

United States District Court,  
N.D. California.

**DATABASE EXCELLERATION SYSTEMS, INC,**  
Plaintiff.

v.

**IMPERIAL TECHNOLOGY, INC,**  
Defendant.

No. C 96-20894 RMW

**July 23, 1998.**

Russell L. Johnson, Norman R. Klivans, Jr., Maria S. Spustek, Skjerven, Morrill, MacPherson, Franklin & Friel, San Jose, CA, for Plaintiff.

Robert Schroeder, Matthew C. Lapple, Pretty, Schroeder & Poplawski, Los Angeles, CA, for Defendant.

## **ORDER RE CLAIMS CONSTRUCTION**

**RONALD M. WHYTE, District Judge.**

A claims construction hearing was conducted on July 20, 1998. By this order the court construes the disputed claim language of U.S. Patent No. 5,555,402 (the "402 patent") issued to George Tuma, Wade Tuma and Robert Warne on September 10, 1996. Each disputed term or phrase is set forth in Section II below followed by the court's construction of the term or phrase.

### **I. CLAIMS CONSTRUCTION STANDARD**

Interpretation of patent claims is a question of law to be determined by the court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed.Cir.1995) (en banc), *aff'd*, 116 S.Ct. 1384 (1996). To ascertain the meaning of an asserted claim, a court first looks to "intrinsic" evidence, i.e. the language of the claim, the patent specification, and the prosecution history. *Id.*; *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). Where intrinsic evidence unambiguously sets forth the scope of the claims, reliance on "extrinsic" evidence, such as expert testimony, is improper. *Vitronics*, 90 F.3d at 1583.

Courts first look to the claims themselves, both asserted and non-asserted, to define the scope of the patented invention. *Vitronics*, 90 F.3d at 1582.

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 nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. s. 112, first paragraph. Where the patent employs terms that are inconsistent with their ordinary meaning, the specification acts as a dictionary "when it expressly defines terms used in the claims or when it defines terms by implication." *Vitronics*, 90 F.3d at 1582. The patent specification must teach those skilled in the art how to make and use the full scope of the claimed invention. *In re Wright*, 999 F.2d 1557, 1561 (Fed.Cir.1993) (citing *In re Vaeck*, 947 F.2d 488, 495 (Fed.Cir.1991)). *See also* *In re Fisher*, 427 F.2d 833, 839 (CCPA 1970)(scope of protection sought in a claim must reasonably correlate to scope of enablement provided by specification).

The court may also consider the prosecution history of the patent, if in evidence. *Vitronics*, 90 F.3d at 1582. "The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution ." *Southwall Technologies, Inc. v. Cardinal IG Company*, 54 F.3d 1570, 1576 (Fed.Cir.1995); *CVI/Beta Ventures, Inc. v. Tura L.P.*, 112 F.3d 1146, 1155 (Fed.Cir.1997). The prosecution history of parent and grandparent applications is also relevant to understanding the scope of the claims in a continuation application. *Mark I Marketing Corp. v. Donnelley & Sons Co.*, 66 F.3d 285, 291 (Fed.Cir.1995), cert. denied, 116 S.Ct. 917 (1996). *See also* *Jonsson v. Stanley Works*, 903 F.2d 812, 818 (Fed.Cir.1990).

## II. CONSTRUCTION OF DISPUTED CLAIM LANGUAGE

<b>Claim 1-Disputed Language</b>	<b>Construction</b>
Disk Controller	"disk controller" refers to a device which interfaces and controls a hard disk drive or any data storage system which emulates a hard disk drive and which controls the reading and writing of data to that hard disk drive or data storage system.
Geometric Address Information	"geometric address information" refers to address information in geometric form; i.e. head-cylinder-sector information. More specifically, "geometric address information" refers to (1) address information which represents or characterizes the physical geometry of a particular hard disk system and (2) address information in binary form which represents the geometry of a hypothetical or imagined hard disk system having a binary number of heads, cylinders and sectors.
Corresponding to Geometric Address Information	"Corresponding to geometric address information" modifies "location in said volatile storage medium" and together the phrases refer to the location in the volatile storage medium which corresponds to (matches with) a particular geometric address.
Control Circuit	<i>See</i> Section III.B.3.
Control Line	"control line" means a conductor which carries information for control purposes.
First Port and Second Port	"first port" refers to the port in the control circuit through which data is written to and read from the backup hard disk drive.  "second port" refers to the port in the control circuit through which data is written to and read from the solid state memory.

