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

ABSTRAX, INC,
v.
DELL, INC., v.

Nos. 2:07-cv-221 (DF-CE), 2:07-cv-333 (DF-CE)

Oct. 31, 2008.

Elizabeth L. Derieux, Nancy Claire Abernathy, Sidney Calvin Capshaw, III, Capshaw Derieux, LLP, Longview, TX, John Jeffrey Eichmann, Christin K. Cho, Gregory Scott Dovel, Sean Aaron Luner, Dovel & Luner, Santa Monica, CA, Charles Ainsworth, Deborah J. Race, Otis W. Carroll, Jr, Ireland Carroll & Kelley, Robert Christopher Bunt, Robert M. Parker, Deron R. Dacus, Ramey & Flock, Tyler, TX, Franklin Jones, Jr, Jones & Jones, Marshall, TX, for Abstrax, Inc.

Roderick B. Williams, K&L Gates LLP, Austin, TX, Joseph Daniel Gray, Matthew S. Wermager, R Floyd Walker, Vinson & Elkins, Jeffrey Brian Plies, Steven Robert Daniels, Dechert LLP, Austin, TX, for Dell, Inc., et al.

J Thad Heartfield, The Heartfield Law Firm, Beaumont, TX, James Michael Woods, Thomas Dunham, Howrey LLP, Washington, DC, for Sun Microsystems, Inc.

MEMORANDUM OPINION AND ORDER

CHARLES EVERINGHAM IV, United States Magistrate Judge.

1. Introduction

In this case, the plaintiff, Abstrax, Inc. ("Abstrax"), has sued the defendants, Dell, Inc, ("Dell") and Sun Microsystems, Inc. ("Sun") for infringement of various claims of U.S. Patent No. 6,240,328 B1 ("the '328 patent"). The cases, filed separately, were consolidated for claim construction purposes. This memorandum opinion resolves the parties' disputes over the scope of the claims.

2. Background of the Technology

The '328 patent is titled "Manufacturing Method for Assembling Products By Generating and Scheduling Dynamically Assembly Instructions." According to the Abstract, the patent relates to a manufacturing method for assembling a number of products by generating and scheduling dynamically a number of assembly instructions from modeling information. According to the Summary of the Invention, "[t]he present invention allows exact assembly instructions to be generated for the full theoretical scope of the product line." '328 Patent, 1:41-43. In general terms, the patent describes the creation of abstract assembly steps that relate to a given product line. The abstract assembly steps have variable portions that include

variable parameters to accommodate multiple product configurations. A configuration model represents a product to be assembled. Once a configuration is selected, the computer program applies the configuration to the abstract assembly steps to create the actual assembly instructions for the configuration. The instructions can be dynamically scheduled across an assembly line.

Although the patent touts multiple advantages, one advantage is that the method allows a manufacturer to generate dynamically step-by-step assembly instructions on a per configuration basis for each product being manufactured in a manufacturing facility. *Id*. at 50-53. Another advantage is that the invention allows the scheduling of those instructions across various workstations and additionally allows the instructions to be created in human readable form, along with an annotated picture of the product being assembled. *Id*. at 54-60. Still others include dynamic scheduling of instructions and the removal of paperwork associated with the manufacturing process. '328 Patent, at 1:66-2:9.

Claim 1 is an illustrative independent claim:

1. A method, performed by a computer, for assembling a product having components, the method comprising the steps of:

(a) providing one or more abstract assembly steps for assembling the product, the abstract assembly steps containing variable portions for assembling the product with potentially different configurations, the variable portions including variable parameters capable of representing different component information, text information explaining how to assemble or connect one or more of the components of the product, and the variable portions further including at least one of

an identifier of one or more computer graphics images to be displayed indicating how to assemble or connect one or more of the components of the product, and

machine-readable instructions for the computer to draw and display one or more computer graphics images indicating how to assemble or connect one or more of the components of the product;

(b) obtaining a configuration model corresponding to a requested configuration of the product, the configuration model including one or more component information lines corresponding to one or more of the components utilized in the requested configuration, each of the component information lines containing at least one of a component tag identifying a component to be used in the requested configuration, a physical location field providing precise placement information for the component to be used in the requested configuration, a property field indicating a property of the component to be used in the requested configuration and a connection field indicating all locations to which the component to be used in the requested configuration is to be connected; and

(c) applying the configuration model to the abstract assembly steps provided for assembling the product by inserting component information from the component information lines into the variable parameters of the variable portions of the abstract assembly steps to produce one or more assembly instructions for assembling the product to have the requested configuration.

