United States District Court,
C.D. California.

INTELLIGENT COMPUTER SOLUTIONS, INC,
v.
VOOM TECHNOLOGIES, INC.

No. CV 05-5168-VBF(JWJx)

Aug. 3, 2007.

Attorneys Present for Plaintiffs, None Present.

Attorneys Present for Defendants, None Present.

PRESENT: HONORABLE VALERIE BAKER FAIRBANK**, U.S. District Judge.**

Rita Sanchez, Courtroom Deputy.

None Present, Court Reporter.

PROCEEDINGS (IN CHAMBERS): CLAIM CONSTRUCTION ORDER

The Court has received and read the papers filed, including both parties' claim construction briefs and supporting declarations, Plaintiff's Reply Brief on Claim Construction, and the parties' Joint Claim Construction Chart. After considering the papers filed, the oral arguments made at the July 25, 2007 hearing, and in light of applicable legal standards, the Court makes the following findings:

I. ***Introduction***

Plaintiff Intelligent Computer Solutions, Inc. ("Plaintiff") is the owner of United States Patent Number 6,131,141 ("the '141 Patent"), entitled "Method of and Portable Apparatus for Determining and Utilizing Timing Parameters for Direct Duplication of Hard Disk Drives." Plaintiff has brought suit under 35 U.S.C. s. 271(a) alleging that Defendant Voom Technologies, Inc. ("Defendant") has infringed the '141 Patent. The '141 Patent contains fifty eight (58) claims of invention, eight of which Plaintiff alleges Defendant of infringing through use of its sale of a HardCopy and HardCopy II hard disk drive duplicator products. The claims at issue include: 38, 39, 40, 42, 44, 53, and 57. FN1

FN1. Plaintiff includes Claim 55 in its list of disputed claims, however neither party discusses this claim in any respect in their briefs. (*See* Pl. Br., at 1.) Accordingly, the Court makes no determination as to Claim 55.

II. ***Legal Standard***

The following acknowledges applicable legal standards, which are more fully set forth in the parties' briefs.

In construing claims of a patent, courts must give words in the claims their ordinary and customary

meaning; that is, "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed.Cir.2005). To ascertain the meaning of claims, courts must primarily look to intrinsic evidence (i.e. the claims, the specification, and the prosecution history). Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995). When the meaning of the claim is clear based on the intrinsic evidence, it is improper to rely on extrinsic evidence. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed.Cir.1996).

Although courts have the discretion to consider extrinsic evidence, including expert and inventor testimony, dictionaries and scientific treatises, such evidence is "less significant than the intrinsic record in determining the legally operative meaning of claim language." Phillips, 415 F.3d at 1317 (citation omitted). Courts should take caution to consider only dictionary definitions that are applicable within the context of the patent since dictionaries "strive to collect all uses of particular words, from the common to the obscure." Id. at 1321

The specific embodiments set forth in a patent provide guidance in construing the claims; however, the claims are not confined to the specific embodiments of the invention described in the specification. *Phillips,* 415 F.3d at 1144. It is a corollary principle of claim construction that a claim cannot be construed to include a feature that the specification makes plain is outside the scope of the invention, even if the literal language of a claim might arguably be read as broad enough to encompass that feature. SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1341 (Fed.Cir.2001).

As asserted by Defendant in its brief and at oral argument, the prosecution history is also an essential component in determining proper claim construction. McGill, Inc. v. John Zinc Co., 736 F .2d 666, 673 (Fed.Cir.1984). Importantly, in cases where a patentee has made arguments during prosecution to obtain allowance of the patent, those arguments determine the scope of the claim. Springs Window Fashion LP v. Novo Industries LP, 323 F.3d 989 (Fed.Cir.2003). This principle, known as the "doctrine of prosecution disclaimer," is rooted in Supreme Court precedent and "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." Omega Engineering Inc. v. Raytec Corp., 334 F.3d 1314, 1323 (Fed.Cir.2003). However, the prosecution disclaimer doctrine does not apply where the alleged disavowal of patent claim scope is ambiguous. Omega, 334 F.3d at 1324. Although Defendant's brief and oral argument were excellent, for reasons indicated herein the Court finds that Plaintiff did not "disclaim" or "surrender" as much as the defense asserts.

III. ***Relevant Prosecution History***

The following refers to prosecution history that is more thoroughly set forth in Plaintiff's Exhibit 1 and the briefs filed.

The prosecution of the '141 Patent involved the oversight of two United States Patent and Trademark Office ("PTO") Examiners. The initial examination, conducted by Examiner King, indicated that some claims were allowable; this decision was reversed by Examiner Peikari when additional prior art was discovered and made part of the file history. (*See* Ex. 1 to Rozsa Decl., at 93-98; 115-120.) The prior art in question was Patent No. 5,777,811 issued to Bodo ("the Bodo Patent"), which became the basis for Examiner Peikari's rejection of *all* of Plaintiff's pending claims under a 35 U.S.C. s. 103(a) "obviousness" basis. (Ex. 1, at 116-118.)