<b>Claim 3-Disputed Language</b>	<b>Construction</b>
Wherein said Control Circuit Does said Copying in Response to a Failure of	This limitation calls for copying in response to an indication that the battery is failing, i.e., declining in strength or

### III. CLAIM CONSTRUCTION ANALYSIS

#### A. WHETHER PREAMBLE OF CLAIM 1 CONSTITUTES A LIMITATION

Imperial argues that the preamble of Claim 1 limits the scope of the claims to storage subsystems that respond to "geometric address information" from a disk controller.

"[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed.Cir.1995). A claim preamble may limit the scope of the claimed invention, where it recites a structural limitation rather than a statement of purpose or intended use. *Rowe v. Dror*, 112 F.3d 473, 478-79 (Fed.Cir.1997); *Corning Glass Works v. Sumitomo Elec. U.S A., Inc.*, 868 F.2d 1251, 1257 (Fed.Cir.1989). "Where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe*, 112 F.3d at 478 (citing *Vitalink*, 55 F.3d at 620-21). *Cf. In re Paulsen*, 30 F.3d 1475, 1479 (Fed.Cir.1994) ("[T]erms appearing in a preamble may be deemed limitations of a claim when they 'give meaning to the claim and properly define the invention.' ") (citations omitted).

The determination of whether a claim preamble recites a structural limitation or merely a statement of purpose or intended use requires "review of the entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works*, 868 F.2d at 1257; *see also Rowe*, 112 F.3d at 478 (inquiry requires examination of "entire patent record to determine what invention the patentee intended to define and protect."); *In re Paulsen*, 30 F.3d at 1479 (stating that court must determine whether inventors intended the preamble to represent additional structural limitations or "mere introductory language"). *See also E.I. DuPont de Numours and Co. v. Monsanto Co.*, 903 F.Supp. 680, 702 (D.Del.1995) (examining prosecution history to determine effect of preamble).

Here, the preamble of Claim 1 appears to limit the scope of the claims to a disk emulator that responds to "geometric address information" from a "disk controller." Preliminarily, the court notes that the body, of Claim 1 refers to elements or limitations contained in the preamble. *See Gerber Garment Technology v. Lectra Systems*, 916 F.2d 683, 688-89 (Fed.Cir.1990); *Vitalink*, 55 F.3d at 620. Although the body of Claim 1 appears to define a structurally complete invention, the preamble "gives meaning" to the claim and is required to properly understand the scope of the invention as defined in Claim 1. *In re Paulsen*, 30 F.3d at 1479. The preamble indicates that the invention of Claim 1 works in conjunction with a disk controller which "specifies a storage location by geometric address information." *See Col. 66:61-62*. The body of Claim 1 states that the control circuit is "couplable to said disk controller" through a second control line. *See Col. 67:1-8*. Claim 1 and the specification also indicate that the invention receives "geometric address information" from the disk controller. Accordingly, the preamble "gives meaning" to and helps to define terms appearing in the body of the claim.

#### B. DISPUTED CLAIM TERMS

##### ***1. Geometric Address Information and Corresponding to Geometric Address Information***

As to the term "geometric address information," the '402 patent refers to it as head-cylinder-sector address information. *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477, 1478 (Fed.Cir.1998) (words

used in the claims are to be read in light of the specification). *See generally* Col. 6:8-36; *see* Col. 6:18-21 ("translation circuit in the disk emulator instantaneously translates the geometric addresses from the SMD disk controller, the cylinder and head address, into higher order addresses for the DRAM array in the disk emulator."); Col. 25:13-15 ("Two different means are available for translating the geometrical form of the address information to the binary structure suitable for addressing solid state memory."). In addition, the prosecution history of the '474 patent reveals a consistent definition. *See* Lapple Decl. Ex. D at 51 ("[A] disk controller provides geometric addresses, head, cylinder, and sector, and not a volatile memory address.").

