

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

LANTRONIX,
INC. and Acticon Technologies LLC Plaintiffs.

v.

DIGI INTERNATIONAL,
INC. Defendant.

No. 6:05CV35

March 6, 2006.

Floyd R. Nation, Brian Langston Jackson, Henry A. Petri, Jr., Howrey LLP, Houston, TX, Otis W. Carroll, Jr., Deborah J. Race, Ireland Carroll & Kelley, PC, Tyler, TX, for Plaintiffs.

Janice M. Symchych, William D. Hittler, Christine M. Mennen, David T. Schultz, Kevin M. Lindsey, Teresa J. Kimker, Halleland Lewis Nilan & Johnson, Minneapolis, MN, Allen Franklin Gardner, Douglas Ray Mcswane, Jr., Michael Edwin Jones, Potter Minton PC, Tyler, TX, for Defendant.

MEMORANDUM OPINION

DAVIS, J.

This Memorandum Opinion construes the terms in U.S. Patent No. 4,972,470. Only independent claim 1 and dependent claim 8 contain disputed terms.

BACKGROUND

The '470 patent issued November 20, 1990 to Steven Farago. The '470 patent discloses a configurable connector that connects two or more devices, which would otherwise be unable to directly communicate with each other, for the transfer of information. The connector contains programmable electronic circuitry that allows one device to instruct the connector regarding a desired connecting configuration and/or function. "It is an object of the present invention to provide a connector between devices which is capable of being externally programmed or instructed to adapt itself into a desired connecting configuration and/or function between the devices ." '470 patent, 1 :21-25. "It is a further object of the present invention to provide a connector which, when externally activated, is programmed to inquire and determine the requisite connecting function and to reconfigure itself accordingly." '470 patent, 1 :26-30.

Well before the '470 patent issued to Farago, the Patent and Trademark Office issued U.S. Patent No. 4,603,320 "Connector Interface" to Farago on July 29, 1986. The '320 patent discusses the same general area of technology as the '470 patent, but the patents are not related. Digi contends the '470 patent incorporates the '320 patent by reference.

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) (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.

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, 978 (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. Ficoso 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, "although 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); *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 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.*

CLAIM 1

With the disputed terms in bold, claim 1 states:

1. An electronically configurable connector, for connecting at least two discrete external electronic devices, said devices having individual housings and said connector having its own housing which contains at least two physical interface connection elements through the walls thereof, wherein, with the connection of one of the physical interface connection elements with a first one of said devices, at least one other of the physical interface connection elements is exposed externally to said first one of said devices for physical electrical connection with another of said devices; characterized in that said devices, when initially physically connected by said connector, do not electronically communicate with each other as desired; and wherein the connector further comprises electrically programmable means, comprising electronic circuitry with a loaded program, said electronic circuitry being remotely accessible by at least one of said connected devices whereby electrical instructions are sent thereto for interpretation by the loaded program, with operational instructions being generated, whereby the electronic circuitry causes modification of the connection between the connected devices to provide the function or configuration of the connector for communication between the connected devices as desired.

Connector

Lantronix contends "connector" does not require construction because it appears in the preamble and the remainder of claim 1 defines the claimed connector. Alternatively, Lantronix argues the term should be given its ordinary meaning: "a device linking together two or more elements."

Digi argues connector should be construed as "a device that provides translation between an industry standard plug and wires that attach to a circuit board located within its housing." Digi contends the term requires construction "[b]ecause claim 1 uses the term 'connector' without defining it and because the term is so ubiquitous." Digi argues that the '470 patent adopted the definition of "connector" used in the '320 patent because the '470 patent "emphasiz[ed] that [it] was an improvement over the '320 in one respect, and one respect only-it has the capability to automatically adapt its configuration to the particular device which it connects." Based on this position, Digi looks to the '320 patent's prosecution history to define "connector" as used in the '470 patent. Digi also looks to the '470 patent's prosecution history, which Digi argues demonstrates "the Applicant specifically and expressly narrowed the type and function of the connector being described as an external unit utilized to connect separate electronic devices:

Applicant has clearly defined his connector as being a 'connector' in the common sense of an external component which connects two separate and distinct devices such as a computer and a modem or a computer and a printer...."

'470 patent prosecution history, Amendment and Response to Official Action, 5/8/1990, p. 4.

