

United States District Court,
W.D. Washington.

VERITAS OPERATING CORPORATION, a Delaware corporation,
Plaintiff.

v.
MICROSOFT CORPORATION, a Washington corporation,
Defendant.

Microsoft Corporation, a Washington Corporation,
Counterclaim Plaintiff and Counterclaim Defendant.

v.
Veritas Operating Corporation, a Delaware Corporation, and Veritas Software Corporation, a Delaware Corporation,
Counterclaim Defendants and Counterclaim Plaintiffs.

No. 2:06-CV-00703-JCC

May 29, 2007.

Clerk of Court, Western District of Washington-Seattle Division, U.S. Courthouse, Lobby Level, Seattle, WA, [Federal Express Only], for the Clerk of the Court.

Ralph H. Palumbo, WSBA, Philip S. McCune, WSBA, Summit Law Group PLLC, Seattle, WA, Mark A. Flagel (pro hac vice), Latham & Watkins LLP, Los Angeles, CA, for Veritas Operating Corporation, and Veritas Software Corporation, Plaintiff and Counterclaim Defendants.

The Honorable John C. Conghenour, United States District Judge, United States District Court for the Western District of Washington at Seattle, U.S. Courthouse, Seattle, WA, for Referring Court.

Arthur W. Harrigan, Jr., WSBA, Christopher T. Wion, WSBA, Danielson Harrigan Leyh & Tollefson, Seattle, WA, Bruce R. Braun, Dan K. Webb, Raymond C. Perkins (pro hac vice), Winston & Strawn LLP, Chicago, IL, for Microsoft Corporation, Defendant and Counterclaim Plaintiff.

**SPECIAL MASTER'S REPORT AND RECOMMENDATION ON CLAIM CONSTRUCTION
REGARDING U.S. PATENT NO. 5,469,573**

COUGHENOUR, J.

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I.

Introduction

A. Background

Veritas Operating Corporation and Veritas Software Corporation (collectively "Veritas") allege, *inter alia*, that Microsoft Corporation ("Microsoft") has infringed claims 1-5, 7-10, 13-19, 22-24, and 26-33 of U.S. Patent No. 5,469,573 (the '573 patent) entitled "Disk Operating System Backup and Recovery System." The '573 patent issued on November 21, 2005, to James E. McGill, *et al*., and is now apparently owned by Veritas.

On February 17, 2007 (filed May 4, 2007), the parties submitted their Joint Claim Construction Statement ("JCCS") [Dkt. No. 112]. On March 5, 2007 (filed May 4, 2007), Veritas submitted Veritas' Opening Claim Construction Brief Regarding U.S. Patent No. 5,469,573 ("Veritas' Brief") [Dkt. No. 113]. On March 19, 2007 (filed May 3, 2007), Microsoft submitted Defendant Microsoft Corporation's Responsive Claim Construction Brief Regarding U.S. Patent No. 5,469,573 (Microsoft's Response") [Dkt. No. 106]. On April 12, 2007 (filed May 7, 2005), Veritas submitted its Veritas' Reply Claim Construction Brief Regarding U.S. Patent No. 5,469,573 ("Veritas' Reply") [Dkt. No. 115].

B. Referral to the Special Master

By order dated January 18, 2007, the above captioned cause was referred to the special master, *inter alia*, to conduct a Markman FN1 hearing, and to prepare a report and recommendation to the Court concerning construction of disputed terms and phrases in the patents-in-suit. In accordance with that order, a *Markman*

hearing was held on April 25, 2007, at the United States Courthouse for the Western District of Washington at Seattle, in the courtroom of The Honorable John C. Coughenour, United States District Judge. A transcript of that hearing is in the process of being prepared by the court reporter, and will be filed with the Court.

FN1. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

At the conclusion of the *Markman* hearing, the parties were requested to meet and confer in an effort to narrow the issues requiring resolution. The parties did so and on May 2, 2007, filed the "Parties Joint Submission to Special Master Regarding *Markman* Hearing" ("Joint Submission") [Dkt. No. 110]. In that Joint Submission, the parties reached agreement on four previously disputed terms in the '573 patent, and focused their dispute regarding two other disputed phrases. However, the meanings of a number of other terms remain in dispute.

After reviewing the exhibits and briefs offered by both parties, and having heard the parties' arguments during the *Markman* hearing, and pursuant to the foregoing Order and Rule 53, Federal Rules of Civil Procedure, the master issues the following report and recommendation on claim construction.

II.

Claim Construction Principles

A. Overview

A patent is a fully integrated written instrument. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed.Cir.1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). A patent, by statute, must provide a written description of the invention, a disclosure that would enable one of ordinary skill in the art to make and use the invention, and a disclosure of the best mode known to the inventor for practicing the invention. 35 U.S.C. s. 112(1).FN2 A patent must also contain claims "particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. s. 112(2).FN3 The claims of a patent provide the measure of a patentee's right to exclude others from practicing the claimed invention. 35 U.S.C. s. 154.FN4

FN2. 35 U.S.C. s. 112(1) provides:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most neatly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

FN3. 35 U.S.C. s. 112(2) provides:

The specification shall conclude with one or more claims particularly pointing, out and dis finctly claiming the subject matter which the applicant regards as his invention.

FN4. 35 U.S.C. s. 154(a)(1) provides:

Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process, referring to the specification for the particulars thereof.

B. Claims

Primary claim construction principles are discussed and explained in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed.Cir.2005) (*en banc*). Among those are that "[i]t 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*, 415 F.3d at 1312, quoting *Innova/ Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed.Cir.2004), and citing *Vitronies Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). *See also* *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed.Cir.1998) (claim construction "begins and ends" with the actual words of the claims). "That principle has been recognized since at least 1836, when Congress first required that the specification include a portion in which the inventor 'shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.'" ' *Phillips*, 415 F.3d at 1312.

"[T]he words of a claim 'are generally given their ordinary and customary meaning,'" ' and "the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application." *Id.* at 1313. "That starting point is based on the well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art." *Id.* at 1312. "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

"In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. Thus, in some instances, "general purpose dictionaries may be helpful," but, as the court explained, "[i]n many cases that give rise to litigation * * * determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art." *Id.* "Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to 'those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.'" ' *Id.*, quoting *Innova*, 381 F.3d at 1116. "Those sources include 'the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.'" ' *Phillips*, 415 F.3d at 1314.

Thus, the claim construction process begins with the language used in the claims because "[q]uite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms." *Id.* "Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term. Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Id.* (citation omitted).

"Differences among claims can also be a useful guide in understanding the meaning of particular claim terms." *Id.* That is referred to as "claim differentiation." "For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15. However, claim differentiation is a guide, not a rigid rule, and there are exceptions, as discussed below.

C. Specification

The specification nevertheless remains important in claim construction. "The claims, of course, do not stand alone. Rather, they are part of 'a fully integrated written instrument,' consisting principally of a specification that concludes with the claims. For that reason, claims 'must be read in view of the specification, of which they are a part.' * * * [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.* at 1315.

In particular, "[c]onsistent with that general principle," the cases recognize that (1) "the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs," and (2) "[i]n other cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor. In that instance as well, the inventor has dictated the correct claim scope, and the inventor's intention, as expressed in the specification, is regarded as dispositive." *Id.* at 1316.

However, two claim construction principles are that (1) claims are read in light of the specification, but (2) limitations from the specification must not be read into the claims. The line between the two is not always clear. *See Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 87 (Fed.Cir.1998) ("there is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification"). In *Phillips*, the Federal Circuit advised that the "line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms. For instance, although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment. That is not just because section 112 of the Patent Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments." *Phillips*, 415 F.3d at 1316 (citations omitted).

The Federal Circuit also advised: "To avoid importing limitations from the specification into the claims, it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so. One of the best ways to teach a person of ordinary skill in the art how to make and use the invention is to provide an example of how to

practice the invention in a particular case. Much of the time, upon reading the specification in that context, it will become clear whether the patentee is setting out specific examples of the invention to accomplish those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive. The manner in which the patentee uses a term within the specification and claims usually will make the distinction apparent." *Id.* at 1323 (citations omitted).

Nevertheless, the Federal Circuit has acknowledged that "[i]n the end, there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature. While that task may present difficulties in some cases, we nonetheless believe that attempting to resolve that problem in the context of the particular patent is likely to capture the scope of the actual invention more accurately than either strictly limiting the scope of the claims to the embodiments disclosed in the specification or divorcing the claim language from the specification." *Id.* at 1323-24.

D. Prosecution History

The words in the claim may also be interpreted in light of the prosecution history, if in evidence. *Teleflex, Inc. v. Vicoso N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed.Cir.2002). "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent. Furthermore, like the specification, the prosecution history was created by the patentee in attempting to explain and obtain the patent." *Phillips*, 415 F.3d at 1317 (citations omitted).

"Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* "Nonetheless, the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be. *Id.*

III.

Veritas' U.S. Patent No. 5,469,573-the '573 Patent

A. Overview

The '573 patent generally discloses "a data backup procedure and apparatus for backing up and restoring, or otherwise loading a fully configured operating system to the high capacity storage device (e.g ., hard disk) of a computer workstation, such as a personal computer. The invention quickly restores the operating system to the workstation from standard system backup media, such as magnetic backup tapes, without the need to reload and reconfigure the operating system from its original distribution media. The operating system can be restored regardless of whether the high capacity storage device has been reformatted, repartitioned, or otherwise replaced with an equivalent device. " '573 patent, col. 2, lines 3-13.

1. Background

The specification explains by way of background that "[c]omplex computer systems require similarly

complex disk operating systems to support the wide variety of possible system hardware and software configurations available today." '573 patent, col. 1, lines 21-24. Such operating systems included "IBM OS/2 (commercially available from IBM corporation), Microsoft MS-DOS, and Microsoft Windows 3.x (both commercially available from Microsoft Corporation, Redmond, Wash.)." '573 patent, col. 1, lines 14-17. According to the specification, "[b]ecause there are so many possible system configurations available, a typical operating system needs to be individually tailored for each personal computer system on which it is installed"-a process that "typically requires that a skilled technician spend several hours building the operating system on the personal computer according to the desired system configuration. This process is typically repeated for each system built, even if the configuration of that system is identical to one previously built." '573 patent, col. 1, lines 25-28. For example, according to the specification, "[l]oading OS/2 onto the PC can take as long as three to five hours, involve as many as twenty-four diskettes which must be manually inserted into the PC when prompted by the installation program, and require the attention of a skilled computer operator." '573 patent, col. 4, lines 16-20.

However, data stored on "magnetic media disk drives" were vulnerable to loss or corruption, such as through " 'head crashes,' accidental exposure to magnetic fields, loss of power during data writing operations, unintentional reformatting or data overwriting," "software failure, user error, hard storage device failure, or even loss or theft of the storage media or device." '573, patent, col. 1, lines 35-41. Thus, "[d]ata backup systems, such as magnetic tape backup," were generally used to restore "corrupted or destroyed data files on the high capacity hard disk." '573 patent, col. 1, lines 42-44. According to the specification, though, such backup systems normally required that "the disk operating system installed on the hard disk be intact and fully operational before data [could] be restored to the hard disk. A data loss affecting the operating system itself is typically not recoverable by using the tape backup system, and requires that the operating system be reloaded onto the hard disk and configured anew." '573 patent, col. 1, lines 45 47

According to the specification, one may be able to use a "digital image of that hard disk" to restore high capacity hard disks "on a media bit mapped basis" because "the operating system is simply some portion of the total image being restored." '573 patent, col. 1, lines 56-60 "However, any reformat or repartition of the hard disk, which is typically required after a head crash or other problem affecting the integrity of the media, can change the underlying logical structure of the hard disk which may make it impossible to restore a digital image to the hard disk without losing data." '573 patent, col. 1, lines 60-66

2. Disclosure

Overall, the disclosure of the invention may be generally discussed in four parts: (1) a data processing system on which the recovery process may be run, (2) creation of an electronic backup, for example on tape, (3) creation of a recovery disk, and (4) the recovery process.

a) Data Processing System

Figure 1 is said to disclose a "functional block diagram of a PC workstation which utilizes the operating system recovery or loading features of this invention." '573 patent, col. 3, lines 16-18.

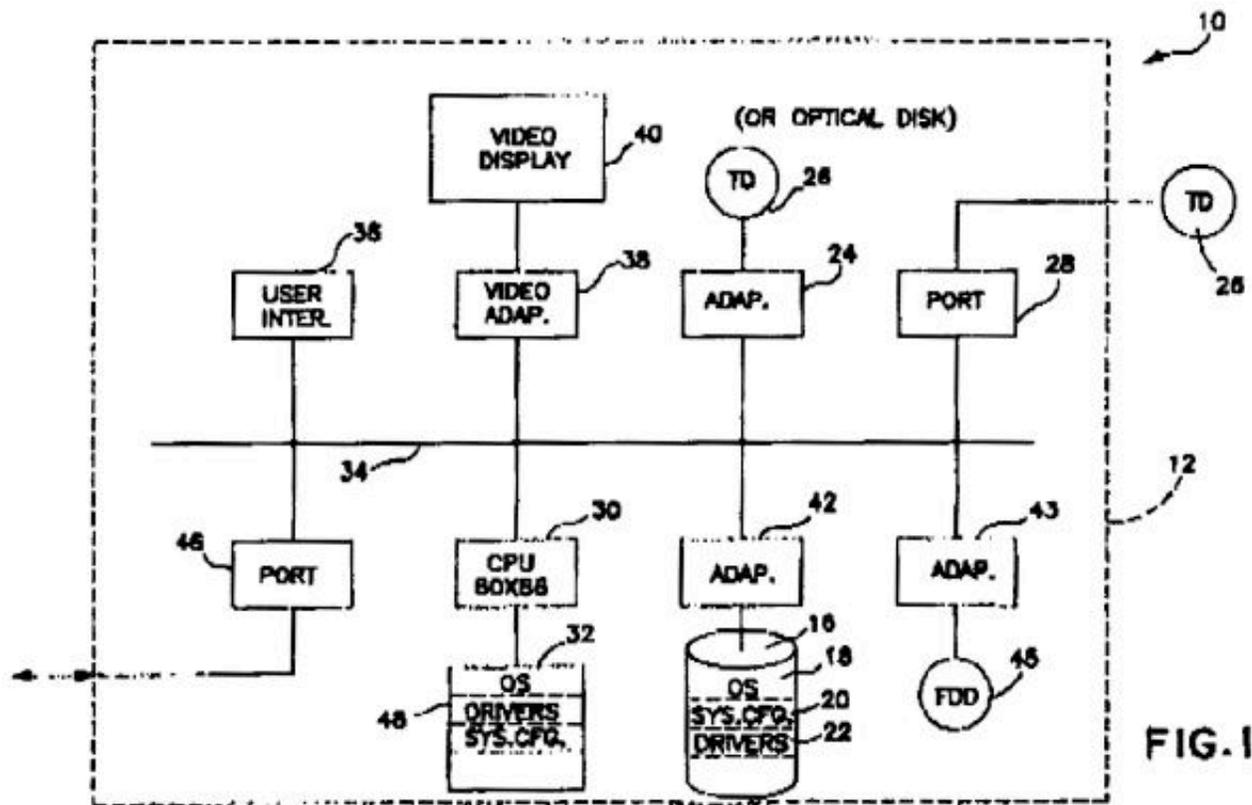


FIG. 1

According to the specification, "[d]ata processing system 10 includes a computer workstation 12," *e.g.*, "an IBM-compatible personal computer (PC) operating under a disk operating system" such as IBM OS/2 (versions 1.2, 1.3x, 2.0 and 2.x), Microsoft MS-DOS, Microsoft Windows 3.x, UNIX, or another operating system. The specification explains that workstation (12) typically includes "storage device 16 * * * which stores files necessary to start (boot) and operate the workstation," *i.e.*, "operating system files 18, system configuration files 20, device driver files 22, and any other files necessary to properly configure and operate the workstation;" "interface 24 for connecting to a backup data device 26;" "workstation data port 28;" "a processor 30;" "memory 32;" and "backplane channel 34 [that] can connect the processor 30 to various devices in the workstation including a user interface 36, a video display adapter 38 for driving a video display 40, a hard disk drive adapter 42 for communicating with hard disk drive 16, a tape drive adapter 44 for communicating with the backup tape drive device 26, and a data port interface 46 for communicating with a wide variety of devices such as modems and printers. Typically, each interface and adapter device requires a specific software de vice driver 48 resident in memory 32 to operate the device in the configured workstation/operating system environment." '573 patent, col. 3, line 42; '573 patent, col. 4, line 13.

b) Creating a "Backup Tape"

The specification describes, in connection with Figure 2, the various media that may be involved in creating an electronic backup, and, in connection with Figure 3, the process for doing so. Turning first to the media, Figure 2:

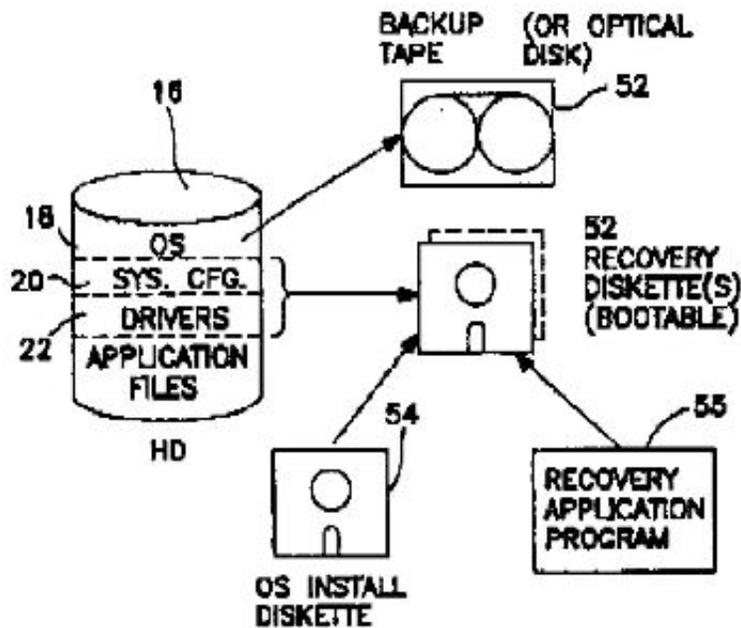
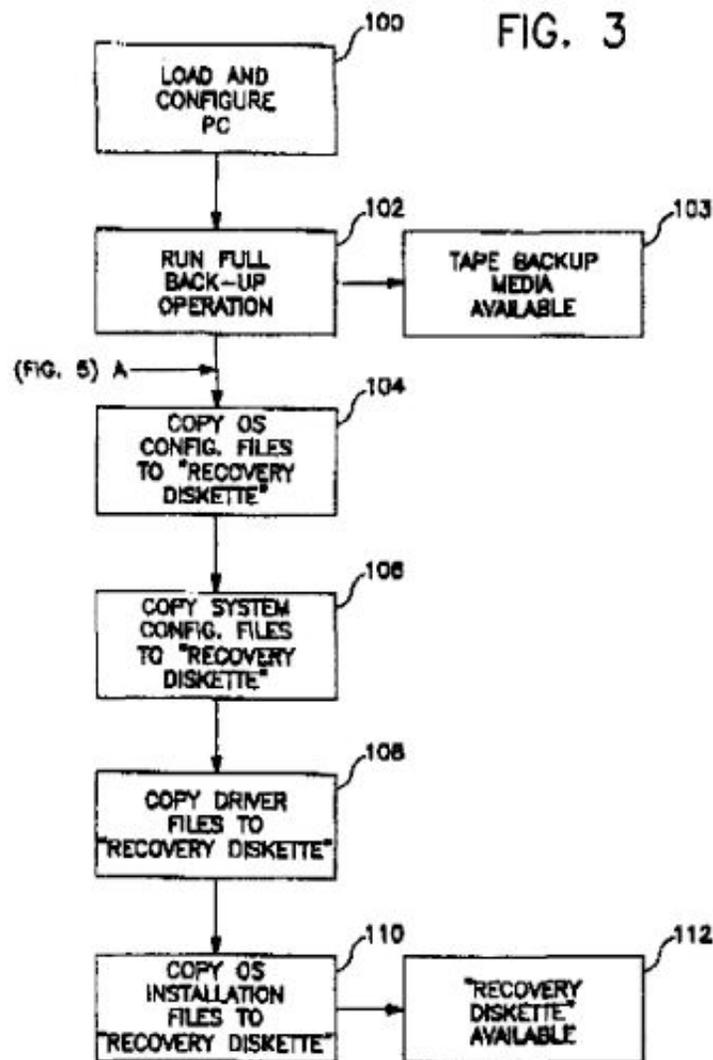


FIG. 2

is said to illustrate a "PC hard disk drive 16" that is "fully loaded and configured with operating system files 18, system configuration files 20, and device driver files 22." According to the specification, "[a]ll the files stored on hard disk 16 are backed up to create one or more backup tapes 50. " '573 patent, col. 4, lines 26-30.

Figure 3 is said to illustrate the "preparation steps performed prior to implementation of the operating system recovery and loading procedure of this invention," which includes, *inter alia*, creating backup media.

FIG. 3



According to the specification, at step 100, "[p]rior to performing a recovery or loading operation," a PC is "fully loaded and configured" with the "operating system, device drivers, configuration files, and application software including a tape backup program." '573 patent, col. 5, lines 19-24. At step 102, a "partial or full backup" of the PC hard disk is done to "create a restorable backup media set" at step 103. That "backup media," according to the specification, includes "any or all files currently residing on the PC hard disk, including all operating system files, configuration files, and device drivers," and is "used as the source for the operating system subsequently loaded or restored onto the PC hard drive." '573 patent, col. 3, lines 32-38.

c) Creating a "Bootable Recovery Disk"

The specification describes, also in connection with Figures 2 and 3, the various media that may be involved in creating a recovery disk, and the process for doing so. In connection with Figure 2, the specification explains that the "bootable recovery diskette 52" includes copies of the "device drivers 22," "[o]perating system installation files * * * from the original disks 54 distributed with the operating system," "recovery application program 55 * * * for implementing the recovery and loading procedures," and optionally "a text file which identifies the PC system the recovery diskette belongs to." '573 patent, col. 4, lines 32-39.

According to the specification, "the recovery diskette can actually be a set of several recovery diskettes, each diskette containing a particular sub set of files." '573 patent, col. 4, lines 54-56. "The number of recovery diskettes required is a function of the method in which the operating system is distributed, rather than by the requirements of the load or restore procedure of this invention." '573 patent, col. 5, lines 8-11. For example, the "recovery diskette set" for IBM OS/2 v. 1.2, 1.3x, the specification explains, comprises two recovery diskettes: "one bootable disk containing a copy of the original OS/2 boot/install distribution disk files and some system configuration files, and the other diskette containing all executable files necessary to run the recovery or loading process and other required resource files." '573 patent, col. 4, lines 58-62. On the other hand, the recovery diskette set for IBM OS/2 v. 2.0, 2.x may include up to four recovery diskettes: "one bootable disk contains a direct copy of the original boot disk distributed with the OS/2 v. 2.0, 2.x. Another disk contains modified copy of the OS/2 v. 2.0, 2.x 'Install' disk (minus some files, plus configuration info files). A third disk contains all executable files necessary to run the recovery or loading process of this invention, and other resource files. Yet a fourth disk containing format information is required if multiple versions of OS/2, with the OS/2 boot manager, are to be recovered or loaded into the hard disk." '573 patent, col. 4, lines 62-col. 5, line 7. In light of that, the specification explains that "these recovery diskette sets will be referred to herein as the recovery diskette for simplicity, referring to removable media which is bootable, and contains all the needed operating system, system configuration, device driver, and recovery application program files." '573 patent, col. 5, lines 11-16.