Additionally, although the court's interpretation of "geometric address information" is somewhat consistent with the interpretation asserted by defendant, the language has a broader meaning than that ascribed to it by defendant. Specifically, "geometric address information" appears to cover both embodiments described in the '402 patent. *See* Col. 25:13-30. More specifically, "geometric address information" refers to (1) address information which represents or characterizes the physical geometry of a particular hard disk system and (2) address information in binary form which represents the geometry of a hypothetical or imagined hard disk system having a binary number of heads, cylinders and sectors. *See* Col. 25:13-30; Col. 32:16-28; Col. 25:20-22 ("In this method, the software disk driver is configured so that the driven disk has a binary number of heads, sectors, and cylinders."); Col. 32:20-30 ("the disk controller addresses the disk emulator with a binary format for the number of heads, sectors, and cylinders.... The geometric address signals ... in this method are used directly to address the DRAM array.").

As to the term "corresponding to geometric address information," plaintiff's asserted interpretation is ambiguous and overbroad. Claim 1 indicates that, for every geometric address which the disk controller may specify, there exists a corresponding memory location in the volatile storage medium. This interpretation is consistent with the preamble of Claim 1 which indicates that the invention as defined works in conjunction with a disk controller which specifies a storage location by geometric address information.

### ***3. Control Circuit***

Imperial asserts that "control circuit" in Claim 1 invokes 35 U.S.C. section 112, paragraph 6 and, therefore, is limited to the specific structure or the equivalents thereof disclosed in the '402 patent for performing the functions disclosed in the "wherein" clauses.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. 35 U.S.C. s. 112, paragraph 6.

The application of section 112, paragraph 6 appears to require a determination of whether the applicant intended to invoke it. *See* Greenburg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1584 (Fed.Cir.1996) (holding that "detent mechanism" is not a means-plus-function element). However, "merely because an element does not include the word 'means' does not automatically prevent that element from being construed as a means-plus-function element." Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996) (citing Raytheon Co. v. Roper Corp., 724 F.2d 951, 957 (Fed Cir.1983)). Whether a particular claim element invokes section 112, paragraph 6 involves review of the patent and its prosecution history. *Id.* Additionally, the recitation of structure in a means-plus-function element does not automatically preclude the application of section 112, paragraph 6. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1536 (Fed.Cir.1991) (reasoning

that recited structure only indicated what function the recited "means" element performed rather than its structure).

Here, Claim 1 appears to recite sufficient structure to avoid application of section 112, paragraph 6. As in *Greenburg*, the "control circuit" element is not drafted in means-plus-function form. Additionally, Imperial has cited nothing in the prosecution history or elsewhere which indicates that the inventors of the '402 patent intended to invoke section 112, paragraph 6. Furthermore, the "control circuit" element is supported by structure. Claim 1 specifies that the "control circuit" comprises a first port, second port, a first control line, and a second control line and defines their structural relationship. *See* Col. 67:1-8. The term "circuit" alone indicates sufficient structure to avoid application of section 112, paragraph 6. Accordingly, the "wherein" clauses merely provide functional limitations to the structure specified in the claims. The control circuit also has two ports. The first port is coupled to volatile memory and the second port to the hard disk drive.

#### ***4. Control Line, First Port and Second Port***

As to the above-identified terms, Imperial does not appear to dispute Database's asserted definitions. Therefore, the court adopts them.

#### ***5. Wherein Said Control Circuit Does Said Copying in Response to a Failure of Battery Power***

The court's interpretation finds support in the specification. *See* Col. 14:39-43 ("If control circuit **100** senses that the battery power *is failing*, then the data stored in the solid state memory **104** ... are stored on SCSI hard disk **101**." (emphasis added)). Imperial's asserted interpretation is inconsistent with the specification and results in an inoperable device since full loss of battery power prevents all copying. The court's interpretation is also consistent with an ordinary dictionary definition of "failure."

#### ***6. Disk Controller***

The court's interpretation is consistent with the specification's disclosure of different embodiments of the invention including disk emulators that are couplable to either (1) an unmodified SMD disk controller that specifies geometric addresses in nonbinary form or (2) a modified disk controller that has been configured to drive a disk having a binary number of heads, sectors, and cylinders. *See* Col. 25:13-48. In both embodiments, the disk controller drives a device that emulates a hard disk drive.

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