'328 Patent, claim 1.

3. General Principles Governing Claim Construction

"A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." Burke, Inc. v. Bruno Indep. Living Aids, Inc., 183 F.3d 1334, 1340 (Fed.Cir.1999). Claim construction is an issue of law for the court to decide. Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71 (Fed.Cir.1995) (*en banc*), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996).

To ascertain the meaning of claims, the court looks to three primary sources: the claims, the specification, and the prosecution history. Markman, 52 F.3d at 979. Under the patent law, the specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. A patent's claims must be read in view of the specification, of which they are a part. *Id*. For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id*. "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims." Watts v. XL Sys., Inc., 232 F.3d 877, 882 (Fed.Cir.2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's claims. Otherwise, there would be no need for claims. SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1121 (Fed.Cir.1985) (*en banc*). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. Intellicall, Inc. v. Phonometrics, 952 F.2d 1384, 1388 (Fed.Cir.1992). And, although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. Electro Med. Sys., S.A. v. Cooper Life Scis., Inc., 34 F.3d 1048, 1054 (Fed.Cir.1994).

This court's claim construction decision must be informed by the Federal Circuit's decision in Phillips v. AWH Corp., 415 F.3d 1303 (Fed.Cir.2005) (*en banc*). In *Phillips,* the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the *claims* of a patent define the invention to which the patentee is entitled the right to exclude." *Id*. at 1312 (emphasis added) (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed.Cir.2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id*. 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. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention. The patent is addressed to and intended to be read by others skilled in the particular art. *Id*.

The primacy of claim terms notwithstanding, *Phillips* made clear that "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*. Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of "a fully integrated written instrument." *Id*. at 1315 (quoting Markman, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id*. at 1314-17. As the Supreme Court stated long ago, "in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims." Bates v. Coe, 98 U.S. 31, 38, 25 L.Ed. 68 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed.Cir.1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. 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.

Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. The prosecution history helps to demonstrate how the inventor and the PTO understood the patent. Phillips, 415 F.3d at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant," it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id*. Nevertheless, the prosecution history is intrinsic evidence. That evidence is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims.

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The en banc court condemned the suggestion made by Tex. Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Id*. at 1319-24. The approach suggested by *Tex. Digital*-the assignment of a limited role to the specification-was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id*. at 1320-21. According to *Phillips,* reliance on dictionary definitions at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of the claim terms within the context of the patent." *Id*. at 1321. Phillips emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id*. What is described in the claims flows from the statutory requirement imposed on the patentee to describe and particularly claim what he or she has invented. *Id*. The definitions found in dictionaries, however, often flow from the editors' objective of assembling all of the possible definitions for a word. *Id*. at 1321-22.

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id*. at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

4. Discussion

A. "Assembly instructions for assembling the product to have the requested configuration"

The first term in dispute relates to assembly instructions. Resolution of this term will resolve many of the parties' disputes in this case. The term appears in independent claims 1 and 10. The final limitation of claim 1, for example, provides "applying the configuration model to the abstract assembly steps provided for assembling the product by inserting component information from the component information lines into the variable parameters of the variable portions of the abstract assembly steps to produce one or more assembly

instructions for assembling the product to have the requested configuration." Abstrax contends that no construction is necessary. Alternatively, Abstrax suggests that "assembly instruction" should be construed as "information directing how to put something together." The defendants contend that the term "assembly instructions for assembling the product to have the requested configuration" means "an automatically generated exact sequence of step-by-step instructions required to assemble and configure the final product without any human lookup or inference." As reflected by the proposed constructions, the parties have several disputes concerning the proper construction of this term.

First, the parties dispute whether the definition of "assembly instructions" should include the fact that the instructions are "automatically generated." Abstrax contends that the method of the claims will be "automatic" because it is generated by a computer. Abstrax suggests, however, that the definition of the term should not include the phrase "automatically generated." The parties do not dispute that the resolution of the abstract (hypothetical) instructions into actual (assembly) instructions is an automated process performed by a computer. Reading the specification as a whole, and in light of the plaintiff's concession that the method is automatic, the court will include the phrase "automatically generated" in the court's construction.

