IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

MIRROR WORLDS, LLC	§	
	§	
Plaintiff	§	
	§	
vs.	§	**CASE NO. 6:08 CV 88**
	§	
APPLE, INC.	§	
	§	
Defendant	§	

MEMORANDUM OPINION AND ORDER

This Memorandum Opinion and Order construes the disputed terms in U.S. Patent Nos. 6,006,227 (the "'227 Patent"), 6,638,313 (the "'313 Patent"), 6,725,427 (the "'427 Patent"), 6,768,999 (the "'999 Patent"), and 6,613,101 (the "'101 Patent"). The Court further **GRANTS** in part and **DENIES** in part Defendant Apple Inc.'s Motion for Partial Summary Judgment of Invalidity for Indefiniteness Under 35 U.S.C. § 112 ¶ 2 (Docket No. 156).

BACKGROUND

The '227 Patent issued on December 21, 1999, the '313 Patent on October 28, 2003, and the '427 Patent on April 20, 2004, all to Eric Freeman and Davis Gelernter. The '227, '313, and '427 Patents disclose a document stream operating system and method where: (1) documents are stored in one or more chronologically ordered streams; (2) the location and nature of file storage is transparent to the user; (3) information is organized as needed instead of at the time the document is created; (4) sophisticated logic is provided for summarizing a large group of related documents at the time a user wants a concise overview; and (5) archiving is automatic. '227, '313, & '427

Patents, at [57]. The documents can include text, pictures, animations, software programs, or any other type of data. *Id.*

The '999 Patent issued on July 27, 2004 to Randy Prager and Peter Sparago. The '999 Patent discloses a computer program product and method that operate an enterprise information system comprising at least one server and multiple personal computers communicating with each other and the server. '999 Patent, at [57]. The program product and method create object models that have a consistent structure regarding diverse types of information assets that come from diverse software and display browse cards about the information assets in a time-ordered stream, together with glance views related to the document object models. *Id.* The glance views are displayed essentially in real time in response to passing a cursor over respective browse cards on the display. *Id.*

The '101 Patent issued on September 2, 2003 to Richard Mander, Daniel Rose, Gitta Salomon, Yin Yin Wong, Timothy Oren, Susan Booker, and Stephanie Houde. The '101 Patent discloses a method and apparatus for organizing information in a computer filing system. '101 Patent, at [57]. The method and apparatus include creating of a pile comprising a collection of documents, displaying a graphical representation of the pile, and browsing the pile by pointing a cursor at a particular item to reveal an indicia for the particular item. *Id.* The filing system can automatically divide a pile into subpiles based on the content of each document in the pile and, at the user's request, can automatically file away documents into existing piles in the computer system based on of a similarity match between the content of the document and the content of existing piles. *Id.* The filing system can also create a pile from a sample document by using the internal representation of the document as the internal representation of the new pile. *Id.* The computer

filing system provides various interfaces in connection with piles to the user of the system to provide feedback and other information to the user. *Id.*

Mirror Worlds, LLC ("Mirror Worlds") alleges that Apple, Inc. ("Apple") infringes Claims 1, 5, 6, 9–13, 15, 20, 25–27, and 29 of the '227 Patent, Claims 1–3 of the '313 Patent, Claims 1, 7, 8, 16, 25, 32, and 34 of the '427 Patent, and Claim 1 of the '999 Patent. Apple alleges that Mirror Worlds Technologies, Inc. ("MWT") infringes Claims 1–12 of the '101 Patent.[1]

APPLICABLE LAW

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.*; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very

[1] Claim 13 of the '227 Patent, Claim 1 of the '313 Patent, Claims 1, 7, and 8 of the '427 Patent, Claim 1 of the '999 Patent, and Claim 5 of the '101 Patent are reproduced in Appendix A. Each of the disputed, definite terms appears in one or more of these claims.

instructive. *Id*. Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id*. Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314–15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id*. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id*. Also, the specification may resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. But, "'[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home*

Diagnostics, Inc., v. Lifescan, Inc., 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent.").

Although extrinsic evidence can be useful, it is "'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition is entirely unhelpful to a court. *Id*. Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*.

The patent in suit also contains a means-plus-function limitation that require construction. Where a claim limitation is expressed in "means plus function" language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112 ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112 ¶ 6 mandates that "such a claim limitation 'be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.'" *Id*. (citing 35 U.S.C. § 112 ¶ 6). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Id*.

Construing a means-plus-function limitation involves multiple inquiries. "The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id*. A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id*. Moreover, the focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id*.

CLAIM TERMS

All eighteen "means for . . ." terms in the '227 Patent

Claims 1, 6, 9–12, and 25 of the '277 Patent contain at least one "means for . . ." term. Mirror Worlds contends that the terms are definite, while Apple contends that they are indefinite for failure to disclose corresponding structures. Mirror Worlds asserts that for several of the terms, the claims recite sufficient structure to take them outside the scope of 35 U.S.C. § 112 ¶ 6. Further, Mirror Worlds asserts that the specification discloses at least some corresponding structure for each term and that Apple is incorrect in arguing that there is a total absence of structure. Apple counters that the "means for . . ." terms are presumed to be subject to § 112 ¶ 6 and that Mirror Worlds has failed to meet its burden of rebutting the presumption. Apple argues that Mirror Worlds fails to show where the requisite linked disclosed structures are found in the '227 Patent's specification and

that the mere identification of "computer hardware" or "executable code" or both for performing the specified function is insufficient disclosure and results in the claims being indefinite.

"A claim element that contains the word "means" and recites a function is presumed to be drafted in means-plus-function format under 35 U.S.C. § 112 ¶ 6." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1366 (Fed. Cir. 2008) (citing *Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1364 (Fed. Cir. 2000)). Mirror Worlds has not rebutted that presumption because merely restating a portion of the function and characterizing it as structure does not overcome the presumption. Further, Mirror Worlds's reliance on the structures set forth in the statement of function is not in accordance with § 112 ¶ 6.

A claim is invalid under 35 U.S.C. § 112 ¶ 2 if it fails to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. The party seeking to invalidate a claim under 35 U.S.C. § 112 ¶ 2 as indefinite must show by clear and convincing evidence that one skilled in the art would not understand the scope of the claim when read in light of the specification. *Intellectual Prop. Dev., Inc. v. UA-Columbia Cablevision of Westchester, Inc.*, 336 F.3d 1308, 1319 (Fed. Cir. 2003).

A means-plus-function limitation is indefinite if the specification does not disclose sufficient structure such that one skilled in the art would understand the structure as adequate to perform the recited function. *Id.* To qualify as sufficient structure, the disclosed structure must correspond to the recited function. *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005).

