United States District Court,
N.D. California, San Jose Division.

Horst FROESSL, an individual,
Plaintiff.
v.
HEWLETT-PACKARD COMPANY, a Delaware corporation; Image Recognition Integrated Systems S.A., a Belgium company; I.R.I.S., Inc., a Delaware corporation; and Scansoft, Inc., a Delaware corporation,
Defendants.

No. C-01-20924 RMW

Nov. 27, 2002.

Donald R. Pepperman, Maxwell Michael Blecher, Blecher & Collins, Los Angeles, CA, Harold L. Jackson, Jackson Law Corporation, Tustin, CA, for Plaintiff.

Andrew P. Valentine, DLA Piper Rudnick Gray Cary U.S. LLP, Michael A. Ladra, James C. Otteson, Michael B. Levin, Rena Su-Ling Chng, Wilson Sonsini Goodrich & Rosati, East Palo Alto, CA, John Allcock, Gray Cary Ware & Freidenrich, San Diego, CA, Luther Kent Orton, Snyder Miller & Orton LLP, San Francisco, CA, for Defendants.

CLAIM CONSTRUCTION ORDER

[Re Docket Nos. 29, 33, 39]

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

Defendants Hewlett-Packard Co., Image Recognition Integrated Systems S.A., I.R.I. S., Inc., and Scansoft, Inc. (collectively, "defendants") filed a claim construction brief on April 12, 2002 regarding plaintiff's U.S. Patent No. 4,553,261 ("the '261 patent"). Plaintiff Horst Froessl filed a claim construction brief on April 26, 2002, to which defendants responded and plaintiff replied. FN1 The court held a *Markman* hearing on May 21, 2002. Having considered the papers filed by the parties and the arguments of counsel, FN2 the court construes the disputed claim terms below.

FN1. Froessl's motion for leave to file his May 10, 2002 reply brief is granted.

FN2. Froessl also submitted a CD-ROM approximately 31 minutes in length providing a tutorial of the '261 patent and purportedly summarizing portions of the parties' claim construction arguments. Defendants objected to the submission of the CD-ROM as beyond the scope of the parties' agreement regarding its contents (defendants assert they consented to the submission of a 3-minute CD-ROM discussing only the

subject matter of the '261 patent). Defendants also object to the CD-ROM as mischaracterizing their claim construction arguments. The court has reviewed the contents of the CD-ROM and sustains defendants' objection in part as follows. To the extent the CD-ROM provides a tutorial of the claimed invention (the first 2 minutes, 52 seconds), the court has considered its contents. The court has not relied upon the remainder of the CD-ROM, which discusses the parties' purported claim construction positions. The court finds that the parties' arguments were sufficiently set forth in their briefs.

I. BACKGROUND

The '261 patent relates to a system for electronically storing documents and portions of documents in both digitalized image form and machine code form for subsequent retrieval and use. The parties dispute the meaning of certain terms in Claim 12 (apparatus) and Claim 17 (method), which are set forth below:

12. An apparatus for selectively storing information derived from source documents comprising

[a] means for receiving source documents, optically scanning each document and forming a series of digitalized electrical signals representative to a digitalization of patterns on each document from which an image of each document can be reproduced,

[b] buffer means for storing the series of digitalized signals,

[c] means for recalling from said buffer means groups of said digitalized signals and for producing on a viewable screen an image of digitalized patterns of the document from which said signals were formed;

[d] manually operable control means for selecting a plurality of locations in said document to identify selected segments of the patterns therein and for adding to said selected segments address information to control subsequent disposition of said segments; and

[e] a mass data file for receiving said segments in digitalized form and said address information.

17. A method of inputting and preparing data from source documents comprising the steps of

[a] scanning each source document and forming signals representative of digitalized patterns derived from images of characters and graphics thereon,

[b] temporarily storing the signals representative of the digitalized patterns,

[c] selecting segments of the stored signals for further processing,

[d] converting signals representative of digitalized patterns of characters in only the selected segments into a machine code,

[e] displaying the digitalized patterns from the storage of signals for each character not successfully converted into machine code,

[f] manually entering a code for the digitalized pattern, and

[g] storing the machine code and digitalized pattern signal for subsequent use.

'261 patent, col. 11:30-52, 12:16-35 (bracketed reference letters added).

II. DISCUSSION

A. *Claim Limitation 12(d)*

Defendants advance three arguments regarding the construction of claim limitation 12(d), which recites:

[d] manually operable control means for selecting a plurality of locations in said document to identify selected segments of the patterns therein and for adding to said selected segments address information to control subsequent disposition of said segments.

First, defendants argue that "manually operable control means" cannot be construed under 35 U.S.C. s. 112, para. 6 because the '261 patent specification fails to disclose software structure or an algorithm for performing the function of "adding address information." (*See* Defs.' Br. at 6:12-14, 6:19-9:2.) Second, defendants argue that the logic of Figure 4 must be found to impose limits on the construction of claim limitation 12(d). (*See* Defs .' Br. at 9:24-12:4.) Third, defendants argue that the term "address information" does not include unique file names. (*See* Defs.' Br. at 12-14.) Each of these arguments is addressed below.