In connection with Figure 3, the specification explains that at step 104, "a recovery diskette is prepared from the fully configured PC by copying various files from the hard disk onto the recovery diskette, which essentially define the current PC configuration." Such files include "vital operating system configuration files (104), system configuration files (106), and device drivers (108) * * * required for the proper operation of the hardware, operating system, and attached devices," as well as "[o]perating system installation files" (110) from the " 'lostallation' diskette, distributed with the original operating system distribution diskettes," "an application program for implementing the loading or recovery procedure of this invention, and an application program capable of recovering the operating system files from the backup media onto the hard disk of the PC." '573 patent, col. 5, lines 39-65. For example, "the copied files include various OS/2 operating system files, CONFIG.SYS, and various device drivers such as SCSI.SYS (IBM OS/2 versions prior to 2.0), ASPI4OS2.SYS (IBM OS/2 versions prior to 2.0), TAPE.TSD (MS OS/2 LADDR), *.BID (MS OS/2 LADDR), *.ADD (IBM OS/2 2.0), and any backup device drivers." '573 patent, col. 5, lines 39-65.

d) The Recovery Process

Although the specification discloses a number of recovery process embodiments, only the recovery process of Figure 4 is discussed here. Other embodiments are discussed as necessary to address the parties' respective proposed constructions.

Figure 4 is said to illustrate "implementation of the operating system recovery and loading procedure of this invention:"

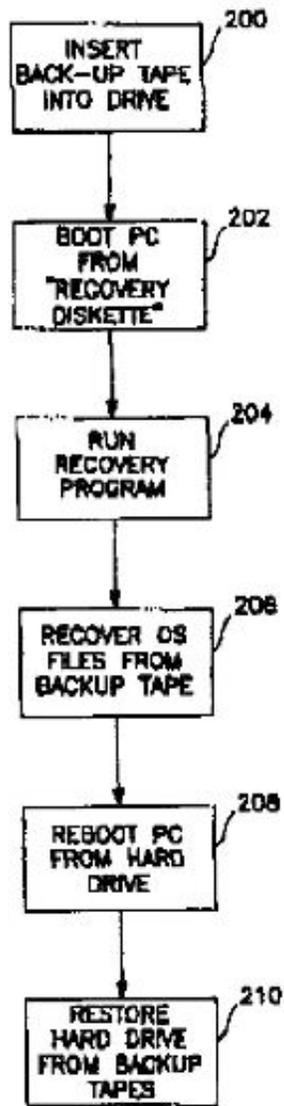


FIG. 4

The specification explains that "[t]o begin the recovery process the operator inserts (200) the backup tape containing the operating system files to be restored into the PC tape drive." At step 202, the "operator starts (i.e., boots)" the PC "from the recovery diskette which loads an initial, temporary operating system into the memory of the PC. The recovery diskette also supplies this initial operating system with the necessary system configuration files and device drivers, i.e., the files previously copied to the recovery diskette from the fully configured PC." '573 patent, col. 6, lines 10-18. "Next, a recovery program is loaded from the recovery diskette into the PC and run (204) to directly recover (206) the operating system files from the backup tape," as well as recover other files on the backup tape. "Finally, the PC is rebooted 208 from the recovered operating system files now installed on the hard disk, and the hard drive can be further restored (210) from the backup tape if necessary." '573 patent, col. 6, lines 26-33.

3. The Claims

As noted above, Veritas asserts claims 1-5, 7-10, 13-19, 22-24, and 26-33 of which claims 1, 18, 30 and 33 are independent, and provide:

1. A method for loading a fully configured operating system onto a storage device of a data processing system, comprising the steps of:

providing a first media comprising operating system files for installing the fully configured operating system onto the storage device;

providing a second media comprising configuration-specific data files;

initializing the data processing system from the second media to provide a temporary operating system and using the configuration specific data files to configure the data processing system;

loading the fully configured operating system files from the first media to the storage device using the temporary operating system; and

reinitializing the data processing system from the storage device to install the fully configured operating system.

18. A method for loading a fully configured operating system onto a disk drive of a data processing system, comprising the steps of:

copying fully configured operating system files stored on the disk drive to a first media;

copying configuration-specific data files from the disk drive to a second media;

initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system;

initializing the disk drive prior to the step of loading the fully configured operating system files from the first media to the disk drives;

loading the fully configured operating system files from the first media to the disk drive using the temporary operating system to install the fully configured operating system; and

reinitializing the data processing system from the disk drive to provide the fully configured operating system.

30, A method for loading a fully configured operating system onto a disk drive of a first data processing system, comprising the steps of:

configuring a disk drive of a second data processing system with the desired configuration for the first data processing system;

copying fully configured operating system files stored on the disk drive of the second data processing system to a first media;

copying configuration-specific data files from the disk drive of the second data processing system to a

second media;

initializing the first data processing system from the second media to provide a temporary operating system and using the configuration specific data files to configure the first data processing system; and

loading the fully configured operating system files from the first media to a disk drive of the first data processing system using the temporary operating system to install the fully configured operating system.

33. A method for loading a fully configured operating system onto a storage device of a data processing system, comprising the steps of:

initializing the data processing system from a second media, having configuration-specific data files, to provide a temporary operating system using the configuration specific data files to configure the data processing system;

loading the fully configured operating system files from a first media to the storage device using the temporary operating system, the first media having operating system files for installing the fully configured operating system onto the storage device; and

reinitializing the data processing system from the storage device to install the fully configured operating system.

B. Agreed Terms

In the parties' Joint Submission following the *Markman* hearing, the parties have advised that they have reached agreement on the following terms:

Claim Language	Parties' Agreement (or Near Agreement)
system configuration files	<i>Agreed:</i> Configuration-specific data files that provide information about the set up of the data processing system.
operating system configuration files	<i>Agreed:</i> Configuration-specific data files that provide information about the set up of an operating system of the data processing system.
device driver files	<i>Agreed:</i> Configuration-specific data files that are used to activate one or more devices attached to the data processing system.
configuration-specific data files	<i>Agreed:</i> Files that are used to configure the data processing system in a specific manner and that collectively provide necessary information for loading data from the first media to the storage device (or disk drive) of that system.

[Noting, however, that "[t]he parties are disputing the phrase 'to configure the data processing system' as set forth in the 'Narrowed Disputes' section.]

Joint Submission at 1.

Despite the parenthetical "or Near Agreement," the master understands from the Joint Submission as a whole ("the parties have reached agreement") and "Agreed" adjacent each construction, that the parties have, in fact, reached agreement on the meanings of those terms.

C. Disputed Terms

Overall, prior to the *Markman* hearing, the parties disputed several terms, "grouped" as follows: (1) "initializing" related terms, (2) "configuration-specific" related terms, (3) "configure" related terms, (4) "desired configuration" and "fully configured operating system," (5) "install," (6) "reinitializing" relating terms, (7) "storage" related terms, (8) "loading" related terms, (9) "limiting to a predetermined quantity," and (10) requests to interpret "each claim as a whole." *See* Veritas' Brief, Apx. B at 4-17; Microsoft's Response at 12 *et seq.* Each of those terms-as grouped by the parties-is discussed separately below.

D. Person Having Ordinary Skill in the Art

The parties dispute their respective characterizations of a person having ordinary skill in the art. Veritas focuses on the educational and skill level, while Microsoft focuses on knowledge of the prior art.

1. The Parties' Arguments

According to Veritas, an artisan "would have experience with the design and implementation of computer system software including operating systems." Veritas further urges that "[o]ne of ordinary skill in the art would typically have a B.S. or M.S. in computer science, computer engineering, or electrical engineering, and would have 2-5 years of experience in computer system software development above and beyond any study related to the degree." Veritas' Brief at 10.

Microsoft, on the other hand, asserts that "as of February, 1993, in relation to the problem addressed by the '573 Patent," one of ordinary skill in the art would be "(1) a skilled system administrator looking for ways to reduce the amount of work involved in recovery of a system disk (a disk storing the operating system) or (2) the backup software designer, skilled in the art of software engineering, looking to incorporate rapid recovery from the system disk failures into a backup application." According to Microsoft, "[c]ach POSA [person of ordinary skill in the art] would have been familiar with the Emergency Boot (Recovery) Disk prior art, as that art addresses the same problem addressed by the '573 patent (and provided the same solution)." Microsoft's Response at 7-8.

Microsoft describes the "Emergency Boot (Recovery) Disk prior art" based on a "1990 Baxter/Herbert Usenet publication called 'How to Make a Disaster Boot Floppy,' " that, according to Microsoft, "aptly described the 'chicken before the egg' problem" of having saved a copy of a configured hard disk to backup tape, but being unable to retrieve the contents of that tape in the event of a hard disk crash without installing " 'a fresh Unix, configure it, and then restore the tape." ' Microsoft contends that "[n]early three years later, after Baxter asked and answered that question, the '573 Patent applicants described the same problem," citing column 1, lines 43-55. According to Microsoft, "[i]n 1992, the standard solution to this problem was to create an Emergency Boot (Recovery) Disk with sufficient configuration information to allow the

computer to access and restore whatever had been saved to the backup media, including the operating system if that had been backed up." Microsoft argues that "[a]lthough Veritas' expert Dr. Smith avoided reading the prior art Microsoft had provided to Veritas, he knew enough to know that prior to 1993, the standard way to solve the crash recovery problem addressed in the '573 Patent was to use an emergency boot disk." According to Microsoft, the "standard Emergency Boot (Recovery) Disk technique used the same steps described in the '573 Patent." Microsoft's Response at 6-7.

With that in mind, Microsoft argues that "[a] POSA picking up the '573 Patent application on February 26, 1993, immediately would have recognized that it was describing an implementation of the standard Emergency Boot (Recovery) Disk crash recovery procedure, and read it through that 'state of the art' lens." Furthermore, according to Microsoft, the artisan "also would have seen that the application was not limited to any particular operating-system implementation of that known Emergency Boot (Recovery) Disk technique." With that background, Microsoft argues, "the POSA would have understood the patent application to describe" essentially the "standard Emergency Boot (Recovery) Disk technique," which Microsoft describes against the disclosure of the '573 patent. Microsoft also notes that the "Applicants did not cite any Emergency Boot (Recovery) Disk art to the Examiner and the Examiner did not find that art on his own." Microsoft's Response at 8-11.

According to Veritas, though, "Microsoft attempts to compensate for the deficiencies in its alleged 'prior art' references acknowledged by its own expert and to improperly turn this *Markman* proceeding into a truncated validity hearing." Veritas' Reply at 1. Veritas does not contest that "boot disks, which could be used in various situations including system recovery, were known at the time," and that "Dr. Smith correctly acknowledged that 'everyone started with an emergency boot disk.'" However, Veritas contends that "was the prior art solution-to boot with an emergency boot disk, install the base operating system from scratch, configure the base operating system as needed, and then restore the desired data from the backup media. Thus, simply using an emergency boot disk would not solve the problems of system recovery and deployment in the manner described and claimed in the patent. Rather, it is part of the conventional approaches to these problems that the '573 patent seeks to improve upon." *Id.* at 3.

2. Discussion

The parties do not appear to dispute the particular skill level of an artisan in the field of the '573 patent, and Microsoft does not dispute Veritas' statement of that level of skill. Microsoft argues, though, that the artisan would have in mind both the particular problem discussed in the '573 patent and prior art solutions to that problem.

This is an unnecessary dispute at this stage. "When the references are in the same field as that of the applicant's invention, knowledge thereof is presumed." *In re Dance*, 160 F.3d 1339, 1343 (Fed.Cir.1998). *See also* *In re Carlson*, 983 F.2d 1032, 1038 (Fed.Cir.1992)("To determine patentability, a hypothetical person is presumed to know all the pertinent prior art, * * *."); *In re Gorman*, 933 F.2d 982, 986 (Fed.Cir.1991)("When the references are all in the same or analogous fields, knowledge thereof by the hypothetical person of ordinary skill is presumed.). Because the parties do not dispute the skill level of the hypothetical person of ordinary skill in the art, and because there can be no dispute that such hypothetical person is presumed to be aware of prior art in the same field as the applicant's invention, this dispute does not require resolution.

The "initializing" Phrase

A. The Parties' Proposed Constructions

The parties primarily dispute the meaning of the phrase "initializing the data processing system from the second media to provide a temporary operating system *and* using the configuration-specific data files to configure the data processing system" (underlining added) found in the claims. Veritas urges a construction of the complete phrase while Microsoft divides the phrase into two clauses separated by the "and," namely, the "initializing" clause and the "using" clause," and urges a separate construction for each.

Thus, the parties propose the following constructions:

Veritas' Proposed Construction

Starting the operation of the [first] data processing system from the second media, and adjusting the starting configuration of the [first] data processing system using the configuration-specific data files, to set up a temporary operating system for use.

Microsoft's Proposed Construction

Claims 1, 18, and 30 each recite two steps, 'initializing ...' and 'using ...,' separated by the word 'and.' The word 'and' is missing in claim 33, but that is a typographical error and properly read, this claim language includes the word 'and' in claim 33 as in the other claims.

"initializing" clause: Starting (booting) the operation of the data processing system using an interim operating system located on the second media.

"using" clause: Configuring hardware and/or software on the data processing system based on information contained in the configuration specific data files. For example, loading a tape backup device driver from the second media to the data processing system's memory (to support later transfer of data from tape to that system's storage device).

See JCCS, Exh. B at [18] & Exh. C at 49-50; Veritas' Brief at 12-14; Microsoft's Response at 15-16.

B. Parties' Respective Arguments

Veritas argues that "[a]s part of the 'initializing' step of these claims, the 'temporary operating system' is provided using the 'configuration-specific data files' to configure the data processing system." According to Veritas, "[t]he proper scope of this element can be ascertained by asking three basic questions: *What?* Initializing, or starting, the [first] data processing system from the second media. *Why?* To provide, or set up for use, a temporary operating system. *How?* Using the configuration-specific data files to configure, and thereby adjusting the starting configuration of, the data processing system." Veritas points to supporting statements in the "Summary of the Invention," the prosecution history, and in "all of the embodiments of the '573 patent," and points to particular embodiments in which "the temporary operating system is set up by

processing the configuration file, CONFIG.SYS, during system initialization to install the specific device driver files necessary to support the hardware configuration." Veritas' Brief at 14-17 (Veritas' emphasis).

Veritas contends that Microsoft's proposed constructions "improperly parse the recited claim element into two separate and disjointed phrases," "ignore the inventive requirement that the temporary operating system be set up using the configuration-specific data files during system initialization," and "sever any linkage between the temporary operating system and the configuration specific data files." According to Veritas, "the claims as construed by Microsoft would not solve the problems of system recovery and deployment in the manner set forth in the patent, as confirmed by the testimony of its own technical expert." Furthermore, Veritas contends that "Microsoft's proposed constructions are contradicted by its own prior characterization of the '573 patent to the U.S. PTO" that "[t]he configured operating system may then be subsequently restored on the computer system by *initializing the computer system* from the bootable recovery diskette and *using the system configuration files* and device driver stored on the recovery diskette *to provide a temporary operating system.*" ' Veritas' Brief at 17-19 (Veritas' emphasis).

Microsoft contends, on the other hand, (1) that its reading is the "literal and grammatical reading of this claim language," (2) the omission of the word "and" in claim 33 was in error, and (3) its "non-limiting example" would be helpful to the jury. With respect to (1), Microsoft argues that "[t]he POSA knew that the Emergency Boot (Recovery) Disk served at least two distinct functions," namely, "it allowed the crashed computer to boot up by loading operating system files from the Emergency Boot (Recovery) Disk into the computer's memory as a temporary operating system" and "it provided enough configuration data to allow the computer to be configured sufficiently to recover data from the backup device." Microsoft points to the example of "the CT Boot implementation" that "stored a partially configured version of the SCO Unix (or SCO Xenix) operating system on the Emergency (Recovery) Disk, with enough configuration information to allow the computer to recover its backed up data," and argues that "the POSA reading the '573 Patent application in 1993 immediately would see that its 'second media' recovery diskette served the exact same two functions, and would read the claims in that light." Thus, Microsoft argues, the claim language "recites two traditional functions of the Emergency Boot (Recovery) Disk: boot and configure," and use of the word "and" means "that there are two separate actions ('initializing' and 'using')." Microsoft's Response at 16-19.

In connection with the "initializing" or "boot" clause, therefore, Microsoft argues that the "participle clause is complete and self contained," *i.e.*, "[i]t recites an action ('initializing ... from the second media'), the object of that action ('the data processing system'), and the result of that action on that object ('to provide a temporary operating system')." Microsoft points out that the claim uses the "broad term 'provides,'" and "does *not* say 'configures,' 'installs' or 'sets up for use' the temporary operating system." Microsoft also contends that the "using" or "configure" clause, "is complete and self-contained," and "has an action (using) that is performed on an object (the configuration-specific data files) to cause a result (to configure the data processing system)." According to Microsoft, the "using" clause "is *not* restricted to any particular configuration-specific data files," *e.g.*, "does *not* require these files to include device driver files (*cf.* Claim 9) or operating system configuration files (*cf.* Claim 8)," nor "does it require any particular way of using these files to tailor (configure) the data processing system," nor "require that the files be used during booting of the system, or during any other action." In Microsoft's view, the "action's result (to configure the data processing system)" "is not restricted to any particular manner in which the data processing system is configured," nor "specify that any particular part of the data processing system must be configured." Microsoft contends that the "result" "does not require (or prohibit) that the temporary operating system is configured by the configuration specific data files." *Id.* at 19-20 (Microsoft's alteration & emphasis).

Microsoft further contends that "[n]othing in the grammatical structure of this claim language requires that these two separate participle clauses be merged in any way," "[n]or does anything in the substantive content of this claim language require that these two separate participle clauses be merged in any way." According to Microsoft, "the specification supports Microsoft's plain-meaning construction of the claim language in at least the following five ways:" (1) "the specification describes the boot and configure functions of the boot and recovery disk *separately*," citing two sentences at column 4, lines 40-46, that in Microsoft's view separately "map" to the two clauses, (2) "nothing in the specification *requires* the configuration-specific data files to configure the temporary operating system (as distinct from configuring vis-a-vis other hardware and/or software on the data processing system," (3) "nothing in the specification requires the configuration-specific data files to play a role in the first, 'boot' function," pointing to an example at column 7, lines 8-12 that Microsoft urges is to contrary, (4) "nothing in the patent limits the 'operating system' to being a 'dynamically configurable' operating system," pointing to the "variety of operating systems" disclosed in the '573 patent, and (5) "nothing in the patent requires a particular manner of storing or using the device driver files," pointing to named inventor Gonsalves' deposition testimony. Microsoft's Response at 19-22 (Microsoft's emphasis).

As for those sections of the specification urged by Veritas, Microsoft contends that those sections (1) state "that the temporary operating system is provided by initializing (booting) the data processing system (not by the configuration-specific data files), which supports Microsoft's reading of the claims," (2) do not "restrict the operating system to a dynamically configurable operating systems," (3) "while unclear on this point, [suggest] that the temporary operating system uses the configuration-specific data files (in some unspecified manner), which is not contrary to Microsoft's position," and (4) do not provide "the final wording used in the *issued* claims." Microsoft's Response at 22 (Microsoft's emphasis).

According to Microsoft, the prosecution history supports its construction because (1) "the Applicants added the word 'and' by amendment to separate these two clauses," (2) "Applicants presented a new application claim 33 (later cancelled) in which they again recognized that boot and configure functions may be separate," and "confirm[ed] that the recovery disk has some files used in booting the data processing system (which puts a temporary operating system into memory), and has other files used to configure the workstation, and that 'boots' and 'configures' may be *separate* actions," (3) "in distinguishing the prior art, Applicants described the role of the configuration-specific data files as supporting later transfer of data form the backup media-which is Microsoft's position- *not* to assist booting the computer-as Veritas urges," and (4) "the Examiner read the term 'initializing' in the independent claims broadly, equating it with 'booting.'" Microsoft's Response at 22-24.

With respect to claim 33, Microsoft urges that the claim is "unclear as written," and "appears to have" the two participle clauses urged above in light of the patentees' prosecution history remarks. According to Microsoft, "[t]he specification does not always use the word 'and' to separate the two clauses, but the word was added to the claims to clarify this point." Microsoft's Response at 25-26.

Finally, Microsoft contends that the "non-limiting example for the configuring action (loading a tape backup device driver ...) is taken from the patent," and "will help the jury understand this claim language." Microsoft's Response at 26 (Microsoft's alteration). Overall, Microsoft urges that its "construction honors the POSA's 'state of the art' lens, while Veritas instead takes an 'avoid the art' sledgehammer to the claims." *Id.* at 25.

Veritas replies that the " 'initializing' related terms constitute a single, integrated 'initializing' step in each of

the independent claims of the '573 patent." According to Veritas, "Microsoft's constructions of these terms ignore the patent's description of the invention and actually result in a method that fails to carry out the stated purpose of the invention," is "grammatically incorrect" and is "inconsistent with the patent's discussion of the stated purpose of the invention." Veritas contends that "a recovery procedure that did not configure the temporary operating system in this way to work with the specific system components during initialization could not restore the previously configured operating system in the face of increasing hardware and software complexity of computer systems," pointing to the testimony of Microsoft's expert, Mr. Lary, "in the context of early UNIX systems." Veritas also argues that the specification's use of multiple sentences to describe the "initializing" step is consistent with "common and grammatical sense," and that the specification contradicts Microsoft's argument that the specification does not require the configuration-specific data files to set up the temporary operating system, citing, *inter alia*, column 2, lines 24-26. Furthermore, Veritas contends, "an inventive step of the solutions presented by the '573 patent is configuring the temporary operating system during the initialization process, *i.e.*, a 'dynamic' configuration," and "the specification consistently and repeatedly describes using the device driver files to configure the computer system during initialization to set up the temporary operating system," *i.e.*, "in the OS/2 embodiments of the patent, the device driver files are selected and loaded based on the CONFIG.SYS file as part of the configuration process during system installation." Veritas' Reply at 5-10. Veritas adds that its construction "gives meaning to the term 'initializing' as part of the larger claim element by defining 'initializing' as 'starting ... and adjusting the starting configuration," which Veritas urges is "consistent with the ordinary meaning of the term 'initializing' in the context of data processing systems," citing, *inter alia*, a dictionary. Veritas' Reply at 6 n.5 (Veritas' alteration).