A structure disclosed in the specification qualifies as "corresponding" structure only if the specification or prosecution history clearly link or associate that structure to the recited function.

Id. The corresponding structure does not need to include all necessary elements to enable the claimed invention, but the structure must include all structure that actually performs the recited function. *Id.* Courts consider the entire specification to determine the structure that is capable to perform the recited function. *Id.*

Because skilled artisans could carry out the recited functions in a variety of ways, means-plus-function limitations must have roots in a particular structure described in the specification with sufficient particularity of detail so one skilled in the art can comprehend the metes and bounds of the claim limitation. *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001) ("[T[he standard for assessing whether a patent claim is sufficiently definite to satisfy the statutory requirement [is] . . . : If one skilled in the art would understand the bounds of the claim when read in light of the specification, then the claim satisfies section 112 paragraph 2." (citing *Miles Labs., Inc. v. Shandon, Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993)). Mirror World's inability to reference specific portions of the specification in support of a construction demonstrates that there are no clearly linked structures disclosed for the means-plus-function limitations. *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2003) ("The duty of a patentee to clearly link or associate structure with the claimed function is the quid pro quo for allowing the patentee to express the claim in terms of function under section 112, paragraph 6." (citing *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1377 (Fed. Cir. 2001)). Accordingly, all eighteen "means for . . ." terms in the '227 Patent are indefinite, and the Court **GRANTS** in part Apple's Motion for Partial Summary Judgment that Claims 1, 6, 9–12, and 25 of the '227 Patent are indefinite. As independent Claims 1 and 25 are indefinite, and all claims dependent from Claims 1 and 25, which include Claims 5, 6, 9–12, 26, 27, and 29, are also indefinite because dependent

claims "incorporate by reference all the limitations of the claim to which [they] refer[]." 35 U.S.C. § 112 ¶ 4. Thus, the Court will address any remaining claim construction disputes only for the definite claims.

Stream

Claim 13 of the '227 Patent, Claim 1 of the '313 Patent, Claims 1, 20–25, and 37–39 of the '427 Patent, and Claim 1 of the '999 Patent contain the term "stream." Mirror Worlds contends that the term means "a time-ordered collection of data units, or documents, unbounded in number, in which the time associated with a data unit can be in the past, present or future, and the location of file storage is transparent to the user" in the '227, '313, and '427 Patents and "a time-ordered collection of information assets, unbounded in number, in which the time associated with an information asset can be in the past, present or future, and the location of file storage is transparent to the user" in the '999 Patent. Apple contends that it means "a time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life and that is designed to have three main portions: past, present, and future." The parties disagree whether or not the term "stream" should be construed as a diary, has separate past, present, and future portions, and must be unbounded and transparent.

Mirror Worlds asserts that the construction should encompass both "data units" and "documents" because the claims include both terms, and that "collection" is clearer than "sequence." Moreover, Mirror Worlds asserts that the stream is described as being unbounded and transparent, while the inclusion of "past, present, and future" and "diary" is overly limiting. Apple counters that the specification gives a definition, which is confirmed in the prosecution history. Apple further argues that Mirror World's construction of stream is not supported in the specification because

Mirror Worlds' construction states that a data unit could be in the future, not that the steam must have a future portion.

Apple's construction follows the definition given in the specification and the prosecution history.[2] *See* '227 Patent, col. 4:6–8 ("A 'stream' according to the present invention is a time-ordered sequence of documents that functions as a diary of a person or entity's electronic life."); *id.* at 5:53–6:7 ("A stream has three main portion: past, present, and future."); Docket No. 160, Exhibit C, '227 Patent File History, Amendment Under 37 C.F.R. §1.115 in Response to November 3, 1998 Office Action, 11 (May 7, 1999) [hereinafter *Amendment*]. Accordingly, the Court adopts Apple's construction and construes the term "stream" to mean "a time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life and that is designed to have three main portions: past, present, and future."

Main stream

Claim 13 of the '227 Patent and Claim 2 of the '313 Patent contain the term "main stream." Mirror Worlds contends that the term means "a stream of each data unit, or document, received by or generated by the computer system," while Apple contends that it means "a stream which stores every data unit, or document, received by or generated by the computer system." The parties disagree whether or not the term "main stream" requires storing and refers to each or every data unit.

Mirror Worlds asserts that the claim specifies "each" data unit and that Apple improperly includes the requirement to "store." Apple argues that the dispute is whether every document that is received must be stored or simply has pointers to received documents. Apple counters that the

[2] At the claim construction hearing, Apple also agreed that the "stream" is designed in the conjunctive, but its actual use is in the disjunctive. Transcript, 1/27/10 at 21:9–11.

specification consistently references the operating system as storing documents in a stream, and that the definition in the prosecution history expressly states that "every" received data unit or document is stored.

The term "each" is found in the preamble and body of the claim and is applied to the data units received by or generated by the computer system. '227 Patent, col. 16:9–25. In the preamble, the term "each data unit" is expressed in relation to what the claimed computer system combination does. *Id.* at col.16:9–10. Similarly, in the body of the claim, the term is expressed in relation to what the main stream does and not what it is. *Id.* at col 16:11–25. Thus, Mirror Worlds' construction of "a stream of each data unit" is not supported by the use of "each" in the claim. Alternatively, the inclusion of the limitation "which stores" is overly narrow in Apple's construction; "that is inclusive of" is more accurate. The '101 Patent's prosecution history states a "'main stream' is a type of stream which receives every data unit received by (external) or generated by (internal) the computer system." *Amendment*, at 11. This definition given by Mirror Worlds during prosecution is not limited to "storing" and does not support "which stores." Further, Apple's construction of "which stores" is a reference to what a stream does and not merely what a stream is. Accordingly, the Court construes the term "main stream" to mean "a stream that is inclusive of every data unit, or document, received by or generated by the computer system."

Including each data unit according to the timestamp in the respective chronological indicator in the main stream

Claim 13 of the '227 Patent contains the term "including each data unit according to the timestamp in the respective chronological indicator in the main stream." Mirror Worlds contends that the term does not need to be construed or, if it does, it means "including each data unit in the main stream, ordered according to the time stamp in the respective chronological indicator." Apple

contends that it means "storing each document in the main stream, in the location required by its identifying timestamp." The parties disagree whether or not the term "including each data unit according to the timestamp in the respective chronological indicator in the main stream" requires storing.

Mirror Worlds asserts that Apple departs from the claim language by including a requirement for "storing." Apple counters with the same arguments it set forth for the term "main stream." Having construed the term "main stream" to not require storing and resolved the parties' dispute, *see O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008), the claim language is clear to a lay jury who will understand the term "including each data unit according to the timestamp in the respective chronological indicator in the main stream." Therefore, the term does not require construction. *See Orion IP, LLC v. Staples, Inc.*, 406 F. Supp. 2d 717, 738 (E.D. Tex. 2005) (Davis, J.) ("although every word used in a claim has meaning, not every word requires construction").

