United States District Court,
N.D. Illinois, Eastern Division.

FIRST GRAPHICS, INC,
Plaintiff.
v.
M.E.P. CAD, INC,
Defendant.

June 29, 2001.

Patentee brought action against alleged infringer relating to computer-aided design software for fire sprinkler systems. For purpose of claim construction of patents at issue, the District Court, Kennelly, J., held that: (1) "designing" meant to prepare the plans for something such as a fire sprinkler system; (2) "requirement" meant something that is necessary; and (3) "comply" meant to act in accordance with standards or requirements.

Ordered accordingly.

Meaning of "comply," for purpose of claim construction of patent relating to computer-aided design software for fire sprinkler systems, meant to act in accordance with standards or requirements.

Arne M. Olson, Joseph Ming Kuo, Olson & Hierl, Chicago, IL, for Plaintiff.

Robert J. Glenn, Motherway & Glenn, Chicago, IL, Scott L. Terrell, Scott L. Terrell, P.C., Golden, CO, for Defendant.

MEMORANDUM OPINION AND ORDER

KENNELLY**, District J.**

First Graphics, Inc. holds certain patents relating to computer software and has brought suit, alleging that M.E.P. CAD, Inc. has been infringing the patents by selling computer-aided design software for fire sprinkler systems called Autosprink. The Court held a claim construction hearing on April 6, 2001. This opinion explains the Court's construction of the three claim terms that the parties say are in dispute.

Background

First Graphics is the owner of three patents relating to its software used for designing building distribution systems: U.S. Patent No. 5,227,983 (the '983 patent), U.S. Patent No. 5,557,537 (the '537 patent), and U.S. Patent No. 5,808,905 (the '905 patent). This software takes certain data, such as floor layouts, building codes, and pipe schedules, and produces detailed drafting plans for fire sprinkler systems, including

sprinkler head placement, pipe widths, and various other sprinkler element selections. The software is claimed to be distinctive because it produces plans that comply with the input data. For example, the software incorporates floor layout input and ensures that a sprinkler head is not placed in a location that limits its coverage, such as on top of a wall. After the plans are drafted, they can be analyzed and edited as the user desires. To a limited extent, the software prompts the user for input while the plans are being processed.

Discussion

Patent infringement analysis requires the Court to first determine "the meaning and scope of the patent claims" and then compare the "properly construed claims to the device accused of infringing." Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed.Cir.1995) (en banc), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The first step is claim construction, a question of law exclusively for the court. Id. at 979. In most circumstances, the intrinsic evidence-the language of the claim, the specification, and the prosecution history-will provide sufficient information for construing the terms. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed.Cir.1996). Our analysis must begin with the language of the claims. Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305 (Fed.Cir.1999). In analyzing claim language, words of the claim will be given their ordinary and customary meaning unless a special definition is chosen and plainly stated in the patent. *Id*. at 1582. *See also* Kraft Foods, Inc. v. International Trading Co., 203 F.3d 1362, 1366 (Fed.Cir.2000).

The Court may rely on extrinsic evidence, such as dictionaries, learned treatises, and expert testimony, for limited purposes, such as to inform our understanding of how ambiguous terms in the patent are understood by those in the field, but we may not rely on extrinsic evidence to vary or contradict the terms of the claims. Markman, 52 F.3d at 981. M.E.P. argues that the deposition testimony of Linda Normann, regarding the meaning of terms in the claims, should be considered by the Court in determining the meaning of the claim terms. In so doing, M.E.P. relies on an unpublished opinion of the Federal Circuit that has no precedential force. Furthermore, the Federal Circuit has recently reaffirmed that in this context, "an inventor is not competent to construe patent claims." Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1380 (Fed.Cir.2000). The Court will not consider Normann's testimony in our claim construction.