Veritas also contends that during prosecution, "the patentees unequivocally described the inventive methods as requiring the temporary operating system to be configured by the data processing system using the configuration-specific data files, all as part of the initialization process," and that the patentees' addition of "and" was "for purposes of clarity, and not a substantive change in response to any particular prior art or substantive, narrowing rejection." According to Veritas, claim 33 is "clear as written and is taken verbatim from the specification." Veritas' Reply at 10-12.

C. Discussion

In a nutshell, Microsoft urges that use of the word "and" means that "initializing" may be accomplished, and thus the "temporary operating system" may be provided, without "using the configuration-specific files." Veritas, on the other hand, contends that the "configuration-specific files" are used for "initializing the data processing system."

In essence, Microsoft's proposed construction severs any relationship between the "configuration-specific data files" and the "temporary operating system," and would read the claims as:

initializing the data processing system from the second media to provide a temporary operating system; and
using the configuration specific data files to configure the data processing system;

That is not, however, how the claims are written, and in construing the claims, courts are not permitted to re-write the claims. *See* Becton Dickinson & Co. v. C.R. Bard Inc., 922 F.2d 792, 799 n.6 (Fed.Cir.1990) ("Nothing in any precedent permits judicial redrafting of claims."). That is also not consistent with the written description of the invention in the specification. *See* Renishaw, 158 F.3d at 1249 ("The construction

that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.").

Claim 1, for example calls for:

1. A method for loading a fully configured operating system onto a storage device of a data processing system, comprising the steps of:

providing a first media comprising operating system files for installing the fully configured operating system onto the storage device;

providing a second media comprising configuration-specific data files;

initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system;

loading the fully configured operating system files from the first media to the storage device using the temporary operating system; and

reinicializing the data processing system from the storage device to install the fully configured operating system. [Emphasis added.]

As is apparent, the format of the claim (which is the same format appearing in the printed parent) suggests that the "initializing" step is a single step. Claims 18, 30 and 33 have a similar format. Among the rules applicable to practice before the U.S. Patent and Trademark Office (PTO) is 37 C.F.R. s. 1.75 dealing with claims. That rule provides, in part, "[w]here a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation." 37 C.F.R. s. 1.75(i). The Manual of Patent Examining Procedure (M.P.E.P.) s. 608.01(m) explains that "[t]here may be plural indentations to further segregate subcombinations or related steps," and "[i]n general, the printed patent copies will follow the format used but printing difficulties or expense may prevent the duplication of unduly complex claim formats." Although far from decisive, the format of the claims weighs against Microsoft's proposed construction.

Also, the context of the claims counsels against Microsoft's proposed construction. In claim 1, for example, the preamble informs that the method is one for "loading a fully configured operating system onto a storage device of a data processing system." The step of "initializing" appears in the context of the other steps of the recovery process.

The first-recited step calls for "providing a first media comprising operating system files for installing the fully configured operating system onto the storage device." The terms "the fully configured operating system" and "the storage device" find antecedent basis in the preamble: "A method for loading a fully configured operating system onto a storage device of a data processing system." The claim thus assumes the existence of "a data processing system" having a "storage device" that is to be "load[ed]" with "a fully configured operating system."

As noted above, Figure 1 depicts one such "data processing system 10." That "data processing system"-as illustrated-generally comprises (1) "computer workstation 12" and its subcomponents, and (2) "backup tape

drive device 26."

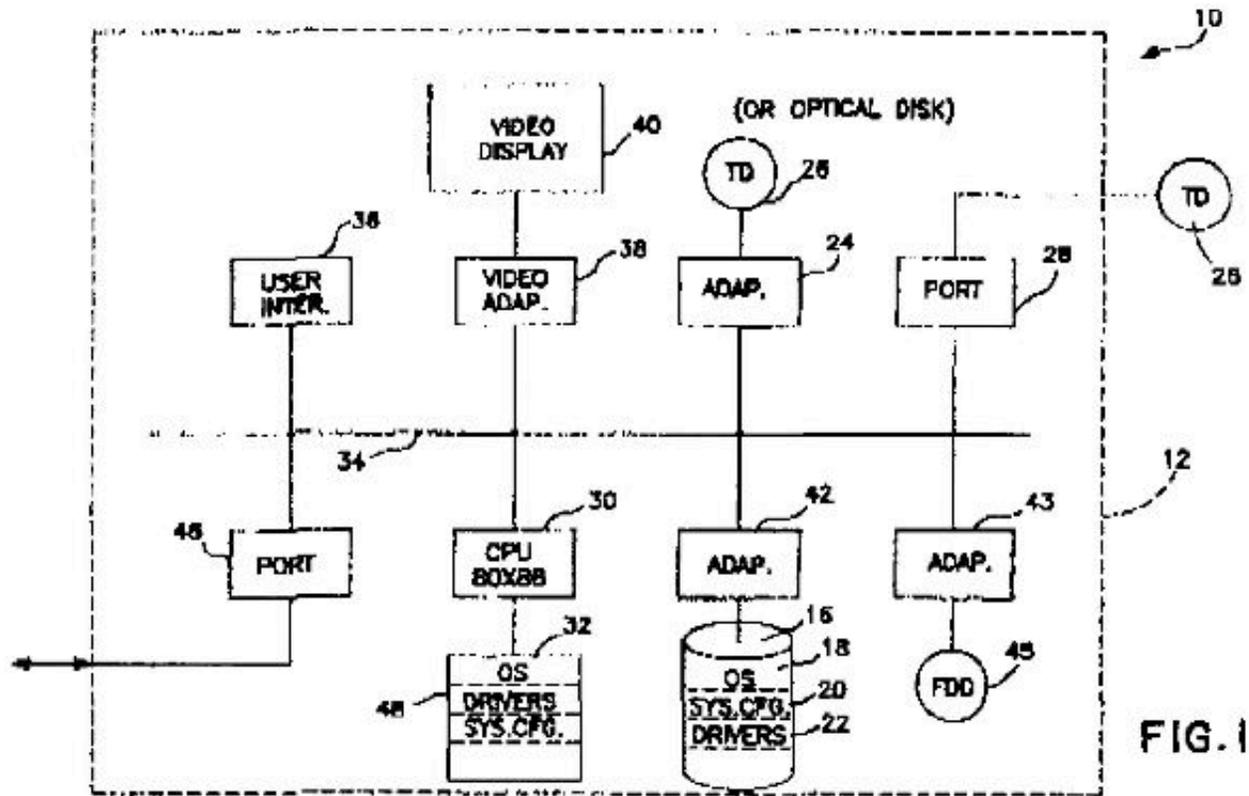


FIG. 1

That workstation further includes a "high capacity storage device 16." The "storage device 16" "stores files necessary to start (boot) and operate the workstation," including "operating system files 18, system configuration files 20, device driver files 22, and any other files necessary to properly configure and operate the workstation." '573 patent, col. 3, lines 54-58. As noted above, the specification explains that "a PC is fully loaded and configured [] as desired with the operating system, device drivers, configuration files, and application software including a tape backup program." '573 patent, col. 5, lines 21-24. Those files "essentially define the current PC configuration," '573 patent, col. 5, lines 41-42, and thus may be understood as one disclosed embodiment of a "fully configured operating system" that, in the context of the claim, is to be "load[ed]" onto the "storage device."

Those parts are detailed further in Figure 2:

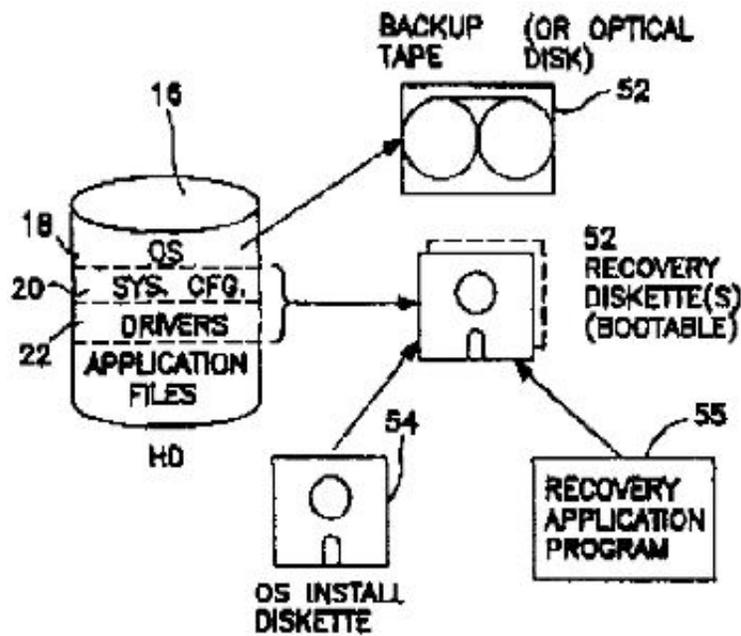


FIG. 2

As noted above, the specification explains that "[t]he PC hard disk drive 16 is first fully loaded and configured with operating system files 18, system configuration files 20, and device driver files 22." The specification then explains that "[a]ll the files stored on hard disk 16 are backed up to create one or more backup tapes 50." In that embodiment, "backup tape 50" may be understood as illustrating a "first media comprising operating system files," and that backup copying process as illustrating "providing a first media * * *." For example, dependent claims 2-4 provide:

2. The method of claim 1, wherein the step of providing the first media comprises copying the operating system files stored on the storage device to the first media.
3. The method of claim 2, wherein the step of providing the first media further comprises copying all the files from the storage device to the first media.
4. The method of claim 3, wherein the first media comprises magnetic tape, and copying all the files comprises running a data backup routine.

Thus, the first-recited step of "providing a first media comprising operating system files for installing the fully configured operating system onto the storage device" may be understood as generally drawn to the backup media.

The next recited step calls for "providing a second media comprising configuration-specific data files." According to the specification, "[t]he system configuration files 20 and device drivers 22 stored on the recovery diskette 52 are used to configure the system and provide the necessary device drivers to activate the PC devices, especially the backup tape drive 26." '573 patent, col. 4, lines 42-46. As noted above, the "bootable recovery diskette 52" can include "device drivers 22," "[o]perating system installation files are copied from the original disks 54 distributed with the operating system," "recovery application program 55"

and optionally "a text file which identifies the PC system the recovery diskette belongs to." '573 patent, col. 4, lines 32-39. Thus, "second media comprising configuration-specific data files" may be understood as referring, in the disclosed embodiment, to "bootable recovery diskette 52." *See* Microsoft's Response, Apx. B at 33 ("[A] 'temporary operating system' is installed from a recovery diskette, *i.e.*, the 'second media,' together with a number of files, *i.e.*, the 'configuration-specific data files,' necessary to support transfer of data between the storage device and the back-up system or 'first media,' *e.g.*, a QIC or DAT tape cartridge located in a backup device such as a tape drive.").

The parties now agree that "configuration-specific data files" means "[f]iles that are used to configure the data processing system in a specific manner and that collectively provide necessary information for loading data from the first media to the storage device (or disk drive) of that system." Joint Submission at 1. According to the claims, the "configuration-specific data files" may include "system configuration files," "operating system configuration files," and "device driver files," as dependent claims 7-9 indicate:

7. The method of claim 5, wherein the configuration-specific data files comprise system configuration files.
8. The method of claim 5, wherein the configuration-specific data files comprise operating system configuration files.
9. The method of claim 5, wherein the configuration-specific data files comprise device driver files.

See also '573 patent, col. 2, lines 43-47. ("In still other preferred embodiments, the configuration-specific data files include system configuration files, operating system configuration files, and device drivers. The device drivers specifically include device drivers for using a tape backup device for reading the magnetic backup tape.").

Returning to the context of the claim, with the "first media" and the "second media" having been "provid[ed]," the claim then recites the disputed "initializing" limitation:

initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system;

That is, in terms of the disclosed embodiment, the "data processing system" is "initialize[ed]" from the recovery diskette "to provide a temporary operating system," and the "configuration-specific data files" are "us[ed]" to "configure the data processing system." The "data processing system" is identified by numeral 10 in Fig. 1.

With respect to Microsoft's argument that "initializing" means "[s]tarting (booting) the operation of the data processing system using an interim operating system located on the second media," there seems to be no dispute that "initializing" *includes* "booting." In the field of computer science, "boot" has been explained as "[t]o load the operating system into a computer after it has been switched on; usually applied to small computers." MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS (5th ed.1994) at 253. Accordingly, "initializing the data processing system from the second media" may be understood as including, but not necessarily as being limited to, "booting the data processing system from the second media." In the case where the "second media" is a removable or "floppy" disk, that is physically done by inserting the disk into a "floppy" disk drive that is recognized by the computer firmware or otherwise as a "bootable" drive, and then switching the computer on.

There also seems to be no dispute that in order for a personal computer or PC of the type described in the specification to function (beyond initial power-on startup) at least some portion of an operating system, *e.g.*, MS-DOS, OS/2, *etc.*, must be loaded into the computer's memory. In the case of a PC of the type described in the specification, *i.e.*, one having a hard-disk drive and a removable or "floppy" disk drive, when such computer is "booted" the computer, through firmware or otherwise, looks first to see whether there is a disk in a bootable "floppy" disk drive (for example, Drive A, by convention) and secondly to the hard drive (for example, Drive C, by convention). If there is a disk in the "floppy" disk drive, the computer attempts to "boot" from that drive. If there is no disk in the "floppy" disk drive, the computer attempts to "boot" from the hard drive.

One embodiment of the '573 patent is directed to the situation where the computer cannot "boot" from the hard drive (*i.e.*, "After a hard disk error affecting the operating system, the PC typically will be incapable of starting (*i.e.*, booting) from the hard disk."). '573 patent, col. 6, lines 1-3. Another embodiment is drawn to "factory" loading the hard drive of a new PC, *i.e.*, the hard drive is "empty" except for whatever data has been placed on that drive by the drive manufacturer. In either event, in the PC environment of the specification, simply switching the computer on would not allow the computer to function beyond initial startup, *i.e.*, the PC would not "boot." '573 patent, col. 7, lines 59-61.

As described in the specification, a PC suffering a hard disk error (or a PC with a new "empty" hard disk) may be "booted" in at least two ways. One way is to insert an installation disk for MS-DOS or OS/2 into the "floppy" disk drive, and then turn the computer on. As explained in the specification, the entire MS-DOS or OS/2 operating system may be contained on multiple disks, but starting the computer with an initial disk from the MS-DOS or OS/2 disk set allows the computer to "boot" with at least some initial minimal functionality. There seems to be no dispute that "booting" a PC of the type referenced in the specification in that manner causes at least some operating system files to be loaded into computer memory, giving the computer that minimum functionality.

At this stage, a user could perform some disk operations such as formatting or partitioning a hard disk drive (assuming files such as FDISK and FORMAT for doing so are on the installation disk used to boot the computer). A user could also continue loading the entire MS-DOS or OS/2 operating system by inserting additional disks from the MS DOS or OS/2 disk set into the "floppy" disk drive, typically in response to prompts on the computer screen. The result would be a computer with a full operating system, but perhaps not configured as the user desired-or, in the case of a hard disk crash, not configured in the same way as before the disk crash. Also, as the specification explains, reinstalling an operating system can be time-consuming. An object of the invention of the '573 patent was to avoid such a complete reinstallation and configuration of the operating system ("The invention quickly restores the operating system to the workstation from standard system backup media, such as magnetic backup tapes, without the need to reload and reconfigure the operating system from its original distribution media.").

There further seems to be no dispute that a second way to start or "boot" a PC, of the type referenced in the specification, was to create a "bootable" floppy disk. In MS-DOS 5.0, FN5 for example, such a disk could be created by formatting a floppy disk with a /S switch (*e.g.*, FORMAT A: /S) or by copying the system files, IO.SYS, MSDOS.SYS and COMMAND.COM, to a formatted floppy disk. *See* Jeff Proscic, PC Magazine DOS 5 Techniques and Utilities (Ziff-Davis Press 1991) at 148-49. Again, inserting such a "bootable" floppy disk into the floppy disk drive and then turning the computer on would load those files into memory and provide the computer with some minimal functionality. For example, although the hard

drive may have suffered damage due to head crash and incapable of "booting," such hard drive may nevertheless be accessible after the PC is "booted" from a floppy disk.

FN5. The '573 patent does not refer to any particular version of MS-DOS. The application maturing into the '573 patent, however, was filed on February 26, 1993. Some sources indicate that MS-DOS 5.0 was released in November 1991, with a supplemental version in 1992, and that a later version, MS-DOS 6.0, was introduced in March 1993. *See* <http://members.fortunccity.com/pcmuseum/dos.htm>, <http://www.16bitos.com/600ms.htm>. It is not believed that those later versions are relevant to the broad comments made herein.

A premise of the '573 patent, however, is that the minimal functionality provided by "booting" a PC of the type referenced in the specification either from the initial installation disk for MS-DOS or OS/2 or a bootable floppy disk having only the core system files would not necessarily allow a user to restore files previously backed up on, for example, a back-up tape drive. One reason is that such core system files may not have a "device driver" (*i.e.*, software that allows a computer to communicate with a particular device) for such a back-up tape drive.

Accordingly, the specification explains that a recovery diskette is prepared that includes at least the core operating system files that allow a PC to "boot" ("[o]perating system installation files are copied from the original disks 54 distributed with the operating system to make the recovery diskette a bootable diskette" ('573 parent, col. 4, lines 32-32)) plus other files that allow recovery of files from the backup device. For example, the specification explains that "a recovery diskette is prepared from the fully configured PC by copying various files from the hard disk onto the recovery diskette, which essentially define the current PC configuration. These copied files include vital operating system configuration files (104), system configuration files (106), and device drivers (108) which are required for the proper operation of the hardware, operating system, and attached devices. The most important device driver is the backup device driver, e.g., backup tape drive device driver, which must be available to activate the backup tape drive during the recovery or loading operation." '573 patent, col. 5, lines 39-49. In the case of the operating system OS/2, the specification explains that "the copied files include various OS/2 operating system files, CONFIG.SYS, and various device drivers such as SCSI.SYS (IBM OS/2 versions prior to 2.0), ASPI4OS2.SYS (IBM OS/2 versions prior to 2.0), TAPE.TSD (MS OS/2 LADDR), *.BID (MS OS/2 LADDR), *.ADD (IBM OS/2 2.0), and any backup device drivers." '573 patent, col. 5, lines 51-57.

The specification of the '573 patent explains that the computer may be "booted" according to the invention in two ways. One way is to "boot" the PC from the recovery disk: "Next, the operator starts (*i.e.*, boots) (202) the PC from the recovery diskette which loads an initial, temporary operating system into the memory of the PC. The recovery diskette also supplies this initial operating system with the necessary system configuration files and device drivers, *i.e.*, the files previously copied to the recovery diskette from the fully configured PC. In this embodiment, the system is started from the recovery diskette, which includes a copy of the files on the OS/2 Installation diskette distributed with the OS/2 operating system." '573 patent, col. 6, lines 12-22 (paragraphing omitted).

Another way, according to the specification, is to initially "boot" the PC from the operating system installation disk, and then subsequently insert the recovery disk: "Alternatively, the system can be started directly from the OS/2 Installation diskette and the recovery diskette is then inserted into the floppy disk drive when the installation process prompts the user for the next diskette." '573 patent, col. 5, lines 22-25.

Additionally, the specification discloses an embodiment in which two or more versions of an operating system are installed in "partitions" on the hard disk drive. In general, a hard disk "partition" is defined storage space on a hard disk. In effect, one large physical hard disk is, through the use of software, divided into multiple smaller logical hard disks, *e.g.*, a single physical "Drive C" can be partitioned into logical Drives C:, D:, E: *etc.* In MS-DOS 5.0, for example, hard disk partitions were created using the FDISK command. *See* Jeff Prosis, *PC Magazine DOS 5 Techniques and Utilities* (Ziff-Davis Press 1991) at 133-137. Again speaking in general terms, one reason for running different versions of an operating system (or different operating systems) in separate partitions may be to reduce interference between the operating systems.

The specification of the '573 patent explains that in that embodiment (illustrated in Figs. 5 and 6), a recovery disk (which may be multiple disks) is prepared containing (1) the FDISK.COM utility, (2) separate "directories," *i.e.*, hierarchical divisions, for each version of the operating system, and the files FORMAT.COM and UHPFS.DLL from each OS/2 version, and (3) the operating system configuration files, device drivers, *etc.* as noted above. The specification explains that during recovery, the PC is booted using the latest version of OS/2 to be restored using the OS/2 installation disk. The specification explains that "[n]ext, the recovery diskette (404) containing the necessary system configuration files and device drivers is inserted into the PC. The operator then determines if the hard drive being restored is to be partitioned (406). If partitioning is desired (408), then the FDISK.COM program is run (410), the standard OS/2 boot manager program is invoked (412), and the desired partitions (414) are recreated on the hard drive. * * * The system is then configured by the boot manager (416) to boot from the C: disk drive." '573 patent, col. 7, lines 13-23. And the process continues. The point is, the PC is booted in that example using the OS/2 installation disk which permits the user to perform tasks such as partitioning.

Once again, when claim 1 refers to "initializing the data processing system from the second media to provide a temporary operating system" it seems there can be little doubt that includes "booting" the PC from the "second media." However, the limitation as written is "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system."

When the "second media" consists of a single recovery disk (or a single set of recovery disks) containing *both* the minimal operating system files necessary for a PC to "boot," and the "configuration specific data files," Veritas' proposed construction, *i.e.*, "[s]tarting the operation of the [first] data processing system from the second media, and adjusting the starting configuration of the [first] data processing system using the configuration-specific data files, to set up a temporary operating system for use," accurately describes the process. For example, one of the system configuration files referenced in the specification of the '573 patent is CONFIG.SYS, albeit in conjunction with the OS/2 operating system.FN6 One source explains that "DOS offers default configurations that will certainly run on most PCs, but there is much to be gained from customizing it for your system. * * * The key to configuring your system is a pair of special files called CONFIG.SYS and AUTOEXEC.BAT, which DOS looks for in the root directory of the drive you boot from," and "[i]f your system does not have a CONFIG.SYS file, DOS will run using default configurations settings that vary from system to system, but not quite as well as it would had it been optimized for a particular system." Jeff Prosis, *PC Magazine DOS 5 Techniques and Utilities* (Ziff Davis Press 1991) at 39-41. That is to say, turning a PC on with a floppy disk in a bootable drive (*e.g.*, Drive A:) wherein that disk contains the minimal MS-DOS 5.0 operating system files, *i.e.*, IO.SYS, MSDOS.SYS and COMMAND.COM, would allow a computer to "boot." Adding a CONFIG.SYS file to the floppy disk in the

root directory, *i.e.*, with the other three files, however, would cause the PC to "boot" with the "configuration" specified in the CONFIG.SYS file (assuming the parameters specified in the CONFIG.SYS file are supported, for example, by providing any referenced device drivers). In that instance, the "booting" and "configuring" occurs as one continuous action.

FN6. Available sources indicate that the CONFIG.SYS file served similar functions in MS-DOS and OS/2. See [http:// www.answers.com/topic/config.sys](http://www.answers.com/topic/config.sys).