1. Corresponding structure for "manually operable control means ... for adding ... address information"

Defendants argue that the term "manually operable control means," as recited in claim limitation 12(d), cannot be construed under s. 112, para. 6 because the '261 patent specification does not adequately disclose "corresponding structure" (namely, a software algorithm) for performing the function of "adding address information." (*See* Defs.' Br. at 6:12-14, 6:19-9:2.) Defendants indicate that, should the court agree that the specification does not contain an adequate disclosure, they will file a motion for summary judgment of invalidity for indefiniteness under s. 112, para. 2. (*See* Defs.' Br. at 7 n. 5.) In response, Froessl argues that it would be inappropriate to adjudicate the validity of Claim 12 under the guise of claim construction, and that in any event a person of ordinary skill in the art easily could provide the simple computer instructions to perform the function of adding address information. (*See* Pl.'s Br. at 7-9, 18-23.) The court finds that the '261 patent specification does disclose at least some structure corresponding to "manually operable control means" but declines to determine at this time whether additional disclosure is necessary to render claim limitation 12(d) definite under s. 112, para. 2.

Neither party disputes, and the court agrees, that claim limitation 12(d) is written in means-plus-function format. (*See* Defs.' Br. at 6:21-22; Pl.'s Br. at 5:2.) Because claim limitation 12(d) does not recite definite structure for performing the recited functions, it is properly construed under 35 U.S.C. s. 112, para. 6. *See* Tex. Digital Sys., Inc. v. Telegenix, Inc., No. 02-1032, 2002 WL 31307212, at hdnt. [17] (Fed.Cir. Oct. 16, 2002) ("Because this limitation is expressed in 'means plus function' language and because it does not recite definite structure in support of its function, it is subject to the requirements of 35 U.S.C. s. 112, para. 6 (1994).").

Construction of a means-plus-function limitation involves two steps. *See* Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed.Cir.2002). First, the court must identify the claimed function. *See*

id. Second, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function. *See id*. "Structure disclosed in the specification is 'corresponding' structure only if the specification ... clearly links or associates that structure to the function recited in the claim." B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed.Cir.1997).

Regarding step one (identifying the claimed function), the court finds that claim limitation 12(d) recites two separate functions to be performed by the "manually operable control means": (1) selecting a plurality of locations in said document to identify selected segments of the patterns therein; and (2) adding to said selected segments address information to control subsequent disposition of said segments.

Regarding step two (determining corresponding structure disclosed in the specification), the court finds that the '261 patent specification discloses and clearly links structure with these two functions. In one portion, the specification identifies a work station (e.g., a personal computer) together with a cursor control, a keyboard, a "mouse," or a lightpen as structure capable of selecting segments and adding address information to the selected segments:

Work station **30** is provided with a manual control symbolically indicated at **35** which can comprise a simple form of cursor control, a simplified keyboard, a "mouse" or a lightpen, any of which are capable of positioning two or more cursors at selected locations intextual or graphic material displayed on screen **31.**

*** * ***

In addition to selecting segments of the data, the manual control **35** can also be employed to attach an address or keyword to the data segment indicating the nature of the subject matter or the organizational unit to which the subject matter should be directed, or both. In some circumstances, control **35** would necessarily be in the nature of a keyboard to provide a larger amount of control, but the actual size is not particularly significant.
'261 patent, col. 6:31-41, 7:1-8.
In another portion, the specification additionally identifies "joy sticks" as structure capable of performing the functions recited in claim limitation 12(d):

In the embodiment of FIG 3, work station **30** is shown as having ... a more complex keyboard **40,** although the apparatus can still include a lightpen, mouse, joy stick or the like for cursor control.

Id. col. 7:34-38.

Thus, defendants' assertion that "[w]here a claim fails to disclose and clearly link a structure that performs the function, the claim cannot be construed," is misplaced. (Defs.' Br. at 7:17-21 (citing Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1376 (Fed.Cir.2001)).) As explained above, the ' 261 patent specification does disclose and clearly link at least some structure corresponding to the recited functions. Indeed, defendants acknowledge that the '261 patent specification discloses "certain hardware" for the "manually operable control means." (Defs.' Br. at 8:1-2, 9:12-23.)

Defendants' primary argument is that more structure is needed to satisfy the disclosure requirement, namely, a software algorithm to control the disclosed hardware. Defendants assert that any novelty to Claim 12 lies not in a new and nonobvious combination of hardware but, rather, lies in its use of prior art hardware under the control of a specific new type of computer program. (*See* Defs.' Br. at 6:26-7:2.) Defendants cite the

Federal Circuit's decision in WMS Gaming, Inc. v. International Game Technology, 184 F.3d 1339, 1349 (Fed.Cir.1999), for the proposition that "in a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm." (Defs.' Br. at 7:2-6.) Based on this proposition, defendants argue that the '261 patent specification also must disclose "a specific type of software algorithm in the form of a computer program" in order to satisfy s. 112, para. 6. (*See* Defs.' Br. at 7:8-10, 8:5-7 ("[A] specific type of software algorithm in the form of a computer program is *critical* to defining the structure of the manually operable control means." (emphasis added)).) Defendants' reasoning based on the *WMS Gaming* decision is flawed, however.