Next, the parties dispute whether the assembly instructions must be "an exact sequence of instructions." In their brief, the defendants point to statements made during prosecution that the applicants made to overcome the Lee prior art reference. In particular, the applicants stated:

No means is disclosed or suggested [in the Lee patent] for converting this manufacturing information into exact assembly instructions that can be directly performed to assemble the product.

The defendants point to similar statements to support their construction of assembly instructions. Defendants' Claim Construction Brief, at 6 & Exh. B.

The court rejects this prosecution history argument. The statements made in this portion of the prosecution history were directed toward pending claims 1 and 11 of Application No. 08/179,639. In their brief, the defendants represent, inaccurately, that pending claims 1 and 11 issued as independent claims 1 and 10 of the '328 Patent, and, accordingly, the patentee's statements concerning those claims "are directly applicable to the instant construction." Defendants' Claim Construction Brief, at 6. ("Because pending claims 1 and 11 issued as independent claims 1 and 10 in the '328 patent, the patentee's statements are directly applicable to the instant construction."). In fact, the patentee filed a continuation application, canceled the pending claims, and submitted new claims with different limitations. Plaintiff's Reply Brief, Exh. 2. The defendants have not shown that the prosecution history of the parent application mandates their proposed construction.

In addition to the prosecution history, however, the defendants point to the specification:

The manufacturing method generates *exact* assembly instructions for the full theoretical scope of the product line. The generated instructions do not require any human lookup or inference. Even *exact* instructions for configured components of the final product are generated.

'328 Patent, Abstract (emphasis added). The Summary of the Invention also states: "[t]he present invention allows *exact* assembly instructions to be generated for the full theoretical scope of the product line." '328 Patent, 1:41-49 (emphasis added).

The prosecution history of the application which matured into the ' 328 patent is also pertinent to this issue. The file history states in relevant part that "[t]he inventive method generates *exact* assembly instructions for any of a variety of possible configurations by applying a configuration model, which defines the properties, connectivity, location, etc., of the components used in a desired configuration...." Defendants' Brief, Exh. D, p. 4 (emphasis added). These passages suggest that the assembly instructions must be exact in the sense that they must be specific enough to tell the assembler everything necessary to perform that part of the manufacturing process.

Neither the specification nor the prosecution history requires, however, that the assembly instructions be ordered in any sequence or even comprise multiple instructions. The relevant language of claim 1 requires the generation of "one or more assembly instructions," which counsels against the "sequence" limitation. As a result, the court rejects this part of the defendants' proposed construction.

Finally, the parties dispute whether the instructions must show how to assemble a "final product." The defendants appear to contend that the "product" in the claim must be a final product ordered by a customer. Although the invention may be used to create a set of instructions to create a final product, the claims do not require a final product ordered by a customer. Instead, the relevant language of the preamble indicates that claim 1 is a method "for assembling a product having components." The defendants' proposed construction would appear to restrict the scope of the claims such that a manufacturer who uses the invention to automate the manufacture of only a portion of a "final product" would not infringe, even though the portion included multiple components and configurations. This view of the patent is rejected. The court construes this term to mean "automatically generated specific instructions for assembly of the product."

B. "Abstract assembly steps for assembling the product"

This term also appears in independent claims 1 and 10. The plaintiff divides the claim language into two parts. The plaintiff proposes that "abstract assembly steps" means "potential (not actual) assembly instructions that are ready to be resolved into specific assembly instructions." The plaintiff also contends that "for assembling the product" should be constructed as "that suit the purpose of assembling the product." The defendant contends the phrase as a whole means "a set of configuration-independent instructions used to generate assembly instructions for the full theoretical scope of a given product line."

During prosecution, the patentee explicitly stated that "[a]bstract assembly steps are abstract, configuration independent, potential instructions that are ready to be resolved into specific instructions based on the configuration model describing the configuration to be used...." Defendants' Claim Construction Brief, at 13, and Exh. C, pp. 3-4. As a result, the court construes the phrase as a whole to mean "potential (not actual) configuration-independent instructions that are ready to be resolved into specific assembly instructions."