However, as noted above, the specification gives examples in which the PC is "booted" using a "floppy" disk that does *not* contain "configuration-specific data files," for example the initial installation disks for MS-DOS or OS/2. A PC in the time frame of the '573 patent "booted" from a floppy disk containing only, in case of MS-DOS 5.0, the IO.SYS, MSDOS.SYS and COMMAND.COM files, that would present the user with a "prompt" on the computer display, and thus would allow a user to perform whatever functionality was allowed by those files, but with no configuration information specific for the user's system. A user, of course, could subsequently physically load CONFIG.SYS or other configuration specific files.

Those examples lend some support to Microsoft's proposed construction. Microsoft's proposed construction, though, divorces the claim language from the context of remaining language of the claim and the specification, and the Federal Circuit has explained, *inter alia*, that "[i]mportantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Phillips, 415 F.3d at 1313.

According to the specification as discussed above, the "second media" may be a collection of disks, and may be either (1) the recovery disk (or disks) containing (A) operating system files, and (B) "configuration-specific data files," or (2)(A) the operating system installation disk (or disks) containing operating system files and (B) the recovery disk (or disks) containing "configuration-specific data files." In either event, the "second media" as a whole must contain "configuration-specific data files."

That is also required by the second step in the claim ("providing a second media comprising configuration-specific data files"), *i.e.*, the "second media" must contain "configuration specific data files." An operating system installation disk for MS-DOS or OS/2 would not contain "configuration-specific data files." Thus, the "second media" may consist of several disks, and the specification similarly explains that:

Depending on the type of operating system to be loaded onto the hard disk, the recovery diskette can actually be a set of several recovery diskettes, each diskette containing a particular sub-set of files. For instance, for IBM OS/2 v. 1.2, 1.3x the recovery diskette set is actually made up of two recovery diskettes, one bootable disk containing a copy of the original OS/2 boot/install distribution disk files and some system configuration files, and the other diskette containing all executable files necessary to run the recovery or loading process and other required resource files. In contrast, for IBM OS/2 v. 2.0, 2.x the recovery diskette set includes up to four recovery diskettes, depending on the system configuration. In this case, one bootable disk contains a direct copy of the original boot disk distributed with the OS/2 v. 2.0, 2.x. Another disk contains modified copy of the OS/2 v. 2.0, 2.x 'Install' disk (minus some files, plus configuration info files). A third disk contains all executable files necessary to run the recovery or loading process of this invention, and other resource files. Yet a fourth disk containing format information is required if multiple versions of OS/2, with the OS/2 boot manager, are to be recovered or loaded into the hard disk.

The number of recovery diskettes required is a function of the method in which the operating system is distributed, rather than by the requirements of the load or restore procedure of this invention. Thus, these recovery diskette sets will be referred to herein as the recovery diskette for simplicity, referring to removable media which is bootable, and contains all the needed operating system, system configuration, device driver, and recovery application program files.

'573 patent, col. 4, line 53-col. 6, line 16. When the claims refer to "initializing the data processing system from the second media," the "second media" as a whole, according to the claim language and further as explained in the specification, must contain "configuration-specific data files." Read in context, it seems clear that the step of "initializing" not only "provide[s] a temporary operating system" but also "us[es] the configuration-specific data files to configure the data processing system."

Additionally, Microsoft's proposed construction equates "initializing" to "booting," but "initializing" is used in the specification in a broader sense. For example, the specification explains that "the method includes initializing the storage device prior to the step of loading the desired operating system files from the first media to the storage device. Initializing includes formatting and partitioning the storage device." '573 patent, col. 2, lines 49-51. The actions of "formatting" and "partitioning" occur after a PC is "booted." The patentees also did not equate "initializing" to "booting," and used "boot" in a separate sense, *e.g.*, "which stores files necessary to start (boot) and operate the workstation," ('573 patent, col. 3, lines 54-55) "the PC system is started, or booted, from the bootable recovery diskette 52," ('573 patent, col. 6, lines 2-3). "the PC typically will be incapable of starting (*i.e.*, booting) from the hard disk." FN7 '573 patent, col. 4, lines 41-42.

FN7. Microsoft urges, *see* Microsoft's Response at 24, that during prosecution, the examiner equated "initializing" with "booting." *See* Microsoft's Response, Apx. 13 at 24 (First Office Action: "Both Ottman and Bealkowski teach the loading and initializing (booting) of an operating system * * *"). Although that may be, the applicants subsequently argued that "Ottman *et al.* do not disclose an initialization and loading procedure as claimed by Applicants in claims 1, 18, 33 and 34." *Id.* at 34. The applicants said the same about Bealkowski *et al.* *Id.* at 36.

Further, Microsoft's proposed construction is not consistent with the specification, *i.e.*, "initializing the data processing system from the second media to provide a temporary operating system using the configuration-specific data files" (abstract); "initializing the data processing system from the second media to provide a temporary operating system using the configuration-specific data files" ('573 patent, col. 2, line 24-26); "initializing the target data processing system from the second media to provide a temporary operating system using the configuration-specific data files" ('573 patent, col. 2, line 65-col. 3, line 2); "[n]ext, the operator starts (*i.e.*, boots) (202) the PC from the recovery diskette which loads an initial, temporary operating system into the memory of the PC. The recovery diskette also supplies this initial operating system with the necessary system configuration files and device drivers, *i.e.*, the files previously copied to the recovery diskette from the fully configured PC." '573 patent, col. 6, lines 10-18. Although Microsoft is correct that in some instances "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system" requires successive physical actions, *e.g.*, "First, the PC is booted (402) with the latest version of the OS/2 operating system to be restored on the system. * * * Next, the recovery diskette (404) containing the necessary system configuration files and device drivers is inserted into the PC," '573 patent, col. 7, lines

8-15, it seems clear from the specification that the step of "initializing" is a single method step.

That is also clear from the remainder of the claims. In claim 1, for example, following the "initializing" step, the claim calls for "loading the fully configured operating system files from the first media to the storage device using the temporary operating system." Although method steps in a claim do not necessarily require performance in the order listed, here the "loading" step must follow the "initializing" step because the "loading" requires "using the temporary operating system" provided in the "initializing" step. That is, according to the claim language, the "temporary operating system" must be capable of transferring those files from the backup device to the storage device, meaning that the "temporary operating system" must be able to communicate and work with the backup device. According to the specification, that ability is provided by the "configuration-specific data files." *See* '573 patent, col. 4, lines 42-46. ("The system configuration files 20 and device drivers 22 stored on the recovery diskette 52 are used to configure the system and provide the necessary device drivers to activate the PC devices, especially the backup tape drive 26."); '573 patent, col. 6, lines 15-18. ("The recovery diskette also supplies this initial operating system with the necessary system configuration files and device drivers, i.e., the files previously copied to the recovery diskette from the fully configured PC."). The prosecution history supports that view, as well. *See* Microsoft's Response, Apx. B at. 33 ("[A] 'temporary operating system' is installed from a recovery diskette, i.e., the 'second media,' together with a number of files, i.e., the 'configuration-specific data files,' necessary to support transfer of data between the storage device and the back-up system or 'first media,' e.g., a QIC or DAT tape cartridge located in a backup device such as a tape drive.").

Thus, the role of the "configuration-specific data files" becomes clearer from the claims in light of the intrinsic record: "configuration-specific data files:" (1) are used to "configure the data processing system," and (2) provide the "temporary operating system" with the ability to communicate with the "first media." Because the "data processing system" "provide[s] the temporary operating system" when "initializing," the claim is most reasonably understood to use the "configuration specific data files" in connection with "initializing" the "data processing system." In other words, the recited limitation "using the configuration-specific data files to configure the data processing system" is part of the overall "initializing" step, and is thus part of "provid[ing] a temporary operating system."

That is also consistent with the intrinsic record as a whole. The "Summary of the Invention," for example, in summarizing "a method for recovering or loading a desired operating system onto a storage device of a data processing system," provides:

- [1] providing a first media having the desired operating system files to be loaded onto the storage device,
 - [2] providing a second media having configuration specific data files,
 - [3] *initializing the data processing system from the second media to provide a temporary operating system using the configuration specific data files,*
 - [4] loading the desired operating system files from the first media to the storage device using the temporary operating system, and
 - [5] reinitializing the data processing system with the desired operating system from the storage device.
- [Emphasis, numbering and paragraphing added.]

'573 patent, col. 2, lines 21-31. The "Summary of the Invention" thus clearly explains that the "configuration-specific data files" are used for "initializing the data processing system" "to provide a temporary operating system." *See also* '573 patent, col. 2, line 57-col. 3, line 4. ("In general, in another aspect, the invention features a method for loading a desired operating system onto a hard disk drive of a target data processing system, including configuring a hard disk drive of a model data processing system with the desired configuration for the target data processing system, copying the desired operating system files stored on the hard disk drive of the model data processing system to a first media, copying configuration-specific data files from the hard disk drive of the model data processing system to a second media, *initializing the target data processing system from the second media to provide a temporary operating system using the configuration-specific data files*, and loading the desired operating system files from the first media to a hard disk drive of the target data processing system using the temporary operating system." (emphasis added)).

With respect to Microsoft's argument that the claims were amended to add "and," in the first Office Action, the examiner had rejected original claims 1-32 under 35 U.S.C. s. 112(2) as being indefinite. The examiner said that it was "unclear who or what is intended to perform the steps of 'providing', 'initializing', 'loading' and 'reinitializing'." In response, the applicants made a number of amendments. In claim 1, for example, one of the amendments amended the "initializing" step as follows: "initializing the data processing system from the second media to provide a [second] *temporary* operating system *and* using the configuration-specific data files to configure the data processing system." Microsoft's Response, Apx. B at 26-27. Remarks accompanying that amendment indicate that no substantive change was intended: "Other minor amendments were made to claim 1 for clarity and which either rearranged words or deleted unnecessary words." Microsoft's Response, Apx. B at 30-31. In distinguishing the prior art, the applicants urged that in accordance with [application] claims 1, 18, 33 and 34, in the event of a hard disk crash, "a 'temporary operating system' is installed from a recovery diskette, *i.e.*, the 'second media,' together with a number of files, *i.e.*, the 'configuration-specific data files,' necessary to support transfer of data between the storage device and the back-up system or 'first media,' *e.g.*, a QIC or DAT tape cartridge located in a backup device such as a tape drive." Microsoft's Response, Apx. B at 33. Nothing in the amendment suggests that the applicants intended to define two separate steps. And, of course, application claim 34 (patent claim 33) was presented without the "and." Microsoft's argument that such was a typographical error is simply not persuasive.

D. Recommendation- "initializing" Related Terms

In view of the foregoing, the master recommends that the Court adopt the following construction:

The limitation "initializing the data processing system from the second media to provide a temporary operating system and using the configuration specific data files to configure the data processing system" should be read as a single method step.

In claims 1 and 18, the step of "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system" should be construed to mean "starting the operation of the data processing system from the second media, and adjusting the starting configuration of the data processing system using the configuration-specific data files, to set up a temporary operating system for use."

In claim 30, the step of "initializing the first data processing system from the second media to provide a

temporary operating system and using the configuration-specific data files to configure the first data processing system" should be construed to mean "starting the operation of the first data processing system from the second media, and adjusting the starting configuration of the first data processing system using the configuration-specific data files, to set up a temporary operating system for use."

In claim 33, the step of "*initializing* the data processing system from a second media, having configuration-specific data files, to provide a temporary operating system using the configuration-specific data files to configure the data processing system" should be construed to mean "starting the operation of the data processing system from the second media, and adjusting the starting configuration of the data processing system using the configuration-specific data files, to set up a temporary operating system for use."

V.

"configuration-specific"-Related Terms

As noted above, the parties in their Joint Submission following the *Markman* hearing have reached agreement on the construction of "system configuration files," "operating system configuration files," "device driver files," and "configuration-specific data files." Accordingly, there is no longer a dispute that requires resolution.

VI.

"configure"-Based Terms

A. The Parties' Proposed Constructions

The claims use the term "configure" and terms based on that term, *i.e.*, "configured," "configuration" and "configuring." The parties initially proposed the following constructions:

Veritas' Proposed Construction	Microsoft's Proposed Construction
" <i>configure</i> :" to tailor the capability based on selection of components	" <i>configure</i> :" tailor hardware and/or software of a particular data processing system. For example (but not limited to), tailor a particular data processing system to operate with a specific tape backup device
" <i>configured</i> :" tailored in terms of capability based on selection of components	" <i>configured</i> :" tailored hardware and/or software
" <i>configuration</i> :" the way in which the capability has been tailored based on selection of components	" <i>configuration</i> :" the particular combination and set up of hardware and/or software (e.g., an operating system) of a specific data processing system or portion thereof
" <i>configuring</i> :" tailoring the	" <i>configuring</i> :" tailoring hardware and/or software of a particular data

capability based on selection of components

processing system. For example (but not limited to), tailoring a particular data processing system to operate with a specific tape backup device

See JCCS, Exh. B at [11-14] & Exh. C at 27-37; Veritas' Brief at 26-27; Microsoft's Response at 12.

B. The Primary Dispute

The parties, however, in their Joint Submission following the *Markman* hearing have narrowed the dispute as follows:

Claim Language	Veritas' Proposal	Microsoft Proposal	Primary Dispute
To configure the [first] data processing system	To tailor the hardware and software of the [first] data processing system to enable loading of the fully configured operating system files from the first media	To tailor the [first] data processing system.	Whether this claim language requires (1) tailoring both hardware and software of the data processing system, and requires (2) enabling the loading of the "fully configured operating system" files from the first media.

Joint Submission at 1.

The parties also advise that although they have agreed that "configuration-specific data files" means "[f]iles that are used to configure the data processing system in a specific manner and that collectively provide necessary information for loading data from the first media to the storage device (or disk drive) of that system," they continue to dispute the meaning of "to configure the data processing system."

C. Discussion

The claims use the word "configure" in various forms, as claim 1 illustrates:

1. A method for loading a fully *configured* operating system onto a storage device of a data processing system, comprising the steps of:

providing a first media comprising operating system files for installing the fully *configured* operating system onto the storage device;

providing a second media comprising *configuration*-specific data files;

initializing the data processing system from the second media to provide a temporary operating system and using the *configuration*-specific data files to configure *the data processing system*;

loading the fully *configured* operating system files from the first media to the storage device using the temporary operating system; and

reinitializing the data processing system from the storage device to install the fully *configured* operating

system. [Emphasis added]

As noted, the parties now focus on "to configure the data processing system."

The specification explains that the "complexity of personal computers" supports a "wide variety" of configurations:

The complexity of personal computers has increased dramatically in recent years. A wide variety of hardware and software options are available today for configuring a personal computer, adding to their complexity. Complex computer systems require similarly complex disk operating systems to support the wide variety of possible system hardware and software configurations available today. Because there are so many possible system configurations available, a typical operating system needs to be individually tailored for each personal computer system on which it is installed. This tailoring operation typically requires that a skilled technician spend several hours building the operating system on the personal computer according to the desired system configuration. This process is typically repeated for each system built, even if the configuration of that system is identical to one previously built.

'573 patent, col. 1, lines 18-33. Thus, according to the specification, a given system "configuration" does not need to be unique. Each system, however, needs to be "individually tailored" for its particular hardware and software.

Microsoft urges that its originally proposed construction was consistent with the specification ("the patent uses the word 'configure' in its ordinary broad sense, to refer to tailoring hardware and/or software, in any manner") and the defined meaning of the term (" 'configure means to modify hardware or software to meet a specific environment or need," ' quoting Computer Professional's Dictionary (1990)). Microsoft's Response at 13-14. Veritas replied that "[t]he 'configure' related terms must be construed to include the selection of components, proposed by Veritas." Veritas' Reply at 14-15. Veritas' current proposed construction, however, does not include "selection." However, Veritas' current proposal ("[t]o tailor the hardware *and* software" (Joint Submission at 1)), though, requires "tailoring" both the hardware and software, *i.e.*, tailoring one but not the other would not fall within the scope of the claims as so construed.

Again, "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Philips, 415 F.3d at 1313. And, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." Renishaw, 158 F .3d at 1249.

As discussed above, using MS-DOS 5.0 as an example, loading the system files IO.SYS, MSDOS.SYS and COMMAND.COM would allow a PC of the type referenced in the specification to "boot" using default parameters. Adding a "configuration-specific data file" such as CONFIG.SYS changes those default parameters such that the operating system is "configured" for the actual data processing system on which the operating system is running. And, the purpose of "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to *configure* the data processing system" is to permit performance of the next step, *i.e.* , "loading the fully configured operating system files from the first media [*i.e.*, the backup media] to the storage device using the temporary operating system."

Thus, addressing the second question in the parties' current dispute, *i.e.*, "[w]hether this claim language * * * requires (2) enabling the loading of the 'fully configured operating system' files from the first media," the answer is yes. As Microsoft points out, "configure means to modify hardware or software to meet a specific environment or need." Here, the "specific environment" is a data processing system in which (1) there has been a hard disk crash or some other error that prevents the system from "booting" from the hard drive, (2) the "fully configured operating system files" are stored on a backup device, (3) but "booting" the system from an installation disk for MS-DOS or OS/2, or from a "floppy" disk that contains only the minimal system files such as IO.SYS, MSDOS.SYS and COMMAND.COM would not necessarily allow the system to access the backup device because of the lack of a "configuration-specific" file such as CONFIG.SYS and a device driver for the backup device. The "need" is to "configure" the data processing system such that the "fully configured operating system files" stored on the backup device can be restored.

In answer to the first question in the parties' current dispute, *i.e.*, "[w]hether this claim language requires (1) tailoring *both* hardware *and* software of the data processing system," the answer is no—at least to the extent that such a construction requires "modifying" or "tailoring" both hardware and software. In this instance, "hardware" is being used to mean "[t]he physical, tangible and permanent components of a computer or a data-processing system." MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS at 904 (5th ed.1994) (using the computer science sense of the word). And "permanent" is intended to mean something that continues without marked changes, but does not preclude removable drives *etc.* Nothing in the specification suggests that "configure" in "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to *configure* the data processing system" requires "modifying" or "tailoring" the "physical, tangible and permanent components" of the system. In the embodiments discussed in the specification, for example, the backup device is a tape drive. Nothing in the specification indicates that the physical tape drive is "modified" or "tailored" other than perhaps in the broad sense of loading a tape in the drive.

Also, as discussed above, the specification discusses an embodiment in which the hard disk drive of the system is formatted or partitioned. A hard disk drive is "hardware," and formatting or partitioning the magnetic disk in such drive using software may be broadly thought of as "modifying" or "tailoring" that hardware, but even so, the embodiments disclosed in the specification do not always *require* a user to format or partition the drive.

From the foregoing description of the invention in the specification, and in the context of the claim language, it seems clear that "configure" in "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to *configure* the data processing system" means to "tailor the [first] data processing system to enable loading of the fully configured operating system files from the first media."

The master understands from the parties' Joint Submission that resolves the parties' disputes concerning the "configure-based" terms.

D. Recommendation

In view of the foregoing, the master recommends that the Court adopt the following construction:

The term "configure" as used in "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing

system" means to "tailor the [first] data processing system to enable loading of the fully configured operating system files from the first media."

VII.

"desired configuration" and "fully configured operating system"

A. The Parties' Proposed Constructions

The parties propose the following constructions:

Veritas' Proposed Construction

"desired configuration:" the desired way in which the capability has been tailored based on selection of components

Microsoft's Proposed Construction

"desired configuration:" this phrase is indefinite in the '573 patent claims. For example, a person of ordinary skill in the art attempting to discern the precise meaning of 'desired configuration' in these claims would not be able to determine:

1. by whom (e.g., user, administrator, other?) the configuration needs to be desired, or
2. how the claim is supposed to be applied to situations where different persons have different desires for the configuration, or
3. how much of the configuration a person must desire for the configuration to qualify as a 'desired configuration,' or
4. how the claim is supposed to be applied to situations where one or more person's 'desired configuration' changes during the performance of the process, or
5. how the claim is supposed to be applied to situations where multiple configured operating systems are available, each having some desirable and some undesirable aspects relative to the others.

"fully configured operating system:" operating system having the desired configuration

"fully configured operating system:" a 'configured operating system' is an operating system which is tailored for a particular data processing system.

The phrase 'fully configured operating system' is indefinite in the '573 patent claims. For example, a person of ordinary skill in the art attempting to discern the precise meaning of 'fully configured operating system' in these claims reasonably might understand this phrase to mean any of the following (among other possible meanings), with there being no clear indication as to which meaning is correct:

- (1) Functional Test: An operating system that requires no reconfiguring whatsoever to completely support the full current capabilities of all of the hardware and software of the data processing system on which it is installed (or on which it is expected to be installed).
- (2) Historical Test: An operating system that is configured the same way as an operating system was configured on this or another data processing system at some point in the past, such as the most recently backed up version of the operating system.
- (3) Historical and Functional Test: A configured operating system selected from a set of previously saved configured operating systems to provide the closest match for supporting the full capabilities of all of the hardware and software of the data processing system, which may not be the most recently backed up version of the operating system.
- (4) Subjective Test No. 1: An operating system sufficiently configured to support its hardware and software environment in a manner satisfactory to the user of the data processing system.
- (5) Subjective Test No. 2: An operating system sufficiently configured to support its hardware and software environment in a manner satisfactory to the administrator of the data processing system."

See JCCS, Exh. B [9-11] & Exh. C at 23-27; Veritas' Brief at 29-32; Microsoft's Response at 47.

B. Parties' Respective Arguments

Veritas argues that the specification "uses the term 'fully configured operating system' to refer to the operating system having the desired configuration for system recovery or deployment, depending on the embodiment," and that "[w]hat is desired depends on the context, as understood by those skilled in the art." According to Veritas, "[i]n the system deployment context, the desired configuration is the 'model' operating system configuration to be deployed on the target computer systems." Based on claim 30, Veritas urges that the disputed terms are used interchangeably, and, based on the prosecution history, urges that the term "fully configured operating system" "was inserted into the claims to refer to the state of the operating system being restored or deployed." Veritas' Brief at 32-34.

Veritas also contends that "Microsoft makes no reasonable effort to construe these fairly straightforward

claim terms in view of the specification," and that the specification "provides an objective standard for determining the bounds" of the disputed terms both in the "recovery context" and in the "deployment context." According to Veritas, "[a]s would be readily apparent to one of ordinary skill in the art, the patent uses the disputed terms in the context of dynamically configured operating systems for data processing systems with varying hardware components." In Veritas' view, the disputed terms "are functionally constrained and guided by an objective, technical standard- *i.e.*, the specific system configuration, based on the selection of components, to be either recovered or deployed." Veritas' Brief at 34-35. Furthermore, Veritas urges, "[t]hose skilled in the art would readily understand that the modifier 'fully configured' is used to distinguish the operating system being restored or deployed from the 'temporary operating system,' and the corresponding modifier 'desired' is used in a similar fashion, as acknowledged by Microsoft's own expert." Veritas' Reply at 17.