In *WMS Gaming,* the patented technology involved slot machines with electronically controlled reels. *See* WMS Gaming, 184 F.3d at 1343. The point of novelty involved controlling the probability of a slot machine displaying certain combinations of symbols (e.g., three cherries). The probability was determined by the operation of a random number generator in connection with an algorithm. Various numbers were assigned to each of the reels' stop positions, with more numbers assigned to certain stop positions than other stop positions. The algorithm set forth the conditions for assigning the numbers to the reels' stop positions, and the random number generator selected the number (and, thus, the stop position). By varying how many numbers were assigned to a particular stop position, the probability of the reels landing on that stop position could be controlled. *See id.*

The issue in *WMS Gaming* was determining the scope the "structure" disclosed in the specification that corresponded to the function recited in the means-plus-function limitation at issue ("means for assigning a plurality of numbers"). There was no dispute (indeed, the parties stipulated) that the disclosed corresponding structure was a computer that would control the assignment of numbers to reel stop positions. *See id.* at 1347. The patentee argued, however, that "corresponding structure" broadly included any computer that could perform an algorithm for assigning numbers to stop positions, whereas the accused infringer argued that "corresponding structure" was limited to a computer programmed to perform the specific algorithm disclosed in the specification. *See id.* at 1348. The Federal Circuit, agreeing with the accused infringer, held that the corresponding structure in the specification was a computer programmed to perform the *disclosed* algorithm. *See id.* at 1349.

Contrary to defendants' suggestion in this case, the *WMS Gaming* decision did not impose a requirement that, whenever the corresponding structure to a means-plus-function limitation is a computer, the specification must also disclose an algorithm or other software program to perform the recited function. In *WMS Gaming,* there was no dispute that an algorithm for assigning numbers to stop positions was disclosed in the patent specification. *See id.* at 1347-48. Thus, the court was not confronted with, and therefore did not resolve, whether the disclosure of the algorithm was necessary.

Unlike the parties in the *WMS Gaming* case, the parties here dispute whether the software for adding address information to selected segments is a new and nonobvious feature of the claimed invention that must be disclosed in the specification. Froessl, for instance, contends that "[a] skilled artisan reading the specification would readily understand the structure for adding the address information and could easily provide the simple computer instructions to accomplish this task." (Pl.'s Br. at 9:6-8; *see id.* at 22:10-12 ("Giving a segment of data address information ... is a simple task that has been understood for at least as long as the task of selecting a segment.").) Defendants, on the other hand, "do not concede that the functions of segment selection and addressing are simple" (Defs.' Reply at 2:13-14) and in fact argue that a software algorithm is " *critical* to defining the structure of the manually operable control means." (Defs.' Br. at 8:5-7 (emphasis

added).)

Determining whether the particular software for adding address information must be disclosed in the '261 patent specification in essence requires the court to determine the validity of Claim 12. *See* Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1376 (Fed.Cir.2001) ("[F]ailure to disclose adequate structure corresponding to the recited function in accordance with 35 U.S.C. s. 112, paragraph 1, results in the claim being of indefinite scope, and thus invalid, under 35 U.S.C. s. 112, paragraph 2."). As such, a clear and convincing standard of proof applies. *See* id. at 1381 ("Despite the fact that the district court entered its judgment of non-infringement without addressing the issue of validity, its decision necessarily renders claim 1 invalid. Thus, the district court should have applied the 'clear and convincing' evidentiary standard in assessing Harley-Davidson's assertion that the specification of the '348 patent fails to disclose structure corresponding to the 'electronic sensing means.' "). Furthermore, "[w]hether or not the specification adequately sets forth structure corresponding to the claimed function necessitates consideration of that disclosure from the viewpoint of one skilled in the art." Id. at 1376.

The court does not have sufficient information at this time to determine whether the '261 patent specification must disclose an algorithm or software for adding address information in order for Claim 12 to be definite. Given that the parties dispute whether the software for adding address information is so "simple" that its disclosure is not necessary to enable one of ordinary skill in the art to practice the invention, the court anticipates the parties each will offer expert testimony on that issue. It would be more prudent to resolve this issue after having considered such evidence.FN3 Furthermore, because the issue of indefiniteness is one of validity rather than claim construction, it is more properly presented in a motion for summary judgment than at a *Markman* hearing.FN4 The court's role at this stage was to identify the function(s) recited in claim limitation 12(d) and the corresponding structure, if any, disclosed in the specification, which it has done above.

FN3. In In re Dossel, 115 F.3d 942, 946-47 (Fed.Cir.1997), the Federal Circuit upheld a claim's validity over a s. 112, para. 2 challenge, where the corresponding structure to a recited function in a means-plus function limitation was a computer but the specification did not disclose the mathematical algorithm for performing the function. In finding that adequate structure had been disclosed, the court noted that "in the medical imaging field, it is well within the realm of common experience that computers are used to generate images for display by mathematically processing digital input." *Id*. at 947. In the present case, the court must receive testimony regarding "the realm of common experience" in the document and data handling field before defendants' s. 112, para. 2 challenge can be properly adjudicated.

Additionally, in *Intouch Group, Inc. v. Amazon.com, Inc.,* No. C-00-1156-DLJ (N.D. Cal. June 20, 2001), which defendants cited in their claim construction brief, the court suggested that software need not be disclosed in the specification where the means-plus-function claim limitation at issue recites a "basic" function of the disclosed hardware structure: "Authenticating the user ID was not a basic function of a web site performed by the SGI server; therefore the SGI server cannot function as the ID means." (Levin Decl. Ex. G at 40:20-22.) Accordingly, the court defers determining whether adding address information is a "basic" function of the disclosed hardware structure until after the parties have had the opportunity to present expert testimony on that issue.