Following Examiner Peikari's December 1998 Office Action, Plaintiff twice amended its application. In this second set of amendments, Plaintiff distinguished all of its claims by adding the limitation "without utilizing any memory buffer." (*See* Ex. 1 to Rozsa Decl., at 130-141.) In its amended response, Plaintiff made a series of representations concerning the patent in issue. These representations included (1) distinguishing the Bodo patent on the basis of its use of a random access memory (RAM) as an information storage device; and (2) describing three critical features distinguishing the '141 Patent from the Bodo patent. (*See* Ex. 1, at

142-143; *see also* Def. Br., at 13.) The critical features included the '141 Patent's use and control of data and control signal switches to operate a direct data path between the source HDD and target HDDs; the aspect that copied data directly flows from the source HDD to the target HDDs through the direct data path; and that the Bodo device utilizes a RAM for storage and read/write purposes. (*See* Ex. 1, at 142-143; Def. Br., at 14.)

After further prosecution before the PTO, Examiner Peikari issued an Office Action on September 22, 1999 again rejecting all of Plaintiff's claims as obvious under 35 U.S.C. s. 103, reciting not only the prior art Bodo patent, but two other patents not previously discussed. (Ex. 1, at 171-177.) In response to this Office Action, Plaintiff made additional representations and disclaimers concerning the unique features of its device. Namely, that the copied data flows directly between the source HDD and target HDDs without a memory buffer, and that the read/write function is simultaneous. (*See* Def. Br., at 16; Ex. 1, at 200-205.)

Based on the arguments and disclaimers presented by Plaintiff, the '141 Patent issued on October 10, 2000.

IV. ***Disputed Claims***

Before reaching the claims at issue, the Court addresses Defendant's motion to strike the opening declaration of Plaintiff's expert Dr. Yuval Tamir ("Dr.Tamir"). Defendant objects to Dr. Tamir's declaration on grounds that "ICS is plainly offering Mr. Tamir as an advocate and not an expert with personal expertise that could assist the Court in understanding the meaning of the patent claims." (Def. Opp., at 2 n. 1.) In defending the use of Dr. Tamir's opening declaration, Plaintiff asserts that "[t]he purpose of tracking much of the technical brief to a Declaration of ICS's expert Dr. Tamir was to provide full support by an expert for the statements made by ICS in its brief." (Pl. Reply, at 2.) As set forth on the record, Defendant's motion to strike Dr. Tamir's declaration is GRANTED. FN2 (*See* Record of July 25, 2007 Hearing as Reflected in Reporter's Notes.)

FN2. Dr. Tamir was called by Plaintiff to present a tutorial on the patented invention. The Court sustained Defendant's objections to the tutorial on grounds that it amounted to claims construction argument. (*See* Record of July 25, 2007 Hearing as Reflected in Reporter's Notes.)

A. ***Claim 38***

1. " ***Simultaneously Duplicating*** **"**

In its preamble, Claim 38 refers to a "portable hard disk drive (HDD) duplicator for simultaneously duplicating data from a source HDD to at least one target HDD ..."

Plaintiff asserts that the phrase "simultaneously duplicating" means that in the event there is more than one target HDD, the duplication is simultaneously performed to two or more target HDDs. Plaintiff urges that the language does not require that there be more than one target HDD. (Pl. Br., at 11.)

Defendant contends that the phrase refers to a portable HDD that is capable of duplicating data from a source HDD to *two or more* target HDDs simultaneously. (Def. Br., at 17.)

A plain reading of the phrase "to at least one target HDD" contemplates the possibility of there being only a single target HDD. This construction is supported by the fact that other claims in the patent refer to "a multiplicity of target HDDs." (Ex. 1, Rozsa Decl., at 11:66-67; 13:6-7.) Construing the phrase "at least one" to require two or more would be counterintuitive and inconsistent with other claims requiring the presence of multiple targets. Accordingly, the proper construction of the preamble language is one construing the phrase "simultaneously duplicating" as requisite only in the situation where there is more than one target HDD present. (*See* Reply, at 4.)

Although Defendant asserts that the claim language requires duplication capability to two or more target HDDs simultaneously, its argument appears to focus not on the number of target HDDs required, but on the functional *capability* of the source HDD to connect to multiple target HDDs and thereby perform simultaneous duplication of data *when multiple target HDDs are present*. (*See* Def. Br., at 19.) In other words, Defendant's preferred construction appears to center on the requirement that only devices incorporating a structure capable of connecting to two or more target HDDs for simultaneous duplication can infringe this claim, regardless of the number of target HDDs actually present. Stated more simply, Defendant's construction would preclude the possibility of a portable HDD duplicator that is capable of duplicating to a maximum of one target HDD, whereas Plaintiff's construction would allow this.

As support for its proposed construction, Defendant refers to independent claims 1, 5, 12, 18, 34, 37, 45, and 48, all of which contain the phrase "simultaneously duplicating," but some of which refer to "multiple target HDDs" as opposed to "at least one target HDD." (*See* Def. Br., at 17; Ex. 1 to Rozsa Decl.) Defendant urges that because some of the claims refer to simultaneous duplication to multiple target HDDs, and because certain embodiments in the patent's specification refer to a multiplicity of target HDDs (*see, e.g.,* col. 7:40, 66-67; 8:18-19, 62-9:1), this language should be read into all claim references to simultaneous duplication. (*See* Def. Br., at 17-18 .)

Although this argument has merit, it is unpersuasive in light of the fact that certain embodiments likewise refer to "one or more target HDDs" and "to at least one target HDD." (*See* col. 7:4; 9:55-56; 10:17-18.) Applying the legal standard that the specification provides guidance for claim construction but should not be read to subvert the claim's express language, the proper construction of the disputed claim language is one that includes the possibility of *exactly one* target HDD as well as the possibility of *multiple* target HDDs; and the "simultaneously duplicating" language applies only in the context where more than one target HDD is present. (*See* Pl. Br., at 11.)

