patents of modules being 'fully independent,' let alone any way to determine what the term 'fully independent'—as opposed to just 'independent'—could possibly mean." Docket No. 151 at 7. Thus, Defendants submit, "[t]he word 'fully' either adds nothing, which cannot be the case as a matter of law, or it is impossible to know what meaning the word adds." Id. at 8 (citing Funai Elec. Co. v. Daewoo Elecs. Corp., 616 F.3d 1357, 1372 (Fed. Cir. 2010)).

ACQIS responds that "'fully' is an absolute adjective whose meaning is easily understood by anyone, including a person of ordinary skill." Docket No. 157 at 6; see also id. at 7–8 (citing dictionaries defining "fully" as "to the full; completely; entirely; thoroughly," or "totally or completely"). ACQIS argues that the specification distinguishes between modules that are fully independent and modules that are not, and "[o]ne example of this interdependence is automatic file backup." Id. at 7. ACQIS concludes that "'fully independent' means there is absolutely no interdependent relationship between computers operating 'fully independent of each other.'" Id. (citing Gafford Decl. at ¶¶ 11–14).

Claim 26 of the '624 Patent, for example, is reproduced above in the discussion of the term "similar in design." It recites in relevant part (emphasis added): "wherein each of the computer modules is similar in design to each other and operates fully independent of each other."

The specification discloses:

> In an exemplary embodiment, the present invention provides a system including a plurality of computer modules that can independently operate to provide backup capability, dual processing, and the like.

'624 Patent col.8 ll.42–45 (emphasis added).

The meaning of "independent," particularly in light of this context in the specification, is not "purely subjective," Datamize, 417 F.3d at 1351, but rather is "reasonabl[y] certain[]," Nautilus, 134 S. Ct. at 2129. Defendants' indefiniteness argument is therefore rejected as to this disputed term. No further construction is necessary. See U.S. Surgical, 103 F.3d at 1568.

Accordingly, the Court **DENIES** Defendants' Motion for Partial Summary Judgment with respect to "fully independent." The Court construes "fully independent" to have its **plain meaning.**

C. "connection program"

ACQIS's Proposed Construction	Defendants' Proposed Construction
Not subject to 35 U.S.C. § 112 ¶ 6. No construction necessary. Alternatively, "a program that connects one piece of hardware or software to another"	Term is indefinite. Subject to 35 U.S.C. § 112 ¶ 6. Function: "to adapt to the connection information" Structure: not disclosed

Claim 24 of the '171 Patent contains the term "connection program." ACQIS submits that "[t]he 'connection program' is not limited to a specific type; rather, it describes a class of programs that will be able to receive information regarding what type of connection is appropriate and connect one piece of hardware or software to another according to that information." Docket No. 129 at 23. Defendants argue that ACQIS's proposal "adds nothing" and "illustrates the point that the specification does not allow one of ordinary skill in the art to understand the claim's scope with 'reasonable certainty.'" Docket No. 151 at 11 (citing

Nautilus, 134 S. Ct. at 2124). Defendants argue that "the term refers to a purely functional element in the claim" such that the presumption against means-plus-function treatment is overcome, "and since there is no corresponding structural support in the specification, the term is indefinite." Id.

ACQIS responds that in a recent Inter Partes Review proceeding, Defendant EMC submitted a declaration by its expert opining on how a person of ordinary skill in the art would understand the term "connection program." Docket No. 157 at 9–10. ACQIS also urges that "Defendant's assertion that the claimed 'connection program' performs the function of 'adapt[ing] to the connection information' is insufficient to overcome the strong presumption against applying § 112 ¶ 6 to a term that does not recite 'means for.'" Id. at 10.

Essentially, the parties dispute whether reciting a "connection program" is tantamount to reciting a connection "means," such that means-plus-function treatment under 35 U.S.C. § 112 ¶ 6 is appropriate.