Substream

Claim 13 of the '227 Patent and Claims 2 and 11 of the '313 Patent contain the term "substream." Mirror Worlds contends that the term means "a subset of data units, or documents, yielded by a filter on a stream, the filter identifying certain documents within the stream," while Apple contends that it means "a stream that is a subset of data units, or documents, yielded by a filter on a stream, the filter identifying certain documents within the stream." The parties disagree whether or not the term "substream" is a type of stream or can be any subset of data units.

Mirror Worlds contends that Apple's inclusion of the lead-in "a stream that is" is superfluous. Apple argues that the term itself and the prosecution history confirm that the term means a type of stream.

Given the construction for "stream" and the inclusion of "a stream that is" in the construction of "main stream," Apple's inclusion of "a stream that is" accurately describes a "substream." Further, the prosecution history of the '227 Patent states that a "'substream' is a *type of stream* having one or more data units only from the main stream." *Amendment* at 11 (emphasis added). Accordingly, the Court construes the term "substream" to mean "a stream that is a subset of data units, or documents, yielded by a filter on a stream, the filter identifying certain documents within the stream."

Stream-based operating system / Document stream operating system

Claim 1 of the '427 Patent contains the term "stream-based operating system," and Claim 1 of the '313 Patent and Claim 25 of the '427 Patent contain the term "document stream operating system." Mirror Worlds contends that the terms mean "an operating system that includes support for streams," while Apple contends that they mean "a non-hierarchical operating system in which, as each document is presented to the operating system, the document is placed according to a time indicator in the sequence of documents already stored relative to the time indicators of the stored documents." The parties disagree whether or not the terms "stream-based operating system" and "document stream operating system" must be non-hierarchal.

Mirror Worlds asserts that the specification indicates that the terms merely refer to an operating system that supports a stream-based storage model, rather than a file name-based one. Apple counters that Mirror Worlds' construction decouples the meaning of the term from the

characteristics that distinguish the invention from the prior art. Apple argues that its construction is drawn from the specification and gives effect to the fundamental nature of the invention because the specification disclaims operating systems having "organizational hierarchies that quickly become obsolete."

Apple's argument for a "non-hierarchical" limitation is outside the context of the specification's use of "hierarchical." A time-ordered sequence of documents is inherently hierarchical. Apple's construction is overly limiting as it strictly adheres to the details of the specification, which sets the invention in contrast to a file-name based operating system. There is no clear disclaimer in the specification that supports Apple's proposed construction. Further, as the term "stream-based operating system" implies, the term encompasses a operating system based on streams, which the Court has already construed. Accordingly, the Court construes the terms "stream-based operating system" and "document stream operating system" to mean "an operating system that is based on a time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life and that is designed to have three main portions: past, present, and future."

Timestamp to identify

Claim 13 of the '227 Patent contains the term "timestamp to identify." Mirror Worlds contends that the term means "a time-based identifier," while Apple contends that it means "a date and time value that uniquely identifies each document." The parties disagree whether or not the term "timestamp to identify" requires identification of only date and time. Mirror Worlds agrees that the timestamp "uniquely identifies each document." Transcript, 1/27/10 at 50:6–8.

Mirror Worlds asserts that its construction is the plain meaning of the term, while the prosecution history statements do not restrict the values to only time and date. Apple counters that Mirror Worlds defined the term in the prosecution history and it is now bound to the definition.

The parties dispute whether the term should be broadly construed to cover only time and date values, Apple's construction, or narrowly construed to include time and date values plus additional information, Mirror Worlds' construction. Mirror Worlds fails to rebut Apple's contention that the definition of "timestamp" is provided in the prosecution history, which clearly states: "A 'timestamp' is a date/time used to uniquely identify each data unit . . . ." *Amendment*, at 11. Mirror Worlds provided this definition in the prosecution history, and the Court must give it weight in construing the term. Accordingly, the Court construes the term "timestamp to identify" to mean "a date and time value that uniquely identifies each document."

Glance views

Claims 1 and 9 of the '313 Patent, Claims 1, 8, 16, 25, and 32 of the '427 Patent, and Claim 1 of the '999 Patent contain the term "glance views." Mirror Worlds contends that the term means "an abbreviated presentation of a document," while Apple contends that it means "a different graphical representation of a document that appears when a document representation is touched by the cursor or pointer and provides additional information about the document." The parties disagree whether or not the term "glance views" must be a different representation of the document and provide additional information about it.

Mirror Worlds asserts that the specification merely describes that a glance view provides some information about a document in the stream and that Apple's construction includes several extraneous limitations. Apple counters that the term is coined and its meaning must be obtained

from the specification. Apple argues that the specification describes a browse card providing a glance view, so a glance view must be a different graphical representation of a document.

Mirror Worlds' construction is consistent with the claims, which specify that "glance views . . . are *abbreviated* versions of respective ones of said documents." '313 Patent, col. 15:21–22 (emphasis added); *see also id.* at col. 16:35–36 ("glance view is an abbreviated version of the documents"). Apple's construction includes additional aspects of when and how a glance view is produced, rather than only what a glance view is. Further, the claims otherwise specify cursor or pointer movement to cause display. *See id.* at 15:28–33, 16:31–35. Accordingly, the Court construes the term "glance views" to mean "an abbreviated presentation of a document."

Receding, foreshortened stack

Claims 1 and 9 of the '313 Patent and Claims 1, 10, 18, and 25 of the '427 Patent contain the term "receding, foreshortened stack." Mirror Worlds contends that the term means "a representation of a stack that uses perspective to create the illusion of increasing distance from the viewpoint implied by the image," while Apple contends that it means "a stack where the document representations get smaller, and appear farther from the surface of the screen, toward the bottom of the stack." The parties disagree whether or not the term "receding, foreshortened stack" requires getting smaller and appearing farther.

Mirror Worlds asserts that the term uses commonly understood words having meanings that are reflected in its construction, while Apple's construction is drawn to a particular example and is too narrow. Apple counters that the plain meaning of the term requires that the document representations must get smaller (foreshortened) and appear to be farther from the screen (receding).

Apple argues that Mirror Worlds' construction does not include the two visual effects and is ambiguous as to the meaning of "the viewpoint implied by the image."