2. "*a source HDD data bus switch*" *and* "*target HDD data bus switch*"

Element "a" of Claim 38 refers to "a source HDD data bus switch connected to said source HDD through a source HDD connector." Element "b" of Claim 38 refers to "at least one target HDD data bus switch connected to said at least one target HDD through at least one target HDD connector."

Plaintiff construes these two switches as the circuitry that allows switching among the three direct data paths (i.e. between (1) microcontroller and source HDD; (2) microcontroller and target HDD; and (3) source HD and target HD). Plaintiff defines the source HDD data bus switch as the "interface circuitry through which data signals are exchanged between the source HDD and the rest of the duplicator." (Pl. Br., at 12.) Similarly, the target HDD data bus switch includes "interface circuitry through which data signals are exchanged between the target HDD and the rest of the duplicator device." (Id.) As support for its construction, Plaintiff refers to col. 6, ll.7-12 of the patent text and Figure 2 of the patent drawings, both of which describe/depict a circuitry system. Plaintiff also cites to an article published by the Association of Computing Machinery, which provides an example of a "switch" used as a building block for interconnection networks. FN3 (*See* Ex. 1 to Tamir Decl., at 39 [*Introduction*].)

FN3. Defendant objects to Plaintiff's use of this extrinsic evidence on grounds that the evidence concerns switching components used to construct computer networks, and the '141 Patent has nothing to do with computer networks; instead, the patent describes a data duplicator. (*See* Def. Br., at 22; Ex. 1 to Tamir Decl., at 39 [discussing switches (or routers) used to build interconnection networks for large-scale parallel computers, gigabit local area networks for high performance distributed computing, and wide area communication networks].) As indicated, the Court is not inclined to consider any such extrinsic evidence and hereby sustains Defendant's objection.

Defendant construes each phrase individually. It asserts that the phrase "source HDD data bus switch" means a single electrical device that can be turned on or off to connect an electrical circuit between the source HDD data bus and the main data bus. Similarly, Defendant defines "target HDD data bus switch" to mean a single electrical device that can be turned on or off to connect an electrical circuit between the main data bus and the target data bus. (Def. Br., at 21-23.) Defendant relies on the same intrinsic evidence as does Plaintiff for its construction of the claim language as referring to a *single* switch that performs the function of electrically connecting the data busses. Defendant also cites to a secondary publication entitled "Electrical Circuits" that defines a switch as a "two-state device. It is either ON or OFF." (*See* Def. Br., at 22; Ex. B to McCloskey Decl., at 26.)

Plaintiff asserts in reply that Defendant's representation of the term "switch" as used to denote a component that can make or break an electrical circuit is not the ordinary meaning of the term "switch." (Pl. Reply, at 8.) To the contrary, Plaintiff contends that the function of the data bus switches for disk duplication is very similar to the function of data bus switches in a multiprocessor interconnection network and, thus, Plaintiff's extrinsic evidence is relevant to understanding the term "switch" in the context of the ' 141 Patent. (Pl. Reply, at 9.)

Looking exclusively to the intrinsic evidence of the '141 Patent, the claim language of both elements "a" and "b" refers to a switch in the singular, and Figure 2 included in the specification depicts a diagram including a single data bus switch connecting to the source HDD and the target HDDs. However, to reduce the switches referenced to single ON/OFF components that activate or deactivate the flow of data between the busses, as opposed to construing them as part of a larger overall circuitry through which data flows between the source HDD and the rest of the duplicator, and between the target HDD and the rest of the duplicator, is limiting in the absence of some language suggesting such a narrow construction. The Court finds that Plaintiff's rather than Defendant's proposed construction is supported by the intrinsic evidence and is the correct construction.

3. " *Main data bus* "

Element "c" of Claim 38 refers to "a main data bus connected to said source HDD data bus switch and said at least one target HDD data bus switch...."

Plaintiff construes this claim element to mean the interconnect circuitry through which the main data flows occur [sic] during the operation of the device. The term "bus," according to Plaintiff, is used in the art to represent different types of interconnects, including, for example, a USB bus and a FireWire bus. (Pl. Br., at 14.)

Defendant construes the claim element to mean a set of parallel wires that connects the source HDD data bus switch and the target HDD data bus switch. (Def. Br., at 23.) Defendant contends this meaning is consistent with the only embodiment described by the specification of the '141 Patent, namely Figures 1 & 2, which depict wires drawn without any other components. (Def. Br., at 24.) Defendant disputes Plaintiff's construction on grounds that it is inconsistent with the patent itself. Specifically, Defendant asserts that the ' 141 Patent already describes interconnect circuitry in the form of switches and connections to the main data bus; consequently, the term "main data bus" does not encompass such interconnect circuitry, but instead means a set of parallel wires running from the source HDD to the target HDD. (*See* Def. Br., at 24.)

Though Plaintiff acknowledges that a "bus" can consist of multiple parallel wires, this is not the only example of a "bus" provided in the patent. (Pl. Br. 14; Reply, at 10-11.) In fact, the patent's preferred embodiment provides the following caveat after a description of the illustrations included as part of the patent:

Although the connection to a parallel port of PC is illustrated, it is merely one example of the preferred embodiments of the present invention. For example, the connection between the portable HDD duplicator and PC can be made through other computer external ports, such as a serial port, an infrared port, an *universal serial bus (USB),* and a *PCMCIA bus*.