FN4. The court recognizes that if it had determined that *no* corresponding structure was disclosed in the '261 patent specification, then it necessarily would have ruled on the validity of Claim 12. *See* Cardiac Pacemakers, 296 F.3d at 1114 ("If ... *no* embodiment discloses corresponding structure, the claim is invalid for failure to satisfy the definiteness requirement of s. 112, para. 2." (emphasis added)); *see also Intouch,*

No. C-00-1156-DLJ, at 45 ("[T]he patentee has failed to identify *any* corresponding structure for the purchasing means." (emphasis added)). Because the '261 patent specification does disclose and clearly link at least some structure (i.e., hardware structure) to the recited functions in claim limitation 12(d), however, Claim 12 cannot be deemed invalid on this basis. *See* Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1382 (Fed.Cir.1999) ("All one needs to do in order to obtain the benefit of [s. 112, para. 6] is to recite *some* structure corresponding to the means in the specification, as the statute states, so that one can readily ascertain what the claim means and comply with the particularity requirement of para. 2. The requirement of specific structure in s. 112, para. 6 thus does not raise the specter of an unending disclosure of what everyone in the field knows that such a requirement in s. 112, para. 1 would entail." (emphasis added)).

Finally, defendants' reference to the Federal Circuit's recent decision in Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc., 296 F.3d 1106 (Fed.Cir.2002), also is unavailing. There, the primary issue was whether the specification disclosed a single structure corresponding to the two functions recited in the means-plus-function limitation at issue. The court found that the specification did not disclose a single structure for performing the two functions and invalidated the claim as indefinite under s. 112, para. 2. Here, although claim limitation 12(d) recites two functions to be performed by the "manually operable control means," the '261 patent specification discloses the same structure for performing both functions. *See* '261 patent, col. 6:31-41, 7:1-8. Accordingly, Claim 12 cannot be invalidated on the basis relied upon in *Cardiac Pacemakers*.

In sum, the court finds that the '261 patent specification discloses at least some structure corresponding to the functions recited in claim limitation 12(d) but defers determining whether additional disclosure (i.e., a software algorithm) is necessary until the parties have had the opportunity to present expert testimony on that issue.

2. Figure 4

Defendants next argue that "Figure 4 is the only disclosure in the specification of any aspect of an algorithm related to the function of selecting and adding address information to segments.... Thus ... the logic of Figure 4 must be found to impose limits on the construction of element 12(d)." (Defs.' Br. at 10:4-7.) This argument is dependent, however, on the assumption that the '261 patent specification necessarily must disclose a software algorithm for the operation of the disclosed structure (i.e ., the hardware) corresponding to the function of adding address information. As explained above, the court defers making that determination. Accordingly, the court will not restrict claim limitation 12(d) to the logic of Figure 4 in a wholesale fashion at this time.

Nevertheless, the parties' arguments on this point highlight two issues that are properly resolved on claim construction. First, what is a "segment"? Second, must the apparatus of Claim 12 be able to select and add address information to multiple segments in a single step before the segments are stored?

a. Definition of "segment"

Froessl contends that "segment" means "a single area or continuous portion of a document" and that "segments" refers to more than one area. (Pl.'s Br. at 10:17-14:19.) Froessl further contends that defendants have taken the position that a single area could encompass more than one segment. (*See* Pl.'s Br. at 13:16-21.) In response, defendants assert that Froessl has mischaracterized their argument and that "[d]efendants

agree with Froessl that the term 'segment' refers to a continuous area between two X's." (Defs.' Response Br. at 7:4-11.) FN5 Although the parties apparently agree that the term "segment" refers to a single area, the court clarifies that a "segment," although capable of being defined by two X's or other markers (for instance, in selecting text), is not limited to being defined by only two markers.

FN5. Despite the parties' apparent agreement that a "segment" is a single area, the '261 patent specification is somewhat ambiguous on this point. For instance, the specification at one point appears to suggest that two markers, such as the X's in Figure 1, define an area containing multiple "segments":
Thus, if it is assumed that lines **34** on screen **31** represent lines of characters which have been extracted from store **16,** control **35** can be used to place cursors at, for example, the positions on the lines identified by the X symbols in FIG. 1. These cursors are used to identify those *segments* lying between the X's as being *segments* which are to be preserved for further processing or use.

'261 patent, col. 6:44-50 (emphasis added).

Reading the above passage in isolation, it is unclear whether the phrases "these cursors" and "the X's" in the second sentence are referring to Figure 1 or to cursors and X's generally. The ambiguity is clarified, however, in the next sentence of the specification, which recites:
The X's can be used to select all of the data on the screen, none of the data on the screen, or any amount in between....

'261 patent, col. 6:51-53.

This passage shows that the phrase "the X's" was used in the previous passage in a general sense rather than as a reference to the X's shown in Figure 1, because a specific amount of data had been selected in Figure 1. Furthermore, the patent specification later confirms that two markers define an area containing a single "segment":
The selected *segment* is identified by manually placing identification marks which are unique and different from the remainder of the text likely to appear on the page, the marks being chosen to be machine recognizable. In the example illustrated, marks **56** and **57** have been placed on the page, indicating the beginning and end points of the selected *segment*.

