United States District Court,
D. Oregon.

COLLEGENET, INC., a Delaware corporation,
Plaintiff.
v.
APPLYYOURSELF, INC., a Delaware corporation,
Defendant.

No. CV-02-484-HU

Dec. 19, 2002.

Kristin L. Cleveland, John D. Vandenberg, Klarquist Sparkman, LLP, Portland, OR, for Plaintiff.

Kathleen C. Bricken, Garvey Schubert Barer, Portland, OR, Lawrence E. Carr III, Raymond C. Jones, Carr, Morris & Graeff, P.C., Washington, D.C., for Defendant.

OPINION ON CLAIMS CONSTRUCTION

HUBEL**, United States Magistrate Judge.**

Plaintiff CollegeNET, Inc. brings this patent infringement action against defendant ApplyYourself, Inc. Defendant counterclaims for a declaratory judgment on invalidity and non-infringement. The patent in suit concerns a universal forms engine allowing "customizable on-line forms" such as college admissions applications. This Opinion construes the disputed patent claims.

BACKGROUND

Plaintiff owns patent number 6,345,278 B1 (the '278 patent). The patent, issued February 5, 2002, is entitled "Universal Forms Engine." Exh. A to Oct. 18, 2002 Cleveland Declr. at p. 1. The patent abstract reads as follows:

A forms engine allows data sharing between customizable on-line forms, such as college admissions applications. After an applicant completes an application, the data is saved in a database and automatically populates fields in subsequent application forms. Each form is branded for its institution and forms for different institutions differ in appearance and content so that the presence of the third party servicers is transparent to the applicant. The system is extensible without programming, allowing new applicant attributes to be readily incorporated into the system and allowing the content and appearance of the application to be readily changed by changing the description file. Information stored about each attribute allows the specification of data validation rules and data sharing and grouping rules, as well as dependency rules that permit application page content to depend on applicant's responses on a previous page.

Id.

The patent has forty-two claims. Id. at pp. 44-46. In this action, claims 1-10, 13-24, 26-28, 30-32, 34-37, and 39-41 are at issue. The parties seek construction of specific words or phrases used throughout the claims. They are: (1) "automatically"; (2) "at least two application information files";(3) "thereby allowing new form data fields corresponding to applicant information not previously requested to be added to an application form without requiring alterations of existing forms or of programs that access the database"; and (4) "computer network."

Initially, the parties also sought construction of the terms "criteria" and "branding." The Joint Claims Construction Statement (JCCS) filed after the claims construction briefing, indicates that the parties have resolved any disputes over those terms. Because I find the proposed joint constructions of those terms consistent with the claim language and specification, I adopt the parties' proposed joint constructions of "criteria" and "branding."

CLAIM CONSTRUCTION STANDARDS

The first step in any validity or infringement analysis is to construe the claims. *See, e.g.,* Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347, 1353 (Fed.Cir.1999) ("the first step in any validity analysis is to construe the claims of the invention to determine the subject matter for which patent protection is sought"); Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed.Cir.1995) (en banc) (first step in two-step patent infringement analysis is to determine "the meaning and scope of the patent claims asserted to be infringed[, ...] commonly known as claim construction or interpretation[.]"), *aff'd,* 517 U.S. 370 (1996). The meaning of a term in a patent claim is a matter of law to be resolved by the court. Markman, 517 U.S. at 389-91.

Claims should be interpreted, when reasonably possible, to preserve their validity. Modine Mfg. Co. v. United States Int'l Trade Comm'n, 75 F.3d 1545, 1556 (Fed.Cir.1996). In construing a claim, the court should first look to the intrinsic evidence, that is, the claims themselves, the written description portion of the specification, and the prosecution history. Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys., 132 F.3d 701, 705 (Fed.Cir.1997).

Generally, claim construction begins with the words of the claim. K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1363 (Fed.Cir.1999).

It is standard practice that in determining the proper construction of an asserted claim, the court looks first to the intrinsic evidence-the patent specification, including of course the written description, and, if in evidence, the prosecution history. Absent an express definition in the specification of a particular claim term, the words are given their ordinary and accustomed meaning; if a term of art, it is given the ordinary and accustomed meaning as understood by those of ordinary skill in the art.

Zelinski v. Brunswick Corp., 185 F.3d 1311, 1315 (Fed.Cir.1999); *see also* Georgia-Pacific Corp. v. United States Gypsum Co., 195 F.3d 1322, 1332 (Fed.Cir.1999) ("The specification of the patent in suit is the best guide to the meaning of a disputed term."), *amended,* 204 F.3d 1359 (Fed.Cir.), *cert. denied,* 121 S.Ct. 54 (2000).

Terms in a claim are given their ordinary meaning to one skilled in the art unless it appears from the patent

and prosecution history that the inventor used them differently. A patentee may be his own lexicographer, but any special definition given to a word must be clearly defined in the specification or file history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996).

Additionally, a claim term should generally be read so as not to exclude the inventor's device or the inventor's preferred embodiment. *See, e.g.,* id. at 1581 (claim interpretations excluding the preferred embodiment are heavily disfavored); Modine Mfg., 75 F.3d at 1550 ("[A] claim interpretation that would exclude the inventor's device is rarely the correct interpretation[.]").

While examining the patent specification is appropriate, it is improper to import, or "read in" to a claim, a limitation from the specification's general discussion, embodiments, and examples. *See, e.g.,* Intel Corp. v. United States Int'l Trade Comm'n, 946 F.2d 821, 836 (Fed.Cir.1991) ("Where a specification does not *require* a limitation, that limitation should not be read from the specification into the claims.") (internal quotation omitted); Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571 (Fed.Cir.1988) ("Although the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.").

It is also improper to eliminate, ignore, or "read out" a claim limitation from a claim in order to extend a patent to subject matter disclosed, but not claimed. *See, e.g.,* Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 93 F.3d 1572, 1582-83 (Fed.Cir.1996) (court cannot read a limitation out of a claim); *see also* Unique Concepts, Inc. v. Brown, 939 F.2d 1558, 1562 (Fed.Cir.1991) (patentee cannot be allowed to expressly state throughout specification and claims that his invention includes a limitation and then be allowed to avoid that claim limitation in infringement suit by pointing to one part of specification stating an alternative lacking the specification).