C. "Variable parameters"

The abstract assembly steps contain variable portions which include variable parameters. Claim 1 provides "... the abstract assembly steps containing variable portions for assembling the product with potentially different configurations, the variable portions including variable parameters capable of representing different component information...." '328 Patent, claim 1. The plaintiff contends that the term "variable parameters" means "in a computer program, words or sets of characters that are used to represent data that vary and that can be made specific in the course of running the program." The defendants contend that the term "variable parameters" means "parameters within the abstract assembly steps that represent different

component choices that are replaced from information from the component information lines."

The specification explains that the variable parameters are parameters capable of representing different component information. '328 Patent, 7:9-11 ("Variability is provided in the abstract assembly steps via variable parameters capable of representing different component information."). In the context of the patent, the court concludes that the plaintiff's construction is substantially correct. The court construes the term "variable parameters" to mean "in a computer program, words or sets of characters that are used to represent component information that vary and that can be made specific in the course of running the program."

D. "Configuration model"

The patent claims use the term "configuration model." The plaintiff proposes that this term means "computer-readable data constituting a simplified representation of some aspects of a set of components and their interconnections." The defendants maintain that the term means "a file that defines the properties, connectivity, and locations of the components used in the desired configuration."

The term "configuration model" has no accepted meaning in the art. Accordingly, resort to the intrinsic record is necessary. The specification states that "the configuration model comprises information about how parts, pieces, or components of a product fit together and how it is configured in the product." '328 patent, 3 :15-17. The defendants argue that the configuration model must include all the information about the identities, placement, properties, and connections of the components, if such information exists for the components of a particular configuration. This view, however, is ultimately inconsistent with the dependent claims set forth in the '328 patent. Those claims specifically set forth the information which must be included in the component information lines, which, in turn, are included in the configuration model. The doctrine of claim differentiation therefore counsels against the defendants' proposed construction.

In addition, the prosecution history does not mandate the defendants' construction. The defendants point to a passage in the prosecution history which states that the assembly steps are generated in part "by applying a configuration model, which defines the properties, connectivity, location, *etc.,* of the components used in a desired configuration...." Defendants' Brief, Exh. C, p. 2 (emphasis added). This passage uses properties, connectivity, and location as examples. Finally, there is no justification for requiring the data to be organized in a file. The court construes the term "configuration model" to mean "computer readable data that includes information concerning how parts, pieces, or components of a product fit together and how they are configured in the product. Such information may include, for example, information about properties, connectivity, or location."

E. "Component information lines"

The claims require "the configuration model including one or more component information lines corresponding to one or more of the components utilized in the requested configuration ..." '328 Patent, claim 1. The plaintiff contends that "component information lines" means "an arrangement or ordering of information that corresponds to a component." The defendants contend that the term means "data within the configuration model that contains all the information about the identity, placement, properties, and connections of the components in a particular configuration." Again, for the reasons set forth in the preceding discussion, the court rejects the defendants' attempt to limit the definition of component information lines. The court construes this term to mean "data within the configuration model which corresponds to a component used in the desired configuration."

F. "Component tag"

Claims 1, 3, 4, and 9 of the '328 patent require that the component information line include at least one "component tag." The plaintiff contends the term "component tag" means "alphabetical or numeric characters (for example, part number or name) that identify a component." The defendants maintain that this term means "a portion of the component information line that is used to select the set of abstract steps that are required."

The primary dispute between the parties is whether the component tag must be used to select the set of abstract assembly steps that are required to convert into assembly instructions. Although the preferred embodiment uses the component tag to select the required set of abstract assembly steps, the claim language is broad enough to embrace a system which uses another means to select a particular set of abstract steps. The court will not construe the term "component tag" to import limitations from the preferred embodiment. The court construes the term "component tag" to mean "a portion of the component information line that is used to identify a component."

G. "Applying the configuration model to the abstract assembly steps"

The plaintiff proposes that this phrase means "having a computer use information from the configuration model to resolve the abstract assembly steps." The defendants argue that this term means "using the component information lines within the configuration model to identify the abstract assembly steps." The relevant limitation of claim 1 provides: "applying the configuration model to the abstract assembly steps provided for assembling the product by inserting information from the component information lines into the variable parameters of the variable portions of the abstract assembly steps to produce one or more assembly instructions for assembling the product to have the requested configuration." The claim language makes clear that the computer uses the information contained in the configuration model to resolve the variables in the abstract assembly steps and turn them into actual instructions. As such, the court adopts the plaintiff's proposed construction of this term.

5. Conclusion

The court adopts the above constructions. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the constructions adopted by the court.

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