(Ex. 1 to Rozsa Decl., at 7:55-61 [emph. added].) Moreover, a description of the functionality of the "main data bus," in the context of one description of the invention, is found in the patent text:

(4) a main data bus connected to the parallel port interface, the source HDD data bus switch, and the at least one target HDD data bus switch for providing direct data path between the PC and the source HDD, between the PC and the at least one target HDD, and between the source HDD and the at least one target HDD

(Ex. 1 to Rozsa Decl., at 4:18-23.) In light of this intrinsic evidence, and coupled with the fact that neither the claim language nor any other relevant section of the '141 Patent limits the main data bus to a set of parallel wires, Plaintiff's construction that the claim language refers to a broader interconnect circuitry through which the main data flows during operation of the device is the-more appropriate construction.

4. " *Direct data path* "

Element "c" of Claim 38 states that the main data bus operates to provide a "direct data path between said source HDD and said at least one target HDD."

Plaintiff construes the claim language to mean a collection of interconnected hardware components (modules) through which data can flow from source to destination without requiring software (executed by a microprocessor or microcontroller) to directly control every block of data through intermediate steps. Importantly, Plaintiff asserts that the phrase "direct data path" does not necessarily preclude the existence of storage/memory that temporarily holds the data along the path from the source of the data to its destination. (Pl. Br., at 15-16; Reply 12-13.) As support for its construction, Plaintiff refers to column 4, lines 61-63 of the Summary of the Invention section of the '141 Patent, which reads: "(3) data flows from the source HDD to the multiple target HDDs directly without having the data saved in the PC memory." Plaintiff also refers to similar language in column 7, lines 66 through line 1 of column 8 of the preferred embodiment, which reads: "(5) data flows from the source HDD to the multiple target HDDs directly without having the data saved in the PC memory."

Defendant construes the phrase to mean a data path in which there is no random access memory to provide temporary storage. Referring to the prosecution history described above, Defendant contends that Plaintiff has expressly defined the outer boundary of the claims with respect to the claim term "direct data path," and that application of the doctrine of prosecution disclaimer applies to preclude the broad construction proffered by Plaintiff. (Def. Br., at 25-29; *see also* Pl. Reply, at 12 [distinguishing the direct data path in the Bodo patent from the direct data path in the '141 Patent].)

As Defendant asserts, the '141 Patent does not refer to the direct data path as a collection of interconnected hardware components. In fact, the patent makes no mention of "a collection of interconnected hardware components" at all. (Def. Br., at 28; *See* Ex. 1 to Rozsa Decl.) However, Figures 1 and 2 of the '141 Patent's specification do depict a collection of interconnected hardware components. What is more, neither the patent nor the prosecution history on which Defendant relies support a construction that would altogether preclude a data path involving random access memory for temporary storage. FN4 As the prosecution history reflects, and as Plaintiff elaborated at oral argument, the RAM storage utilized in the Bodo patent is part of the data transfer process, whereas the memory utilized in the ' 141 Patent is for purposes of counting data (i.e. running code) between the PC (or micro-controller) and the source HDD, and the PC (or micro-controller) and the target HDD, to assist in the direct transfer of data between the source HDD and the at

least one target HDD. (*See* Rozsa Decl., Ex. 1 at 13-14 [remarking that "The Bodo Patent discloses a digital data duplicating system wherein when copying digital data from one information storage device to another, a random access memory (RAM) ***receives digital data read from one information storage device, and supplies such digital data form*** **[sic]** ***writing to the other information storage device.***" (emph .added.)]; *see also* Record of July 25, 2007 Hearing as Reflected in Reporter's Notes.) This distinguishing feature, on which Plaintiff relied in obtaining the ' 141 Patent, militates against a finding that "direct data path" precludes the presence of temporary data storage for *any* purpose.

FN4. *See* discussion at IV.A.12, infra, construing the phrase "without utilizing any memory buffer."

Based on the intrinsic evidence referenced above, and in light of the arguments made at the July 25 hearing, the Court finds that Plaintiff's construction is the more appropriate construction, and is therefore correct.

5. "*Source HDD control signal switch" and "target HDD control signal switch"*

Elements "d" and "e" of Claim 38 provide as follows:

d. a source HDD control signal switch connected to said source HDD connector for providing a source HDD control signal to said source HDD;

e. at least one target HDD control switch connected to said at least one target HDD connector for providing a target HDD control signal to said at least one target HDD

Plaintiff asserts that the "source HDD control signal switch" and the "target HDD control signal switch" together represent the circuitry that, in addition to other functionality, allows switching between the control path from the microcontroller to source HDD and the control path from microcontroller and target HDD. Specifically, Plaintiff construes the "source HDD control signal switch" as interface circuitry through which control signals are exchanged between the source HDD and the rest of the duplicator device. Similarly, the "target HDD control signal switch" includes interface circuitry through which control signals are exchanged between the target HDD and the rest of the duplicator device. (Pl. Br., at 14-15.)

Just as it did for element "a" of Claim 38, Defendant construes the two phrases as single electrical devices that can be turned on or off to provide control signals either to the source HDD or the target HDDs. (Def. Br., at 29-30.)