The Claims

The parties say that three claim words remain in dispute: "designing," "requirements," and "comply." These words are highlighted in context in the following claims. The key claims in the '983 patent are:

1. A method for *designing* a distribution system and producing a layout of the system for a building or a portion of a building, the method comprising in combination the steps of:

(a) storing, in digital form in first memory means, generic dimensional *requirements* of elements from which distribution systems can be constructed;

(b) storing, in digital form in second memory means, *requirements* of at least one building standard from which distribution systems can be evaluated;

(c) entering input data into a computer operatively connected to the first and second memory means, the input data including the location and dimensions of building elements and adjuncts of the building;

(d) identifying the *requirements* of at least one building standard stored in the second memory means to be used;

(e) dividing the building into a plurality of sections based on the input data; and

(f) electronically *designing* a layout from the distribution system in each section using the generic dimensional *requirements* of the elements stored in the first memory means, the layout being *designed* to *comply* with the *requirements* of the at least one building standard.

'983 patent, claim 1, col. 17, l. 64-col. 18, l. 23.

* * *

25. An apparatus for *designing* a distribution system and producing a layout of the system for a building or a portion of a building, the apparatus comprising:

(a) first memory means for storing in digital form generic dimensional *requirements* of elements from which the distribution system can be constructed;

(b) second memory means for storing in digital form *requirements* of at least one building standard from which the distribution system can be evaluated;

(c) means for entering input data into a computer operatively connected to the first and second memory means, the input data including the location and dimensions of building elements and adjuncts of the building

[(d)] means for identifying the *requirement* of at least one building standard stored in the second memory means to be used;

(e) means for dividing the building into a plurality of sections based on the input data; and

(f) means for electronically *designing* a layout for the distribution system in each section to *comply* with the selected building standard.

'983 patent, claim 25, col. 21, l. 17-col. 21, l. 39.

The key claims from '537 patent are:

1. A method for *designing* a distribution system having delivery components and producing a layout of the system for a building or a portion of a building, the method comprising in combination the steps of:

(a) storing, in digital form in first memory means, generic dimensional and operation *requirements* of distribution system elements including the delivery components from which the distribution system can be constructed;

(b) storing, in digital form in second memory means, *requirements* of at least one building standard relating

to the operation of the delivery components from which the distribution system can be evaluated;

(c) entering input data into a computer operatively connected to the first and second memory means, the input data including the location and dimensions of building elements and adjuncts;

(d) identifying the *requirements* of at least one building standard in the second memory means to be used;

(e) electronically *designing* a layout automatically for the distribution system using the generic dimensional and operation *requirements* of distribution system elements stored in the first memory means, during which the operation of the delivery components being evaluated and the layout being *designed* to *comply* with the *requirements* of the at least one building standard;

(f) editing one of the building elements, adjuncts and the layout;

'537 patent, claim 1, col. 33, l. 62-col. 34, l. 30.

* * *

13. An apparatus for *designing* a distribution system having delivery components and producing a layout of the system for a building or a portion of a building, the apparatus comprising in combination:

(a) first memory means for storing in digital form dimensional and operation information of distribution system elements including the delivery components from which the distribution system can be constructed;

(b) second memory means for storing in digital form *requirements* of at least one building standard relating to the operation of the delivery components from which the distribution system can be evaluated;

(c) means for entering input data into a computer operatively connected to the first and second memory means, the input data including the location and dimensions of building elements and adjuncts;

(d) means for identifying the *requirements* of at least one building standard stored in the second memory means to be used;

(e) means for electronically *designing* a layout automatically for the distribution system using the dimensional and operation information of distribution system elements stored in the first memory means, the operation of the [ ] delivery components being evaluated and the layout being *designed* to *comply* with the *requirements* of the at least one building standard;

(f) means for editing one of the building elements, adjuncts and the layout;

(g) means for electronically checking the edited one of the building elements, adjuncts and the layout for *compliance* with the *requirements* of the at least one building standard; and

(h) means for *redesigning* the layout to include the edited one of the building elements, adjuncts and the layout.

'537 patent, claim 13, col. 35, l. 27-col. 35, l. 62.