Claims are not limited to the preferred embodiment. CVI/Beta Ventures, Inc. v. Tura LP, 112 F.3d 1146, 1158 (Fed.Cir.1997) ("as a general matter, the claims of a patent are not limited by preferred embodiments."); *see also* Amhil Enters., Ltd. v. Wawa, Inc., 81 F.3d 1554, 1559 (Fed.Cir.1996) ("A preferred embodiment ... is just that, and the scope of a patentee's claims is not necessarily or automatically limited to the preferred embodiment.").

Finally, when intrinsic evidence is unambiguous, it is improper for the court to rely on extrinsic evidence to contradict the meaning of the claims. *See* Pitney Bowes, Inc., v. Hewlett-Packard Co., 182 F.3d 1298, 1308-9 (Fed.Cir.1999). If, after considering the intrinsic evidence, a claim term is ambiguous, a court may look to extrinsic evidence to assist in determining the meaning or scope of terms in a claim. Vitronics, 90 F.3d at 1584. Extrinsic evidence includes expert testimony, inventor testimony, and technical treatises or articles. *Id*. Extrinsic evidence cannot, however, alter the clear meaning of a claim arising from the patent or prosecution history. *Id*.

DISCUSSION

I. Background and Overview of the Invention

As described in the patent itself, students applying to colleges and universities typically complete a separate paper application for each institution to which they seek admission. Exh. A to Oct. 18, 2002 Cleveland Declr. at p. 34 (Col. 1, lines 19-21). FN1 The applicant then mails each application to the corresponding institution along with a fee. 1:21-23.

FN1. All further references to the '278 patent will be to this Exhibit and will be denoted simply by the column and line number referred to, such as 1:19-21.

Many institutions prefer Internet applications. 1:24-25. One problems with such applications, however, is that the student is required to re-enter the same information for each subsequent application to a different institution or to the same institution perhaps for a different academic term. Additionally, the institution cannot change the application form without revising the source code that creates the application form, making changes expensive and inconvenient. 1:26-34.

One way to reduce the redundancy for the applicant would be to allow students to complete a single, generic application form provided by a third party who would then transmit the application to any designated institution. 1:35-38. The drawback to such a system is that the institution cannot customize its application form. 1:38-48.

As described by plaintiff in its initial claim construction brief, a typical applicant would use the patented invention by first viewing a college's website and proceeding to the admissions web page. The student would typically be using a personal computer that was running a web browser to access the website. Somewhere in the on-line admissions materials, there is a prompt for applying on line. Clicking on this would lead the student through a series of instruction pages and ultimately to a "log on" page where the student establishes a user ID and a password.

Next, the student would receive a prompt which would say something like "Application" or "Apply Now." When the student clicks on this prompt, the browser on the student's computer sends a request over the Internet to the third party servicer's web server. The forms engine processes the request. The request itself would identify the specific college application form being requested and the student who is requesting it.

The forms engine then creates a copy of the requested application form for the student. The forms engine can create a copy of the college's application form in a variety of ways. The forms engine queries the database to determine whether the particular student has information stored that corresponds to any of the fields in the newly requested application form. If it is that student's first application with the third party servicer's system, there will be no stored information. If the student has previously filled out other application forms, the forms engine will identify the like fields and obtain data from the database. The forms engine will merge the retrieved data into the corresponding form data fields on the application form. The forms engine will then provide the application form to the student, sending it from the web server over the Internet.

The student then enters personal information into the form data fields. When the student clicks "save" or "save and go to next page," the browser will send the information entered by the student and post it to the third party servicer's web server. The forms engine then stores the information into the database.

Once the student has completed the form, the student can hit the "transmit" or "send application to school" prompt. It is then possible for the forms engine to perform a "data validation" check on the application. For example, Lewis & Clark College may specify that the "high school attended" and "SAT scores" are required fields and that it will not accept application forms in which those fields are left blank.

In addition, error-checking criteria may be specified, such as the "SAT score" must be between 200 and 800. The forms engine compares the data entered by the student for these fields and determines whether they are filled in and whether any specified criteria are met. If the criteria are met, the data is "valid" and will be further processed. If not, the system will send back to the student, over the Internet, an error-correction form or message that the student must change entries for the fields that did not meet the prescribed criteria.

Once the application is complete, the student can also select a payment method to "e-pay" the school's application fee.

Next, the same student may want to fill out a second application to a different college or university. The student logs on to that school's website and follows the application prompts. The forms engine creates an application form for the student. Because the student has previously filled out a form, information regarding that student is stored in the database. The forms engine will retrieve information required for the second application that the student has already entered on the first application. The forms engine then automatically inserts the previously stored information required by the second application, into the form data fields of the second application form and sends it back to the student over the Internet. FN2 The student will fill in the remaining blanks of the form, then "save" it. His or her data will then be sent over the Internet and posted to the web server. The forms engine will then store the data in the database.

FN2. It is interesting to note that unless the student uses the same ID number as he or she did in filling out the first application, and both the colleges being applied to use the plaintiff's device/services, the universal forms engine will not recognize the student as having previously filled out an application and thus, no automatic populating or inserting of the data, previously automatically stored, would occur. At oral argument, defendant's counsel indicated that plaintiff places a "cookie" on a user's computer the first time the user accesses a form and thus, plaintiff's database recognizes the user even before the user inserts an ID number and will continue to recognize the user even if the user inserts an ID for the second application different from the one the user inserted for the first application. That aspect of the technology is not at issue in this phase of the case.

II. Automatically

A. Where the Term Appears

The term "automatically" is sprinkled throughout the '278 patent. In each instance, it is used to modify one of three functions: populate, insert, or store. The term principally appears as "automatically" and occasionally as "automatic." The different use is immaterial to the construction of the term. Additionally, the function modified by "automatically" or "automatic" sometimes appears as a past participle, *e. g.* "populated," or as a present participle, *e.g.* "inserting." The differences in described function have no impact on the construction of "automatically."