The claim language by itself describes the stack as being receding and foreshortened. The use of the word "perspective" in Mirror Worlds' construction merely encompasses the characteristics of receding and foreshortened. *See, e.g.,* Random House Compact Unabridged Dictionary, Exhibit G, Apple's Claim Construction Brief (Docket No. 160) ("foreshorten: . . . to convey the illusion of three-dimensional space . . . often done according to the rules of *perspective*" (emphasis added) and "recede: . . . esp[ecially] as giving the illusion of space"). Further, Apple's construction that the image must appear to be farther away and get smaller merely restates the requirements that the stack is receding and foreshortened, respectively. Having resolved the parties' dispute, *see O2 Micro*, 521 F.3d at 1362, the claim language is clear to a lay jury who will understand the term "receding, foreshortened stack" and does not require construction. *See Orion*, 406 F. Supp. 2d at 738.

Archiving

Claims 1 and 9 of the '313 Patent and Claims 1 and 8 of the '427 Patent contain the term "archiving." Mirror Worlds contends that the term means "copying documents to a secondary storage medium," while Apple contends that it means "moving from immediately-accessible storage to long-term storage." The parties disagree whether or not the "archiving" requires moving.

Mirror Worlds asserts that "moving" implies that the original version must be deleted after it is archived and that "long-term storage" is overly limiting. Apple counters that the specification describes archiving as only moving the documents and not copying them. Apple argues that the provision for browse cards further indicates that the documents have been moved from immediately-accessible storage to long-term storage.

Mirror Worlds is correct that the term "archiving" has a more generalized meaning than Apple's restrictive construction, which limits the scope to the disclosed embodiment. The specification refers to a specific operation where older documents are moved from immediately-accessible storage to long-term storage. '313 Patent, col. 10:21–23. Moreover, the specification refers to this as "[w]hen a document is *archived in this way* . . . ," emphasizing that moving is merely an illustrative, preferred embodiment of archiving. *Id.* at 10:23 (emphasis added); *see Astrazeneca AB, Aktiebolaget Hassle, KBI-E, Inc. v. Mut. Pharm. Co.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004) ("[I]t is of course improper to limit the claims to the particular preferred embodiments described in the specification."). At the hearing, Mirror Worlds agreed to include "or moving" in addition to "copying" in its construction. Transcript, 1/27/10 at 76:3–5. Modifying Mirror Worlds' construction to include "or moving" properly encompasses establishing the presence of a document in a specified location whether as a backup document (copying) or as an inactive document (moved). Accordingly, the Court construes the term "archiving" to mean "copying or moving documents to a secondary storage medium."

Document organizing facility

Claims 1, 8, 16, and 25 of the '427 Patent contain the term "document organizing facility." Mirror Worlds contends that the term means "software that organizes documents." Apple contends the term is a means-plus-function limitation subject to 35 U.S.C. § 112 ¶ 6, or if the Court finds it is not a means-plus-function limitation, it means "the portion of a stream-based operating system whose purpose is to organize documents." The parties disagree whether or not the term "document organizing facility" is subject to § 112 ¶ 6.

Mirror Worlds asserts that one skilled in the art would understand that "facility" refers to a software module or set of modules. Further, Mirror Worlds asserts that when the term "means" is absent, there is a presumption that § 112 ¶ 6 does not apply. Apple counters that the term "facility" does not have an understood meaning and that the term describes something in terms of its function. Apple argues that describing something in terms of its purpose rather than its structure does not make it a "structural" term within the meaning of § 112 ¶ 6. Thus, if § 112 ¶ 6 applies, Apple argues the term is indefinite for failure to include supporting disclosure in the specification.

Federal Circuit precedent makes clear "that the presumption flowing from the absence of the term 'means' is a strong one that is not readily overcome." *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004). The presumption controls, and Apple fails to rebut it. Even though the structure is identified by its function, it does not decide the issues or result in the term being non-structural. The term "document organizing facility" is understood by skilled artisans to be a software module. Further, although "stream-based operating system" is included in Apple's construction, the claims already specify that the "document organizing facility" is within the "stream-based operating system." *E.g.*, '427 Patent, col. 15:10–22. Accordingly, the term "document organizing facility" is not a means-plus-function limitation subject to 35 U.S.C. § 112 ¶ 6, and the Court **DENIES** in part Apple's Motion for Partial Summary Judgment of Invalidity for Indefiniteness Under 35 U.S.C. § 112 ¶ 2. The Court construes the term "document organizing facility" to mean "software that organizes documents."

Data Unit

Claim 13 of the '227 Patent contains the term "data unit." Mirror Worlds contends that the term means "a collection of data of significance to the user that the user considers as a unit," while

Apple contends that it means "an item of information of significance to the user that the user considers as a unit (*e.g.*, an email, picture, voice mail, software program, reminder or calendar item)." The parties disagree whether or not the term "data unit" must be a single item or can be a collection of items.

Mirror Worlds asserts that the characterization of "a collection of data" embraces both data that is readable and not readable by a user. Apple counters that the specification indicates that individual items are of interest.

The claim refers to "each data unit," and then generating a "main stream of data units." '227 Patent, col. 16:9–15. From the claim, the connotation is that a "data unit" is "an item of information." Further, the specification describes that "every document" created and sent is stored in a main stream, which also suggests "an item of information." *Id.* at col. 4:8–10. In addition, the specification indicates that "[a] document can contain any type of data," which specifies both user readable and non-readable items. *Id.* at col. 4:16–18 ("including but not limited to pictures, correspondence, bills, movies, voice mail[,] and software programs"). Apple does not object to the deletion of the examples, which are unnecessary, that it included in its proposed construction. Apple's Claim Construction Brief, at 26 (Docket No. 160). Accordingly, the Court construes the term "data unit" to mean "an item of information of significance to the user that the user considers as a unit."

Enterprise information management system

Claim 1 of the '999 Patent contains the term "enterprise information management system." Mirror Worlds contends that the term means "a system that manages information for an enterprise or organization," while Apple contends that it means "a system with a client-server architecture, a

multi-computer, multi-node, high volume server, and a number of clients in the order of hundreds, rather than tens." The parties disagree whether or not the term "enterprise information management system" includes the various limitations in Apple's construction.

Mirror Worlds asserts that Apple's construction is overly narrow and that the term merely indicates a general computer system for a business operation. Apple counters that its construction is based on Dr. David Gelernter's explanation of the nature of the inventions in the '999 Patent. Dr. Gelernter is an inventor of the '227, '313, and '427 Patents, but not the '999 Patent.

Apple's construction is too limiting and its reliance on Dr. Gelernter's testimony is inapplicable because the testimony is not as to how a person of ordinary skill in the art would understand the term. Accordingly, the Court construes the term "enterprise information management system" to mean "a system that manages information for an enterprise or organization."