Id. col. 9:11-18.
The court construes the term "segment" to mean an area of a source document. "Segments," therefore, means more than one area of a source document. An area is a portion of a document (or the entire document) bounded by a geometric or other encompassing shape. The method of defining the bounded area largely would be a matter of operator preference. For a textual segment consisting of characters,FN6 the '261 patent specification contemplates using two markers (such as X's) to indicate the starting and stopping points of the text segment. For other segments, however, such as irregularly shaped graphics, FN7 defining the boundary of a segment may require the use of more than two markers. This interpretation is consistent with the specification, which explains:

FN6. The '261 patent specification defines "character" to mean "alpha-numeric symbols as well as other symbols such as mathematical operators, generally including any symbol having a recognizable and definable meaning to some group." '261 Patent, col. 4:8-11.

FN7. The '261 patent specification defines "graphics" to mean "drawings, graphs, etc." '261 Patent, col. 4:11-13.

Work station **30** is provided with a manual control symbolically indicated at **35** which can comprise a simple form of cursor control, a simplified keyboard, a "mouse" or a lightpen, any of which are capable of positioning two *or more* cursors at selected locations in textual *or graphic* material displayed on screen **31.** '261 patent, col. 6:38-43 (emphasis added).

b. Selecting multiple segments in a single step

Defendants additionally argue that the apparatus of Claim 12 must be capable of selecting multiple segments and adding address information to those segments in a single step, prior to storage. (*See* Defs.' Br. at 10:8-12:4.) In essence, defendants seek to impose the requirement that the apparatus claimed in Claim 12 perform its functions in a particular sequence of steps. Defendants' primary support for this argument is Figure 4, which defendants argue shows the functions of selecting "segments" and adding address information to those segments in a single step prior to storage. (*See* id.) It is a well-founded canon of claim construction, however, that limitations from the specification are not to be read into the claims unless justified by the particular claim language. *See* Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 867 (Fed.Cir.1985) ("Generally, particular limitations or embodiments appearing in the specification will not be read into the claims."). Defendants' strategy in seeking to limit Claim 12 to the "algorithm" disclosed in Figure 4 is that: (1) claim limitation 12(d) is a means-plus-function limitation; (2) the specification must disclose a corresponding "software algorithm" structure to satisfy s. 112, para. 2; and (3) Figure 4 is the only portion of the specification that arguably discloses an algorithm. (*See* Defs.' Br. at 9:26-10:7.) As explained above, however, the court defers determining at this time whether express disclosure of an algorithm is necessary in order for a person of ordinary skill in the art to practice the claimed invention. Thus, importation of the limitations of Figure 4 into Claim 12 on this basis is unwarranted. Furthermore, Figure 4 is a flow diagram illustrating the sequence of steps for a particular *method* of practicing the invention, which includes certain steps (such as converting data segments into machine code) that are not required to be performed by the apparatus recited in Claim 12. *See* '261 patent, col. 3:34-36, 8:40-9:3.

To determine whether limitation 12(d) requires the claimed apparatus to be able to select multiple segments and add address information to those segments in a single step before the segments are stored, the court applies the rules of claim construction rather than simply import the limitations of Figure 4, as defendants suggest. As the Federal Circuit explained in Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576 (Fed.Cir.1996):

[I]n interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.... First, we look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention.... [S]econd, it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.... Third, the court may also consider the prosecution history of the patent, if in evidence.

90 F.3d at 1582.

Because defendants contend that the apparatus of Claim 12 must perform certain recited functions in a particular sequence, the court first examines the words of the relevant limitations to determine if they require the performance of the recited functions in a particular sequence. The limitations of Claim 12 that recite the functions of selecting segments, adding address information, and receiving (i.e., storing) the segments and address information are as follows:

[d] manually operable control means for selecting a plurality of locations in said document to identify selected segments of the patterns therein and for adding to said selected segments address information to control subsequent disposition of said segments; and

[e] a mass data file for receiving said segments in digitalized form and said address information.

'261 patent, col. 11:45-49 (emphasis added).

Defendants argue that because claim limitation 12(d) recites the plural term "segments," the "manually operable control means" must be capable of selecting and addressing multiple segments in the same document. (*See* Defs.' Br. at 11:16-18.) Froessl argues, on the other hand, that "Claim 12 element (d) anticipates the situation where one area of a document is selected at a single time and given address information and stored and the process is repeated ." (Pl.'s Br. at 11:25-12:2.) Each party's proposed construction is partly correct and partly incorrect.

First, the court finds first that the claimed apparatus must be capable of selecting more than one segment at a time in a single document. The actual language of claim limitation 12(d) requires the ability to select "a plurality of locations" in a single document "to identify selected segments." Froessl's suggestion that only "one area of a document is selected at a single time" is inconsistent with the "plurality of locations" language as well as with the court's construction of the term "segments" to mean "more than one area of a source document." (*See supra* Part II(A)(2)(a).)

The court further finds that address information must be added to a segment before it is received in storage. Claim limitation 12(d) indicates that the purpose of adding address information is "to control subsequent disposition of said segments." The specification also indicates that "[t]he added address information can also be used to perform such functions as complementing the link to the source information for use in a specific report or an excerpt from a report which permits this link to be carried forward, proving, e.g., an automated audit trail." (*See* '261 patent, col. 2:65-3:2.) This language shows that address information is added to a segment before it is stored. Furthermore, claim limitation 12(e) recites "a mass data file for receiving said segments in digitalized form *and said address information*." (emphasis added.) Logically, address information must be added to a segment before the mass data file can receive the segment and its address information.