In addition to various references in the specification discussed below, the term appears in the following claims:

1. Claim 1:

automatically inserting into some of the second form data fields applicant information from the database[.]

22:62-63 (emphasis added).

2. Claim 1:

automatically storing the applicant information entered into the second form data fields into the database by adding new records to the database, the *automatic storing* of the applicant information not altering the database field structure[.]

23:5-9 (emphasis added).

3. Claim 9:

The method of claim 1 in which *automatically storing* the applicant information is performed by a third party application servicer.

23:58-60 (emphasis added).

4. Claim 12:

The method of claim 11 in which *automatically inserting* applicant information from the database includes *automatically inserting* applicant information representing combined elements into a single one of the second form data fields.

24:6-10 (emphasis added).

5. Claim 13:

storing the posted applicant information and *automatically inserting* into some of the second form data fields applicant information from the database are independent of the labels used in the first application form and the second application form[.]

24:18-23 (emphasis added).

6. Claim 14:

... and *automatically inserting* applicant information from the database is independent of the data field format[.]

24:32-33 (emphasis added).

7. Claim 21:

... the forms engine program *automatically populating* the fields for user information with user information available from the second data storage, ... and storing the newly entered information in the second data storage for *automatically populating* subsequent forms, ... the forms engine *automatically storing* the entered information into the database by adding new records to the database, the *automatic storing* of the

user information not altering the database field structure[.]

25:9-21 (emphasis added).

8. Claim 32:

automatically storing the applicant information entered into the form data fields into the database by adding new records to the database, the *automatic storing* of the applicant information not altering the database field structure[.]

26:25-29 (emphasis added).

Although the term appears in seven separate claims, the parties agree that the same construction applies to all uses of the term.

B. The Parties' Proposed Constructions

In the JCCS, plaintiff proposes the following construction: "Performing a function 'automatically' means that, once initiated, the function is performed by a machine, without the need for manually performing the function." JCCS at p. 5. Defendant proposes a construction that would prohibit human intervention: "Performing a process 'automatically' means the process occurs without human intervention, such that a human does not have the option or ability to intercede and alter the flow of that process." Id.

The gist of the dispute is that while both parties acknowledge that a human act initiates the "automatic" populating, inserting, or storing, via a request for an application or a command to save an application, plaintiff's construction allows for human intervention during the process even though it is not required, while defendant's construction would forbid such intervention. For the reasons explained below, I adopt plaintiff's proposed construction.

C. Discussion

1. Claim Language

Plaintiff concedes that in the claims themselves, there is no human intervention element in any of the automatic functions claimed. The claims suggest that once the human applicant saves a form or requests a second application form, the automatic process occurs without human intervention. The issue, however, is whether a human intervention step is precluded because the claims are written without such a step.

As an example of another "automatic" process that contemplates human intervention once the process has begun, plaintiff points to an automatic dishwasher. There, plaintiff states, simply because a human has to load it and press the start button, and has the ability to turn it off mid-cycle, does not mean that the device does not "automatically" wash the dishes. Similarly, plaintiff cites to an "auto-pilot" which is turned on by a human and necessarily must be able to be interrupted by a human once the automatic process is engaged, but remains an "automatic" device.

Plaintiff notes that in claim 1, the patent applicants used the word "comprising" in introducing the claims. The claim starts with the following words:

A method of creating and processing over a computer network forms representing applications to different higher education institutions, comprising:

22:34-36. Plaintiff argues that by using "comprising" instead of "consisting of" in introducing the claims, it is clear that plaintiff did not limit claim 1 to the elements explicitly expressed.

As a general rule of patent construction, use of the word "comprising" means including the elements that follow, but not excluding additional, unrecited elements. Georgia-Pacific Corp., 195 F.3d at 1327-28. In contrast, use of the words "consisting of" means including only the elements that follow in the body and no more. *See* Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc., 212 F.3d 1377, 1382-83 (Fed.Cir.2000) ("The phrase 'consisting of' is a term of art in patent law signifying restriction and exclusion, while, in contrast, the term 'comprising' indicates an open-ended construction. simple terms, a drafter uses the phrase 'consisting of' to mean 'I claim what follows and nothing else.' A drafter uses the term 'comprising' to mean 'I claim at least what follows and potentially more.' ") (citations omitted).

Plaintiff contends that by using "comprising," unrecited elements are not excluded. Thus, plaintiff argues, a separate element allowing for a user prompt such as "insert stored data?" could, consistent with the claimed elements, be added after the element reciting the creation of the second application form in response to the applicant request, and before the element reciting the automatic insertion into some of the second form data fields applicant information from the database.

With this construction, "automatically" would still mean that the function of inserting data is performed by a machine without manual operation, but it allows for the possibility of human intervention because the machine does not perform the automatic function unless expressly told to do so. Additionally, plaintiff's construction would also allow for the insertion of an element allowing a "cancel" or "abort" button in the "automatically inserting" process. Such an element would still allow for the function of data insertion to be performed by a machine without manual operation, but would also allow for human intervention to interrupt the automatic process.

Thus, plaintiff contends that its construction is true to the ordinary meaning of "automatically" and would be consistent with the claims as written because they do not expressly forbid human intervention. Plaintiff contends that its construction still provides for the automatic function of the actual process, but allows human intervention to initiate and interrupt the process once it has begun.

Defendant contends that the ordinary meaning of "automatically" to one skilled in the art is an automatic data sharing or transfer process in which a human does not have the option to intervene and alter the flow of that process. In terms of claim language, defendant points to the lack of an express element allowing for human intervention. Defendant argues that because the use of automatically "inserting," "populating" or "storing" data to or from the database does not include human intervention, the claims must be construed to prohibit such intervention.

I agree with defendant that the automatic functions or processes disclosed in the '278 patent occur without the express option of a human altering the flow of data. However, this is distinct from saying that human intervention in the automatic process is prohibited. Certainly, the claims do not provide for human intervention. But, as plaintiff notes, the patent's use of "comprising" in the introduction of claim 1 suggests that additional, unrecited elements are not excluded. Such elements could include actions by humans to either expressly initiate the automatic storing or inserting, or to interrupt the function once it has begun.