Abbreviated form and **Abbreviated Version**

Claim 20 of the '227 Patent contains the term "abbreviated form," and Claims 1 and 9 of the '327 Patent and Claims 5, 13, 22, 29, and 37 of the '427 Patent contain the term "abbreviated version." Mirror Worlds contends that the terms need no construction, but if the Court finds that they do, they mean "a form or version that is less than the full form or version." Apple contends that they mean "a shortened version of the content to be displayed from the data unit or document." The parties disagree whether or not the terms "abbreviated form" and "abbreviated version" mean a shortened version of the content of the document or a version that is less than the original in any aspect.

Mirror Worlds asserts that Apple's construction complicates otherwise clear language and that the term simply means a version that is less than the full version. Mirror Worlds further asserts

that Apple's inclusion of "shortened" in its construction raises an issue as to what that word means. Apple counters that Mirror Worlds' proposed construction is unclear as to what it means to be "less than" the full version.

The claim language recites "displaying data from one of the data units in abbreviated form" and specifies what is abbreviated, the data contained in the data unit. '227 Patent, col. 16:54–55. Apple's construction is unnecessarily inclusive of "content," while Mirror World's construction is not as expansive as Apple contends given the entire claim limitation. The parties' arguments that "less" and "shortened" are unclear are without merit when read in the context of the entire claim. *See id.* at 16:9–25, 16:52–55. The claim merely indicates that the data from one of the data units is in a form or version that has been reduced relative to the whole of the data. Having resolved the parties' dispute, *see O2 Micro*, 521 F.3d at 1362, the claim language is clear to a lay jury who will understand the terms "abbreviated form" and "abbreviated version" and does not require construction. *See Orion*, 406 F. Supp. 2d at 738.

Archiving the documents and indicators in consistent format for selective retrieval

Claims 1 and 8 of the '427 Patent contain the term "archiving the documents and indicators in consistent format for selective retrieval." Mirror Worlds contends that the term does not need to be construed or, if it does, it means "archiving documents and indicators in a consistent format that enables uniform selective retrieval of the documents." Apple contends that it means "archiving the documents and indicators in a consistent format rather than the diverse formats appearing in conventional directors and subdirectories of files." The parties disagree whether or not the term "archiving the documents and indicators in consistent format for selective retrieval" must be distinguished from the prior art.

Mirror Worlds asserts that Apple's construction is crafted as a negative limitation and does not include the "selective" requirement of the claim language. Apple counters that during reexamination Mirror Worlds distinguished the prior art on the basis that conventional directories lead to archiving in diverse formats and thus defined the term.

Although the '427 Patent's prosecution history confirms the distinction over the prior art, it does not support Apple's inclusion of a negative limitation in the term's construction. However, Mirror Worlds' alternative construction also improperly sets forth a follow-on operation requiring archiving documents in a uniform format. The claim language is clear to a lay jury who will understand the term "archiving the documents and indicators in consistent format for selective retrieval." Having resolved the parties' dispute, *see O2 Micro*, 521 F.3d at 1362, the term does not require construction. *See Orion*, 406 F. Supp. 2d at 738.

Controlling operating system

Claims 8 and 16 of the '427 Patent contain the term "controlling operating system." Mirror Worlds contends that the term means "an operating system that utilizes subsystems from another operating system," while Apple contends that it means "an operating system that controls another operating system." The parties disagree whether or not the term "controlling operating system" requires control of another operating system.

Mirror Worlds asserts that Apple's construction is inconsistent with the claims as a whole and is overly limiting. Apple counters that to give effect to the adjective "controlling" in the term, there is a requirement for control of another operating system.

Apple's construction distorts the recitation of the preamble and the scope of the claims. *See* '427 Patent, col. 15:55–16:13, 16:38–58. The whole of the claim indicates that the "control" is over

document handling within a computer, not over any other operating system that is being run on the computer. *See id.* Accordingly, the Court construes the term "controlling operating system" to mean "an operating system that utilizes subsystems from another operating system."

Complex analysis

Claims 7, 15, 24, 31, and 39 of the '427 Patent contain the term "complex analysis." Mirror Worlds contends that the term means "analysis involving the form, content and/or type of a document," while Apple contends that it means "analysis of the content of a document that allows selection of important words, pictures, and/or sounds in the document." The parties disagree whether or not the term "complex analysis" requires the selection of important items in a document.

Mirror Worlds asserts that the claim language merely provides that glance view content results from complex analysis as opposed to non-complex techniques. Apple counters that its construction tracks the claim language as well as the description of the term in the specification. Apples argues that Mirror Worlds' construction fails to observe the disclosure.

Apple's proposed construction adheres to the claim language and specification. The specification's only discussion of the term states: "complex analysis is performed on the document contents so that 'most important' words, pictures, and/or sounds are presented." Accordingly, the Court construes the term "complex analysis" to mean "analysis of the content of a document involving selection of important words, pictures, and/or sounds in the document."

Document object model

Claim 1 of the '999 Patent contains the term "document object model." Mirror Worlds contends that the term means "a consistent structure containing information about information assets of diverse types, created by diverse software," while Apple contends that it means "a consistent

structure containing information about information assets of diverse types, created by diverse software, that includes items such as summary, type of document, owner, permissions, keywords, command options, timestamp, index, etc." The parties disagree whether or not the term "document object model" requires examples of it in its construction.

Mirror Worlds asserts that Apple's construction improperly includes superfluous examples, and Apple does not address the term. The parties' constructions are the same, except for the examples Apple includes, which are unnecessary in construing the term. Accordingly, the Court construes the term "document object model" to mean "a consistent structure containing information about information assets of diverse types, created by diverse software."

Time-ordered stream

Claim 1 of the '999 Patent contains the term "time-ordered stream." Mirror Worlds contends that the term means "a displayed stream in which the elements are arranged in time order," while Apple contends that it means "a time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life and that is designed to have three main portions: past, present, and future." The parties disagree whether or not the term "time-ordered stream" requires a display.

Mirror Worlds asserts that the claim refers to a display that is time-ordered because the claim recites a display. Apple counters that the '999 Patent incorporates its parent applications, which includes incorporating their meaning of "stream." Thus, Apples argues that the definition given by Mirror Worlds during prosecution of the '999 Patent's parent, the '227 Patent, controls.

The inclusion of "displayed stream" in Mirror Worlds' construction is unnecessary because, as Mirror Worlds acknowledges, the claim itself specifies a display. Further, Mirror Worlds previously defined the term in the prosecution of the '999 Patent's parent application. *See, e.g.,*

Amendment, at 11 ("A 'stream' is a time-ordered sequence of documents . . . that functions as a virtual object (diary) . . . ."). Accordingly, the Court construes the term "time-ordered stream" to mean "a time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life and that is designed to have three main portions: past, present, and future."