The Court rejects Digi's argument that the '470 patent in any way incorporates the '320 patent. Although the '470 and '320 patents have the same inventor, and both describe "connectors," they are not related. The '470 patent is not a continuation or continuation-in-part of the '320 patent. The '470 patent describes the '320 patent in the second paragraph of the specification. '470 patent, 1:8-20. In this paragraph, the '470 patent

distinguishes the '320 patent as prior art and describes its limitations. Id. ("These connectors however were limited to a single hard wired-in conversion application. Thus, ..., they were nevertheless limited to a single operative function."). The next two paragraphs briefly state the objects of the invention disclosed in the '470 patent. This discussion of the '320 patent is similar to most other patents that briefly describe the limitations of the prior art, usually in a section entitled "Background of the Invention." There is nothing in this discussion that would lead one skilled in the art to suspect that any aspect of the '320 patent, or anything in its specification, should be used to construe the claims of the '470 patent. The '470 patent does not even disclose that it shares the same inventor as the '320 patent. Accordingly, the Court rejects the idea that terms in the '470 patent should be interpreted specifically in light of the '320 patent.

"Connector" does not require construction. Digi offers no support, and the Court finds none, from the '470 patent for its limitation of "industry standard plug and wires that attach to a circuit board located within its housing." The term "connector" itself has an ordinary meaning that will be easily understood by a lay jury within the context of the '470 patent. To the extent that "connector" describes a structure mores specific than its ordinary meaning, the remaining claim language sufficiently describes the term such that any construction would be redundant.

Discrete external electronic devices

Lantronix contends this term does not require construction as it is used in accordance with its plain meaning, but if the Court does determine construction is necessary, Lantronix does not object to Digi's proposed construction, "electronic devices having separate housings, each standing alone." Lantronix does not believe Digi's construction is necessary since it encompasses limitations present elsewhere in the claim. Thus, Lantronix contends Digi's construction is redundant and may potentially confuse the jury.

During the claim construction hearing, Digi agreed with Lantronix that this term does not require construction. The Court agrees.

Housing

In its briefing, Lantronix argued that "housing" is used according to its plain meaning and therefore does not require construction. Alternatively, if the Court does construe the term, Lantronix argued it should be construed according to its plain meaning: "a case or enclosure."

Digi argued "housing" should be construed as "cover that provides structural and protective support for the enclosed components." Digi contended the housing serves as both a cover and a structure for the enclosed components such as the electrical pins and socket connections. If this were not the case, Digi argued, "the claim language requirement that the connector contain at least two physical interface connection elements and electronic circuitry would contradict the '320 patent, which claimed the insertion of components inside the connector itself."

Further, Digi argued, the components must be attached to the connector's structural supporting unit (the housing) in order for them to be electrically connected and functional. Digi also relied on the '320 patent's prosecution history, which acknowledged that "a housing is required to provide a structure for the connector." *See* '320 patent prosecution history, Amendment and Response to Official Action, 4/30/1985, p. 5. Finally, Digi contended that Figure 1 and the '470 patent's prosecution history "show that the connector has its own separate housing to distinguish it from prior art where the functional circuitry was part of, and contained within, the computer housing."

During the hearing, the parties agreed to a compromise construction: "case or enclosure to cover and protect the connector's internal components." The Court agrees with the parties' agreed construction. As before, the Court rejects Digi's argument that the '320 patent was incorporated in any way into the '470 patent.

Physical interface connection elements

In their briefing, the parties nearly agreed on the construction of this term: "Elements *such as electrical pins and socket connections* that link two *discrete electronic external* devices, allowing the devices to transfer information." Digi's proposed construction contained the additional italicized words. Digi argued the patent specification supports its inclusion of "such as electrical pins and socket connections":

Generally the present invention comprises a connector having a housing which contains at least two physical interface connection elements such as electrical pins and socket connections, through the walls thereof, for connection to at least two external devices.

'470 patent, 1: 41-45. Lantronix did not dispute the inclusion of "such as electrical pins and socket connections." Lantronix did however argue that Digi's inclusion of "*discrete electronic external*" fundamentally misrepresents how the structures fit together. According to Lantronix, the "physical interface connection element" is the part of the connector at which each external device connects to the connector. Therefore, the connector as a whole links two discrete external devices, but a single physical interface connection element does not. A single physical interface connection element links the connector with one of the external devices.

During the hearing, the parties reached a compromise construction: "elements such as electrical pins and socket connections that link the connector to a discrete external electronic device." In light of the claim language and specification, this is an appropriate construction.

Through the walls

Lantronix argues this term is used according to its plain meaning and does not require construction. If the Court determines the term needs construction, Lantronix argues it should be construed as "can be accessed through the housing" in accordance with its plain meaning.