These elements are not inconsistent with the actual data storage and insertion or population being performed by a machine and occurring without manual operation. The claim language supports plaintiff's interpretation.

2. Specification

The term "automatically" appears several times in the specification:

a. Summary of the Invention

The invention thus creates forms, parses data on forms, stores data, retrieves the data, and deploys the data onto other forms. As additional forms are completed and additional information becomes part of the database, the amount of information that must be manually entered on new forms decreases because the new forms are *automatically populated* with the previously entered data[.]
2:15-21 (emphasis added).
b. Overview of a Preferred Embodiment

Information that had previously been entered in connection with prior applications to any institution is *automatically inserted* into the customized form. Information entered by the applicant onto the application form is stored in an applicant database for *automatic insertion* into subsequent applications by that applicant.
5:40-45 (emphasis added).
c. Overview of a Preferred Embodiment

Forms engine 104 then retrieves user data that was entered in previous applications and stored in the applicant database 62, and merges the user data into the current application, which is then returned to the applicant as an HTML form. The applicant then enters any requested information that was not *automatically inserted* from the database.
5:63-6:1-2 (emphasis added).
d. Overview of a Preferred Embodiment

Once the new attribute is added to the database, it is available for *automatic* inclusion in all subsequent applications.
7:35-37 (emphasis added).
Plaintiff argues that its construction of "automatically" is consistent with one of the problems the invention sought to redress: in prior methods and systems, prospective students were required to manually re-enter much of the same information for every college application they desired to complete. 1:27-30.

Plaintiff suggests that the invention of the '278 patent addresses this problem by inserting common information into subsequent application forms, without the human user having to re-enter it. Allowing additional human intervention initiation steps or a human intervention interruption element would not alter the problem-solving nature of the invention.

Plaintiff contends that the specification's distinction of an automatic process from a manual one suggests that the proper interpretation of "automatically" is one that emphasizes the lack of any requirement for manual data input, not one that forbids human intervention in the form of an additional human initiation or interruption element. Plaintiff contends that the terms "automatic" or "automatically" that appear in the quoted sections of the specification above, are consistent with its proposed construction because the

specification is directed to a function performed by a machine rather than a human but is not concerned with human intervention in the process.

Defendant contends that because the specification references to the automatic processes do not include an option for a human to intervene, the term "automatically" precludes human intervention. Defendant notes that in the quoted specification passages from the preferred embodiment, information is automatically inserted by the forms engine without the opportunity for human intervention.

I reject defendant's argument. Defendant continues to confuse two separate concepts. The specification, like the claims themselves, does not explicitly express the idea that a human will intervene in the process once it has been initiated by the user saving a form or requesting a second application. That, however, in and of itself, does not *preclude* human intervention such as an additional initiation step or the opportunity to cancel or abort the process. Moreover, such human intervention is not inconsistent with the automatic process disclosed in that the forms engine, not a human, will perform the process once it receives an appropriate initiation trigger, whether it be the requesting of a form or a "yes" response to a "insert stored data?" prompt. A cancel or abort button similarly does not detract from the forms engine, as opposed to a human, performing the automatic function. It simply allows for a human to interrupt the function, not take over the performance of the function.

Finally, defendant notes that the '278 patent provides for human intervention in the "validation" portion of the invention. 15:49-59 (describing user option of first stage validation); Fig. 15 (flowchart showing steps processing by forms engine with optional steps for data validation). Defendant argues that because the patent provides for human intervention in other areas of the invention and does not do so in regard to any of the "automatic" processes, "automatically" should be interpreted to prohibit human intervention.

Assuming that the concept of "expressio unius est exclusivo alterius" or, the expression of one thing excludes another, applies in the construction of patent claims, I am unpersuaded by defendant's argument. The omission of an express human intervention element in any of the "automatic" processes suggests that in the preferred embodiment, a human intervention element is not contemplated. This stands in contrast to the preferred embodiment of the validation process which does contemplate a human intervention step. However, as indicated above, simply because human intervention was not expressed in the preferred embodiment "automatic" processes, does not mean that it is prohibited by the claims, especially when construing the claims to allow human intervention does not detract from the performance of the function by the forms engine. CVI/Beta Ventures, 112 F.3d at 1158 ("the claims of a patent are not limited by preferred embodiments").

3. Prosecution History

The patent applicants filed a "provisional" patent application on June 4, 1998, allowing filing without certain items ordinarily required for a regular application, but establishing an early effective filing date for the regular application. 35 U.S.C. s. 111. At this time, the word "automatically" appeared in provisional claim 9 in which "automatically inserting data available from the database into the second form" was claimed. Deft's Exh. 505, Tab A, at 6966.

The patent applicants filed their regular application in the United States on June 3, 1999, and internationally on June 4, 1999. "Automatically" did not appear in any of the five independent claims (claims 1, 21, 32, 40, and 45).

In their September 20, 2000 response to a July 20, 2000 written opinion from the International Preliminary Examining Authority, the patent applicants amended the proposed patent by, *inter alia,* adding "automatically" before "inserting" to claim 1 and adding "the inserting of applicant information being performed automatically" to claim 13. *Id.,* Tab G, at 6904. The patent applicants attempted to distinguish a prior art patent referred to by the International Preliminary Examining Authority as "WO 98/04976" and which the parties here refer to as the "Lextron" reference. *Id.* at 616.

The patent applicants noted several differences between their invention and the Lextron reference, including that the Lextron reference does not address the creation of forms, but only the filling in of forms. The patent applicants described a specific distinction as follows:

Claim 1 recites "entering the applicant information in the data fields" of the first application and "storing the applicant information in a data storage" for use on subsequent forms. WO 98/04976 does not teach storing data entered on a downloaded form for use with subsequently downloaded forms. WO 98/04976 apparently requires that data be stored before the first form is downloaded. For example, on page 6, lines 21-23, WO 98/04976 states that the information is stored and then when the user "encounters a form on the Internet, and wishes to fill in the form, he/she hits a 'hot key,' or key combination, which invokes the control code of the invention." WO 98/04976 appears to allow only a one way flow of data, from the database to the form, but not from the form to the database. The invention of claim 1 eliminates the extra step required in WO 98/04976.