Microsoft focuses particularly on the word "fully" as "too indefinite to construe." In Microsoft's view, "[t]he word 'fully' * * * divides the universe of configured operating systems into two camps: 'fully' configured and 'not fully' configured," and that the "problem is that the patent does not define the dividing line. It gives the POSA no objective guide for distinguishing an operating system that is 'fully configured' from one that is 'not fully configured.'" Microsoft's Response at 45. Microsoft posits a hypothetical:

Consider a hypothetical where a first computer user (e.g., a computer administrator at work or a family member at home) configures a computer to her liking, does a full backup, and creates an Emergency Boot (Recovery) Disk. Then, a second user takes over that same computer, re-configures it to his liking, does no additional backup, and the system crashes. The second user then restores the first user's backed up, out-of-date operating system configuration. Is that restored operating system "fully configured" or "not fully configured?" The '573 Patent does not say. It forces a POSA to guess at what point an out-of-date operating system configuration is "fully configured" versus "not fully configured."

Id. at 46. Microsoft also notes that one of the named inventors, McGill, "testified that 'fully configured operating system' in this patent was 'very, very subjective'." Microsoft offers "some of the different tests a POSA might reasonably consider as candidates for distinguishing a 'fully configured' operating system from one that is 'not fully configured,' with the '573 Patent giving no clear indication as to which is correct." According to Microsoft, "Veritas offers a circle of words leading nowhere." *Id.* at 46-47.

As for "desired configuration," Microsoft contends that the term is similarly indefinite: "It is not a well-defined term of art and it is not defined in the patent." Microsoft's Response at 47 ("Who needs to have desired the configuration? How much of it must they desire? When must they have desired it?"). Microsoft notes that "Dr. Smith was forced to concede that a configuration might be 'desired' even if the user did not specify or desire any part of it." *Id.*

C. Discussion

Only claim 30 uses the term "desired configuration." That claim also uses the term "fully configured operating system," and thus provides representative use of those terms:

30. A method for loading a *fully configured operating system* onto a disk drive of a first data processing system, comprising the steps of:

configuring a disk drive of a second data processing system with the *desired configuration* for the first data

processing system;

copyright *fully configured operating system* files [*sic.* files] stored on the disk drive of the second data processing system to a first media;

copyright configuration-specific data files from the disk drive of the second data processing system to a second media;

initializing the first data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the first data processing system; and

loading the *fully configured operating system* files from the first media to a disk drive of the first data processing system using the temporary operating system to install the *fully configured operating system*. [Emphasis added.]

1. Definiteness-Background

Section 112(2) provides that "[t]he specification shall conclude with one or more claims [1] particularly pointing out and distinctly claiming the subject matter [2] which the applicant regards as his invention." The statute thus imposes two requirements: "first, it must set forth what 'the applicant regards as his invention,' and second, it must do so with sufficient particularity and distinctness, *i.e.*, the claim must be sufficiently 'definite.'" *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1377 (Fed.Cir.2000). Only definiteness is at issue here.

Although the Federal Circuit has held that a party "cannot avoid a full-blown validity analysis by raising the specter of invalidity during the claim construction phase," *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1346 (Fed.Cir.1999), the Federal Circuit has also held that "[t]he question of whether the claims meet the statutory requirements of s. 112 para. 2 is a matter of construction of the claims, and receives plenary review on appeal." *S3 Inc. v. nVIDIA Corp.*, 259 F.3d 1364, 1367 (Fed.Cir.2001). *See also Energizer*, 435 F.3d at 1368 ("An analysis of claim indefiniteness under s. 112 para. 2 is 'inextricably intertwined with claim construction,'" ' quoting *Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1379 (Fed.Cir.1999)).

The court has so held despite that the analysis may involve questions of fact. *See Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1376 (Fed.Cir.2001) ("We adhere to the principle that 'determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims,'" ' quoting *Personalized Media Communications, L.L.C. v. United States Int'l Trade Comm'n*, 161 F.3d 696, 705 (Fed.Cir.1998)).

Accordingly, the issue of indefiniteness addressed below will be in the context of claim construction. However, doing so should not be construed as any comment or recommendation concerning any pending or later filed motions for summary judgment or otherwise on the issue of indefiniteness. *See Barry Fiala, Inc. v. Stored Value Sys ., Inc.*, 2006 U.S. Dist. LEXIS 63056 (W.D.Tenn.2006) (a *Markman* ruling does not necessarily preclude an indefiniteness challenge).

Microsoft primarily relies on *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1383-84 (Fed.Cir.2005)(which Microsoft says stands for the proposition that "claims [were found] indefinite because

'it is unclear' when infringement would occur"); *Datamize, LLC. v. Plumtree Software, Inc.*, 417 F.3d 1342, 1352, 1356 (Fed.Cir.2005)(which Microsoft says stands for the proposition that "aesthetically pleasing" was indefinite because the patent did not set forth "any objective way to determine whether" an interface screen was "aesthetically pleasing"); and *Union Pac. Resources Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 692 (Fed.Cir.2001)(which Microsoft says stands for the proposition that "claim language 'comparing' indefinite because it could have different meanings to a person of skill in the art").

In *Datamize*, the Federal Circuit explained that "[b]ecause the claims perform the fundamental function of delineating the scope of the invention, the purpose of the definiteness requirement is to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee's right to exclude. According to the Supreme Court, '[t]he statutory requirement of particularity and distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise,' " 417 F.3d at 1347, quoting *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942).

"The definiteness requirement, * * *, does not compel absolute clarity." *Datamize*, 417 F.3d at 1347. "Only claims 'not amenable to construction' or 'insolubly ambiguous' are indefinite." *Id. See also Marley Mouldings, Ltd. v. Mikron Indus.*, 417 F.3d 1356, 1360 (Fed.Cir.2005) (When a claim "is not insolubly ambiguous, it is not invalid for indefiniteness.") (citation and quotation omitted); *Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1371 (Fed.Cir.2004) ("We have held that a claim is not indefinite merely because it poses a difficult issue of claim construction; if the claim is subject to construction, *i.e.*, it is not insolubly ambiguous, it is not invalid for indefiniteness.").

"Thus, the definiteness of claim terms depends on whether those terms can be given any reasonable meaning. Furthermore, a difficult issue of claim construction does not *ipso facto* result in a holding of indefiniteness." *Datamize*, 417 F.3d at 1347. " 'If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.' " *Id.*, quoting *Exxon Research & Engineering*, 265 F.3d at 1375. "In this regard it is important to note that an issued patent is entitled to a statutory presumption of validity. 'By finding claims indefinite only if reasonable efforts at claim construction prove futile, we accord respect to the statutory presumption of validity and we protect the inventive contribution of patentees, even when the drafting of their patents has been less than ideal.' " *Datamize*, 417 F.3d at 1347-48 (citation omitted), quoting *Exxon Research & Engineering*, 265 F.3d at 1375. "In this way we also follow the requirement that clear and convincing evidence be shown to invalidate a patent." *Datamize*, 417 F.3d at 1348.

"Claim definiteness is analyzed 'not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art.' " *Energizer Holdings*, 435 F.3d at 1370, quoting *In re Moore*, 439 F.2d 1232, 1235 (C.C.P.A.1971). "The definiteness inquiry 'focuses on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the rest of the specification.' " *Energizer Holdings*, 435 F.3d at 1370, quoting *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 692 (Fed.Cir.2001).

Accordingly, "[i]n the face of an allegation of indefiniteness, general principles of claim construction apply. Intrinsic evidence in the form of the patent specification and file history should guide a court toward an acceptable claim construction. And while 'we have emphasized the importance of intrinsic evidence in claim construction, we have also authorized district courts to rely on extrinsic evidence,' such as expert testimony.

In construing claims, 'what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law.' ' *Datamize*, 417 F.3d at 1348 (citations omitted). And "[t]he reviewing tribunal must determine whether a person experienced in the field of the invention would understand the scope of the claim when read in light of the specification." *Energizer Holdings*, 435 F.3d at 1369. *See also Howmedica*, 401 F.3d at 1371 (citation omitted) ("The perspective of a person of ordinary skill in the art at the time of the patent application governs the definiteness analysis. The definiteness of a patent claim depends on whether one skilled in the art would understand the bounds of the claim when read in light of the specification.").

Additionally, cases decided in the wake of *Datamize* have generally concluded that claims are not rendered indefinite if the meaning of a disputed term or phrase is reasonably discernable from the intrinsic and extrinsic record. *See Sienna LLC v. CVS Corp.*, 2007 U.S. Dist. LEXIS 2 (S.D.N.Y.2007) (finding that "excessive manual force" did not render claims indefinite even though not all individuals are equally strong.); *Wireless Agents, L.L.C. v. Sony Ericsson Mobile Communications AB*, 2007 U.S. Dist. LEXIS 6888 (N.D.Tex.2007) ("generally parallel" did not render claims indefinite); *Aixntis Pharma Deutschland GmbH v. Lupin Ltd.*, 2006 U.S. Dist. LEXIS 31960 (E.D.Va.2006) (finding that "substantially free of other isomers" did not render claims indefinite); *Star Lock Sys., Inc. v. Dixie-Narco, Inc.*, 455 F.Supp.2d 723, 731 (S.D.Ohio 2006) ("axial cinching force" did not render claim indefinite despite that term did not appear in the specification); *Computer Docking Station Corp. v. Dell, Inc.*, 2006 U.S. Dist. LEXIS 58388 (W.D.Wis.2006) ("one of each of" did not render claim indefinite where meaning was clear from the prosecution history); *Superior Graphite Co. v. Timcal SA*, 2006 U.S. Dist. LEXIS 29935 (N.D.Ill.2006) ("bulk volume" not indefinite based on extrinsic evidence); *Goff v. Harrab's Operating Co.*, 412 F.Supp.2d 1090, 1103-04 (D.Nev.2005) ("substantially equal" did not render claims indefinite where the specification provided a basis for determining what degree of equality was required); *Medironic Xomed, Inc. v. Gyrus ENT LLC*, 440 F.Supp.2d 1300, 1327 (N.D.Fla.2006) ("remains essentially within the instrument" in the court's claim construction order did not render claim indefinite); *Billingnetwork Patent, Inc. v. Cerner Physician Practice, Inc.*, 2006 U.S. Dist. LEXIS 5995 (M.D.Fla.2006) ("appropriate application software" did not render claim indefinite based on the claim language and specification).

Cases in which claims were found indefinite were those in which the meaning of a disputed term or phrase was not reasonably discernable from the intrinsic and extrinsic record. In *Halliburton Energy Services v. MI, LLC*, 456 F.Supp.2d 811 (E.D.Tex.2006), for example, the court concluded that it could not construe "fragile gel drilling fluid" or "fragile gel" such that those terms would have a meaning that was not purely subjective. In *E-Watch, Inc. v. March Networks Corp.*, 2006 U.S. Dist. LEXIS 54366 (E.D.Tex.2006), dependent claims referred to "the server." The parent claim recited at least two servers, and it was uncertain which "the server" referred to. The court referred to the choice as a "toss up" and held the claims indefinite. Other claims referring to "said sensor" were likewise held indefinite where the parent claim(s) called for at least two sensors and it was unclear which sensor "said sensor" referred to.

In *Young v. Lumenis, Inc.*, 2005 U.S. Dist. LEXIS 27792 (S.D.Ohio 2005), one of the claims-at-issue, drawn to a surgical method, called for "forming a first circumferential incision in the epidermis *near* the edge of the unguial crest of the claw." The court found that "near" did not distinguish the claim from the prior art, and therefore rendered the claim indefinite.

In *Leggett & Platt, Inc. v. VUTEk, Inc.*, 2006 U.S. Dist. LEXIS 93024 (E.D.Mo.2006), L & P was the owner of a patent drawn to cold UV printing technology used to print heat-sensitive substrates such as poster board, foam board or rigid plastics without deforming the substrate. VUTEk argued, *inter alia*, that the

district court's reference to "acceptable print quality" in its *Markman* definition of "deform, deforming or deformation" rendered the claims indefinite because print quality was subjective. The district court had construed "deform, deforming, and deformation" to mean "a change in the shape or form of a substrate which degrades print quality such that the print is unacceptable for its intended purpose ." The district court noted that "[t]he parties here agree that acceptable print quality always requires a level of subjectivity." The court concluded that "[t]his, like 'aesthetically pleasing,' is too indefinite to meet the requirement of s. 112. Yet I continue to conclude that no more precise definition of 'deform' is reasonable. As a result, the claim terms deform, deforming, and deformation are not capable of reasonable construction, and the claims are indefinite."

In *Fargo Elecs., Inc. v. Iris Ltd., Inc.*, 2005 U.S. Dist. LEXIS 34493 (D.Minn.2005), the claim-at-issue called for "the second supports other than the." The district court concluded that the claim contained a mistake that was not correctable under *Novo Industries, L.P. v. Micro Molds Corp.*, 350 F.3d 1348 (Fed.Cir.2003). Accordingly, the court concluded that the claim was not susceptible to a reasonable construction and was indefinite.

In *Rackable Systems, Inc. v. Super Micro Computer, Inc.*, 2006 U.S. Dist. LEXIS 81432 (N.D.Calif.2006), the court concluded that "front" as used in one of the patents-in-suit, and "components requiring intermittent physical access" rendered the claims indefinite because "both terms-'periodic' and 'intermittent'-suggest time frames, and a certain regularity that depends on a user's purpose."

In *Acacia Media Technologies Corp. v. New Destiny Internet Group*, 405 F.Supp.2d 1127 (N.D.Calif.2005), the court held that the coined terms "sequence encoder" and "identification encoder" rendered the claims indefinite. The term "sequence encoder" was not defined in the specification and was not referenced during prosecution. Based on the specification and claim language, the court could not discern a reasonable meaning for the term. The term "identification decoder" was referenced in the specification in terms of function, but, according to the court, there was no description of any structure. The court wrote that "[c]laiming an apparatus using only a block diagram with functional description is indefinite when the patentee names the device using a coined term and the various functions could be performed by an indefinite variety of devices." *Id.* at 1140.

2. The Showing of Indefiniteness in This Case as to the '573 Patent-"fully configured operating system"

a) Objective Standard-Person of Ordinary Skill in the Art

Microsoft principally contends that "fully configured operating system" renders the claims indefinite because there is no objective standard for distinguishing a "fully configured" operating system from a "not fully configured" operating system. Microsoft's argument *vis-a-vis* "desired con figuration" is similar.

First, terms such as "fully configured operating system" and "desired configuration" do not make a claim *per se* indefinite, even though some judgment may be involved. The "objective" standard is a person of ordinary skill in the art exercising that judgment. As noted above, "[t]he reviewing tribunal must determine whether a person experienced in the field of the invention would understand the scope of the claim when read in light of the specification." *Energizer Holdings*, 435 F.3d at 1369. Claim construction is a question of law, and the law is replete with instances in which the standard for determining a legal outcome is a hypothetical person.

For example, s. 103 of the patent statute requires that validity in terms of obviousness be judged by

reference to "a person having ordinary skill in the art." *See Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed.Cir.1987) ("With the involved facts determined, the decisionmaker confronts a ghost, *i.e.*, 'a person having ordinary skill in the art,' not unlike the 'reasonable man' and other ghosts in the law."). Design patent infringement is based on an "ordinary observer." *See Amini Innovation Corp. v. Anthony Cal., Inc.*, 439 F.3d 1365, 1371 (Fed.Cir.2006) (alteration in original) ("An ordinary observet test governs design patent infringement: "[if] in the eye of an ordinary observer, giving such attention as a purchaser usually gives, two designs are substantially the same, if the tesemblance is such as to deceive an ordinary observer, inducing him to purchase one supposing it to be the other, the first one patented is infringed by the other.").

Trademark law employs a "teasonably prudent person," or "reasonably prudent consumer," or, in some instances, a "discriminating purchaser." *See Weiss Assocs., Inc. v. URL Assocs., Inc.*, 902 F.2d 1546, 1548 (Fed.Cir.1990) ("In making purchasing decisions regarding 'expensive' goods, the reasonably prudent person standard is elevated to the standard of the 'discriminating purchaset."); *Nautilus Group, Inc. v. Icon Health & Fitness, Inc.*, 372 F.3d 1330, 1334 (Fed.Cir.2004) ("Under Ninth Circuit law, the core element of trademark infringement is whether the 'reasonably prudent consumer' is likely to be confused 'as to the origin of the good or service bearing one of the marks.'").

Standards such as "a person having ordinary skill in the art," "an ordinary observer," "a reasonably prudent person," "a reasonable man" and the like are not as concise as say a number or some other term that carries a precise definition. Nevertheless, such standards are deemed "objective" because those standards do not depend on the subjective beliefs of the parties. *See, e.g., United States v. Brown*, 441 F.3d 1330, 1347 (11th Cir.2006), *cert. denied sub. nom Brown v. United States*, 2007 U.S. LEXIS 1213 (2007) (citation omitted) ("Whether Brown was in custody prior to his formal arrest 'depends on whether under the totality of the circumstances, a reasonable man in his position would feel a restraint on his freedom of movement to such extent that he would not feel free to leave.' 'The test is objective; the actual, subjective beliefs of the defendant and the interviewing officer on whether the defendant was free to leave are irrelevant." '); *Trevino v. Johnson*, 168 F.3d 173, 178 (5th Cir.1999) ("The recusal standard is objective; the relevant inquiry is whether a reasonable man, were he to know all the circumstances, would harbor doubts about the judge's impartiality."); *In re Cmty. Bank of N. Va. Mortg. Lending Practives Litig.*, 418 F.3d 277, 320 (3d Cir.2005) (same); *Advantage Consulting Group, Ltd. v. ADT Sec. Sys., Inc.*, 306 F.3d 582, 589 (8th Cir.2002) ("a party's 'satisfaction' will be determined under an objectively-reasonable-man standard, and not on the basis of the contracting party's own subjective standard").

When the Federal Circuit in *Datamize* referred to the lack of any "objective definition" for "aesthetically pleasing," the court was using "objective" in the foregoing sense, *i.e.*, not dependent on the subjective beliefs of the parties. According to the court, "Datamize believes a reasonable construction of 'aesthetically pleasing' in the context of the claims involves the intent, purpose, wish, or goal of a person practicing the invention: that person simply must intend to create an 'aesthetically pleasing' interface screen; whether that person actually succeeds is irrelevant. In other words, Datamize suggests we adopt a construction of 'aesthetically pleasing' that only depends on the subjective opinion of a person selecting features to be included on an interface screen. Indeed, Datamize argues that the district court erred by requiring an objective definition for the phrase 'aesthetically pleasing.'" ' 417 F.3d at 1349. In response, the court remarked: "The scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention." *Id* at 1350.

Also, the Federal Circuit noted in *Datamize* that neither the specification nor the prosecution history provided any non-subjective standard for "aesthetically pleasing." With respect to the specification, the

Federal Circuit commented that:

The description of the advantages of the invention indicates that there are 'good standards of aesthetics,' which of course implies that there are also standards of aesthetics that are 'not good.' The inventor does not attempt to explain what distinguishes the two, except to say that experts, specialists, and academics may have views that are influential in determining what aesthetic standards are good. * * * There is no indication, however, other than by referring to 'the considered opinions of aesthetic design specialists, database specialists, and academic studies on public access kiosk systems and user preferences and problems,' how to determine what button styles, sizes, and placements, for example, are 'aesthetically pleasing.' Moreover, whatever the considered opinions of unnamed people and studies say is altogether unclear. * * * [O]ne skilled in the art reading the specification is left with the unhelpful direction to consult the subjective opinions of aesthetic design specialists, database specialists, and academic studies.

417 F.3d at 1352 (paragraphing omitted).

With respect to the prosecution history, the Federal Circuit in *Datamize* noted that statements by the prosecuting attorney likewise failed to delineate the claimed invention. According to the court, "[b]y arguing that 'aesthetically pleasing' does not depend on any standard of aesthetics other than a purely subjective standard held by any person who steps into the role of the system creator, the prosecuting attorney would eliminate any objective meaning for the phrase 'aesthetically pleasing.' As discussed, this would be improper." 417 F.3d at 1353.

Datamize also relied on extrinsic evidence, namely a declaration by its expert that "[t]he terms 'aesthetic' and 'aesthetically pleasing' in the patent serve to make it clear that the motivation of limiting selection is to allow the system creator to enforce his/her will regarding the "look and feel" and aesthetic aspects rather than solely functionality." ' The expert also provided a list of "generally accepted" parameters that contributed to a display getting high marks from users for being "aesthetically pleasing." The expert testified that in his opinion "one of ordinary skill in the art of software development of kiosks and computer user interfaces would understand the claims and be able to determine whether their own work was or was not covered by the claims in question."

The Federal Circuit rejected that testimony noting that "while indefiniteness does not depend on the difficulty experienced by a particular person in comparing the claims with the prior art or the claims with allegedly infringing products or acts, even the expert could not determine whether the look and feel of particular interface screens are 'aesthetically pleasing' using the parameters he specified, instead testifying that whether an interface screen is 'aesthetically pleasing' is a 'multidimensional question' that is 'not amenable to a single-word answer.' The inability of the expert to use the parameters he himself identified to determine whether an interface screen is 'aesthetically pleasing' militates against the reasonableness of those parameters as delineating the metes and bounds of the invention." *Id.* at 1353 54 (citation omitted).

The other two cases Microsoft relies on are not germane. In *IPXL Holdings*, claim 25, as interpreted by the court, was drawn to both an apparatus and a method, *i.e.* two different categories of invention under 35 U.S.C. s. 101. As a matter of first impression, the Federal Circuit held that such a claim was indefinite under s. 112(2). No similar assertion is made here.

In *Union Pacific Resources Co. v. Chesapeake Energy Corp.*, the claims were drawn to a method for locating a drill bit in a horizontal borehole relative to the surrounding strata. The method compared

"characterizing information," such as the three dimensional location of a bit relative to the surface, as well as gamma ray radiation log information obtained from that location, from two different boreholes. The method was complex and involved information such as: (1) an X offset (east/west coordinate); (2) a Y offset (north/south coordinate); (3) a true vertical depth (TVD) or Z offset; and (4) a value from a gamma ray log, which were then, at various points in the specification, described as "correlated," "rescaled," and "compared," as well as "stretching" and "squeezing" the TVD log. According to the court, "correlation is a process of stretching and squeezing a TVD log by carefully choosing assumed bed dip angles, until a portion of the TVD log matches a portion of the offset log. In other words, the 'comparing' step presumably refers to a complex 'correlation' step suggested (but not explained) in the written description." 236 F.3d 684, 692 (Fed.Cir.2001). The technology at issue here is not nearly as complex.

b) Relative Terms Do Not Render a Claim Indefinite

Second, relative terms "such as 'approach each other,' 'close to,' 'substantially equal,' and 'closely approximate' are ubiquitously used in patent claims and [] such usages, when serving reasonably to describe the claimed subject matter to those of skill in the field of the invention and to distinguish the claimed subject matter from the prior art, have been accepted in patent examination and upheld by the courts." *Anchor Wall Sys, Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1311 (Fed.Cir.2003) (describing holding in *Andrew Corp. v. Gabriel Elecs. Inc.*, 847 F.2d 819, 821-22 (Fed.Cir.1988)). "[W]hile ideally, all terms in a disputed claim would be definitively bounded and clear, such is rarely the case in the art of claim drafting." *Anchor Wall Systems*, 340 F.3d at 1311. The Federal Circuit has found terms of approximation such as "generally parallel," *id.* at 1310-11; "substantially constant wall thickness," *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1119-20 (Fed.Cir.2002); and "substantially uniform," *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed.Cir.2001), to be sufficiently definite when considered in the context of the intrinsic evidence and extrinsic evidence.