The disputed term appears in only Claim 24 of the '171 Patent, which recites (emphasis added):

> 24. A method comprising:
>
> providing a computer module, the module comprising
>
> a central processing unit,
>
> a connection program,
>
> an integrated interface controller and bridge unit to output an encoded serial bit stream of address and data bits of Peripheral Component Interconnect (PCI) bus transaction, the integrated interface controller and bridge unit coupled to the central processing unit without any intervening PCI bus, and
>
> a low voltage differential signal channel coupled to the integrated interface controller and bridge unit to convey the encoded serial bit stream of PCI bus transaction;
>
> inserting the computer module into a computer console, the computer console having access to a network;

> receiving connection information from the computer console;
>
> configuring the connection program to adapt to the connection information; and
>
> establishing a connection between the computer module and a server coupled to the network,
>
> wherein the low voltage differential signal channel further comprises two sets of unidirectional serial bit channels which transmit data in opposite directions.

The term "connection program" does not appear outside of the claims.

"[A] claim term that does not use 'means' will trigger [a] rebuttable presumption that [35 U.S.C.] § 112 ¶ 6 does not apply." Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1358 (Fed. Cir. 2004).

> The presumption that a limitation lacking the term "means" is not subject to section 112 ¶ 6 can be overcome if it is demonstrated that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function. Our cases make clear, however, that the presumption flowing from the absence of the term "means" is a strong one that is not readily overcome.

Id. (citations and internal quotation marks omitted); see id. at 1359–60 ("[I]t is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function."); see also id. at 1360 (noting that claim language need not necessarily "bring to mind a particular structure").

Defendants have failed to overcome the presumption against applying means-plus-function treatment to a term that does not recite a "means." See, e.g., Williamson v. Citrix Online, LLC, 770 F.3d 1371, 1378 (Fed. Cir. 2014) ("To rebut this strong presumption, it must be demonstrated that skilled artisans, after reading the patent, would conclude that the claim limitation is so devoid of structure that the drafter constructively engaged in means-plus-function

claiming.") (citation and internal quotation marks omitted). The Court therefore rejects Defendants' indefiniteness argument. No further construction is necessary. The Court **DENIES** Defendants' Motion for Partial Summary Judgment (Docket No. 151) with respect to this term and construes "connection program" to have its **plain meaning.**

D. "the coupling site" or "the connector" or "the connector and the slot"

Asserted claims of the '416, '624, and '487 Patents contain the terms "the coupling site," "the connector," or "the connector and the slot."

Defendants have cited, as an example, Claim 6 of the '624 Patent, which recites (emphasis added):

> 6. A computer system comprising:
>
> a console comprising a power supply, a first coupling site and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing the coupling sites and the power supply,
>
> a plurality of computer modules; each computer module coupled to one of the coupling site through the connector and the slot, comprising
>
> a processing unit,
>
> a serial communication controller coupled to the connector of the coupling site for communication to an external network,
>
> a main memory coupled to the processing unit, and
>
> a first interface controller coupled to a low voltage differential signal (LVDS) channel comprises two sets of unidirectional serial bit channels in opposite directions communicating an encoded serial bit stream of Peripheral Component Interconnect (PCI) bus transaction;
>
> wherein each of the computer modules is similar in design to each other, and each set of unidirectional serial bit channels comprise a plurality of pairs of differential signal lines.

The plain language of the claim is sufficiently clear that in the phrase "each computer module coupled to one of the coupling site through the connector and the slot," the phrase "one of the coupling site[s]" refers to one of "a first coupling site and a second coupling site." To whatever extent Defendants maintain that "the coupling site" is unclear, the doctrine of judicial

correction can be applied so that this phrase refers to "the coupling sites," plural. See Novo Indus. v. Micro Molds Corp., 350 F.3d 1348, 1354 (Fed. Cir. 2003) (judicial correction of an error in a patent may be available "if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims").

Once "one of the coupling site[s]" is understood, the recital of "the connector and the slot" naturally refers to the "connector" and "slot" associated with the "coupling site" to which the module is coupled. The Court therefore **DENIES** Defendants' Motion for Partial Summary Judgment (Docket No. 151) with respect to these terms.

E. "encoded . . . [PCI] bus transaction"

Asserted claims of the eleven patents-in-suit contain the term "encoded . . . [PCI] bus transaction." A related term, "[PCI] bus transaction in an encoded . . . form," appears in claims of the '119, '416, '873, and '294 Patents.