Id. at 6906.

Before any action was taken on plaintiff's application by the United States Patent and Trademark Office, plaintiff submitted a preliminary amendment on December 4, 2000. *Id.,* Tab H. The patent applicants did this so that the patent application pending in the United States conformed to the amended application submitted to the international body. *Id.* at 266. Thus, application claim 1 was changed to include "automatically" before "inserting" and application claim 13 was amended to include "the inserting of applicant information being performed automatically." *Id.* at 269.

On June 12, 2001, the Patent Office Examiner rejected the application in its entirety. Exh. D to Cleveland Declr. at p. 289. The Examiner explained that the rejection was due to the claims being unpatentable as "obvious" over U.S. Patent No. 5,640, 577 ("the Scharmer Reference."). Id. at pp. 291-95; Exh. E to Cleveland Declr.

On October 12, 2001, the patent applicants submitted an amended application, changing the claims to "more clearly distinguish over the prior art." Id. at pp. 300-34. The letter to the Examiner accompanying the amended application describes Scharmer as a "system for obtaining information from a mainframe database and inserting it onto an electronic form, without an operator having to copy the information onto a piece of paper and then manually type it into the form." Id. at p. 311. Quoting from the Scharmer patent itself, the patent applicants explained that Scharmer's invention "provides the user of a data processing system with forms or other documents which are automatically at least partially completed or filled in with data presented on an operator's data terminal screen." Id. (quoting Scharmer, 1:2-2:2). With Scharmer's invention, "the form itself can be saved so that rather than having to access the mainframe data again to view the information again, an operator can access a saved form." Id.

As noted, in Scharmer's system, data is obtained from a database on a mainframe computer and displayed on a display terminal in the form of a database report. Id. The patent applicants explained:

Some of the displayed data is saved in memory at the display terminal on which it is displayed, and is then inserted onto a form. Report data to be saved is identified by its coordinates on the display screen, which coordinates had to have been previously programmed into the saving function. An operator can also enter data into a form before the form is saved, but the information typed in by the operator, although saved as part of the form, is not saved in a database independent of the form. Consequently, the data is *not* available from such a database for use on subsequent forms. None of the data manually entered by the operator on one form can be used to automatically fill in subsequent forms. Scharmer teaches a one way flow of data from the database into the forms, and nothing the user does can add to or change the data in the database that is the source of information for completing subsequent forms.

Id.

Additionally, the patent applicants noted that in Scharmer's invention, because the data is inserted into the forms as text and not as database fields, the coordinates on the screen at which to insert the text must be known. Id. at p. 312. Any change in the format of the database report or on the form, requires reprogramming the "smart keys" with the new location of the data. Thus, neither the format of the database reports nor the format of the forms can be changed without writing new code. Id.

In highlighting the differences between Scharmer's invention and the claimed invention, the patent applicants explained that "[a]mended claim 1 differentiates over Scharmer by explicitly reciting that applicant data entered on a first application is stored in a database and can then be automatically inserted from the database into a second application." Id.

The patent applicants also noted that amended claim 1 provides for "new form data fields corresponding to applicant information not previously requested to be added to the application form." Id. As a result, the patent applicants explained, a new form can request new information and information need only be entered once by the user. Id.

The information entered in these new fields is automatically stored in the database and available for inserting into subsequent forms "without requiring alterations of existing application forms or of programs that access the database, whereby customized applications to different institutions share data through common, extensible data storage."

Id.

The patent applicants noted that Scharmer does not store user information in a database and thus, cannot make newly entered information available for use on subsequent forms. Id. But, with the claimed invention, applicants can create new forms and can add new data to the database without having to reprogram existing forms. Id. "Because Scharmer's forms are merely text (or graphics) with blanks in them, and information is identified only by its coordinates on the display screen, any change to the location of the data on the database report or the form necessitates a change to the program associated with the smart key." Id.

Finally, the patent applicants addressed independent claims 21 and 45. Id. The patent applicants noted that those claims "similarly recite automatically storing in a database new user information not previously

requested without requiring alterations of existing forms or alterations of programs that access the database." Id. The patent applicants argued that because independent claims 1, 21, and 45 differentiate over Scharmer in the ways described, all of the corresponding dependent claims should be allowable.

The actual amendments the patent applicants made in the amended application include the insertion of the word "automatically" in several places where it did not previously exist. In claim 1, the following paragraph was added:

automatically storing the applicant information entered into the second form data fields into the database by adding new records to the database, the *automatic* storing of the applicant information not altering the database field structure, thereby allowing new form data fields corresponding to applicant information not previously requested to be added to an application form without requiring alterations of existing application forms or of programs that access the database[.]

Id. at p. 319.

In claim 9, the word automatically was inserted as follows: "The method of claim 1 in which *automatically* storing the applicant information is performed by a third party application server." Id. at p. 320. In claim 12, the word automatically was inserted twice: "The method of claim 11 in which *automatically* inserting applicant information from the database includes *automatically* inserting applicant information representing combined elements into a single one of the second form data fields." Id. at p. 321.

Claim 13 was amended to include, *inter alia,* the word automatically: "storing the posted applicant information and *automatically* inserting into some of the second form data fields applicant information from the database are independent of the labels used in the first application form and the second application form." Id.

Claim 14 was amended to include, *inter alia,* the word automatically:

The method of claim 1 in which the first form data fields and the second form data fields are formatted and in which at least some of the second form data fields are formatted differently from the corresponding first form data fields and in which storing the posted applicant information and *automatically* inserting applicant information from the database is independent of the data field format, thereby allowing each institution to customize the appearance of its corresponding application while still permitting information to be shared across applications.

Id.