For the reasons discussed above with respect to the term "switch" in the context of the "source HDD data bus switch" and "target HDD data bus switch," Defendant's limiting construction of these claim elements as constituting a single on/off switch that can be activated or deactivated to electrically connect wires is improper in light of a reading of the literal language of Claim 38, and the patent's preferred embodiment. Specifically, one possible embodiment described in the patent and depicted in Figure 1 reads: "The HDD duplicator also includes a control signal switch 70 for the source HDD and one or more control signal switches 80 for the target HDDs. They are controlled by the control signal generator 40 and ***are used for providing a source HDD control signal 72 to the source HDD and target HDD control signals 82 to target HDDs, respectively, to activate and monitor the respective HDDs.***" (Ex. 1 to Rozsa Decl., at 6:15-21) (emph.added). This description appears to describe a larger circuitry system, of which the signal switches are a part.

For these and other reasons set forth in Plaintiff's brief, the Court finds that Plaintiff's construction is supported by the intrinsic evidence and is correct.

6. " *Control signal generator* "

Element "f" of Claim 38 refers to a "control signal generator" that connects to and controls the source HDD and target HDD data bus switches.

Plaintiff construes this phrase to mean "a circuit that generates (outputs) signals that control the operation of one or more other circuits or devices." Plaintiff refers to col. 6, ll. 15-18 and col. 7, ll. 17-19 in support of its construction.

Defendant construes the phrase to mean "a component that controls the data bus switches and control signal switches to provide the direct data path." (Def. Br., at 31.) Defendant refers to col. 7, ll. 18-25 as support for its construction.

The portion of the specification cited by both parties is of greatest significance. In it, the control signal generator is described as "generat[ing] control signals which control the data bus switches and control signal switches to provide direct data paths between the PC and the source HDD, the PC and the target HDDs, and most importantly, the source HDD and the target HDDs." (Rozsa Decl., Ex. 1, at 7:17-22.)

As Defendant argues, Plaintiff's proposed construction is overly broad and lacking in sufficient support in the patent's text. The Court also finds that Defendant's proposed construction is vague or at least inappropriately narrow. Accordingly, the Court rejects both parties' proposed claim constructions. The Court finds that "control signal generator" needs no clarifying construction.

7. " ***Directly duplicated*** **"**

Element "f" of Claim 38 refers to data that is read from the source HDD and "directly duplicated" to at least one target HDD. There is no dispute as to the construction of this phrase. Both parties agree that "directly duplicated" means copied through a direct data path. (*See* Pl. Br., at 15; Def. Br., at 31; Pl. Reply, at 15.)

8. " ***Reading data from said source HDD is performed at the same time as writing data to said at least one target HDD*** **"**

Element "f" of Claim 38 describes the transmission of data from the source HDD to at least one target HDD. Specifically, the claim states that data is read from the source HDD and that "reading data from said source HDD is performed at the same time as writing data to said at least one target HDD."

The disputed language within this claim element is the phrase *at the same time,* which Plaintiff construes to mean "that some data is read at the same time as some data is written." However, Plaintiff asserts that the phrase does not require that the same data is read and written at the same time. (Pl. Br., at 17.) Rather, under Plaintiff's construction, the phrase means that "while the data is read from the source HDD, there is also data that is written simultaneously to at least one target HDD." Notably, Plaintiff's construction allows for a possible delay, due to temporary storage, between when a particular data item is read from the source HDD and written to the target HDD. (Pl. Br., at 17.) As support for its construction, Plaintiff refers to the concept of "pipelining," which is a method of achieving high performance in data processing and communication, and which is accomplished by partitioning an operation into multiple stages and allowing simultaneous processing at different stages of different data items. The function of pipelining requires storage in the form of "pipeline registers," and these pipeline registers hold the output data from one stage while the data is being processed by the next stage and while, simultaneously, the first stage is processing the next data item. (Pl. Br., at 17.) And, according to Plaintiff, the pipelining feature is included in the instant invention. (Pl. Reply, at 15.)

Defendant construes the claim language to mean that "during the time data is read from the source HDD, data is written to the target HDD without use of temporary storage." (Def. Br., at 32.) As support for its proposed construction, Defendant again refers to Plaintiff's statements made to the PTO during prosecution,

in which Plaintiff asserts that one of the critical distinguishing features of its device is the absence of temporary storage in the data path. (*See* Ex. 1 to Rozsa Decl., at 143; *see also* Ex. 1, at 203 [representing the absence of a memory buffer].)

Though Plaintiff's construction appears valid in light of the concept of pipelining, Plaintiff provides no evidence supporting either the function of pipelining or the inclusion of this feature in the '141 Patent. Nonetheless, and as indicated above in the Court's discussion of "direct data path," the intrinsic evidence does support a claim construction allowing for the use of temporary memory storage to count data, as opposed to storing data as part of the data transfer process. (*See also* Section IV.A.12, infra [construing the phrase "without utilizing any memory buffer"].)

Accordingly, the Court finds that Plaintiff's proposed construction is supported by the intrinsic evidence and is correct.

9. "*Internal micro-controller*"

Element "g" of Claim 38 refers to an "internal micro-controller" that is connected to the control signal generator and main data bus.

Plaintiff construes this phrase to mean "a programmable processor (CPU) that runs software to interact with various devices, such as the source HDD and the target HDD, and ultimately generates signals or commands that control circuits or devices. The qualifier 'internal' refers to the fact that the micro-controller is located inside the hard disk drive duplicator." (Pl. Br., at 18.) As support for its construction, Plaintiff cites to both Figure 2 as well as the description of Figure 2 in the patent's specification. Specifically, Plaintiff cites to the following language: "A code memory device may be used by the micro-controller. Further, a micro-controller support circuit is used for the support circuit needed by the micro-controller." (Ex. 1, at 6:55-57.) Plaintiff represents that the term "code" generally means "software," and thus the phrase "code memory" refers to memory where software is stored. (Pl. Br., at 18.)