The key claims from the '905 patent are:

1. A method of *designing* a distribution system for a building or a portion of a building having building elements, the distribution system having a plurality of distribution system elements including delivery components, the method comprising the steps of:

(a) storing, in digital form in first memory means, operational characteristics of at least one of the delivery components;

(b) storing, in digital form in second memory means, an operational *requirement* from which the distribution system can be evaluated;

(c) entering into a computer the location and dimensions of the building elements;

(d) *designing* a layout for the distribution system to *comply* with the operational *requirement* by using the operational characteristics and the location and dimensions of the building elements;

(e) displaying on a computer display the layout of the distribution system including the delivery components; and

(f) generating from the layout a hard copy detailing the distribution system.

'905 patent, claim 1, col. 33, l. 14-col. 33, l. 36.

* * *

21. An apparatus for *designing* a distribution system having a plurality of distribution system elements including delivery components for a building or a portion of a building having building elements, the apparatus comprising:

(a) a first memory location for storing operational characteristics of at least one of the delivery components;

(b) a second memory location for storing at least one distribution system operational *requirement;*

(c) means for entering the location and dimension of the building elements into a computer;

(d) means for *designing* a layout for the distribution system which *complies* with the distribution system operational *requirement* by using the operational characteristics and the location and dimension of the building elements;

(e) a computer display for displaying the layout of the distribution system including the delivery components; and

(f) means for generating from the layout a hard copy detailing the distribution system.

'905 patent, claim 21, col. 35, l. 9-col. 35, l. 28.

Designing

The dispute over the meaning of the word "designing" concerns whether it should be read as meaning only *automatic* designing. First Graphics argues that "designing" should be given its ordinary meaning, which it claims is simply "to prepare the plans for something." Plaintiff's Claim Construction Brief at 15-16. M.E.P. asserts that "designing," as used in the claims, does "not include use of an object oriented computer aided drafting program where the user has input as to the relative location of an object, or group of objects, with a cursor, such as a mouse." Defendant's Claim Construction Brief at 4. Rather, it argues, the invention is a computer program "which automatically computes a layout through a series of steps limited to the practical application of checking for compliance with the requirements of a building standard during the design, without: (1) user input as to the relative location of the objects, or group of objects, in the drawing; (2) user input as to the route that the piping will take; or (3) the use of a list of objects to [be] placed in the drawing." Id. at 5. This interpretation is buttressed by citations to the specifications of all three patents. By way of example, the specification of the '983 patent states in relevant part that the

invention is a method and apparatus for designing a distribution system for a building. The distribution system can be any system used in a building including plumbing, electrical, sprinkling, ventilating and related systems or any combination of such systems. Information about the distribution system elements and various standard requirements is stored into a memory of a computer. Information about the building elements and adjuncts including location of walls and similar obstructions are entered into a computer.... The user also selects the particular standard which is applicable to the building being constructed.... The computer program then computes the layout needed for the distribution system based upon the selected standard. '983 patent, col. 2, l. 57-col. 3, l. 13.

First Graphics notes, correctly, that limitations should not be read into the claim language from the specification, Vitronics, 90 F.3d at 1582, and it points out that some of the claims specifically contemplate user input. It cites to claim 27(f) of the '537 patent, which covers a method of "designing a layout for the sprinkler system in each section to comply with the selected standard, the designing including: ... (4) notifying a user when no unobstructed position is determined so that the user can manually edit the position of the heads or pipes or one of the elements or adjuncts of the building." '537 patent, claim 27, col. 38, l. 11-24.

Though we agree with First Graphics that reading limitations from the specification into the term "designing" would be inappropriate, there is no question that the claims, read in their entirety, contemplate that the designing of the distribution system will be done, at least to a large extent, electronically or automatically after the software user inputs certain data. This understanding of the claims comes not just from the specification, but also from the prosecution history. For example, during the prosecution of the '537 patent, First Graphics distinguished a patent cited by the examiner (Watanabe, U.S.Pat. No. 4,700,317), on the grounds that that patent "does not teach electronically designing a layout automatically as recited in amended claim 1." As M.E.P. argues, First Graphics may not obtain in claim construction features that it previously disclaimed-whether by amendment of claims or by arguments made to obtain allowance of claims-during the prosecution of its patent application. *E.g.,* Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc., 170 F.3d 1373, 1376-77 (Fed.Cir.1999).