Independent claim 21 was amended to include, *inter alia,* four new uses of "automatically" or "automatic":

a forms engine program operating on the server computer for generating a form from the form description information in response to a request for the form transmitted from the client computer over the computer network, the form including fields for the user to enter user information, the forms engine program *automatically* populating the fields for user information with user information available from the second data storage, accepting user information entered on the form by the user, and storing the newly entered information in the second data storage for *automatically* populating subsequent forms, the user information entered by the user including at least some information not entered on a previous form by the user, the

forms engine *automatically* storing the entered information into the database by adding new records to the database, the *automatic* storing of the user information not altering the database field structure, thereby allowing new user information not previously requested to be added to a form without requiring alterations of existing forms or alterations of programs that access the database.

Id. at p. 323.

Lastly, independent claim 45 was amended to include two new references to "automatic" or "automatically":

automatically storing the applicant information entered into the form data fields into the database by adding new records to the database, the *automatic* storing of the applicant information not altering the database field structure[.]

Id. at p. 327.

After the amendment, the Examiner issued a "Notice of Allowability," on November 1, 2001, indicating that the claims had been allowed. Id. at p. 337. The Patent Office issued the '278 patent on February 6, 2002.

Plaintiff argues that the prosecution history supports its construction of "automatically" because the inventors and the patent examiner discussed the term consistent with plaintiff's meaning. Plaintiff contends that the inventors of the claimed invention, in distinguishing over Scharmer, did not dispute that Scharmer described a filling-in process that was done "automatically" and not "manually." Instead, plaintiff states, the patent applicants distinguished how the process was accomplished and where the data was drawn from.

That is, in contrast to Scharmer, the distinction was not that the insertion was accomplished by a machine, but that with the claimed invention, there was a two-way flow of information. Information initially manually filled in by the user in the first application is automatically stored in the database and then provides the basis for automatic insertion into a second application form. Scharmer did not teach such a device.

Defendant argues that Scharmer disclosed a process of data transfer involving human intervention, and the patent applicants distinguished over Scharmer by emphasizing that data can be "automatically" inserted into subsequent applications. Defendant contends that by distinguishing the claimed invention over the prior art in this fashion, the patent applicants clearly indicated that the claims prohibit human intervention in the automatic processes. Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 979 (Fed.Cir.1999), *cert. denied,* 529 U.S. 1066 (2000).

Additionally, during oral argument, defendant relied on the passage from the Lextron reference quoted above in which the patent applicants distinguished that prior art. Defendant asserted that by expressly stating that claim one eliminated "the extra step" required by the Lextron invention, and the "extra step" being the use of a "hot key" or "key combination" to fill in a form, plaintiff has limited itself to an invention that prohibits human intervention in the automatic process.

I conclude that the prosecution history supports plaintiff's interpretation of the term "automatically." First, while the patent applicants did amend the patent to add several additional references to "automatically," they distinguished Scharmer in several ways, only one of which was a decrease in the need for the user to insert information into a form.

Second, the distinction over Scharmer was not that Scharmer required manual input of data into a form and the claimed invention eliminated that manual requirement. Both Scharmer and the claimed invention teach a process in which a machine fills in the data in the form. Rather, the patent applicants differentiated the claimed invention because instead of a one-way flow of information from a database where a machine inputs information which has been previously stored in the database by some other process, into a form, the claimed invention allows a two-way flow of information in that the user, by filling out and saving an application form, enters data into the database which can then be accessed by the forms engine to allow the forms engine to input that data into a second form.

The distinction of this prior art is directed to how the data gets stored, where the data is stored, and what can be done with the stored data. The distinction was not the elimination of user prompts such as "input stored data?" or "abort" or "cancel." If the claims are construed to allow human intervention steps, the claimed invention is still distinct from Scharmer because once the applicant responds to the user prompt to insert stored data, the forms engine would still "automatically," that is without manual performance by a human, extract data from the database (which was automatically stored in the database by the forms engine upon the user saving the first application) and "populate" or "insert" that information into the second form.

Additionally, such steps are consistent with plaintiff's distinction of the Lextron reference. There, the patent applicants again noted the one-way flow of data, from the database to the form, in the prior art reference. In the Lextron reference, data must first be stored in a separate process and then, when the user is ready to fill in the form, the user hits a "hot key" or "key combination" to invoke the filling-in process. In stating that claim 1 "eliminates the extra step" required by the Lextron reference, the patent applicants were referring to the separate process of storing information, apart from recalling the information into the form. They were not suggesting that the user be asked if he or she wanted to input stored data or that an abort or cancel button could not appear as part of the automatic inserting, populating, or storing.

In summary, I find the claim language, the specification, and the prosecution history provide unambiguous evidence that plaintiff's proposed construction is the proper one. While the claimed invention does not require human intervention, it does not prohibit the possibility of additional, unrecited elements allowing human intervention which could add an additional step to the initiation of the automatic function or could interrupt the automatic function. Thus, I adopt plaintiff's proposed construction and construe "automatically" to mean that once initiated, the function is performed by a machine, without the need for manually performing the function.

4. Extrinsic Evidence

Because the intrinsic evidence is unambiguous, I do not consider any extrinsic evidence. Pitney Bowes, Inc., 182 F.3d at 1308-09.

III. "At Least Two Application Information Files"

A. Where the Phrase Appears

This phrase appears in claim 32. It states:

A method of providing customized applications to institutions, the applications sharing a common database, the method comprising:

providing *at least two application information files,* each describing a customized application for an institution;

...

generating a customized application in response to a request over a computer network from an applicant, the application form and content being specified by one of the *at least two application information files,* the application including multiple form data fields for entering applicant information[.]"

25:62-66; 26:9-14 (emphasis added).

The parties dispute the construction of two parts of the phrase. First, they dispute the proper interpretation of "file." Second, they dispute the proper interpretation of "at least two." They do not dispute that once file is construed, "application information file" means "a file that stores information that includes a description of a distinct application. The file describes the form itself, not user data (e.g. student specific information) that may ultimately be entered into a particular copy of the form." JCCS at p. 19. Based on the intrinsic evidence, I adopt this proposed joint construction of "application information file."