Defendant does not offer an alternative construction, and the intrinsic evidence cited by Plaintiff generally supports its construction. Accordingly, the Court adopts Plaintiff's construction of the phrase "internal micro-controller."

10. "*Perform read and write operations to access said source HDD and said at least one target HDD and ascertain information and parameters therefrom*"

Element "g" of Claim 38 states that the internal micro-controller operates "to perform read and write operations to access said source HDD and said at least one target HDD and ascertain information and parameters therefrom."

Plaintiff construes the claim language as follows: "The micro-controller obtains from the source HDD and the target HDD information that is then used in the copying process ... The patent says that 'read and write operations' are performed in order to ascertain the HDD parameters. This means what it says-in order to obtain the HDD parameters, the device (the duplicator) has to perform both read and write operations. The writes are commands sent to the HDD and the reads actually deliver the parameter values to the device." (Pl. Br., at 19.) Furthermore, Plaintiff construes "ascertain information and parameters" to mean that there can be only one target disk drive. (Pl. Reply, at 17.)

Defendant divides its construction into two parts: (1) defining "read and write operations to access said storage source HDD and said at least one target HDD" to mean "performing read and write operations to the source hard disk drive and to *all* connected target hard disk drives"; and (2) defining "ascertain information and parameters therefrom" to mean "determining information describing the format and files for the source

hard disk drive and for *all* connected target hard disk drives, as well as the physical parameters for each of the source and target hard disk drives." (Def. Br., at 34-37.)

The only dispute in the parties' claim constructions appears to be the number of target HDDs involved in the read/write process. In other words, Defendant construes the phrase "read and write operations to access said source HDD and said at least one target HDD" to require a multiplicity of target HDDs rather than only one.FN5 Likewise, Defendant construes the phrase "ascertain information and parameters" to require the use of multiple targets in the copying process, whereas Plaintiff's construction would allow for only a single target.

FN5. The Court acknowledges the concern raised by Defendant at oral argument that the parties' understanding of the terms "read" and "write" are functionally different. However, as the disputed meanings of these terms were not briefed by the parties, and not placed before the Court for consideration, the Court does not making any finding as to the proper construction of these terms.

Plaintiff cites to its opening brief in support of its construction that "ascertain information and parameters" involves the use of only one target disk drive. (*Compare* Pl. Reply, at 17 *with* Pl. Br., at 19.) However, Plaintiff's assertion in reply is actually inconsistent with the construction set forth in its opening brief. For example, Plaintiff repeatedly refers in its opening brief to the transmission of data to and from "target HDDs," plural. This language is inconsistent with a construction that would allow exclusively for only one target disk drive, as Plaintiff urges in Reply. Moreover, such a construction is inconsistent with the literal claim language, which refers to "at least one target HDD." (Ex. 1, at 21:4-5.) As discussed above in the context of the preamble language "simultaneously duplicating," "at least one target HDD" contemplates the possibility of the duplicator comprising one or more target HDDs. Restricting the claim language here to the use of a single target disk drive in all instances would be contrary to the claim's language. And Plaintiff cites to no intrinsic evidence that supports its construction.

Accordingly, and consistent with the construction of "simultaneously duplicating" set forth above, the proper construction of the claim language is that proposed by Defendant. That is, a construction that requires the use of all *connected* target HDDs in the copying process, but that allows for the possibility of only a single target HDD actually connected to the source HDD. This construction would not *require* multiple targets to be connected for purposes of performing the read/write function, but would require the use of all targets *if* more than one target HDD is connected to the source HDD.

Finally, and in response to the concern raised by Defendant at oral argument as to the Court's construction of the phrase "ascertain HDD information and parameters," the Court agrees with, and therefore adopts, Defendant's construction that the claim language refers to ascertaining format and file information from the source and target HDDs. This construction is supported by the intrinsic evidence. (*See* Rozsa Decl., Ex. 1, at 7:3-10.)

11. " *Said data bus switches and said control signal switches controlled by said control signal generator to operate said direct data path between said source HDD and said at least one target HDD such that the copied data directly flows from said source HDD to said at least one target HDD* "

Plaintiff construes element "h" of Claim 38 to mean the following: "copied data flows through a collection of interconnected hardware components (modules) through which data can flow from source to destination without requiring software (executed by a microprocessor or microcontroller) to directly control every block of data through intermediate steps. Thus, with a direct data path, once the flow of a block of data from the source is initiated, the block of data may reach the final destination without software involvement." (Pl. Reply, at 18.)

Defendant construes the claim language to mean that "data is copied along a data path in which there is no random access memory to provide temporary storage." (Def. Br., at 38.)

As with element "f" of Claim 38 discussed above (construing the claim language "reading data from said source HDD is performed at the same time as writing data to said at least one target HDD"), the dispute over this language bears on whether the claim allows for temporary storage. Relying on the relevant prosecution history set forth above (section III), Defendant contends that Plaintiff's representations during prosecution concerning the absence of a memory buffer for temporary storage have limited a broader construction under the doctrine of prosecution disclaimer. (Def. Br ., at 38-40.) Plaintiff contends that the statements cited from the prosecution history of the '141 Patent do not make the limitations alleged by Defendant. The Court agrees with Plaintiff.