Digi contends "through the walls" should be construed to mean "external to at least the outside of the connector." Digi relies on the '470 patent's prosecution history, Figure 1, and the claim language itself. In discussing that the invention was for connecting two or more external devices, the Applicant stated, "This [connection to external devices] is defined in the claims by requiring that the connector has its own housing through which interface-connection-elements extend." '470 patent prosecution history, Response and Request for Reconsideration, 10/10/1989, p. 2. Digi also contends Figure 1 depicts a connector in which the connection elements (11 and 18) extend outside the housing. Finally, Digi argues that Lantronix's proposed construction is inconsistent with the claim language, which expressly requires that the connector elements extend to the outside of the connector walls.

Lantronix contends Digi's argument excludes a socket connection, which Digi admits the claim includes in Digi's construction of "physical interface connection elements." In a recessed connection, like a socket connection, the connection is made by inserting something through the housing walls and into the socket. Lantronix argues this is expressly contemplated in the specification:

Generally the present invention comprises a connector having a housing which contains at least two physical interface connection elements such as electrical pins and socket connections, through the walls thereof, for connection to at least two external devices.

'470 patent, 1 :41-45.

This term does not require construction. Lantronix is correct that Digi's proposed construction excludes recessed connections, including socket connections, that are expressly contemplated within the patent. *See* '470 patent, 1 :41-45. This portion of the specification, quoted above, demonstrates that the patent did not limit "through the walls" to only connections that project out from the connector, but also included connections that protrude through the walls and into the connector. Figure 1 does show connection elements that extend outside the housing walls, but the claim language should be read in light of the entire specification, not just Figure 1.

The prosecution history cited by Digi does not clearly disavow recessed connections. First, it is not sufficiently clear whether the Applicant was distinguishing Heath on the basis of a housing or a connection to external devices, but it is clear the Applicant was not distinguishing Heath on the basis of protruding connections. Second, "through which interface-connection-elements extend" does not necessarily exclude recessed connections since the external device's connection elements will extend through the walls of the connector's housing.

During the hearing, Digi proposed the construction, "opening through the external walls of the connector's housing." This construction uses the very words that are to be construed and thus does not clarify their meaning. It does, however, demonstrate that the term does not require construction.

Electronically communicate with each other as desired and communication between the connected devices as desired

Lantronix argues these terms should be construed to mean "transmission and/or receipt of electronic information between linked devices in a manner that the information can be utilized by the receiving device." Lantronix contends "communication ... as desired" requires transmission of information and the receiver's understanding of the information received. If the recipient lacks understanding or is unable to use the information, then the information has not been effectively communicated. Alternatively, Lantronix contends the terms should not be construed and the jury should apply the terms' plain meanings.

Digi proposes the terms be construed to mean "electronically communicate using prearranged and mutually agreeable protocol, parameters, and pin-outs." Digi argues that when the invented automatic configuration process is completed, the connector is reconfigured by a simple instruction for changing protocol, parameters, and pin-outs. Digi contends the specification uses "different interface functions," "changing protocol, parameters, and pin-outs," "requisite interface function," and "nature of the connection interface" interchangeably to describe the result of the physical connection being modified such that the communication between the devices can take place as desired. *See* '470 patent, 2 :2-22.

Lantronix criticizes Digi's proposed construction on several grounds. First, Lantronix contends the concept of "protocol, parameters or pin outs" will be unfamiliar to the jury. Second, Lantronix contends Digi has imported the limitation of "protocol, parameters or pin outs" from the specification without any basis for

doing so. Finally, Lantronix argues that Digi's proposed language is inappropriate. The specification describes four methods for configuring the connector: (1) a microprocessor with EPROM (1:67-2:7); (2) a programmable logic array (2:7-14); (3) an external input device (2:14-19); and (4) self-programming of the connector (2:19-24). Changing protocol, parameters, and pin-outs relates only to a programmable logic array. This is a specific embodiment recited in claim 9. Therefore, according to claim differentiation principles, claim 1 should not be construed to contain this limitation.

The Court adopts Lantronix's proposed construction and construes this term to mean "transmission and/or receipt of electronic information between linked devices in a manner that the information can be utilized by the receiving device." This construction comports with the plain meaning of the claim language and is in concert with the description contained in the specification. Lantronix is correct that Digi's limitation of "protocol, parameters, and pin-outs" impermissibly limits the claim to only one of the disclosed embodiments. Further, as claim 9 is limited to the programmable logic array, which utilizes changing the protocol, parameters, and pin-outs, claim differentiation principles do not support Digi's limitation.