B. "File"

Plaintiff proposes the following construction of "file": "an electronically stored collection of information that has a name." *Id*. Defendant proposes a more detailed construction: "an electronically stored collection of similar records that is treated as a single entity by users and applications, that has a unique file name, and which may be created and deleted separately." *Id*.

In the briefing, the parties addressed other issues regarding the interpretation of this phrase, but did not focus on the interpretation of the word "file." The dispute was not apparent until the filing of the JCCS. As a result, there is a lack of discussion in the briefs of support for either party's proposed interpretation. Nonetheless, based on the claim language and the specification, I conclude that the proper interpretation of "file" is similar to that suggested by plaintiff, but with the addition of the adjective "unique": "an electronically stored collection of information that has a unique name."

There is no dispute that a "file" is an electronically stored collection of "something." Plaintiff proposes that the "something" is a collection of information with a name while defendant indicates that the "something" is a collection of similar records. I find nothing in claim 32 suggesting that the "file" at issue must be a collection of similar records.

The specification indicates that the "application data file" is a

specially formatted text file that acts as an application description. It is a series of "directives" and optional arguments which the forms engine parses to build the HTML form and to merge in user data. The directives are interpreted by means of a look-up in a data structure that stores the directive interpretations.

10:41-46. In an alternate embodiment, the application data file can be built by a "pre-processor utility" to produce an application template. 10:64-67-11:1.

The "file" then, is a text, or perhaps template, file that stores the directions to produce the customized form

for each institution. The claim language and the specification suggest that the proper interpretation is that "file" is a collection of information, not similar records.

Because the forms engine must be able to recognize a "file," it obviously must have a name. Because, in this use, the "file" is a collection of information particular to an institution's form, the name must be unique. Beyond that, however, there is no support for the additional limitations proposed by defendant that a "file" is something that may be created and deleted separately. While that may be how it actually functions, that interpretation is not apparent in the claims or the specification.

C. "At Least Two"

Plaintiff's proposal for this phrase is:

"providing at least two application information files:" the method provides for two or more files, each of which includes information that describes a distinct application form. In other words, any particular form need only have one corresponding application information file.

JCCS at p. 19. Defendant's proposal is similar, but not identical:

"providing at least two application information files:" the method provides for two or more application information files, each of which includes information that describes a distinct application form. In other words, a distinct application form has only one corresponding application information file.

Id. The first discrepancy between the two proposals is that defendant's proposal includes the words "application information" before the word "files" in the first sentence, while plaintiff uses just "files". Because the claim discloses a method concerning application information files and not other files, I adopt defendant's proposal in this regard.

The next discrepancy between the two proposals is in the second sentence. After "in other words," plaintiff suggests "any particular form" while defendant proposes "a distinct application form[.]" In these constructions, "distinct" and "particular" are synonymous. Again, because the claim discloses a method concerning application information files, the proper construction should include the reference to "application" as a modifier to "form." Thus, I adopt defendant's proposal in this regard.

The most substantial discrepancy between the two proposals is also in the second sentence. After the word "form," plaintiff proposes "need only have one corresponding information file." Defendant suggests "has only one corresponding information file." Under plaintiff's proposal, a particular or distinct application form need have only one corresponding information file, but the door is left open for the possibility of more than one. Under defendant's construction, the form has only one and no more.

I adopt defendant's proposal. Based on the claims and the specification, each application information file is institution specific. So understood, each particular or distinct application form can have only one corresponding application information file. Thus, I construe "providing at least two application information file" as follows: the method provides for two or more application information files, each of which includes information that describes a distinct form. In other words, a distinct application form has only one corresponding application information file. An application information file is a file (an electronically stored collection of information that has a unique name) that stores information that includes a description of a

distinct application form. The file describes the form itself, not user data (e.g. student specific information) that may ultimately be entered into a particular copy of the form.

D. Extrinsic Evidence

Because the intrinsic evidence is unambiguous, I do not consider any extrinsic evidence. Pitney Bowes, Inc., 182 F.3d at 1308-09.

IV. The "Thereby" Clause

A. Where the Phrase Appears

The clause at issue appears in each of the independent claims (claims 1, 21, and 32). In claims 1 and 32, the language reads:

thereby allowing new form data fields corresponding to applicant information not previously requested to be added to an application form without requiring alterations of existing application forms or of programs that access the database[.]

23:9-13; 26:29-33. The language in claim 21 reads:

thereby allowing new user information not previously requested to be added to a form without requiring alterations of existing forms or alterations of programs that access the database.

25:21-24.

B. The Parties' Proposed Construction

In the JCCS the parties agree on the proposed construction of the "thereby" clause. JCCS at p. 7. The parties propose the following construction of "programs that access the database": "the computer software programs that retrieve user data from the database and send user data to the database." *Id*. I adopt this joint proposed construction. The parties further propose the following construction of the "thereby" clause: "[n]ew form data fields corresponding to applicant information not previously requested could be added to an application form without altering existing application forms or programs that access the database." *Id*. I also adopt this proposed construction.

C. Patentable Weight

While the parties agree on the construction of the "thereby" clause, defendant argues that the clause is not entitled to patentable weight. When a "whereby" or "thereby" clause expresses only the necessary results of what is recited in the claims, it is not entitled to patentable weight in an infringement analysis. Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1172 (Fed.Cir.1993). Assuming that the determination of the patentable weight attributable to the "thereby" clause is proper at the claim construction stage, *see* KX Indus., L.P. v. Culligan Water Techs., Inc., 90 F.Supp.2d 461, 487 (D.Del.1999) (analyzing whether "whereby" clause entitled to patentable weight during claim construction phase of case), I reject defendant's argument.

Plaintiff argues that the "thereby" clause does not "merely state the result" of other parts of the claim.

Plaintiff contends that the "thereby" clause recites a property that allows particular types of new form data fields (those corresponding to application information not previously requested), to be added to a form without requiring changes to other forms or the programs that access the database. Plaintiff contends that no claim language preceding the "thereby" clause in any of the three independent claims sets forth this property. I agree with plaintiff.

Looking at the three independent claims, no elements preceding the paragraph containing the "thereby" clause suggest any similar limitation to that expressed in the "thereby" clause. Thus, the focus must be on what is claimed in the paragraph in which the "thereby" clause appears.