A graphical iconic representation of a collection of said first plurality of documents

Claims 1, 5, and 9 of Apple's '101 Patent contain the term "a graphical iconic representation of a collection of said first plurality of documents." Apple contends that the term means "a collection of two or more document icons displayed together," wile MWT contends that it means "a small static picture representing a collection of documents." The parties disagree whether or not the term "a graphical iconic representation of a collection of said first plurality of documents" is limited to a single icon.

Apple asserts that MWT improperly limits the term to exclude the preferred embodiment of a dynamic graphical presentation of collected documents where the documents can be individually displayed with their own icon and documents can be added to the pile. Further, Apple asserts that because a pile includes individually selectable documents for display, there is no "single" picture. MWT counters that the claim language of "a graphical iconic representation" refers to an icon and "of a collection of said first plurality of documents" refers to a pile, which together specify a single icon. However, MWT's construction is overly limiting because the claim specifies only an "iconic representation," which indicates a type of representation and does not by itself mean "a single icon" or picture. *See, e.g., id.* at 37:33–34. Thus, an "iconic representation" of a collection of "a plurality of documents" is not limited to a single icon representing a group collection without regard for

individual documents. *See id.* Rather, the claim language is broad enough to encompass Apple's construction of two document icons presented as a grouped display.

In addition, Apple asserts that other claim limitations indicate that the term should not be restricted to a single picture, and that characterization of the picture as "small" is misplaced because the pile can grow as documents are added. MWT argues that the other claim limitations also indicate a single document collection icon. Claim 1's additional limitations include referring to selecting positions from the iconic representation by positioning a cursor. When read in the context of the claim language and specification, the additional limitations indicate a sufficiently broad scope to cover a selection that is being made of individual document icons within a group of document icons displayed together. Further, the additional limitations refer specifically to selectively displaying documents of a collection and do not support MWT's contention of a single icon.

Further, MWT argues that the specification describes two embodiments: a dynamic pile (Claim 13 referring to pointing a cursor at one of the documents in the collection) and a static pile (Claim 1 referring to selectively positioning a cursor on the graphical iconic representation). *See* '101 Patent, col. 37:30–49, 38:56–39:18. Thus, MWT asserts, the specification indicates that a static pile uses mapping according to cursor positioning on the pile's graphical representation, while a dynamic pile has an icon for each document in the pile that is selectable by pointing a cursor to it. *Id.* at 7:33–50. Although the specification contemplates both "dynamic" and "static" pile representations, the claim language does not expressly indicate one type of representation, and neither limitation can be inferred. *See id.* at col. 7:33–37. The absence of "iconic" in Claim 13 does not signify a specific type of representation. Also, the Claim 1 limitation of pointing a cursor at a graphical representation of a document, instead of Claim 13's limitation of selecting a position for

display of a document, also does not signify that either a dynamic or static limitation is required. Rather than seeking to limit either Claim 1 or 13 to a dynamic or static pile embodiment, the difference in claim language is merely a different approach to claiming the functionality of individually selecting and browsing documents within a pile. Furthermore, Claim 1 is a method claim, and Claim 13 is an apparatus claim. Claims 1 and 13 are drawn to cover either a dynamic or static pile embodiment. Thus, there is no basis to limit the term to a "static picture."

Additionally, MWT argues that Apple limited the term to a single icon for the collection during prosecution. According to Mirror Worlds, Apple argued a distinction over the prior art because the prior art was unable to display a different message when a different position of the same icon was selected. However, the prosecution history cited by MWT does not support limiting the term to a single picture. The statements Mirror Worlds first points to were directed strictly at the prior art Nicol disclosure. Docket No. 150, Exhibit C - Part 7, '101 Patent File History, Appellant's Reply Brief, 61 (June 28, 1996). The second group of statements were made in regard to other limitations in the claim and did not focus directly on the limitation containing the disputed term. *Id.* There was no clear disclaimer of the term as being restricted to a single picture.

Finally, Apple asserts that the prosecution history of the '101 Patent's parent shows that Apple construed the same term as designating an icon that permitted browsing of individual documents in a pile, which is the construction that was adopted by the United States Patent and Trademark Office Board of Patent Appeals and Interferences. However, Apple's reliance on the prosecution history of the parent patent is misplaced because what Apple points to is related to browsing a pile and is unrelated to construing the disputed term. *See* Docket No. 150, Exhibit C - Part 4, '101 Patent File History, Response to Office Action, 29 (Dec. 3, 1993); *id.* at Part 7, Appeal

Brief, 24–25, 30 (Mar. 20, 1996). However, Apple's construction adheres to the plain, ordinary meaning of the term when read in view of the specification. Accordingly, the Court adopts Apple's construction and construes the term "a graphical iconic representation of a collection of said first plurality of documents" to mean "a collection of two or more document icons displayed together."

Means for displaying a graphical iconic representation of a collection of said first plurality of documents

Claim 5 of the '101 Patent contains the term "means for displaying a graphical iconic representation of a collection of said first plurality of documents." The parties agree that this is a means-plus-function limitation subject to § 112 ¶ 6 and that the recited function is "displaying a graphical iconic representation of a collection of said first plurality of documents."

Apple contends that the corresponding structure is "a video display screen, such as a video (CRT) display monitor or a liquid crystal display, coupled to a system bus that receives commands and data from a processor, and structural equivalents," while MWT contends that it is "executable code that displays the icon representing a collection of documents (*i.e.*, pile), and equivalents thereof." The parties disagree whether or not the corresponding structure includes executable code or is limited to hardware.

Apple asserts that the specification clearly links the hardware elements it identified to the specified function. Apple further asserted that MWT's construction is purely functional. MWT counters that Apple's construction is essentially the hardware used to present any image display and that executable code is a proper identification of structure.

Although executable code is structure, MWT's identification of the corresponding structure is problematic because the specification does not clearly link the "executable code" to the specified function. Alternatively, Apple's identification of clearly linked corresponding structure is correct

and proper under § 112 ¶ 6. '101 Patent, col. 3:1–3, 3:32–37, 6:28–29, 5:62–6:8. Accordingly, the Court adopts Apple's structure and the corresponding structure for the term "means for displaying a graphical iconic representation of a collection of said first plurality of documents" is "a video display screen, such as a video (CRT) display monitor or a liquid crystal display, coupled to a system bus that receives commands and data from a processor, and structural equivalents."

Means for displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation

Claim 5 of the '101 Patent contains the term "means for displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation." The parties agree that this is a means-plus-function limitation subject to § 112(6) and that the recited function is "displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation."