The court does not find, however, that address information must be added to *all* of the selected segments in a particular document before any segment (along with its address information) can be stored in the mass data file. Such a limitation is not recited in the claim itself. The plain language of limitations 12(d) and 12(e) requires means for selecting a plurality of segments, means (the same means) for adding address information to the selected segments, and a mass data file for storing the segments and address information. There is no

requirement that an operator wait to store a particular segment and address information until all segments have been addressed. An apparatus is within the scope of Claim 12 if it can select multiple segments, add address information to the first segment, store that segment, add address information to a second segment, store that segment, and so on. In such a scenario, the apparatus has means for selecting a plurality of segments, means for adding address information to the segments, and a mass data file to store the segments and address information. No more is required by Claim 12, and it would be inappropriate, as defendants urge, to import limitations from the specification that are not justified based on the claim language.

3. "Address information"

The parties next dispute the scope of the term "address information" as used in claim limitation 12(d). Defendants contend that "address information should not be construed to cover a file naming system" (Defs.' Br. at 12:21-14:2), whereas Froessl argues that "address information" can include file names (*see* Pl.'s Br. at 9:10-10:16).

The court previously construed the term "address information" in connection with case number C-95-20069 entitled *Froessl v. Caere Corp.,* in its September 11, 1997 Order Construing Disputed Claims Language. The court's construction, which is adopted for purposes of this case, is as follows:

"Address" means a "keyword ... indicating the nature of the subject matter or the organizational unit to which the subject matter should be directed, or both." Column 7, lines 1-5. Examples of "address information" "include such organizational units as 'accounting,' 'sales,' 'research and development,' and the like." Column 7, lines 21-23. The term can also be the name of a project or topic. Column 7, lines 23-25.

Although "address information" can take a variety of descriptive forms, it must relate in some way to the content of the data segment. It also must "control subsequent disposition of said selected segment," i.e. be used by the hardware and software that manage the storage of the selected segment and make it retrievable by the "address information."

... "Address information" in Claim 12 refers to a content-related descriptor, such as a keyword, attached to the selected data segment.

(9/11/97 Order at 2:17-3:5.)

Based on this construction, the term "address information" can encompass a file name, provided the file name is in a certain format. There is no dispute that a file name, regardless of format, can be used by hardware and software to store and retrieve the selected segment. The only other requirement under the court's claim construction is that the address information "relate in some way to the content of the data segment." This requirement can be met by a file name whose format reflects its subject matter. For instance, if an organization restricted file names beginning with the letter "a" (such as "a001.doc" or "adebtchart .jpg") to segments relevant to "accounting," then those file names would "relate in some way to the content of the data segment." The file naming system need not be obvious, and a more complex file naming system easily could be devised, as long as the file names indicate the nature of the subject matter or otherwise relate to the content of the attached segments. *See* '261 patent, col. 7:26-28 ("The exact nature of the passwords is, of course, not significant to the invention itself and will vary from one organization to another.").

Additionally, defendants argue that use of unique file names would preclude achieving one of the '261

patent's objectives, namely, the ability to search for, store, and retrieve multiple segments based on their subject matter. (*See* Defs' Br. at 6:5-7:3.) The court disagrees. A computer could retrieve a collection of unique file names if they shared a common file name format. For instance, regarding the hypothetical "accounting" example discussed above, a standard computer could retrieve all file names beginning with the letter "a" (for instance, by searching for file names of the format a*.* where an asterisk is a common computer programming variable), which would retrieve all accounting documents.

Thus, the court construes the term "address information" to includes unique file names that otherwise satisfy the requirements of the court's previous claim construction order issued in the *Caere* case.

B. *Claim 17*

Defendants make two arguments regarding the construction of Claim 17. First, defendants argue that "[t]he steps in claim 17 must be performed sequentially in the order recited in the claim, with the selection of the segments in a single step, and with the storage of the machine code and digitalized pattern signal being accomplished in a single step as the last step of the process." (Defs.' Br. at 14:7-9.) Second, defendants argue that "[t]he phrase 'further processing' in step 17(c) means the conversion of the selected segments to machine code." (Defs.' Br. at 14:10.) The court addresses each of these arguments below.

1. Sequence of Steps

Defendants concede that the court must consider the nature of the invention and the intrinsic evidence (i.e., the patent claims, specification, and prosecution history) to determine if the steps of a method claim must be performed in a particular order or sequence. (*See* Defs.' Br. at 15:23-27.) The court finds that although most of the steps recited in Claim 17 logically must be performed before the next step can be performed, it is not necessary to perform steps [d], [e], and [f] before the selected segments of the digitalized patterns can be stored for subsequent use.