Defendants argue that "encoded" is indefinite because "[t]he claims provide no guideposts to differentiate between encoded PCI bus transaction data versus unencoded PCI bus transaction data. At best, it simply provides what encoded cannot be—'serializ[ation],' which is a separate limitation." Docket No. 151 at 14. Defendants also argue that ACQIS's proposed construction is based on an extrinsic dictionary definition that "is likewise generic" and is "completely devoid of context to the Asserted Patents." Id. ACQIS responds that "[t]he specification provides sufficient guidance to a person of ordinary skill as to the meaning of 'encoded.'" Docket No. 157 at 13 (citing Gafford Decl. at ¶¶ 19–22).

Defendants have also cited testimony by the named inventor that "by itself, encoded PCI doesn't have a significant meaning. I mean, it's -- it can be many different forms of encoding."

Docket No. 146, Ex. 27, Chu Dep. at 175:3–6. ACQIS responds that "[t]he fact that different encoding types may be used does not mean that there is an unclear difference between encoded data and unencoded data." Docket No. 157 at 14. Regardless, inventor testimony is of limited, if any, relevance during claim construction proceedings. See Howmedica Osteonics Corp. v. Wright Med. Tech., Inc., 540 F.3d 1337, 1346–47 (Fed. Cir. 2008) (noting that inventor testimony carries limited weight because "an inventor understands the invention but may not understand the claims, which are typically drafted by the attorney prosecuting the patent application").

Defendants have failed to demonstrate that the meaning of "encoded" in the context of the claims at issue is not "reasonabl[y] certain[]." Nautilus, 134 S. Ct. at 2129. For example, the specification discloses: "In the present invention, PCI control signals are encoded into control bits and the control bits rather than the control signals they represent are transmitted on the interface channel." '624 Patent col.5 ll.30–35 (emphasis added); see also id. at col.16 ll.52–55 ("Encoders 1022 and 1023 format the PCI address/data bits to a form more suitable for parallel to serial conversion.").

The Court therefore **DENIES** Defendants' Motion for Partial Summary Judgment (Docket No. 151) with respect to this term and construes "encoded . . . [PCI] bus transaction" as **"code representing a PCI bus transaction"** for the reasons explained above.

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 in Appendix A and the parties' agreed constructions are set forth in a table in Appendix B.

Further, the Court **GRANTS-IN-PART** and **DENIES-IN-PART** Defendants' Motion for Partial Summary Judgment of Invalidity on the Basis of Indefiniteness (Docket No. 151). For the reasons set forth above, the Court **GRANTS** the Motion with respect to "similar in design" and **DENIES** the Motion with respect to all other terms.

So ORDERED and SIGNED this 13th day of April, 2015.

LEONARD DAVIS
UNITED STATES DISTRICT JUDGE

APPENDIX A

Claim Term	Court's Construction
low voltage differential signal LVDS	a signal represented by the difference in voltage between two lines, where the difference in voltage is low
differential signal . . . channel	a channel for carrying a signal, the signal being represented by the difference in voltage between two lines
PCI bus . . . transaction Peripheral Component Interconnect (PCI) bus transaction (PCI) bus transaction	information, in accordance with the PCI standard, for communication with an interconnected peripheral component
encoded PCI bus transaction encoded . . . Peripheral Component Interconnect (PCI) bus transaction encoded . . . PCI bus transaction	code representing a PCI bus transaction Not indefinite
Ethernet hub controller	Ethernet device joining communication lines at a central location, providing a common connection to all devices on the network
computer module module	a removable computing package for providing a computing function within a computer system as recited in a particular claim
console	a chassis that connects several components of the computer system
enclosure	Plain meaning / No construction necessary
slot	a space for receiving a computer module
hard disk drive	Plain meaning / No construction necessary
similar in design	Indefinite

Claim Term	Court's Construction
fully independent	Plain meaning / No construction necessary Not indefinite
connection program	Plain meaning / No construction necessary Not indefinite
the coupling site the connector the connector and the slot	Not indefinite

APPENDIX B

Claim Term	Agreed Construction
PCI bus Peripheral Component Interconnect bus (PCI) bus	industry standard computer bus known as the Peripheral Component Interconnect Local Bus
serial bit channel serial . . . channel channels . . . to transmit . . . as serial data	a path on which units of information are transferred serially from one component to another
serial bit stream	a flow of information in which units of information are transferred serially from one component to another