Apple contends that the corresponding structure is "(a) a video display screen, such as a video (CRT) display monitor or a liquid crystal display, coupled to a system bus that receives commands and data from a processor, and structural equivalents; and (b) an I/O controller to control signals received from a keyboard and/or a cursor control device and structural equivalents," while MWT contends that it is "executable code that initiates browsing of a pile after the cursor has been positioned over the iconic graphical representation of the collection of documents (pile) for a predetermined period of time and displays a first indicia of a first document of the collection (pile) by selecting a first position on the icon representing the collection, and equivalents thereof." The parties disagree whether or not the corresponding structure for the term "means for displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation" includes executable code or is limited to hardware.

The parties advance similar arguments for this term as for "means for displaying a graphical iconic representation of a collection of said first plurality of documents." Thus, the Court adopts the same reasoning in construing the term. Accordingly, the corresponding structure for the term is "(a) a video display screen, such as a video (CRT) display monitor or a liquid crystal display, coupled to a system bus that receives commands and data from a processor, and structural equivalents; and (b) an I/O controller to control signals received from a keyboard and/or a cursor control device and structural equivalents." '101 Patent, 3:37–44, 5:58–62, 6:14–64, 12:47–55, 13:2-4.

Means for displaying in series a second indicia of a second document and a third indicia of a third document by positioning said cursor first on a second position on said graphical iconic representation next on a third position on said graphical iconic representation

Claim 5 of the '101 Patent contains the term "means for displaying in series a second indicia of a second document and a third indicia of a third document by positioning said cursor first on a second position on said graphical iconic representation next on a third position on said graphical iconic representation." The parties agree that this is a means-plus-function limitation subject to § 112(6) and that the recited function is "displaying in series a second indicia of a second document and a third indicia of a third document by positioning said cursor first on a second position on said graphical iconic representation next on a third position on said graphical iconic representation."

Apple contends that the corresponding structure is "(a) a video display screen, such as a video (CRT) display monitor or a liquid crystal display, coupled to a system bus that receives commands and data from a processor, and structural equivalents; and (b) an I/O controller to control signals received from a keyboard and/or a cursor control device (such as mouse, graphic tablet, touch tablets, trackballs, pen input mechanisms, or touch screens) and structural equivalents," while MWT contends that it is "executable code that displays in series a second indicia of a second document and

a third indicia of a third document by positioning a cursor first on a second position on the icon representing the collection (pile) and next on a third position on the icon representing the collection (pile), and equivalents thereof." The parties disagree whether or not the corresponding structure includes executable code or is limited to hardware.

The parties advance similar arguments for the present term as for the term "means for displaying a graphical iconic representation of a collection of said first plurality of documents." Thus, the Court adopts the same reasoning in construing the term. Accordingly, the corresponding structure is "(a) a video display screen, such as a video (CRT) display monitor or a liquid crystal display, coupled to a system bus that receives commands and data from a processor, and structural equivalents; and (b) an I/O controller to control signals received from a keyboard and/or a cursor control device (such as mouse, graphic tablet, touch tablets, trackballs, pen input mechanisms, or touch screens) and structural equivalents." '101 Patent, 3:37–44, 5:58–62, 6:14–64, 12:47–55, 13:2-4.

CONCLUSION

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. Furthermore, Apple's Motion for Partial Summary Judgment of Invalidity for Indefiniteness is **GRANTED** in part and **DENIED** in part. Exemplar claims with the disputed terms in bold are set forth in Appendix A. For ease of reference, the Court's claim interpretations are set forth in a table in Appendix B.

So ORDERED and SIGNED this 11th day of August, 2010.

LEONARD DAVIS
UNITED STATES DISTRICT JUDGE

APPENDIX A

U.S. Patent No. 6,006,227

13. A method which organizes each **data unit** received by or generated by a computer system, comprising the steps of:

generating a **main stream** of **data units** and at least one **substream**, the **main stream** for receiving each **data unit** received by or generated by the computer system, and each **substream** for containing **data units** only from the **main stream**;

receiving data units from other computer systems;

generating data units in the computer system;

selecting a **timestamp to identify** each **data unit**;

associating each **data unit** with at least one chronological indicator having the respective timestamp;

including each data unit according to the timestamp in the respective chronological indicator in at least the main stream; and

maintaining at least the **main stream** and the **substreams** as persistent streams.

U.S. Patent No. 6,638,313

1. A method of utilizing a **document stream operating system** that in turn utilizes subsystems from at least one other operating system, comprising:

receiving documents from diverse applications in formats that are specific to the respective applications and differ as between at least some of said applications;

automatically associating time-based indicators with the documents received in the receiving step from the diverse applications;

automatically **archiving** the received documents;

automatically creating **glance views** that are **abbreviated versions** of respective ones of said documents;

selectively displaying at least some of said documents as a **receding, foreshortened stack** of partly overlapping documents so that only a part of each of said documents in the displayed stack, after the first document in the stack, is visible to the user;

said displaying further including displaying a cursor or pointer and responding to a user sliding the cursor or pointer over said displayed stack to display the **glance view** of the document in the stack that is currently touched by the cursor or pointer, without requiring clicking on the document; and

utilizing, in said **document stream operating system**, subsystems from said at least one other operating system for operations including writing documents to storage media, interrupt handling and input/output.

U.S. Patent No. 6,725,427

1. A **stream-based operating system** utilizing subsystems from another operating system running a computer, comprising:

a **document organizing facility** receiving documents created by diverse applications in diverse formats specific to the respective applications;

said **document organizing facility** automatically associating respective selected indicators with the received documents, automatically **archiving the documents and indicators in consistent format for selective retrieval**, and automatically creating information specifying respective **glance views** of said documents and respective document representations of said documents;

a display facility displaying at least selected document representations as a **receding, foreshortened stack** of partly overlapping document representations such that only a part of each displayed document representation, after the first in the stack, is visible to the user;

said display facility further displaying a cursor or pointer and responding to user-controlled sliding without clicking of the cursor over said displayed stack to display a **glance view** of a document whose document representation is currently touched by the cursor or pointer; and

said **stream-based operating system** utilizing subsystems from said another operating system for operations including writing documents to storage media, interrupt handling and input/output.

7. A stream-based operating system as in claim 1 in which said display of a glance view comprises important words, pictures, and/or sounds of the respective document resulting from **complex analysis** of the document.

8. A **controlling operating system** utilizing subsystems from another operating system running a computer, comprising:

a **document organizing facility** receiving documents from diverse applications in diverse formats specific to the respective applications;

said **document organizing facility** automatically associating selected indicators with the received documents, automatically **archiving the documents and indicators in consistent format for selective retrieval**, and automatically creating information specifying respective **glance views** of said documents and respective document representations of said documents;

a display facility displaying at least selected ones of said document representations;

said display facility further displaying a cursor or pointer and responding to user-controlled sliding without clicking of the cursor or pointer over the displayed document representations to display at least a **glance view** of a document whose document representation is currently touched by the cursor or pointer;

and said controlling operating system utilizing subsystems from said another operating system for operations including writing documents to storage media, interrupt handling and input/output.