As discussed with respect to claims "c," "f," and "g" of Claim 38, the intrinsic evidence does not support the limiting construction proposed by Defendant. Although the prosecution history does repeatedly reference the absence of a memory buffer as a distinguishing feature of the '141 Patent, the intrinsic evidence also supports a finding that the memory buffer precluded under the '141 Patent is that used for the purpose of transmitting data as part of the read/write process, which Plaintiff maintains the invention at issue does not do.

Based on the intrinsic evidence referenced above, and in light of the arguments made at the July 25 hearing, the Court finds that Plaintiff's construction is the more appropriate construction, and is therefore correct.

12. " *Without utilizing any memory buffer* "

Element "g" of Claim 38 concludes with the qualification that the copied data transferred between the source HDD and the at least one target HDD flows directly without utilizing any memory buffer.

Plaintiff construes this language to mean "without going through the main memory of the microcontroller or microprocessor." (Pl. Br ., at 20.) Defendant asserts that the language requires no construction. (Def. Br., at 40.)

Plaintiff refers to the patent's specification as support for Plaintiff's construction. (*See* Ex. 1, at 4:61-66 ["(3) data flows from the source HDD to the multiple target HDDs directly without having the data saved in the PC memory"]; Ex. 1, at 7:66-8:1 ["(5) data flows from the source HDD to the multiple target HDDs directly without having the data saved in the PC memory"].) Moreover, Plaintiff directs the Court's attention to Figure 2, which depicts a micro-controller. Plaintiff contends that the micro-controller includes some amount of read/write memory (i.e. the "main memory"), but is not used for temporary storage. (Pl. Reply, at 19.) Although the Court [Judge Fischer] previously ruled that the term "memory buffer" means "PC memory buffer," Plaintiff now seeks to modify this construction to equate a PC to a micro-controller, thus excluding only the "main memory of the micro controller." (*See* Claim Construction Order, Sept. 19, 2006, at 11-17; Pl. Br., at 20.)

As discussed above, in construing claims of a patent courts must give words in the claims their ordinary and customary meaning; that is, "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips, 415 F.3d at 1312. The phrase "without utilizing any memory buffer" appears in each independent claim of the '141 Patent. However, it is not readily apparent from a reading of the claim itself that the construction proposed by Defendant (i.e. one that would preclude a memory buffer of any type whatsoever) is the meaning the term would have to a person of ordinary skill in the art reviewing the patent. The language of the term itself is ambiguous, and the Court must therefore look to intrinsic evidence for purposes of claim construction. Nothing in either the claim language or the specification refers to a "main memory," as Plaintiff proposes.

The Court does not agree that a PC and a micro-controller are one in the same. Though the two devices may perform the same function, as Defendant asserts, the patent text differentiates between a PC and a micro-controller. (*See* Rozsa Decl., Ex. 1, at 6:50-51.) However, for purposes of construing the claim language, the Court accepts Plaintiff's position that the low-level read and write operations referenced in the patent's specification can be performed by either a PC or a micro-controller. (*See* Rozsa Decl., Ex. 1, at 7:5-9.)

In construing the term "memory buffer" the Court is compelled by the intrinsic evidence found in the patent's specification. Specifically, the Court refers to the '141 Patent's statement of the invention's novel features:

The primary novel features of the present invention include: (1) the PC can read and write to the source HDD, or any of the target HDDs; (2) multiple target HDDs can be created at the same time; (3) data flows from the source HDD to the multiple target HDDs directly without having the data saved in the *PC memory:* and (4) the speed of duplicating multiple HDDs simultaneously is significantly increased.

(Rozsa Decl., Ex. 1, at 4:58-65 [emph. added]; *see also* Ex. 1, at 7:66-8:1)

Accepting this language as evidence of one form of memory referred to in the patent, and accepting Plaintiff's position that the invention at issue can operate by way of a PC or a micro-controller, the Court finds that the patent's reference to a PC memory must also take into account the use of a micro-controller memory as an alternative mode of operation. To the extent Plaintiff's proposed construction seeks to dispense with Judge Fischer's earlier finding that "memory buffer" refers to a PC memory buffer, the construction is rejected. Rather, the Court finds that a modification of the claim language as provided in Judge Fischer's September 18, 2006 Order is appropriate.

Accordingly, the Court construes the phrase "without utilizing any memory buffer" to mean "without utilizing any memory buffer in either a PC or micro-controller." Such a construction is supported by the intrinsic evidence referenced above.FN6

FN6. The Court also notes Plaintiff's assertion at the July 25 hearing that the phrase "without utilizing any memory buffer" cannot, contrary to Defendant's assertion, be construed to mean no memory whatsoever because it is not possible to operate the instant invention without memory to run the program.

B. *Claim 39*

Claim 39 is a dependant claim of Claim 38 that provides: "The portable duplicator HDD as defined in claim 38 further comprising a source HDD data bus for connecting said source HDD data bus switch and said source HDD connector."

The central term in dispute appears to be "data bus." As with element "c" of Claim 38, Plaintiff construes this claim to mean "the connection (the interconnect circuitry and/or wiring) between the source HDD data bus switch and the source HDD connector." (Pl. Br., at 21.) Defendant construes the claim to mean a set of parallel wires that connects the source HDD data bus switch and the target HDD data bus switch. (Def. Br., at 46.) Defendant contends this meaning is consistent with the only embodiment described by the specification of the '141 Patent, namely Figures 1 & 2, which depict wires drawn without any other components. (Def. Br., at 46.)