Remotely accessible

In its briefing, Lantronix argued "remotely accessible" should be construed to mean "able to be electrically accessed from outside the connector." Digi contended "remotely accessible" should be construed to mean "*able to allow the connector* to receive instructions from one of the external electronic devices." Lantronix agreed with Digi's construction except for the italicized language. Lantronix contended the "to allow" language requires that there is some other entity or piece of equipment that is "allowing," or giving permission to, the connector to receive instructions. Digi did not counter Lantronix's argument regarding the "to allow" language and offers no support for it.

During the hearing, the parties agreed, as Lantronix proposed, "remotely accessible" should be construed as "able to be electrically accessed from outside the connector." The Court agrees that, based on the claim language and specification, Lantronix's proposed construction is accurate.

Electrical instructions are sent thereto for interpretation by the loaded program

Lantronix contends this term should be construed as "electrical signals are sent to the circuitry and are acted upon by the loaded program." Lantronix argues that the specification reveals that the functionality described in this claim phrase is not limited to one particular implementation and Lantronix's construction is intended to encompass all the implementations. Lantronix contends a number of devices can send instructions that configure the connector, *see* '470 patent, 2 :10-32, and the instructions can be implemented in multiple ways, *see* '470 patent, 3 :58-63, 4 :15-17. Lantronix objects to Digi's construction for the same reasons it objected to Digi's construction of "electronically communicate...."

Digi contends the term should be construed as "the connector receives an electrical signal from an external electronic device and uses that signal to change the protocol, parameters, and pinouts." Digi argues the "phrase describes the connector's receipt of an electrical signal from one of the external devices and subsequent use of that signal, through the loaded program, to 'adapt itself into a desired connecting configuration and/or function between the devices.'" *See* '470 patent, 1 :21-24. As Digi previously contended, it contends here that the physical configuration is accomplished by changing the protocol, parameters or pin-outs so that the two devices can communicate with each other. *See* '470 patent, 2 :10-14. Digi criticizes Lantronix's use of "loaded program," which is contained in the claim.

The Court construes "electrical instructions are sent thereto for interpretation by the loaded program" to mean "electrical signals are sent to the circuitry and are acted upon by the loaded program." As discussed above, Digi's "protocol, parameters, and pin-outs" limitation is inappropriate. Lantronix's proposed construction, which the Court adopts, includes all of the invention's embodiments that are discussed in the specification.

Modification of the connection

Lantronix contends this term does not require construction because the concept is simple and construing the term would merely use more words to essentially say the same thing. Alternatively, if the Court believes the term needs construction, Lantronix proposes the Court construe it as "altering the characteristics of the connector such that information can move through the connector."

Digi contends the term should be construed to mean "the connector to change its protocol, parameters, and pin-outs." Digi argues that the connector adapts itself to a desired configuration by changing its protocol, parameters, and pin-outs. Lantronix objects to Digi's construction for the same reasons already given above. Digi criticizes Lantronix's proposed construction as "impermissibly expand[ing] the patent language by avoiding a description of the specific modification of the patented invention."

The Court modifies Lantronix's proposed construction and construes "modification of the connection" to mean "altering the connection such that information can move through the connector." Again, Digi's "protocol, parameters, and pin-outs" limitation impermissibly limits the claim scope to a single embodiment. The Court modifies Lantronix's proposed construction to make it more straightforward to the jury.

CLAIM 8

With the disputed terms in bold, claim 8 states:

8. The connector of claim 1 wherein said electrically programmable means comprises a microcontroller with downloadable code storage.

Microcontroller

In its briefing, Lantronix proposed the Court construe "microcontroller" as "equipment, such as a microprocessor, used for precise process control in data handling and communication." Lantronix adapted this definition from the definition given by the McGraw-Hill Dictionary of Scientific and Technical Terms.

Digi proposed the Court construe "microcontroller" as "a type of programmable and/or configurable electronic device such as the Intel 8031 or the Hitachi HM 2-62256." *See* '407 patent, 2:57-59 ("A further example of such programmable and/or configurable electronic device is a microcontroller with downloadable code storage e.g. the Intel 8031 ... and the Hitachi HM 2-62256."). Digi criticized Lantronix's proposed construction as being unrelated to the '407 patent.

During the hearing, the parties agreed "microcontroller" does not require construction. The Court agrees.