Looking first to the claim language itself, there can be no dispute that the source documents must be scanned and formed into signals representing digitalized patterns (step [a]) before those signals can be temporarily stored (step [b]). Then, logically, the signals must be temporarily stored (step [b]) before segments of the "stored" signals can be selected for further processing (step [c]). Next, the segments must be selected (step [c]) before the signals representative of digitalized patterns of characters "in only the selected segments" can be converted into a machine code (step [d]). Then, attempted conversion (step [d]) must occur before the digitalized patterns for the unsuccessfully converted characters can be displayed (step [e]). Then, the digitalized patterns must be displayed (step [e]) before a code can be entered for the unsuccessfully converted patterns(step [f]). Finally, the machine code conversion process (steps [d], [e], and [f]) must be completed before any *machine code* can be stored for subsequent use (the first part of step [g]).

However, the logic of the sequence of steps in the plain language of Claim 17 does not require completing the machine code conversion process (steps [d], [e], and [f]) before the *digitalized pattern signals* for the selected segments generated from steps [a], [b], and [c] are stored for subsequent use (the second part of step [g]). (*See* Defs.' Br. at 16:25-27.) Rather, once these patterns are generated in steps [a] through [c], they are ready to be stored for subsequent use, regardless of whether steps [d] through [f] are carried out, as long as the digitalized patterns are accessible for use in step [e]. Displaying the digitalized patterns in step [e], however, would not be precluded by their storage in step [g]. In fact, step [g] requires that the digitalized patterns be stored "for subsequent use," which would include their use in step [e]. Accordingly,

the court finds that the plain language of Claim 17 does not require that the digitalized pattern signals be stored as the last step of Claim 17.

The '261 patent specification supports this construction. Referring to Figure 3 (reproduced below), the specification explains that, after the selection of data segments using work station **30,** the digitalized signals are sent via channel **36** to the mass data file **46,** independent of the machine code conversion steps (performed by converter **42**):

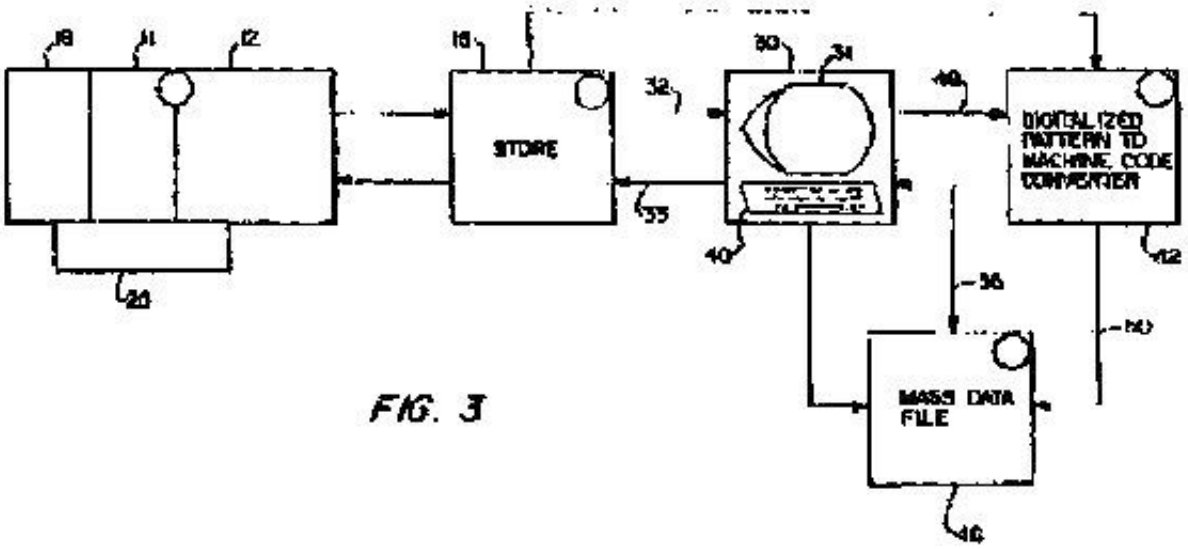


FIG. 3

"[I]n addition to storing the digitalized signals in a data file **46,** the signals are supplied on a channel **48** to converter **42** to be converted into a code which can be processed and handled by a conventional computing device. The encoded data is then supplied on a channel **50** to a separate portion of data file **46.**"
'261 patent, col. 7:45-50.
The above passage from the specification indicates that the digitalized signals are stored in the mass data file **46** prior to being sent to converter **42** for the machine code conversion process. The specification also teaches that the digitalized signals and the machine code are sent to the mass data file on different channels (channel **36** sends the digitalized signals to the mass data file whereas channel **50** sends the machine code to the mass data file). Furthermore, the patent specification explains that selected data segments can be stored in the mass data file immediately following their selection. '261 patent, col. 6:55-56 ("The X's can be used to select all of the data on the screen, none of the data on the screen, or any amount in between, the sequence of entering the material into storage being according to the sequence of activating the cursors. The selected data segments are then transferred on line **36** to mass storage facilities....").FN8 Thus, Figure 3 and the corresponding discussion in the patent specification show that the selected segments of the digitalized signals can be stored prior to the machine code conversion steps.

FN8. The court appreciates that the discussion at column 6, lines 55-56, of the patent specification relates to Figure 1, which discloses an embodiment of the invention that does not involve the machine-code conversion process. Nevertheless, the discussion at lines 55-56 is relevant to Claim 17 in that it shows that the patentee contemplated storing the digital patterns in mass storage immediately following their selection.