With that in mind, the focus turns to the specification and prosecution history of the '573 patent.

c) Specification

Once again, "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313.

The specification of the '573 patent describes several embodiments, but those embodiments fall into two general categories (1) recovery from a hard disk crash, or other error, which precludes "booting" the PC from the hard disk, and (2) factory loading multiple PC's with operating system and application software such as illustrated in Fig. 7. For example, the specification explains that (1) "[t]he present invention provides a data backup procedure and apparatus for backing up and restoring, or otherwise loading a fully configured operating system to the high capacity storage device (e.g ., hard disk) of a computer workstation, such as a personal computer," and (2) "[t]he present invention can also be used to efficiently factory load a fully configured operating system, and application software, into similarly configured workstations on a production line." *See also Veritas' Brief, Apx. C* at 89 (applicant's remarks- "[t]he invention of independent claims 1, 18, 33 and 34 relates generally to * * * apparatus and methods for restoring a fully configured operating system * * * in the event that the workstation's operating system becomes corrupted or otherwise inoperative * * *. A method of the invention may also be used to configure multiple computer systems with a target configuration, such as set forth in claim 30.").

(1) Recovery From a Hard Disk Error

In the first category, the specification explains that "[b]ecause there are so many possible system configurations available, a typical operating system needs to be individually tailored for each personal computer system on which it is installed. This tailoring operation typically requires that a skilled technician spend several hours building the operating system on the personal computer according to the desired system configuration." '573 patent, col. 1, lines 26-32. The specification further explains that "[t]he present invention provides a data backup procedure and apparatus for backing up and restoring, or otherwise loading a fully configured operating system to the high capacity storage device (e.g., hard disk) of a computer workstation, such as a personal computer. The invention quickly restores the operating system to the workstation from standard system backup media, such as magnetic backup tapes, without the need to reload and reconfigure the operating system from its original distribution media." '573 patent, col. 2, lines 1-10.

In the context of the first category, it seems clear that the specification uses "fully configured operating system" to refer to an operating system that has been "tailored" for the personal computer system on which it was installed—that is to say, *not* an operating system "fresh out-of-the-box" or installed from the original operating system installation disks without any configuration to the system on which the operating system is installed. That, indeed, was an object of the invention of the '573 patent, namely restoring the operating system "without the need to reload and reconfigure the operating system from its original distribution media."

Secondly, the specification uses "fully configured" and "temporary" to differentiate between the operating system that was backed up, and the operating system that is created using the "second media" ("the operator starts (i.e., boots) (202) the PC from the recovery diskette which loads an initial, temporary operating system into the memory of the PC." (573 parent, col. 6, lines 12-15)). The claims make that distinction as well.

Veritas urges in its proposed claim construction that "fully configured operating system" means an "operating system having the desired configuration," and "desired configuration" means "the desired way in which the capability has been tailored based on selection of components." As noted above, "desired configuration" is used only in claim 30 which is drawn to a second category of embodiments (factory installation on multiple PCs), discussed below. Also, that phrase is used in the specification only in that context, *i.e.*, "[i]n general, in another aspect, the invention features a method for loading a desired operating system onto a hard disk drive of a target data processing system, including configuring a hard disk drive of a model data processing system with the desired configuration for the target data processing system * * *." Accordingly, "desired configuration" is discussed separately below.

Veritas' proposed construction of "fully configured operating system" must be rejected for at least two reasons. First, once again, the specification is clear that "fully configured operating system" refers to an operating system that is "tailored" for the personal computer system on which it was installed, *i.e.*, *not* an operating system installed from the original operating system installation disks.

As discussed above, the specification mentions a system configuration file CONFIG.SYS, and "various device drivers such as SCSI.SYS (IBM OS/2 versions prior to 2.0), ASPI4OS2.SYS (IBM OS/2 versions prior to 2.0), TAPE.TSD (MS OS/2 LADDR), *.BID (MS OS/2 LADDR), *.ADD (IBM OS/2 2.0), and any backup device drivers." In MS-DOS 5.0, the CONFIG.SYS file had 15 different commands or configuration directives. Jeff Prosis, *PC Magazine DOS 5 Techniques and Utilities* at 39 (Ziff-Davis Press 1991). Those

commands include BREAK, BUFFERS, COUNTRY, DEVICE, DEVICEHIGH, DOS, DRIVPARM, FCBS, FILES, INSTALL, LASTDRIVE, REM, SHELL, STACKS and SWITCHES. Some commands had to do with configuring the system such that it would work with certain programs, *e.g.*, FILES governed the maximum number of files that could be open at any one time ("If WordPerfect quits on you with a message telling you to increase the number of FILES in CONFIG.SYS * * *, id. at 40-41), some had to do with geography, *e.g.*, COUNTRY ("[t]ailors time, date, currency, and other display formats for countries other than the United States," id.), and some had to do with loading device drivers, *e.g.*, DEVICE ("[l]oads an installable device driver into memory"), DEVICEHIGH ("[l]oads an installable device driver into upper memory on 286, 386 and 486 systems" id.). DOS 5.0 was supplied with certain installable device drivers such as ANSLSYS, HIMEM.SYS, and the DEVICE or DEVICEHIGH commands could be used to load those device drivers. Also, DEVICE could be used to "load any device driver developed in accordance with the device driver specifications published by IBM and Microsoft. If you own a tape drive, chances are it came with a device driver that you had to add to your CONFIG.SYS file before you could access the drive. * * * Why are device drivers so important? Because they, more than any other component of the operating system, are responsible for DOS's ability to run on a variety of different hardware configurations." Id. at 57-58.

One device driver listed in the specification was SCSI.SYS ('573 patent, col. 5, lines 51-54), which was a device driver for *S*mall *C*omputer *S*ystem *I*nterface devices. Sometimes changes in the CONFIG.SYS file were necessary to allow such device drivers to function properly, *e.g.*, a Microsoft support document entitled "System Hangs When SCSI Driver Is Loaded After DBLSPACE.SYS" involving MS-DOS 6.22 explains: "To work around this problem, load your SCSI device driver before DBLSPACE.SYS in the CONFIG.SYS file. If your system still hangs, load the device driver low (that is, change "DEVICEHIGH=" to "DEVICE=" and remove the /L parameter). For example, change devicehigh /L:1,1234 =c: scsi.sys to: device-c:scsi.sys." <http://support.microsoft.com/kb/103668>. Another device driver listed in the specification was ASPI4OS2.SYS ('573 patent, col. 5, lines 51-55), a driver for the Advanced SCSI Interface. TAPE.TSD was a tape driver for OS/2.

Thus, if a particular PC system used a SCSI interface to connect peripherals such as a tape drive and a scanner to the PC, the operating system would require "configuration" in order to operate, *i.e.*, device drivers for the SCSI interface as well as for the tape drive and scanner would have to be loaded. In PC systems of the type referenced in the '573 patent, that would require not only that those drivers be resident on the hard disk, but also that the CONFIG.SYS file has been "tailored" or modified such that those drivers are loaded into memory. Or, if a particular applications program such as WordPerfect required more open files than permitted by the default parameter, the CONFIG.SYS file would require "tailoring" or modification to the FILES command. Although some device drivers may relate to personal preference, *e.g.*, installing ANSI.SYS to enhance display and keyboard options, other drivers were necessary to allow a hardware configuration to function.

The point is that when an operating system such as MS-DOS 5.0 is loaded, certain default parameters are installed to allow the system to run. At that stage, the operating system is *not* a "fully configured operating system." A user though may then proceed to "configure" the operating system, for example as explained by Jeff Proise, *PC Magazine DOS 5 Techniques and Utilities* at 39 (Ziff-Davis Press 1991), under the heading "Configuring Your System":

Now that DOS 5.0 is installed on your system, your next task is to set it up to get the best return on your investment. DOS offers default configurations that will certainly run on most PCs, but there is much to be

gained from customizing it for your system. If you have a 286, a 386, or a 486 with 1Mb or more of memory, for example, you can load portions of DOS into extended memory, freeing up memory in the lower 640k for programs. If you own a 386 or 486, you can load terminate-and-stay resident (TSR) utilities and device drivers outside the lower 640k. If you have a hard disk, you can use some of that extra memory to speed up disk operations. Or, you can devote some of the memory in your system to a RAM disk to speed up application programs that are particularly disk-intensive. Even if you're running on an 8088 or 8086, you'll find that there's plenty of horsepower to spare with this operating system, and that its configuration options are as varied as they are numerous.

See also Microsoft support document entitled "Tips for Optimizing Performance" http://www.microsoft.com/technet/archive/wfw/4_ch9.mspx?mft=true. And, of course, the operating system may require configuration to properly run certain applications programs. *See, e.g.,* Microsoft support document entitled "Configuring AutoCAD 386 or AutoCAD Release 11 with MS-DOS," <http://support.microsoft.com/kb/73580>. In the context of the '573 patent, once a user configures the operating system for the system on which it is running, the operating system is a "fully configured operating system."

In a broad sense, Veritas' proposed construction of "fully configured operating system" as an "operating system having the desired configuration" may be correct to the extent that if one, for example, had a SCSI interface and "desired" that interface to work one would have to configure the operating system. But in terms of s. 112(2), Microsoft is correct that "Veritas offers a circle of words leading nowhere." Microsoft's Response at 47. Veritas' proposed construction would be analogous to that found indefinite in *Datamize, i.e.*, whether an operating system was "fully configured" would depend on a subjective opinion analogous to Datamize's suggestion that "aesthetically pleasing" depended on "the subjective opinion of a person selecting features to be included on an interface screen." 417 F.3d at 1349. That is a second reason for rejecting Veritas' proposed construction. The claim language is not indefinite, but Veritas' proposed construction is.

Once again, the specification is clear that "fully configured operating system" refers to an operating system that is "tailored" for the personal computer system on which it was installed, *i.e., not* an operating system installed from the original operating system installation disks without any configuration to the system on which the operating system is installed. The specification also uses "fully configured" and "temporary" to distinguish between the two operating systems, one being the operating system backed up on, for example, a tape drive, and the other being the operating system resulting from the "initializing" step that is then used to retrieve the backed up operating system. That becomes clearer from the prosecution history discussed below.

(2) Factory Installation on Multiple PCs

The specification explains that "FIG. 7 is a flow diagram showing one embodiment of the invention for efficiently factory loading multiple PC's with operating system and application software. Initially, the hard drive of a 'model' PC system is fully loaded and configured (500) with all the operating system files, system configuration files, device driver files, and application software files to be factory loaded onto the target production PC systems. A full backup operation of the model hard drive is then performed (502) to copy all files from the hard drive to backup media, such as magnetic tape or optical disk. The operating system configuration files, system configuration files and device driver files needed for the system configuration are copied (504) from the hard drive of the model PC to the recovery diskette. At this point, all media necessary to fully load multiple PC systems, *i.e.*, the backup media and the recovery diskette, are available (506)." '573 patent, col. 7, line 59-col. 8, line 7.

The specification further explains that "[t]he factory loading of the hard drive of a target PC system is begun by inserting (508) the backup media, previously prepared from the model PC, into a backup media drive connected to the target PC. The backup media drive can be either installed in the target PC or may be temporarily connected to the PC for the loading operation through, for instance, the PC parallel data port. Next, the target PC is booted (510) from the recovery diskette to install a temporary operating system, configuration files, device drivers and a recovery software application program for loading the hard drive of the target PC from the backup media." '573 patent, col. 8, lines 8-18.

From the specification, it is clear that "fully configured operating system" was intended in this embodiment to refer to the operating system on such a "model" PC system that was "fully loaded and configured with all the operating system files, system configuration files, device driver files, and application software files to be factory loaded onto the target production PC systems." That is to say, once again, *not* an operating system "fresh out-of-the-box" or installed from the original operating system installation disks without any configuration to the system on which the operating system is installed. And, again, the specification here too uses "fully configured" and "temporary" to distinguish between the two operating systems.

d) Prosecution History

As originally filed, claim 1 referred to a "first operating system" and a "second operating system":

1. A method for loading a first operating system onto a storage device of a data processing system, comprising the steps of:

providing a first media comprising operating system files for installing the first operating system onto the storage device;

providing configuration-specific data files on a second media;

initializing the data processing system from the second media to provide a second operating system using the configuration-specific data files to configure the data processing system;

loading the first operating system files from the first media to the storage device using the second operating system to install the first operating system; and

reinitializing the data processing system from the storage device to install the first operating system.

Independent claims 18 and 30 did likewise.

After the first Office Action, claim 1 was amended as follows (brackets showing deletions, underlining showing additions):

1. (Amended) A method for loading a [first] *fully configured* operating system onto a storage device of a data processing system, comprising the steps of:

providing a first media comprising operating system files for installing the [first] *fully configured* operating system onto the storage device;

providing [configuration-specific data files on] a second media *comprising configuration-specific data files*;
initializing the data processing system from the second media to provide a [second] *temporary* operating system *and* using the configuration specific data files to configure the data processing system;
loading the [first] *fully configured* operating system files from the first media to the storage device using the [second] *temporary* operating system [to install the first operating system]; and
reinitializing the data processing system from the storage device to install the [first] *fully configured* operating system.

Thus, in lieu of "first operating system" and "second operating system," the amended claim refers to "fully configured operating system" and "temporary operating system." Claims 18 and 30 were similarly amended.FN8 The applicants' remarks likewise explain that " 'first operating system' has been replaced by 'fully configured operating system' in each of claims 1, 18 and 30" and " 'second operating system' has been replaced by 'temporary operating system' in each of claims 1, 18 and 30." Veritas' Brief, Apx. C at 88-89.

FN8. It is noted that the amendment was not entirely accurate in showing what had been deleted and added. For example, in the preamble of claim 18, the word "first" is set out in brackets indicating that it was deleted, but "fully configured" was not underlined, although those words had been added. Veritas' Brief, Apx. C at 85. The same is true for claim 30.

Accordingly, it is clear from the prosecution history that "fully configured" and "temporary" are used in the claims to distinguish between the "first" and "second" operating systems.

3. "desired configuration"

In claim 30:

30. A method for loading a *fully configured operating system* onto a disk drive of a first data processing system, comprising the steps of:

configuring a disk drive of a second data processing system with the *desired configuration* for the first data processing system;

copying *fully configured operating system* files [*sic.* files] stored on the disk drive of the second data processing system to a first media;

copying configuration-specific data files from the disk drive of the second data processing system to a second media;

initializing the first data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the first data processing system; and

loading the *fully configured operating system* files from the first media to a disk drive of the first data

processing system using the temporary operating system to install the fully *configured operating system*. [Emphasis added.]

the "desired configuration for the first data processing system" clearly refers to the "fully configured operating system" that is loaded onto "a disk drive of a first data processing system."

The specification explains that "[i]n general, in another aspect, the invention features a method for loading a desired operating system onto a hard disk drive of a target data processing system, including *configuring a hard disk drive of a model data processing system with the desired configuration for the target data processing system*, copying the desired operating system files stored on the hard disk drive of the model data processing system to a first media, copyright configuration-specific data files from the hard disk drive of the model data processing system to a second media, initializing the target data processing system from the second media to provide a temporary operating system using the configuration-specific data files, and loading the desired operating system files from the first media to a hard disk drive of the target data processing system using the temporary operating system." '573 patent, col. 2, line 57-col. 3, line 4 (emphasis added).

In connection with Fig. 7, as already noted above, the specification explains that "[i]nitially, the hard drive of a 'model' PC system is fully loaded and configured (500) with all the operating system files, system configuration files, device driver files, and application software files to be factory loaded onto the target production PC systems." '573 patent, col. 7, lines 61-65.

Thus, from the specification it is plain that the "desired configuration" is the configuration for the "model" PC that will be duplicated on the target production PC systems. As the Federal Circuit explained in *Datamize*, the word "desired" does not render a claim indefinite: "[A] patent applicant may use claim language that requires a person to have foreknowledge of certain facts when practicing the invention. Consistent with this proposition, claim 1 is not indefinite for using the term 'desired,' which requires foreknowledge and even intent on the part of the person practicing the invention." 417 F.3d at 1355-56 (construing "wherein each said element type permits limited variation in its on screen characteristics in conformity with a desired uniform and aesthetically pleasing look and feel").

4. Conclusion

In the case of "fully configured operating system," Microsoft concentrates on the word "fully" and criticizes the '573 patent for failing to distinguish between "fully configured" and "not fully configured." But that is more or less the point. The '573 patent does not distinguish between "fully configured" and "not fully configured" because that is not the invention described in the specification. The '573 patent draws a distinction between (1) an operating system installed from the original operating system installation disks without any configuration to the system on which the operating system is installed, and (2) an operating system that *has* been configured to the system on which the operating system is installed. The specification and claims dub the latter a "fully configured operating system."

Veritas says in its reply brief that "[s]pecifically, the 'fully configured operating system' is the operating system that is being restored or deployed (depending on the application) and the 'desired configuration' is the configuration state of that operating system." Veritas' Reply at 17. The master agrees, but only up to a point. In the context of the '573 patent, the "operating system that is being restored or deployed" must have been "configured" to the system on which the operating system is installed, as distinguished from an

operating system installed from the original operating system installation disks without such configuration.

The hypothetical that Microsoft posits, namely where the backed up version of the operating system differs from the actual configuration of the system at the time of a hard disk crash, is not particularly relevant. The thrust of the '573 patent is to permit recovery of the configured operating system files that have been backed up-in the preferred embodiment-to a backup tape. Whether the backed up operating system files actually represent the current configuration of the subject PC is dependent on the user, not the process disclosed and claimed in the '573 patent.

Accordingly, the master concludes that the asserted claims are not "insolubly ambiguous" or not amenable to a reasonable construction in light of the specification and prosecution history. The master concludes that "fully configured operating system" refers to an operating system that is "tailored" for the personal computer system on which it was installed, *i.e.*, *not* an operating system installed from the original operating system installation disks without any configuration to the system on which the operating system is installed. The master also concludes that the "desired configuration" is the configuration for the "model" PC that will be duplicated on the target production PC systems.

However, the master reaches those conclusions in the context of claim construction on a record that is perhaps different from that of a motion for summary judgment of invalidity based on claim indefiniteness. Accordingly, nothing should be taken in herein as deciding that the claims are ... or are not-indefinite and therefore invalid (or valid) under s. 112(2).

D. Recommendation

The master recommends that the Court, on the present record, conclude that the asserted claims are *not* "insolubly ambiguous." Therefore, the master recommends that the Court conclude that the asserted claims are not invalid under 35 U.S.C. s. 112(2) on the present record, but without prejudice to raising that argument on a more complete record.

The master further recommends that the Court construe "fully configured operating system" in claims 1, 18, 30 and 33 as an operating system that is "tailored" for the personal computer system on which it was installed, *i.e.*, *not* an operating system installed from the original operating system installation disks without any configuration to the system on which the operating system is installed. The master also recommends that "desired configuration" be construed as the configuration for a "model" data processing system that will be duplicated on the target data processing systems.

VIII.

"install"

A. The Parties' Proposed Constructions

The parties propose the following constructions:

Veritas' Proposed	Microsoft's Proposed Construction
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Construction

Set up for use. The claims use this word in the following two different ways, at different locations in the claims:

(1) Place digital information (e.g., software) into a computer's storage device such that it is ready to be loaded into the computer memory and used by the computer. ('573 Patent at 8:66, 10:6, 10:57, 12:2).

(2) Load digital information (e.g., software) into a computer's memory for use by the computer. ('573 Patent at 9:11, 12:5).

See Veritas' Brief at 35-36; Microsoft's Response at 35

B. Parties' Respective Arguments

Veritas urges that "install" be given its plain meaning, and points to the intrinsic record's use of "install" as consistent with that meaning. Veritas contends that Microsoft's interpretation of "install" to mean two different things within the same claim is contrary to both the intrinsic record and law. Veritas' Brief at 37. Veritas also contends that "Microsoft's dual constructions of 'install' are encompassed by Veritas' single construction of 'setting up for use.' As part of setting up the operating system for use, the operating system files are first placed on to the computer's storage device and then loaded into its memory, as confirmed by Microsoft's own technical expert during his deposition." According to Veritas, "Microsoft's dual constructions introduce confusion and ambiguity where none exists." Veritas' Brief at 38.

Microsoft argues that Veritas' proposed construction is "too cryptic to be helpful." According to Microsoft, "Microsoft's proposed constructions track the literal claim language, and reflect that 'install' has a different connotation when used in connection with a storage device such as a hard disk versus memory." Microsoft's Response at 36.

C. Discussion

Beginning as always with the claim language, claims 1, 18, 30 and 33 call for:

1. A method for loading a fully configured operating system onto a storage device of a data processing system, comprising the steps of:

providing a first media comprising operating system files for *installing* the fully configured operating system onto the storage device;

providing a second media comprising configuration-specific data files;

initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system;

loading the fully configured operating system files from the first media to the storage device using the

temporary operating system; and

reinitializing the data processing system from the storage device to *install* the fully configured operating system.

18. A method for loading a fully configured operating system onto a disk drive of a data processing system, comprising the steps of:

copying fully configured operating system files stored on the disk drive to a first media;

copying configuration-specific data files from the disk drive to a second media;

initializing the data processing system from the second media to provide a temporary operating system and using the configuration specific data files to configure the data processing system;

initializing the disk drive prior to the step of loading the fully configured operating system files from the first media to the disk drives;

loading the fully configured operating system files from the first media to the disk drive using the temporary operating system to *install* the fully configured operating system; and

reinitializing the data processing system from the disk drive to provide the fully configured operating system.

30. A method for loading a fully configured operating system onto a disk drive of a first data processing system, comprising the steps of:

configuring a disk drive of a second data processing system with the desired configuration for the first data processing system;

copying fully configured operating system files [*sic.* files] stored on the disk drive of the second data processing system to a first media;

copying configuration-specific data files from the disk drive of the second data processing system to a second media;

initializing the first data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the first data processing system; and

loading the fully configured operating system files from the first media to a disk drive of the first data processing system using the temporary operating system to install the fully configured operating system. [Emphasis added.]

33. A method for loading a fully configured operating system onto a storage device of a data processing system, comprising the steps of:

initializing the data processing system from a second media, having configuration-specific data files, to

provide a temporary operating system using the configuration-specific data files to configure the data processing system;

loading the fully configured operating system files from a first media to the storage device using the temporary operating system, the first media having operating system files for *installing* the fully configured operating system onto the storage device; and

reinitializing the data processing system from the storage device to *install* the fully configured operating system.