In claim 1, the entire paragraph reads:

automatically storing the applicant information entered into the second form data fields into the database by adding new records to the database, the automatic storing of the applicant information not altering the database field structure, *thereby allowing new form data fields corresponding to applicant information not previously requested to be added to an application form without requiring alterations of existing application forms or of programs that access the database,* whereby customized applications to different institutions share data through common, extensible data storage.

23:5-15 (emphasis added).

The only claim in this paragraph which could possibly be construed to provide for a similar limitation to that expressed in the "thereby" clause is the claim reciting "the automatic storing of the applicant information not altering the database field structure." But, the "thereby" clause does not merely restate the function recited in this claim because the "thereby" clause addresses existing application forms, not the database field structure, and it mentions "programs that access the database" which the prior claim does not address.

The analysis is the same for claims 21 and 32. Thus, because the "thereby" clause does not simply express the necessary result of what is expressed in the preceding claims, it is entitled to patentable weight.

V. Computer Network

A. Where the Phrase Appears

"[C]omputer network" appears in claims 1, 21, and 32, the three independent claims. In claim 1, the relevant language is

A method of creating and processing over a *computer network* forms representing applications to different higher education institutions, comprising:

...

providing to the applicant over a *computer network* the first application form;

...

providing to the applicant over a *computer network* the second application form[.]

22:34-65 (emphasis added).

In claim 21, the relevant language is:

A system for creating and processing customized forms for unrelated institutions using a common third party data storage over a *computer network,* the system including:

...

... a forms engine program operating on the server computer for generating a form from the form description information in response to a request for the form transmitted from the client computer over the *computer network[.]*

24:52-54-25:3-6 (emphasis added).

Finally, in claim 32, the relevant language is:

generating a customized application in response to a request over a *computer network* from an applicant, ...

...

transmitting the customized application over a *computer network* to a requesting applicant[.]

26:8-18 (emphasis added).

In addition to its appearance in the claims, the parties have identified a few places in the specification where the phrase occurs. The summary of the invention states that

[t]he forms are completed by a user over a *computer network* and information from each completed form is forwarded to the appropriate entity over a *computer network*.

2:6-9.

In the description of the preferred embodiment, "computer" is defined as

[a] typical applicant *computer* 14 comprises a personal *computer,* such as a Pentium-based personal *computer* using a Windows-based operating system and running a commercially available Web Browser, such as Netscape Navigator or Internet Explorer.

3:57-62. The specification further provides that

[a]lthough the preferred embodiment of the invention is implemented using an Internet Web site, the invention is not limited to any particular type of *computer* or *computer network*. By making the applications available over the Web, any applicant with a Web browser can apply electronically.

4:12-16.

B. The Parties' Proposed Constructions

From the JCCS, it is apparent that the parties largely agree on the construction of "computer." Both parties propose the following construction: "A computer is a programmable machine with one or more Central Processing Units (CPU) for executing a computer program." JCCS at p. 3. Plaintiff's proposal adds the following phrase: "It does not include a mainframe's 'dumb' terminal, which lacks a CPU." *Id*. I construe the word "computer" to be as jointly suggested by the parties, omitting plaintiff's additional sentence regarding "dumb terminals." Because plaintiff defines "dumb terminal" as lacking a CPU, it is superfluous to the joint construction which defines "computer" as a machine requiring a CPU.

The more substantial dispute is over the phrase "computer network." Plaintiff proposes the following construction: "A computer network is a data communications system, such as the Internet, which interconnects two or more programmable computer systems at two or more sites." *Id*.

In contrast, defendant proposes:

A computer network is a network whose nodes consist of computers and data communications equipment (including programmable and non-programmable Communications Processing Units), and whose branches are data links. This would include mainframe/terminal systems, Web/Internet systems or other distributed network systems.

Id. The parties agree that the same construction should apply to all uses of the phrase in any claim.

C. Discussion

Under plaintiff's proposal, a computer network is limited to two components: programmable computers (at least two), and a "data communications system" capable of "interconnecting" the computers. Defendant's proposal encompasses a broader array of components. First, there are computers as previously defined. Second, there is "data communications equipment" which is additionally defined as including both programmable and non-programmable communications processing units. Both the computers and the data communications equipment are "nodes." Connecting the "nodes" are "data links" which are considered "branches."

The two proposals both identify computers as the "nodes," and some type of link between the computers (called data communications system by plaintiff or data links by defendant), as the "branches." Where the proposals differ is that defendant adds an additional "node" component: "data communications equipment," which defendant identifies as including both programmable and non-programmable communications processing units.

The claim language which refers to "computer network" concerns only the "branches" and not the "nodes" of the network because it addresses only the transfer of data and not the type of machine the data is being transferred to or from. This is also true for the reference in the "summary of the invention" section of the specification as well. There, the use of "computer network" is related to the branches and not the nodes of the network.

The next two references to "computer network" in the specification relate more to the nodes than any other reference in the patent. Both suggest that as long as the machine used by the applicant can support accessing

the Internet, it could be construed as one of the "nodes" of the "computer network." Thus, the specification indicates that the network "nodes" include computers as well as any other machines allowing Internet access.

In certain settings, a user could access the Internet via a machine that lacks a CPU as long as that machine is linked to a central server which contains a CPU which in turn is linked to the computer containing plaintiff's universal forms engine. For example, in an office setting, a particular machine at a workstation may lack a CPU, but still be linked to a central computer in the office which in turn supports Internet access. The machine at the workstation could be a "node" under the claim language and specification because one can access the Internet with it, even though that machine itself lacks a CPU.

Given that the nodes can include more than a computer, which must possess a CPU under the parties' joint construction, I adopt defendant's proposed construction of the phrase "computer network." Furthermore, I need not rely on extrinsic evidence because the intrinsic evidence is unambiguous.

CONCLUSION

The claims at issue in the '278 patent are to be construed in accordance with this Opinion.

IT IS SO ORDERED.

D.Or.,2002.
Collegenet, Inc. v. ApplyYourself, Inc.