Defendants argue that it would be "purposeless and wasteful" to store the digitalized pattern after selection, retrieve it for use in the synchronization and comparison steps, and then re-store the digitalized pattern and machine code at the end of the process. (Defs.' Reply at 9:19-25.) Contrary to defendants' argument, however, the patent specification does contemplate storing the digital patterns in the mass data file, retrieving them for the synchronization and comparison steps, and then restoring the digital patterns and machine code at the end of the process:

It can be expected ... that certain patterns will be not recognized or will be recognized as being ambiguous symbols, such as "5" and "S," "H" and "4," and the like. *The digital patterns representing these ambiguous and unrecognized characters are stored in data file **46*** and the machine code for all recognized symbols are stored in file **46** but those which are not recognized or which are thought to be ambiguous are replaced in storage, preferably in a separate portion thereof, with a code signifying a special identifying symbol such as a rectangle substituting for the character which is presenting the problem, plus a return address.

*After a set of data has been stored, the symbol substituted for those characters which have been identified as unrecognized or ambiguous are returned to the screen along with a concurrent display of the digital pattern stored in file **46** for the same character*.

'261 patent, col. 7:55-8:3 (emphasis added); *see also* id. at col. 9:53-55 ("Conversion and verification into machine code such as ASCII is accomplished using *retrievable* digitalized images ...." (emphasis added)). FN9 Thus, defendants' "practicality" argument is contrary to the teachings of the patent specification.

FN9. The court recognizes the distinction between the temporary storage **16** and the mass data file **46** in Figure 3.

Additionally, defendants cite to a portion of the transcript for the *Markman* hearing held in connection with the *Caere* case in support of its argument that column 8, lines 51-68 of the patent specification require the storage of the digitalized pattern signal along with the machine code as the last step of the process. (*See* Defs.' Br. at 17.) But, during that hearing, the court only indicated its belief at the time that Claim 17 required the storage of the digitalized pattern "after the selected segment is made." (Defs.' Ex. B at 5:2-20.) This earlier statement, although tentative only, nevertheless is consistent with the analysis above, in which storage of the digitalized pattern signal of the selected segment can occur as early as after the segment is selected in step [c].

Furthermore, defendants' reliance on Figure 4 as imparting limitations into Claim 17 is inappropriate. It does not appear that Figure 4 depicts an embodiment that corresponds to the limitations recited in Claim 17. For instance, the patent specification teaches that the digitalized patterns are stored regardless of whether machine code conversion is successful. *See* '261 patent, col. 8:68 ("In each case, the digital patterns are stored."). Claim 17 is consistent with the storage of the digitalized signals even where machine code conversion is unsuccessful. Figure 4, however, does not account for the storage of digital patterns where machine-code conversion is successful. Also, Figure 4 shows a synchronization step that is not recited in Claim 17. Finally, as explained above, it is improper to read limitations from the specification into the claims unless justified by the claim language. Thus, the court will not read any limitations from Figure 4 into Claim 17.

Accordingly, the court finds that steps [a] through [g] in Claim 17 must be performed sequentially in the order recited in the claim, with the selection of the segments in a single step (*see supra* Part II(A)(2)(b)), except that the storage of the selected segments of the digitalized pattern signals can occur at any point after step [c] and does not need to be accomplished in a single step with the storage of the machine code as the last step of the process.

2. "Further processing"

Claim limitation 17(c) recites: "selecting segments of the stored signals for further processing." Defendants contend that this limitation means "selecting segments for conversion into machine code." (Defs.' Br. at 18-19.) Froessl argues "further processing" can include deleting text, adding text, changing the font, or correcting spelling errors. (*See* Pl.'s Br. at 23:6-11.) The court construes this limitation slightly more broadly than defendants do and rejects Froessl's construction.

Preliminarily, the court notes that the term "stored signals" includes both (1) signals representative of digitalized patterns of characters ("character signals") and (2) signals representative of digitalized patterns of graphics ("graphics signals"). *See* claim limitation 17(a). Claim limitation 17(c) refers generally to selecting segments "of the stored signals" for further processing without distinguishing between character signals and graphics signals. Only character signals are amenable to conversion into machine code. *See* '261 patent, col. 7:51-8:39. Graphics signals cannot be converted into machine code. *See* id. at col. 8:35-39. Thus, for graphics signals, "further processing" in claim limitation 17(c) would not include conversion into machine code, as defendants' claim construction proposes.

Even limiting defendants' proposed claim construction to character signals, it is still overly broad. Claim 17 contemplates multiple uses of character signals after segments of them have been selected in step [c]. First, it is contemplated that the character signal segments will be converted into machine code in step [d], as defendants acknowledge. Second, it is contemplated that the character signal segments will be displayed for comparison purposes in step [e], which is not acknowledged in defendants' proposed claim construction. Additionally, for both types of character signal segments (i.e., those that are converted into machine code and those that are used for display purposes), "further processing" also includes storage, as recited in step [g], which again is not acknowledged in defendants' proposed claim construction. *See* '261 patent, col. 6:63-68.

The court rejects Froessl's contention that "further processing" "can include deleting text, adding text, changing the font, spelling, etc., as is clear from Fig. 1 and Fig. 3." (Pl.'s Br. at 23.) Neither Figure 1 nor Figure 3 provides any support for Froessl's proposed construction.

N.D.Cal.,2002.
Froessl v. Hewlett-Packard Co.

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