Microsoft's point is that when "install" (and variations thereof) is used in a context such as "providing a first media comprising operating system files for *installing* the fully configured operating system onto the storage device," the word is being used to describe saving or "placing" digital information on a storage device, *e.g.*, a tape backup or computer hard drive. On the other hand, when "install" is used in a context such as "reinitializing the data processing system from the storage device to *install* the fully configured operating system," the word is being used to describe loading digital information, *i.e.*, the operating system, into memory. Microsoft's point is valid.

Veritas' proposed construction, "set up for use," comes from a general purpose dictionary, *i.e.*, Webster's Ninth New Collegiate Dictionary (1989). The dictionary illustrates use of "install" in the context: "had an exhaust fan ~ed in the kitchen." Here, of course, we are not talking about installing an exhaust fan in the kitchen. And, the Federal Circuit has cautioned that dictionaries, particularly general purpose dictionaries, may not capture the true meaning of a word, especially when used in a technical context. *See Phillips*, 417 F.3d at 1321-22.

Veritas also notes that the Federal Circuit has explained that there is a presumption that the same term appearing in different portions of the specification and claims should be given the same meaning. *See Schoenbaun v. Genesco, Inc.*, 440 F.3d 1354, 1357 (Fed.Cir.2006); *Fromson v. Anitec Printing Plates*, 132 F.3d 1437, 1442 (Fed.Cir.1997). *See also Fin Control Sys. PTY, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed.Cir.2001) ("[T]he same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and the prosecution history that the terms have different meanings at different portions of the claim."). However, when the same word or term is used in different contexts, different meanings may be appropriate. *See, e.g., Epcon Gas Sys. Inc. v. Bawer Compressors, Inc.*, 279 F.3d 1022, 1031 (Fed.Cir.2002) ("In this case, the term 'substantially' was used in two contexts with a subtle but significant difference. The phrase 'substantially constant' denotes language of approximation, while the phrase 'substantially below' signifies language of magnitude, *i.e.*, not insubstantial. Because the same term was used in a different manner in these two phrases, the word 'substantially' should not necessarily be interpreted to have the same meaning in both phrases.").

Here, Veritas does not disagree with Microsoft's proposed constructions-only that, in Veritas' view, two separate constructions are unnecessary. The master disagrees. In the context of the claim language, "install" is clearly being used in the manner Microsoft describes.

D. Recommendation- "install"

The master recommends that the Court adopt Microsoft's proposed constructions.

IX.

"reinitializing"-Related Terms

A. The Parties' Proposed Constructions

The parties propose the following constructions:

Veritas' Proposed Construction

"Reinitializing ... to install the fully configured operating system:" restarting the operation of the data processing system from the storage device to set up a fully configured operating system for use

"Reinitializing ... to provide the fully configured operating system:" restarting the operation of the data processing system from the storage device to set up a fully configured operating system for use

Microsoft's Proposed Construction

"Reinitializing ... to install the fully configured operating system:" restarting (re-booting) the operation of the data processing system to install the operating system loaded onto the storage device into memory on the data processing system

"Reinitializing ... to provide the fully configured operating system:" restarting (re-booting) the operation of the data processing system to install the operating system loaded onto the storage device into memory on the data processing system

See JCCS, Exh. B at [22-23] & Exh. C at 59-61; Veritas' Brief at 38; Microsoft's Response at 35-36.

B. Parties' Respective Arguments

According to Veritas, "[t]he only dispute between the parties concerning these terms is derived from the dispute concerning the proper construction of the term 'install * * *.' " Specifically, Veritas contends that "Microsoft's construction is incorrect, because it incorporates one of its incorrect constructions of the term 'install,' *i.e.*, that the term is sometimes limited to the process of loading data from a storage device to memory." Veritas' Brief at 38-39.

Microsoft contends that "[t]he parties' constructions of this claim language are close, but Microsoft is more specific. Veritas' reference to 'a' 'fully configured operating system, is unclear on whether this is the same 'fully configured operating system' referenced earlier in the claim. Also, 'set up for use' is unclear." Microsoft's Response at 36.

C. Discussion and Recommendation

The parties' dispute *vis-a-vis* "install" is resolved above, which, according to the parties' contentions, resolves this dispute as well. The master recommends that the Court adopt Microsoft's proposed constructions.

X.

"storage"-Related Terms

A. The Parties' Proposed Constructions

The parties propose the following constructions:

Veritas' Proposed Construction

Microsoft's Proposed Construction

"*storage device*:"
Mechanism for performing the functions of accepting, retaining, and emitting data

"*storage device*:" A data processing system's device for storing software and other digital data, such as a magnetic media hard disk drive, flash memory, or optical laser disk. The storage device may have one or more partitions. The storage device is physically distinct from both the first media and the second media.

"*media*:" Any readable or writable data storage area

"*first media*:" A data storage material, such as a magnetic tape, optical disk, or secondary hard disk. The first media is physically distinct from both the storage device and the second media. The first media may consist of multiple physical units (such as multiple tapes or disks)

"*second media*:" A removable data storage material (such as a floppy diskette, optical disk or non-volatile solid state memory module) from which the data processing system may be started (booted). The second media is physically distinct from both the storage device and the first media. The second media may consist of multiple physical units (such as multiple floppy diskettes)

See JCCS, Exh. B at [1-7] & Exh. C at 1-10; Veritas' Brief at 39-40; Microsoft's Response at 38.

B. Parties' Respective Arguments

Veritas contends that these terms should bear their plain meaning, relying on dictionary definitions and use of those terms in the specification. According to Veritas, Microsoft's proposed "physically distinct" limitations "are not supported in by the intrinsic evidence," that "in the Figure 6 embodiment * * *, the same physical hard drive is divided logically into separate 'partitions,' and each partition is used as a separate storage device or media to store a different version of the operating system," and that "Microsoft's own technical expert acknowledged * * * that including the 'physically distinct' limitations would make it 'impossible' to determine whether the 'first media' and 'second media' elements could be satisfied in a typical system configuration such as distributed file systems." Veritas' Brief at 41-42.

Veritas also urges that Microsoft's "removable" limitation in connection with the "second media" is not required by the intrinsic record, but that "the specification repeatedly suggests that removable and non-removable storage media can be used interchangeably * * *." And, as before, Veritas objects to Microsoft's use of specific examples. Veritas' Brief at 42-43.

According to Microsoft, the parties' dispute has multiple bases. First, Microsoft argues that "the storage device, first media (backup), and second media (emergency boot (recovery) disk) are physically distinct, and not the same physical thing" as disclosed in the specification and claimed, and that the media " *must* be different to achieve the functions described in the patent;" relying on the specification and expert testimony. Microsoft's Response at 39-40 (Microsoft's emphasis). Second, "the second media may comprise multiple disks," as the specification explains. Third, "[t]he claims say that the data processing system is initialized from the second media, which requires it to be bootable," and "[t]he alleged invention simply won't work without the Emergency Boot (Recovery) Disk being bootable." Fourth, the "second media" is removable, based on the "standard Emergency Boot (Recovery) Disk," claim differentiation, and the embodiments of the specification. Fifth, Microsoft contends that its proposed construction "is more specific to the claims" but would not object to merging the parties' proposed constructions. Lastly, Microsoft urges that its examples would be helpful to a jury, are "for the most part" examples from the specification, and that Veritas "knows the value of examples in claim construction" because "[t]hree of the agreed constructions *include non-limiting examples.*" *Id.* at 43-44 (Microsoft's emphasis).

Veritas contends that the patent does not require the various media to be "physically distinct," and that Microsoft "speculates about the extrinsic evidence (*i.e.*, how it believes one of skill in the art would implement the system) and then suggests that the 'storage' related media cannot be placed onto 'a single unit' because some of those skilled in the art would choose not to." Veritas urges, however, that "[s]uch speculation cannot make up for the lack of any intrinsic evidence supporting Microsoft's outcome-based constructions * * *)." Veritas' Reply at 18. Veritas also argues that "Microsoft's own expert acknowledged during his deposition that including the 'physically distinct' limitations would make it 'impossible' to determine whether the 'first media' and 'second media' elements could be satisfied in typical system configurations such as distributed file systems." Lastly, Veritas contends that "Microsoft's own expert testified that Microsoft's use of 'flash memory' as a so-called 'example' created an exception that contradicted Microsoft's construction of this claim element." *Id.* at 19.

C. Discussion

Beginning as always with the claim language, using claim 1 as representative:

1. A method for loading a fully configured operating system onto a *storage device* of a data processing system, comprising the steps of:

providing a *first media* comprising operating system files for installing the fully configured operating system onto the *storage device*;

providing a *second media* comprising configuration-specific data files;

initializing the data processing system from the *second media* to provide a temporary operating system and using the configuration specific data files to configure the data processing system;

loading the fully configured operating system files from the *first media* to the storage device using the temporary operating system; and

reinitializing the data processing system from the *storage device* to install the fully configured operating

system. [Emphasis added.]

and viewing the disputed terms in light of the specification, several things become clear.

1. "storage device"

a) Core Meaning

First, "storage device" is a recognized term of art in the field of computer science. For example, the MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS (5th ed.1994) at 1926, in the field of computer science, defines "storage device" as "[a] mechanism for performing the function of data storage: accepting, retaining, and emitting (unchanged) data items." *See also* http://www.webopedia.com/TERM/s/storage_device.html ("A device capable of storing data. The term usually refers to mass storage devices, such as disk and tape drives."). The specification uses "storage device" in the same sense, *e.g.*, "[w]orkstation 12 typically includes at least one high capacity storage device 16, such as a non-volatile magnetic media hard disk drive * * *," "[w]orkstation 12 also includes an interface 24 for connecting to a backup data device 26 such as a magnetic tape drive, optical disk drive, or a secondary hard disk drive." '573 patent, col. 3, lines 52-61.

Second, "storage medium" is also a recognized term of art in the field of computer science. For example, the MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS (5th ed.1994) at 1927 defines "storage medium" in the field of computer science as "[a]ny device or recording medium into which data can be copied and held until some later time, and from which the entire original data can be obtained." *See also* <http://www.webopedia.com/TERM/m/media.html> (defining "media" as the plural of "medium" and "[o]bjects on which data can be stored. These include hard disks, floppy disks, CD-ROMs, and tapes").

The parties' basic proposed constructions for "storage device" (Veritas: "mechanism for performing the functions of accepting, retaining, and emitting data"-Microsoft: "a data processing system's device for storing software and other digital data * * * ") are not substantively different. The parties' basic proposed constructions for "media" are likewise not substantively different (Veritas: "any readable or writable data storage area"-Microsoft: "data storage material").

Turning first to "storage device," Microsoft's proposed construction adds examples, *i.e.*, "such as a magnetic media hard disk drive, flash memory, or optical laser disk." Uses of examples may, sometimes, prove helpful, but also may intentionally or unintentionally limit the preceding construction.

The core of Microsoft's proposed construction is "[a] device for storing software and other digital data." Veritas' proposed construction picks some (not all) words from the definition for "storage device" in the MCGRAW-HILL DICTIONARY, and the result is construction that is not particularly understandable. The master believes that Microsoft's proposed core construction is accurate and comports with the use of the term in the specification, as well as generally understood in the art.

b) Additional Restrictions

Where the parties disagree is in Microsoft's further proposed limitations—limitations that do not appear in the claims. As noted at the outset, two claim construction principles are (1) claims are read in light of the specification, but (2) limitations from the specification must not be read into the claims. In *Phillips*, the Federal Circuit acknowledged that "the distinction between using the specification to interpret the meaning

of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice," but "the line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms." 417 F.3d at 1323.

The Federal Circuit also noted that "although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments," and "[i]n particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." *Id.* The Federal Circuit explained that "[t]hat is not just because section 112 of the Patent Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments." *Id.*

The Federal Circuit advised that "[t]o avoid importing limitations from the specification into the claims, it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so," and "[o]ne of the best ways to teach a person of ordinary skill in the art how to make and use the invention is to provide an example of how to practice the invention in a particular case." *Id.*

According to the court, "[m]uch of the time, upon reading the specification in that context, it will become clear whether the patentee is setting out specific examples of the invention to accomplish those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive. The manner in which the patentee uses a term within the specification and claims usually will make the distinction apparent." *Id.* (citation omitted).

Perhaps, but this is an issue that has evoked significant disagreement. *See, e.g., Acumed LLC v. Stryker Corp.*, 438 F.3d 800, 809, 815 (Fed.Cir.2007) (citation omitted) (panel majority: "where the patentees discussed the perpendicular holes of their preferred embodiment, they were not narrowly defining the term 'transverse' or otherwise limiting the claims, but merely discharging their statutory duties 'to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so.' That preferred embodiment cannot be the only product covered by the claims; if it were, the claims themselves would be unnecessary" versus dissent: "[p]atent scope should be coextensive with what the inventor invented as evidenced by what is disclosed in the patent specification."); *Anderson Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1372, 1373 (Fed.Cir.2007) ("The specification, however, uses language of requirement, not preference, when it states that the manufacture of the composition and pellet of the invention 'requires two important steps,' one of which is the pelletizing step." "It is true that we have warned against importing limitations from the specification into the claims absent a clear disclaimer of claim scope," and "[w]e have also recognized the difficulty faced by district courts in trying to walk that tightrope."); *nCube Corp. v. SeaChange Int'l, Inc.*, 436 F.3d 1317 (Fed.Cir.2006) (disagreement between panel majority and dissent on effect of specification); *Honeywell Int'l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312 (Fed.Cir.2006) (claims limited to disclosed embodiment).

Microsoft's proposed construction includes that "[t]he storage device may have one or more partitions." Although that is a true statement, it offers no help in accurately construing "storage device." Construing the term as "[a] device for storing software and other digital data" neither precludes nor requires partitioning. Thus, this portion of Microsoft's proposed construction is rejected.

Perhaps most importantly, Microsoft proposes that the construction include that "[t]he storage device is physically distinct from both the first media and the second media." Microsoft argues that (1) the claim language refers to those as three separate devices, (2) the specification and drawings likewise describe and depict those as three separate devices, and (3) those three devices must be separate to achieve the functions described in the patent, *i.e.*, "the first media and second media must not be part of the hard disk or they will be unavailable for recovery purposes," and "the patent assumes an inability, post crash, to retrieve data from the first media (*e.g.*, for lack of the correctly configured device driver), so by definition the 'invention' cannot work if the second media is physically part of that inaccessible first media." Microsoft's Response at 40.

Microsoft's first two arguments are not well taken. That the claims refer to "first device," "second device" and "storage device" does not *per se* require that those be separate devices. Similarly, simply because the specification and drawings, in describing exemplary embodiments, refer to separate devices does not necessarily mean that the claims must be so restricted.

Microsoft's third argument, though, has some (but not total) merit. As noted above, although the specification of the '573 patent describes several embodiments, those embodiments fall into two general categories (1) recovery from a hard disk crash, or other error, which precludes "booting" the PC from the hard disk, and (2) factory loading multiple PC's with operating system and application software such as illustrated in Fig. 7.

In claims 1 and 33, "storage device" is being used to refer to, in the context of the embodiments disclosed in the specification, a hard disk on data processing system. Claims 18 and 30 use the phrase "a disk drive of a data processing system."

The specification explains that "[d]ata stored on magnetic media disk drives, such as high capacity hard disks, are vulnerable to hazards such as 'head crashes,' accidental exposure to magnetic fields, loss of power during data writing operations, unintentional reformatting or data overwriting, or other destructive forces which can cause stored data to be lost. Data can also be lost by software failure, user error, hard storage device failure, or even loss or theft of the storage media or device." '573 patent, col. 1, lines 34-41. Simply losing data, though, does not necessarily make a hard disk "unbootable."

Clearly, the '573 patent is drawn to a situation where some error has caused the PC to be unbootable from the hard disk, or at least where the operating system is unreliable: "After a hard disk error affecting the operating system, the PC typically will be incapable of starting (*i.e.*, booting) from the hard disk. Operating system errors will typically result in unreliable operation. Hard disk crashes and other problems that affect the physical hard drive media often require that the hard drive be reformatted and/or repartitioned. In either of these cases, the operating system of the PC needs to be restored to the hard disk before normal hard disk operation of the PC can resume." '573 patent, col. 6, lines 1-9.

The '573 patent also clearly contemplates "initializing" the PC (or data processing system) from the "second media" to provide a "temporary operating system," and all claims so require: claim 1 "initializing the data processing system from the second media to provide a temporary operating system," claim 18 "initializing the data processing system from the second media to provide a temporary operating system," claim 30 "initializing the first data processing system from the second media to provide a temporary operating system," and claim 33 "initializing the data processing system from a second media."

Further, the '573 patent plainly contemplates that the "second media" is distinct from the "storage device" or hard disk drive of the PC, *e.g.*, "the system can be started directly from the OS/2 Installation diskette and the recovery diskette is then *inserted into the floppy disk drive.*" No example is given in which the "second media" and the "storage device" can be the same device, and the overall written description, including the problem being addressed, strongly indicates that those are two separate devices.

Veritas urges that in the Fig. 6 embodiments, "the same physical hard drive is divided logically into separate 'partitions,' and each partition is used as a separate storage device or media to store a different version of the operating system." Veritas' Reply at 18. Although that is true, the embodiment of Fig. 6 also describes "booting" from an OS/2 installation diskette, and then "inserting" the recovery diskette (*i.e.*, "second media") into the PC, *i.e.*, "the recovery diskette (404) containing the necessary system configuration files and device drivers is inserted into the PC." If Veritas is making an indirect reference to the possibility of partitioning and multiple boot options, that is not described in the '573 patent.

In the "factory install" embodiment of Fig. 7, a separate "recovery disk" ("second media") is similarly prepared.

In short, Veritas has pointed to nothing in the specification or the prosecution history that would suggest to one of ordinary skill in the art that the invention described in the '573 could achieve its fundamental purpose if the "second media" was not physically distinct from the "storage device," *i.e.*, the hard disk drive. Accordingly, the master concludes that Microsoft is correct that, in terms of the invention described in the '573 patent, the storage device must be physically distinct from the second media.

Microsoft also proposes that the storage device must be physically distinct from the "first media," *i.e.*, the backup device. The specification clearly describes the "first media" as a separate physical device, albeit one that is physically located within the workstation, *i.e.*, "[w]orkstation 12 also includes an interface 24 for connecting to a backup data device 26 such as a magnetic tape drive, optical disk drive, or a secondary hard disk drive. The backup data device may be physically located within the workstation, or may be a separate device temporarily connected to the workstation through a workstation data port 28, *e.g.* a parallel data port." '573 patent, col. 3, lines 59-65.

If the "first media" is not physically distinct from the "storage device," then the "backup" described in the specification is being made to the same "storage device," *i.e.*, the computer hard disk, that may "crash." Microsoft urges that "[i]t would make no sense to put * * * backup data * * * on the very device you feared would crash." Microsoft's Response at 40. Perhaps it would not be wise, but the specification of the '573 patent does not preclude the same.

The specification notes that "[d]ata backup systems are known which restore high capacity hard disks from a digital image of that hard disk, *i.e.*, on a media bit-mapped basis," and that [t]his type of image restoration may be able to restore an operating system to fixed storage media since the operating system is simply some portion of the total image being restored." '573 patent, col. 1, lines 56-61. However, the specification explains, "any reformat or repartition of the hard disk, which is typically required after a head crash or other problem affecting the integrity of the media, can change the underlying logical structure of the hard disk which may make it impossible to restore a digital image to the hard disk without losing data." '573 patent, col. 1, lines 56-67. The specification further explains that the backup program "should be capable of backing up the entire system in a manner where individual data files can be retrieved from the backup media and restored to the hard drive, rather than requiring a restoration of the entire image of the hard drive." '573

patent, col. 5, lines 24-28. A backup to a disk typically involved placing selected files in one or more backup files. Thus, assuming that a disk drive has sufficient capacity, a backup could be made to the same disk drive. There may be a number of reasons not to do so, including that a hard disk crash or other error may not only render the drive "unbootable," but may also corrupt the backup data itself; and, the hard drive may not only be "unbootable" but inaccessible without reformatting or repartitioning which may result in a loss of the backup data. Also, of course, such a backup takes up additional space on the hard drive.

Nevertheless, the invention of the '573 patent does not preclude using the "storage device" as the "first media." Accordingly, Microsoft's proposal that the "first media" must be physically distinct from the "storage device" is rejected.

Thus, the master concludes that Microsoft's proposed construction of "storage device" is correct to the following extent: "storage device" within the context of the '573 patent means "[a] device for storing software and other digital data. The storage device is physically distinct from the second media." As for Veritas' argument that "physically distinct" creates interpretation problems, especially with distributed file systems, it is not clear what those problems would be. Perhaps there is a better choice of words. The meaning and intent, though, should be clear from the foregoing discussion.

2. "first media"

a) Core Meaning

As noted above, "media" has a well-known meaning and the parties' proposed core constructions do not differ significantly. What the real dispute appears to be is Veritas' reference to "area," *i.e.*, "first media" and "second media" may be different "areas" on the same medium, and Microsoft's requirement that "[t]he first media is physically distinct from both the storage device and the second media."

Before turning to that, however, Microsoft once again includes examples, *i.e.*, "such as a magnetic tape, optical disk, or secondary hard disk." Although that is mostly consistent with the specification, namely, "a backup data device 26 such as a magnetic tape drive, optical disk drive, or a secondary hard disk drive" ('573 patent, col. 3, lines 59-61), once again examples may have other intended or unintended consequences. Furthermore, it is the claim language that controls, and the claim language here is "first media." Accordingly, that portion of Microsoft's proposed construction is rejected.

Microsoft also proposes that "[t]he first media may consist of multiple physical units (such as multiple tapes or disks)." Although that is true, it is unnecessary. That is not the subject of any dispute between the parties. Accordingly, that portion of Microsoft's proposed construction is rejected as well.

b) Additional Restrictions

Again, Microsoft says that "[t]he first media is physically distinct from both the storage device and the second media." The foregoing resolves that the "first media" is not necessarily physically distinct from the "storage device." It can be, and perhaps is preferably so, but Microsoft has not persuasively demonstrated that should be imposed as a requirement on the claims when the claims themselves impose no such limitation.

The second question is whether the "first media" must be physically distinct from the "second media." Certainly, once again, the examples given in the specification all contemplate that the "first" and "second"

media are physically distinct. Examples of the "first media" in the specification are "a magnetic tape drive, optical disk drive, or a secondary hard disk drive," while the "second media" is typically referred to as a "diskette." But again, given that the claims themselves do not contain such a restriction, Microsoft makes no persuasive showing that the invention described in the '573 patent requires that the "first" and "second" media be physically distinct.

In terms of the invention described in the specification, the "second media" must be "bootable" (as discussed below), but the specification also gives examples in which the "boot" function is performed using an installation disk for OS/2, followed by insertion of the recovery disk. That is, perhaps multiple components of the "second media" must be capable of "booting" the system, but that does not necessarily require a single medium or media physically distinct from the "first media."