Downloadable code storage

Lantronix contends "downloadable code storage" should be construed as "a device on which instructions/software are kept and can be retrieved/accessed and into which the instructions/software can be transferred to a remote source." Digi contends the term should be construed as "a component or set of components on which instructions or software are kept and from which the instructions or software can be retrieved or accessed from a remote source." Lantronix says it would adopt Digi's construction except that Digi's construction does not account for the code storage being "downloadable." Digi criticizes Lantronix's construction because "into which the instructions/software can be *transferred from* a remote source" is not mentioned in any cited intrinsic evidence.

During the hearing the parties agreed this term should be construed as "a component or set of components on which instructions or software are kept, from which the instructions or software can be retrieved or accessed, and into which the instructions or software can be transferred." The Court agrees that this compromise construction appropriately reflects the term's meaning.

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 as Appendix A.

So ORDERED.

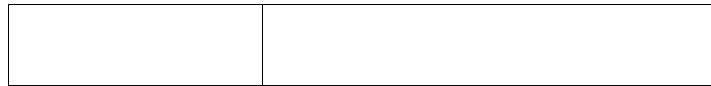
APPENDIX A

Claim Construction Chart for U.S. Patent No. 4,972,470

CLAIM LANGUAGE	CLAIM TERM	COURT'S CONSTRUCTION
1. An electronically configurable connector, for connecting at least two discrete external electronic devices, said devices having individual housings and said connector having its own housing which contains at least two physical interface connection elements through the walls thereof, wherein, with the connection of one of the physical interface connection elements with a first one of said devices, at least one other of the physical interface connection elements is exposed externally to said first one of said	connector	No construction is necessary
	discrete external electronic devices	No construction is necessary (Agreed)
	housing	Case or enclosure to cover and protect connector's internal components
		(Agreed)

devices for physical electrical connection with another of said devices; characterized in that said devices, when initially physically connected by said connector, do not electronically communicate with each other as desired; and wherein the connector further comprises electrically programmable means, comprising electronic circuitry with a loaded program, said electronic circuitry being remotely accessible by at least one of said connected devices whereby electrical instructions are sent thereto for interpretation by the loaded program, with operational instructions being generated, whereby the electronic circuitry causes modification of the connection between the connected devices to provide the function or configuration of the connector for communication between the connected devices as desired.

physical interface connection elements	Elements such as electrical pins and socket connections that link the connector to a discrete external electronic device (Agreed)
--	---



through the walls	No construction is necessary
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electronically communicate with each other as desired / communication between the connected devices as desired	transmission and/or receipt of electronic information between linked devices in a manner that the information can be utilized by the receiving device
--	---



remotely accessible	Able to be electrically accessed for outside the connector (Agreed)
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electrical instructions are sent thereto for interpretation by the loaded	electrical signals are sent to the circuitry and are acted upon by the loaded program
---	---

program

modification of the connection altering the connection such that information can move through the connector

electrically programmable means, comprising electronic circuitry with a loaded

Electronic circuitry storing a set of instructions to be carried out by the circuitry

program

5. The connector of claim 1 wherein said electrically programmable means, after receiving said electrical instructions, causes said connector to function as an encryption device for data transmitted between said

encryption device

a device capable of encoding data to prevent unauthorized access during transmission

external devices.

6. The connector of claim 1 wherein at least one of said physical interface connection elements comprises multiple pin outputs and wherein said electrically programmable means, after receiving said electrical instructions, causes said connector to electrically reconfigure itself between said physical interface connection elements whereby the configuration of said multiple pin outputs is reconfigured as desired.

configuration of said multiple pin outputs is reconfigured

change the purpose or signal characteristics of one or more of the pins

greater than one point of electrical contact

multiple pin
outputs

electrically

change the purpose or signal
characteristics

reconfigure

of one or more of the pins

7. The connector of claim 1 wherein
said electrically
programmable means comprises a
microprocessor
with program storage memory.

microprocessor

a silicon chip on which the
arithmetic and
logic functions of the type used
in a

	computer are placed
--	---------------------

program
storage
memory

a component or set of
components on which
instructions or software are kept
and can be
retrieved or accessed

8. The connector of claim 1 wherein
said electrically
programmable means comprises a
microcontroller
with downloadable code storage.

microcontroller

No construction is necessary
(Agreed)

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downloadable
code
storage

a component or set of
components on
which instructions or software
are kept,
from which the instructions or
software
can be retrieved or accessed,
and into
which the instructions or
software can be

		transferred (Agreed)
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13. The connector of claim 1 wherein
the connector
and its housing are external to all of
the connected
devices.

external to all
of the
connected
devices

exists totally outside the
external electronic
devices to which it is connected

E.D.Tex.,2006.

Lantronix, Inc. v. Digi Intern., Inc.

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