But this description of the patents *in toto* does not control the meaning of the single word "designing," the particular term that the parties have asked the Court to construe. Indeed, "designing" is consistently used in the claims of the '983 and '537 patents together with the word "electronically" and/or "automatically." To read "designing," standing alone, as including those concepts would render those terms superfluous, contrary to the rules governing claim construction. *E.g.,* Wright Medical Technology, Inc. v. Osteonics Corp., 122 F.3d 1440, 1444 (Fed.Cir.1997) (noting that a claim construction rendering ordinary terms "mere surplusage" would eviscerate them).

The plain meaning of designing is "to plan out in systematic, usually graphic form." *American Heritage Dictionary of the English Language* (4th ed.2000). The Court finds that "designing," as used in the claims, means to prepare the plans for something such as a fire sprinkler system. FN1

FN1. M.E.P. points to prior art in the form of software called FireSolutions. The Court previously excluded this evidence, *see* March 20, 2001 Order, as M.E.P. failed to produce the prior art software in accordance with the schedule set by the Court. Accordingly, it is not part of the record and we decline to address it. In any event, prior art that was not relied considered during prosecution of the patent cannot be used in claim construction. Karsten Manufacturing Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1384 (Fed.Cir.2001).

Requirements

"Requirements," according to First Graphics, means "something that is needed." M.E.P. offers as its proposed construction of the word "the mandatory provisions of the selected standard indicated by the word 'shall." ' M.E.P. cites to National Fire Protection Association guidelines (NFPA 13) for support, but First Graphics properly notes that these guidelines are extrinsic evidence upon which the Court cannot rely unless the intrinsic evidence is ambiguous.

We derive the meaning of "requirements" from the term's ordinary meaning and the intrinsic evidence. A requirement is commonly defined as "something called for or demanded: a requisite or essential condition," *Webster's Third New International Dictionary of the English Language (Unabridged)* 1929 (1993), and we see nothing in the intrinsic evidence to indicate any deviation from this ordinary meaning. The software integrates layout plans ("generic dimensional requirements") with building standards ("requirement of at least one building standard from which distribution systems can be evaluated") and produces a finished layout plan that complies with the standard. In other words, the computer identifies the requirements of the plan and the standard and generates a layout that meets the requirements. The Court finds that "requirement" means something that is necessary.

Comply

First Graphics claims that "comply" means "to act in accordance with requirements or rules." Plaintiff's Brief at 16-17. M.E.P. asserts that "comply" means "at least in part, checking during the design, whether the location and operation of each sprinkler element meets all requirements of the selected standards, and, if not, to display an 'error' message." Def's Brief at 14-15.

M.E.P. proposed construction is unnecessarily complex and unduly narrow. M.E.P. cites to a preferred embodiment in the specification which states that "If a problem is discovered, a message is always given to the user." '983 Patent, Col. 9, l. 68-Col. 10, l. 3. As First Graphics correctly notes, however, claim 14 of the '983 patent does not include an error message function, and it would be improper to read into that claim a

limitation from the preferred embodiment in the specification. Vitronics, 90 F.3d at 1582. The Court finds that "comply," consistent with its ordinary meaning, means to act in accordance with standards or requirements.

Conclusion

In sum, the Court finds that "designing" means to prepare the plans for something, "requirement" means something that is necessary, and "comply" means to act in accordance with standards or requirements. This case is set for a status hearing on July 16, 2001, at 9:30 a.m., at which time the Court will set a schedule for the completion of discovery and filing of dispositive motions. The parties are directed to meet and confer so that they can propose a schedule to the Court at that time.

N.D.Ill.,2001.
First Graphics, Inc. v. M.E.P. CAD, Inc.