For the same reasons discussed above in IV.A.3, Plaintiff's construction that the claim language refers to a broader interconnect circuitry through which the main data flows during operation of the device, appears to be the more appropriate construction. In light of the claim language's ambiguity, which does not refer to either "interconnect circuitry" or "parallel wires," a review of the intrinsic evidence suggests that the claim

language should not be limited in the manner Defendant proposes.

C. *Claim 40*

Claim 40 is also a dependant claim of Claim 38, and it provides as follows: "The portable duplicator HDD as defined in claim 38 further comprising at least one target HDD data bus for connecting said at least one target HDD data bus switch and said at least one target HDD connector."

The disputed language is again the term "data bus" and the parties make the same arguments, and refer to the same evidence as they do for Claims 38 (element "c") and 39. (*See* Pl. Br., at 21; Def. Br., at 47.) As with its prior constructions, the Court adopts Plaintiff's broader construction for the reasons discussed above with respect to Claims 38 and 39.

D. *Claim 42*

Claim 42, like Claim 38, is an independent claim that likewise concerns the apparatus of the '141 Patent. According to Plaintiff, Claim 42 is a broader version of Claim 38 FN7 and includes the following disputed terms and phrases:

FN7. Plaintiff asserts that Claim 42 is broader than Claim 38 because the limitation of the control signal generator in Claim 38 has been eliminated from Claim 42, and the term "an internal means" in Claim 42 is a generalization of the term "internal micro-controller," as it appears in Claim 38. (Pl. Reply, at 22.)

1. Preamble language: "simultaneously duplicating";
2. Element "a": "a source HDD data bus switch";

3. Element "b": "at least one target HDD data bus switch";

4. Element "c": "main data bus";

5. Element "d": "source HDD control signal switch";

6. Element "e": "target HDD control signal switch";

7. Element "f": "internal means";

8. Element "f": "perform read and write operation to access said source HDD and said at least one target HDD and ascertain HDD information and parameters therefrom";

9. Element "g": "direct data path";

10. Element "g": "directly flows";

11. Element "g": "without utilizing any memory buffer"

(*See* Pl. Br., at 21-30; Def. Br., at 48.) All of the claim terms recited in Claim 42 that are at issue for purposes of claim construction have been addressed and analyzed with respect to Claim 38, and the Court adopts the same analyses and rulings.

E. *Claim 44*

Claim 44 is a dependant claim of Claim 42 and provides as follows: "The portable duplicator HDD as defined in claim 42 wherein said control signal generator connected to, and controlling the operation of, said

source HDD data bus switch and control signal switch, said at least one target HDD data bus switch and control signal switch, such that reading data from said source HDD is performed at the same time as writing data to said at least one target HDD."

The disputed term in this claim is "control signal generator," which is likewise in dispute in element "f" of Claim 38. This claim term has been addressed with respect to Claim 38, and because Claim 44 is a dependent claim of Claim 42, which is virtually identical to Claim 38 and concerns the apparatus of the '141 Patent (as opposed to the method), the same analysis and construction applies. (*See* Section IV.A.6, supra.)

F. *Claim 53*

Claim 53 is an independent claim that recites a method of using a portable HDD duplicator for simultaneously duplicating data from a source HDD to at least one target HDD. The following terms/phrases are in dispute:

1. Preamble language: "simultaneously duplicating";

2. Element "a": "connecting said portable HDD duplicator to said source HDD";

3. Element "b": "connecting said portable HDD duplicator to said at least one target HDD";

4. Element "c": "performing read and write operations to access said source HDD and said at least one target HDD and ascertain HDD information and parameters therefrom";

5. Element "d": "utilizing an internal micro-controller for controlling said portable HDD duplicator to perform read and write operations to access said source HDD and said at least one target HDD and ascertain HDD information and parameters therefrom";

6. Element "e": "providing direct data path between said source and said at least one target HDD";

7. Element "f": "providing a source HDD data bus switch and control signal switch, and at least one target HDD data bus switch";

8. Element "f": "control signal switch";

9. Element "f": "directly flows"

10. Element "f": "without utilizing any memory buffer";

11. Element "g": "reading data from said source HDD is performed at the same time as writing to said at least one target HDD"

(*See* Pl. Br., at 30-35; Def. Br., at 49.) All of the claim terms recited in Claim 53 that are at issue for purposes of claim construction have been addressed and analyzed with respect to Claim 38, and the Court adopts the same analyses and rulings.

G. *Claim 57*

Claim 57 is also an independent claim that, like Claim 53, recites a method of using a portable hard disk drive (HDD) duplicator for simultaneously duplicating data from a source HDD to at least one target HDD. The disputed terms, as with the other independent claims in dispute, have already been analyzed and construed with respect to Claim 38 and include the following:

1. Preamble language: "simultaneously duplicating";

2. Element "a": "connecting said portable HDD duplicator to said source HDD";

3. Element "b": "connecting said portable HDD duplicator to said at least one target HDD";

4. Element "c": "providing direct data path between said source and said at least one target HDD";

5. Element "d": "perform read and write operations to access said source HDD and said at least one target HDD and ascertain HDD information and parameters therefrom";

6. Element "d": "internal means";

7. Element "e": "providing a source HDD data bus switch and control signal switch, and at least one target HDD data bus switch";

8. Element "e": "control signal switch";

9. Element "e": "directly flows";

10. Element "e": "without utilizing any memory buffer"

The Court adopts the same analyses and rulings with respect to claim construction for terms in Claim 57 as it does with respect to Claim 38.

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