In terms of the claim language, claim 1, for example, calls for "initializing the data processing system from the second media to provide a temporary operating system and using the configuration-specific data files to configure the data processing system," and "providing a first media comprising operating system files for installing the fully configured operating system onto the storage device." So long as the "second media" and "first media" are capable of accomplishing those tasks, there is no prohibition on those media being, for example, different areas on the same medium.

Accordingly, the master concludes that "first media" should be construed to mean "a data storage material. The first and second media are not required to be physically distinct."

3. "second media"

For the same reasons given above, Microsoft's proposed examples are rejected. Also, Microsoft's proposed construction that "[t]he second media may consist of multiple physical units (such as multiple floppy diskettes)" is unnecessary because there is no dispute between the parties that the second media may consist of multiple "units."

Microsoft's proposed construction that "[t]he second media is physically distinct from both the storage device and the first media" has been resolved above. That is not required by either the claim language or the invention described in the '573 patent.

Microsoft's proposed construction includes that "from which the data processing system may be started (booted)." Microsoft's construction is correct. Within the context of the invention of the '573 patent, the "second media" is used to start or "boot" the system. Also, the claim language provides "initializing the data processing system from the second media to provide a temporary operating system" which includes, as discussed above, "booting."

Microsoft's proposed construction also requires that the "second media" be "removable." Certainly in all of the examples of the "second media" given in the specification the media is "removable ." However, Microsoft points to nothing in the nature of the invention disclosed in the '573 patent that requires the "second media" to be removable.

In terms of the claim language, dependent claim 11:

11. The method of claim 1, wherein the second media comprises a removable diskette.

and dependent claim 21:

21. The method of claim 20, wherein the second media comprises a removable diskette.

provide that the "second media" comprises a "removable diskette ." Microsoft argues, with an indirect reference to the doctrine of claim differentiation, that does not mean that the "second media" in the independent claims must be construed as either removable or non-removable. Microsoft argues that only means that "second media" in the independent claims should not be construed as a "removable diskette." Microsoft's Response at 42. Microsoft says it has provided for that in its proposed construction by referring to a "memory module" as being within the scope of the claims.

It is true that dependent claims 11 and 21 do not necessarily resolve the issue. And, in all events, the doctrine of claim differentiation is a guideline not a rigid rule. However, those dependent claims *do* at least suggest that "second media" in the independent claims should be given a broader interpretation than "removable diskette" even though that was the only type of media discussed in the specification for the "second media."

In all events, on the question whether the "second media" must be removable, Microsoft points to no "language of requirement" as opposed to "preference" in the specification or prosecution history. Accordingly, Microsoft's proposal that the "second media" must be "removable" is rejected.

D. Recommendation- "storage" Related Terms

The master recommends that the Court construe (1) "storage device" to mean "a device for storing software and other digital data. The storage device is physically distinct from the second media," (2) "first media" to mean "a data storage material. The first and second media are not required to be physically distinct," and (3) "second media" to mean "a data storage material from which the data processing system may be started (booted)."

XI.

Additional Terms "loading"-Related Terms

A. The Parties' Proposed Constructions

The parties dispute various claim phrases that call for "loading" in connection with the "fully configured operating system." Veritas contends that "[n]o further construction is necessary, except for terms already construed." *See* Veritas' Brief at 43-44. Microsoft, however, proposes the following:

Claim Phrase	Microsoft's Proposed Construction
"providing a first media comprising operating system files for installing the fully configured operating system onto the storage	Providing a first media storing operating system files such that they can be loaded from the first media to the storage device. As a result of this 'providing' step and the subsequent 'loading' step, the 'fully configured operating system' becomes present on the storage device.

device"

This claim limitation excludes restoring a bit mapped image of the operating system.

As noted elsewhere, the phrase 'fully configured operating system' is indefinite in the '573 patent claims.

"loading the fully configured operating system files from [the/a] first media"

Loading operating system files from the first media to the storage device, such that the 'fully configured operating system' becomes present on the storage device

This claim limitation excludes restoring or loading a bit mapped image of the operating system.

"loading ... to install the fully configured operating system"

Loading operating system files from the first media to the storage device, such that the 'fully configured operating system' becomes present on the storage device

This claim limitation excludes restoring or loading a bit mapped image of the operating system.

"loading ... for installing the fully configured operating system"

Loading operating system files from the first media to the storage device, such that the 'fully configured operating system' becomes present on the storage device

This claim limitation excludes restoring or loading a bit mapped image of the operating system.

See JCCS, Exh. B at [17 20 & 22], Exh. C at 41-44 & 53-59; Veritas' Brief at 43-45; Microsoft's Response at 32-33.

B. Parties' Respective Arguments

Veritas urges that "Microsoft's proposed constructions are just another transparent attempt to import outcome-based limitations-specific negative limitations for purposes of avoiding infringement ." Veritas contends that the specification provides no basis for Microsoft's "negative limitations," and, with respect to bit-mapped images, "merely describes one of the many challenges overcome by the patented methods, which utilize configuration-specific data files to provide a temporary operating system that can work with various hardware configurations, including hard disks." Veritas' Brief at 45.

Microsoft, on the other hand, argues that the issue is whether the "first media" may "store only enough of the operating system to provide a 'fully configured operating system' on the storage device when combined with whatever operating system files are loaded from the Emergency Boot (Recovery) Disk." According to

Microsoft, the claims are "unclear" because the "first 'providing step' recites that the first media comprises 'operating system files,' not 'fully configured operating systems,' "[b]ut then it adds the functional language 'for installing the fully configured operating system onto the storage device'-and "Microsoft's construction attempts to reconcile this seemingly conflicting terminology." Microsoft contends that "[t]he patent discloses that all or some of the files on the PC may be backed up," but does not "explain what it means by 'fully configured operating system.'" Microsoft's Response at 33-34. Microsoft also urges that the '573 patent applicants "distinguished their 'invention' from 'image restoration' of an operating system backed up on a bitmapped basis," citing column 1, line 55 to column 2, line 17.

C. Discussion

The master agrees with Veritas that no further construction of those terms is necessary in light of the foregoing constructions, other than to address Microsoft's questions.

In response to the first question Microsoft raises in its Response at 33, the claims and specification are clear that the files that are "loaded" are the files from the "first media." Furthermore, it is clear from the claim language that the "loading" is from the "first media" to the "storage device" or "disk drive" of the data operating system using the "temporary operating system," *i.e.*, claim 1 "to the storage device using the temporary operating system," claim 18 "loading the fully configured operating system files from the first media to the disk drive using the temporary operating system," claim 30 "loading the fully configured operating system files from the first media to a disk drive of the first data processing system using the temporary operating system," claim 33 "loading the fully configured operating system files from a first media to the storage device using the temporary operating system." In the examples described in the specification, the PC is "booted" from the "second media."

As discussed above, system files are thus loaded into memory which, in the type of PCs discussed in the specification, would be volatile memory, *i.e.* lost if the computer is turned off. There is no written description or suggestion that any of those files are written or saved to the PC hard drive. The foregoing excerpts from the claims are clear that the "temporary operating system" allows the user to transfer the files from the "first media" to the PC hard drive-the "storage device" or "disk drive." Then the PC is "reinitialized" (claims 1, 18 and 33) from the PC hard drive-the "storage device" or "disk drive." The system and perhaps other files that loaded into memory are those now on the "storage device" or "disk drive," not those from the "temporary operating system."

With respect to Microsoft's second question, reflected in Microsoft's proposed constructions that the claim limitations "exclude[] restoring or loading a bit mapped image of the operating system," the answer is a qualified yes-although the parties have not provided a full explanation in their submissions.

In general terms, it is understood that backup software falls generally into two broad categories, (1) image based, and (2) file-based. Again in general terms, image backup records an image of a partition or drive, sector by sector instead of file by file.

The '573 patent, under the heading "Background of the Invention," explains that "[d]ata backup systems are known which restore high capacity hard disks from a digital image of that hard disk, *i.e.*, on a media bit-mapped basis. This type of image restoration may be able to restore an operating system to fixed storage media since the operating system is simply some portion of the total image being restored." '573 patent, col. 1, lines 56-61. In short, image backup was known. When the patentees say that it "may" be possible to

restore an operating system from such an image backup (*i.e.*, restore the operating system, but not the entirety of the backup image), that is understood to mean that the patentees were uncertain whether image type backup software then extant would permit restoring less than the entire image, but assumed that was possible.

Additionally, however, the '573 patentees point out that "any reformat or repartition of the hard disk, which is typically required after a head crash or other problem affecting the integrity of the media, can change the underlying logical structure of the hard disk which may make it impossible to restore a digital image to the hard disk without losing data." '573 patent, col. 1, lines 61-67.

A hard disk medium may have portions (clusters) that are defective and cannot reliably hold data. That may occur during disk manufacture. Or, may occur during use, *e.g.*, as a result of a head crash.

When the '573 patent refers to restoring a "digital image" of a hard disk "on a media bit-mapped basis," that is understood to mean that the image is restored to the location on the drive where it originally was. However, during formatting, defective portions of a drive are marked so that the system does not attempt to store data in such defective portions. Also, as the patentees explain, reformatting or repartitioning may change how the drive is logically structured. When the patentees say that it may thus be "impossible to restore a digital image to the hard disk without losing data," within the context of restoring a backup image "on a media bit-mapped basis," that is understood to mean that it may have become impossible to restore the various portions of the data reflected in the backup image to the same location on the drive where it originally was.

As understood, in file-based backup, files on a hard drive are selected and then backed up to another storage medium, typically in one or more backup files. During the process of restoring, individual files (or groups of files) may be selected for restoration. That is, if the original backup consisted of the entire contents of a hard disk, including (1) operating system files, (2) configuration files, (3) application files (such as WordPerfect), and (4) other files, a user could choose among the files the user wished to restore. Also, it is the master's understanding that in restoring from a file-based backup, the files are restored to the hard disk, but not necessarily in the same physical location where those files were at the time of backup. Thus, restoring from a file-based backup could accommodate for a reformatting that had marked defective clusters or portions of the hard disk medium, or a repartition-all, obviously, within degrees.

With that understanding, the '573 patentees in the foregoing seem to clearly disassociate their "invention" from image-type backup systems-or at least ones that restore a backup image "on a media bit-mapped basis." That view finds further support in the body of the specification under the heading "Description of the Invention." The patentees explain that the backup program "should be capable of backing up the entire system in a manner where individual data files can be retrieved from the backup media and restored to the hard drive, rather than requiring a restoration of the entire *image* of the hard drive." '573 patent, col. 5, lines 24-28 (emphasis added). The patentees explain that "[o]ne suitable backup program is Sytos Plus, which is commercially available from Sytron Corporation, 134 Flanders Road, Westboro, Mass. 01581, the assignee of the present application."

Veritas urges that "[n]owhere * * * [in the written description or prosecution history is there a suggestion] that use of such bit-mapped images must be excluded from the patented methods," Veritas' Brief at 45, citing *Ventana Med. Sys., Inc. v. BioGenex Labs., Inc.*, 473 F.3d 1173, 1181 (Fed.Cir.2006) for the proposition that "such general statements of the limitations found in the prior art in the "Background

Section" of the specification, without more, 'will not be interpreted to disclaim every feature of every prior art device discussed in the "BACKGROUND ART" section of the patent." ' "

Ventana involved patents drawn to automated methods and apparatuses for staining microscope slides. The district court had construed "dispensing" in the claims as requiring "direct dispensing." One issue was whether the claims could be construed to cover "sip and spit" dispensing. During oral argument, counsel for BioGenex apparently pointed out that the "BACKGROUND ART" section of the patent-in-suit discussed a number of prior art automated staining devices, including a device that BioGenex characterized as using the "sip and spit" method of dispensing. BioGenex argued that as a result the patent did not encompass that method. The panel majority disagreed, writing that "[w]e decline to interpret these general statements by the inventors to effect a complete surrender from the claims of the '861 patent of all types of dispensing except 'direct dispensing.'" ' 473 F.3d at 1180. The panel majority further wrote that "[s]uch general statements, without more, will not be interpreted to disclaim every feature of every prior art device discussed in the 'BACKGROUND ART' section of the patent." *Id.* at 1181. Circuit Judge Lourie, in dissent, disagreed that the district court had erred, finding that statements made through the specification "describe the essence of the invention and clearly show that the reagent is dispensed directly from a reagent container positioned in a support onto a slide." *Id.* at 1185.

Also, the Federal Circuit has plainly used statements in the "background" section of a patent, in conjunction with statements made in describing the "invention," in construing the claims. *See, e.g., Terlep v. Brinkmann Corp.*, 418 F.3d 1379, 1383 (Fed.Cir.2005) ("The Background and Prior Art sections state that various techniques for applying diffusion directly to the LED surfaces had been attempted in the past and were unsuccessful in rendering the light emitted from the LED omnidirectional. * * * The Summary of the Invention section describes the invention as an omnidirectional LED lamp that does not use a diffusion lens over the LEDs. * * * Implicit in these passages is the distinction between lenses or holders that diffuse or scatter light and those that transmit light without obstruction.").

Here, the statements in the "Background of the Invention" section of the '573 patent in conjunction with statements in the "Description of the Invention" portion of the specification are consistent in at least two areas.

The first is that the backup "should be capable of backing up the entire system in a manner where individual data files can be retrieved from the backup media and restored to the hard drive, rather than requiring a restoration of the entire *image* of the hard drive." As noted above, the patentees expressed at least some question whether then-available (or then-known to the patentees) image-type backup programs would be so capable. Although "should be capable" could be construed as a statement of preference, in context that is believed more reasonably construed as a requirement-not necessarily for "backing up the entire system," which is not the focus of the '573 patent, but a requirement that "individual data files can be retrieved from the backup media and restored to the hard drive, rather than requiring a restoration of the entire *image* of the hard drive." The preceding sentence in the specification, for example, says that "[p]rior to performing a recovery or loading operation with this invention, a PC is fully loaded and configured (100) as desired with the operating system, device drivers, configuration files, and application software including a tape backup program." Thus, the "entire system" that may be backed up includes far more than the "invention," *i.e.*, "[t]his invention features a data backup procedure and apparatus for backing up and restoring, or otherwise loading a fully configured operating system to the high capacity storage device (e.g., hard disk) of a computer workstation, such as a personal computer," '573 abstract; "[a] method for loading a fully configured operating system * * *," claim 1 (similar language in claims 18, 30 and 33).

The second is that the backup must be capable of being restored, without a loss of data, even though the hard disk has been reformatted or repartitioned. The '573 patent clearly contemplates, at least in the "recovery" embodiments as part of the "invention," that the operating system backed up to the "first media" can be restored as a fully functioning operating system even if the hard disk is reformatted or repartitioned. Again, the patentees expressed at least some question whether then-available (or then-known to the patentees) image-type backup programs would be so capable.

Again, Microsoft's proposed construction is that these claim limitations "exclude[] restoring or loading a bit mapped image of the operating system." A fair reading of the '573 patent does not "exclude" "restoring or loading a bit mapped image of the operating system." Or, more generally, a fair reading of the '573 patent does not "exclude" image type backups.

On the other hand, a fair reading of the '573 patent indicates that the backup (1) must allow "where individual data files can be retrieved from the backup media and restored to the hard drive, rather than requiring a restoration of the entire *image* of the hard drive." The master readily concedes that the foregoing snippet is in a clause preceded by "should be," but in this instance, "should be" is understood, in the context of the invention described in the '573 patent as a whole, as a statement of requirement rather than preference.

Secondly, a fair reading of the '573 patent indicates that the backup (2) must be capable of being restored, without a loss of data, even though the hard disk has been reformatted or repartitioned.

D. Recommendation

The master recommends that the Court construe the "loading" related terms as (1) not excluding "restoring or loading a bit mapped image of the operating system," but (2) allowing retrieval and restoration of individual files from the backup media without a loss of data, even though the hard disk has been reformatted or repartitioned.

XII.

"limiting to a predetermined quantity"

A. The Parties' Proposed Construction

Veritas contends that "[n]o further construction is necessary, except for terms already construed." *See* Veritas' Brief at 46. Microsoft, however, urges that the phrase means " 'prohibiting (disabling) loading of the "first operating system files" from the first media to the disk drive more often than a particular number of times, which number is set prior to performance of any step in the recited method." ' Microsoft's Response at 45. *See also* JCCS, Exh. B at [23] & Exh. C at 62.

B. Parties' Respective Arguments

Veritas urges that "the ordinary meaning should apply and is apparent from the disputed claim itself," and that "[n]o further construction is necessary." Veritas' Brief at 46.

Microsoft contends that the "patent sketchily describes a 'copy counter' option in two paragraphs in connection with Figure 7, which is used as a security device for controlling the quantity of systems that can be loaded by using a particular recovery diskette." That, according to Microsoft, "sheds light on the meaning of 'limiting to a predetermined quantity,' namely that for security reasons, the step of loading of the 'first operating system files' (which phrase is another error in these claims) from the first media to the disk drive should be disabled after being performed a particular number of times." Microsoft's Response at 44. In Microsoft's view, the term "predetermined" "naturally raises the question: determined before what?" Id. at 45.

C. Discussion

This "dispute" concerns dependent claim 31, which calls for:

31. The method of claim 30, further comprising the step of limiting to a predetermined quantity the number of times the first operating system files can be loaded from the first media to the disk drive.

In answer to Microsoft's question, the limitation means exactly what it says: "limiting to a predetermined quantity the number of times the first operating system files can be loaded from the first media to the disk drive." There is no ambiguity and no need to further construe this claim.

XIII.

Requests to Interpret "each claim as a whole"

A. The Parties' Proposed Constructions

Veritas argues that "[n]o further construction is necessary, except for terms already construed." Microsoft, though, urges the following:

Claim(s) Microsoft's Proposed Construction

- Claims 1-33
1. The claim contains no limitation as to who or what performs the recited steps. Each step may be performed manually by a human user, or may be performed automatically without human intervention.
 2. None of the steps must occur near in time to any of the other steps.
 3. The configuration-specific data files loaded on the second media need not be all of the configuration-specific data files ever stored on the storage device. Nor need the configuring of the data processing system using those files be complete in any sense. Rather, the claims require only that enough such data be saved on the second media, and enough such configuring be done using that data, necessary to allow the loading of data from the first media to the storage device.

4. The claims exclude (i.e., do not cover) a process in which the loading of the "fully configured operating system" onto the data processing system is accomplished by a separate computer from which that operating system is loaded.

Claims 1, 18 and 33, and their dependent claims

This claim is directed to restoring a "fully configured operating system" to a storage device of a data processing system after the system's operating system becomes corrupted or otherwise inoperative, such as by a storage device crash, in a manner that would otherwise render the system un-bootable. This claim excludes (i.e., does not cover) the factory loading scenario described in the patent in connection with Figure 7.

Claim 30 and its dependent claims

1. The claim does not require the method to be performed with more than two data processing systems. Nor does it require the method to be performed in a factory.

2. The second data processing system must differ from the first data processing system in at least one physical respect (e.g., a new hard disk), but otherwise it may be the same physical unit as the first data processing system.

See JCCS, Exh. C at 63-71; Veritas' Brief at 46-48; Microsoft's Response at 44-45.

B. Parties' Respective Arguments

Veritas argues that "Microsoft improperly seeks advisory rulings from this Court that it will try to use in arguing that (a) certain of its accused products do not infringe the '573 patent, and/or (b) certain prior art is applicable in the context of Microsoft's invalidity counterclaim." According to Veritas, "Microsoft does not even attempt to the these proposed limitations to any particular claim or phrase in the claims, much less establish that these limitations must be read into any particular language of the claims." Veritas contends that Microsoft seeks "fact-specific determinations" better left for the infringement stage. Veritas' Brief at 48.

Microsoft contends that "[t]he main point of claim construction is to explain the claimed invention to jury." Microsoft's Response at 36. According to Microsoft, claims 1, 18 and 33 are "directed to crash recovery, and that another set of claims was directed to factory loading," and that the patentees "made this point repeatedly in the prosecution history." Microsoft also urges that the "claims require that the loading of the fully configured operating system be accomplished by the data processing system itself, rather than by some other computer from which that operating system is transferred," pointing to the patentees' remarks in connection with a prior art Ottman reference. Microsoft further argues that "each step may be performed manually," again relying on the prosecution history. Lastly, Microsoft contends that "steps may be performed far apart in time." *Id.* at 37.

Veritas replies that Microsoft mischaracterizes *Power Mosfet Technologies, L.L.C. v. Siemens AG*, 378 F.3d 1396 (Fed.Cir.2004) by taking quotes out of context. According to Veritas, "this case stands for the generally understood proposition that claim construction is an exercise in construing the terms of the claims and not ascribing some abstract limitations and clarifications to the 'claim as a whole' as Microsoft urges in this case." Veritas contends that "Microsoft points to no particular claim language or limitation for which

further construction is required," "nor does Microsoft offer any factual or legal support that such statements rise to the level of prosecution disavowal or disclaimer."

C. Discussion & Recommendation

The situation in *Power Mosfet* was somewhat unique. There is no analogous situation here. In the master's view, there is no need to construe the claims "as a whole."

XIV.

Mr. Smith's Report

Microsoft urges that the "Court should dismiss the report submitted by Veritas and signed by Dr. Smith and disregard its stated opinions on claim construction because" followed by several reasons. Microsoft's Response at 48-49. Suffice it to say that the master has reviewed the parties' submissions, including expert submissions, in the context in which they were made. To the extent expert submissions were balanced and one was believed persuasive and the other was not, is discussed in context with the foregoing. To the extent that expert submissions (or other submissions) have not been expressly mentioned or referenced, such submissions have not been deemed particularly helpful in resolving the disputes presented to the master, and subsequently to the Court.

Accordingly, the master declines to "dismiss" Dr. Smith's report. Rather, the master has accorded Dr. Smith's report the weight it is due in the context of the parties' briefing, and recommends that the Court do likewise.

XV.

Final Report and Recommendation

This is the master's *final* report and recommendation. Under Rule 53(g)(2), FED. R. CIV. P.:

(2) *Time To Object or Move.* A party may file objections to-or a motion to adopt or modify-the master's order, report, or recommendation no later than 20 days from the time the master's order, report, or recommendation are served, *unless the court sets a different time.* [Emphasis added.]

Accordingly, the parties are encouraged to determine whether an order from the court modifies the foregoing. Also, the parties are encouraged to review Rule 53(g)(3), (4), FED. R. CIV. P., relating to the Court's *de novo* review of findings of fact and conclusions of law.

Although this is the master's final report and recommendation for purposes of filing objections, or motions to adopt or modify, the parties may, of course, seek further comment or clarification through motions directed to the Court.

The Court's order of January 18, 2007, required that the master make findings of fact and conclusions of law, and make a recommendation to the Court. The foregoing constitutes the master's findings of fact and conclusions of law, and the master's recommendations to the Court.

CERTIFICATE OF SERVICE

I hereby certify that on the 25th day of May, 2007, a true and correct copy of the above and foregoing was delivered via Federal Express to the following parties:

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