U.S. Patent No. 6,768,999

1. A method of operating an **enterprise information management system** comprising at least one server and a number of personal computers selectively communicating with each other comprising:

creating **document object models** comprising selected information from and about information assets of diverse types, created by diverse software, said **document object models** having a consistent structure;

displaying browse cards related to respective ones of the information assets in a **time-ordered stream**, together with glance views related to the **document object models** of the respective displayed documents, said glance views being displayed essentially in real time in response to passing a cursor over respective ones of the browse cards.

U.S. Patent No. 6,613,101

5. An apparatus for organizing and viewing information in a computer filing system having a display device and a first plurality of documents, said apparatus comprising:

means for displaying a graphical iconic representation of a collection of said first plurality of documents;

means for displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation, wherein said first position on said graphical iconic representation is capable of being at any one of a plurality of locations on said graphical iconic representation and wherein said selecting from said graphical iconic representation comprises positioning a cursor on said graphical iconic representation; and

means for displaying in series a second indicia of a second document and a third indicia of a third document by positioning said cursor first on a second position on said graphical iconic representation next on a third position on said graphical iconic representation.

APPENDIX B

’227, ’313, ’427, and ’999 Patents	
Term or Phrase (Patent and Claim)	**Court’s Construction**
stream (’227 Patent, Claim 13; ’313 Patent, Claim 1; ’427 Patent, Claims 1, 20–25, and 37–39; ’999 Patent, Claim 1)	a time-ordered sequence of documents that functions as a diary of a person or an entity’s electronic life and that is designed to have three main portions: past, present, and future
main stream (’227 Patent, Claim 13; ’313 Patent, Claim 2)	a stream that is inclusive of every data unit, or document, received by or generated by the computer system
including each data unit according to the timestamp in the respective chronological indicator in the main stream (’227 Patent, Claim 13)	No Construction
substream (’227 Patent, Claim 13; ’313 Patent, Claims 2 and 11)	a stream that is a subset of data units, or documents, yielded by a filter on a stream, the filter identifying certain documents within the stream
stream-based operating system (’427 Patent, Claim 1) **document stream operating system** (’313 Patent, Claim 1; ’427 Patent, Claim 25)	an operating system that is based on a time-ordered sequence of documents that functions as a diary of a person or an entity’s electronic life and that is designed to have three main portions: past, present, and future
timestamp to identify (’227 Patent, Claim 13)	a date and time value that uniquely identifies each document
glance views (’313 Patents, Claims 1 and 9; ’427 Patent, Claims 1, 8, 16, 25, and 32; ’999 Patent, Claim 1)	an abbreviated presentation of a document
receding, foreshortened stack (’313 Patents, Claims 1 and 9; ’427 Patent, Claims 1, 10, 18, and 25)	No Construction
archiving (’313 Patents, Claims 1 and 9; ’427 Patent, Claims 1 and 8)	copying or moving documents to a secondary storage medium
document organizing facility (’427 Patent, Claims 1, 8, 16, and 25)	software that organizes documents
All eighteen disputed “**means for** . . .” terms in the ’227 Patent	Indefinite
data unit (’227 Patent, Claim 13)	an item of information of significance to the user that the user considers as a unit
enterprise information management system (’999 Patent, Claim 1)	a system that manages information for an enterprise or organization

'227, '313, '427, and '999 Patents	
Term or Phrase (Patent and Claim)	**Court's Construction**
abbreviated form ('227 Patent, Claim 20) **abbreviated version** ('313 Patent, Claims 1 and 9; '427 Patent, Claims 5, 13, 22, 29, and 37)	No Construction
archiving the documents and indicators in consistent format for selective retrieval ('427 Patent, Claims 1 and 8)	No Construction
controlling operating system ('427 Patent, Claims 8 and 16)	an operating system that utilizes subsystems from another operating system
complex analysis ('427 Patent, Claims 7, 15, 24, 31, and 39)	analysis of the content of a document involving selection of important words, pictures, and/or sounds in the document
document object model ('999 Patent, Claim 1)	a consistent structure containing information about information assets of diverse types, created by diverse software
chronological indicator ('227 Patent, Claim 13; '427 Patent, Claim 25)	a data structure containing at least a timestamp
persistent streams ('227 Patent, Claim 13)	streams that are dynamically updated
visual streams ('227 Patent, Claim 15)	a representation on a display device of a stream
document representation ('427 Patent, Claims 1, 8, 16, 25, and 32)	a graphical depiction of a document, or data unit
operating system ('313 Patent, Claims 1 and 10; '427 Patent, Claims 1, 8, 16, and 25)	the software that handles basic computer operations (e.g. managing input/output, memory, applications, etc.) and presents an interface to the user
document ('313 Patent, Claims 1 and 9; '427 Patent, Claims 1, 8, 16, 25, and 32)	Except as set forth below, "a data unit" In the '313 Patent, Claim 1 at col.15:25, 15:26, 15:31, and 15:33 (i.e. each appearance of "document" in the fifth and sixth paragraphs of the claim after the preamble) and Claim 9 at col. 16:28, 16:29, and 16:34 (i.e. each appearance of "document" in the final two paragraphs of the claim, except the word "documents" in line 16:36), "a document representation"
selected indicators ('427 Patent, Claims 1, 8, and 16)	data structures that contain information relating to respective documents

’227, ’313, ’427, and ’999 Patents	
Term or Phrase (Patent and Claim)	**Court’s Construction**
interrupt (’427 Patent, Claims 1, 8, and 16)	an external signal to a program or process that may cause the program or process to take some action
a set of commands applicable to the document representations in the stack (’427 Patent, Claim 32)	commands associated with operations that can be performed on the documents whose document representations are in the stack
marking being common to a class of documents (’427 Patent, Claim 34)	marking in the same way document representations associated with documents having the same type or other characteristic
time-based indicators (’313 Patent, Claims 1 and 9; ’427 Patent, Claims 2, 9, 17, and 32)	chronological indicators
a substream that persists (’313 Patent, Claim 3)	a substream that is dynamically updated
information assets (’999 Patent, Claim 1)	data units of significance to the users in an enterprise
browse card (’999 Patent, Claim 1)	a graphical depiction of a document, or data unit
time-ordered stream (’999 Patent, Claim 1)	a time-ordered sequence of documents that functions as a diary of a person or an entity’s electronic life and that is designed to have three main portions: past, present, and future
essentially in real time (’999 Patent, Claim 1)	without significant delay as perceived by a user

'101 Patent	
Term or Phrase (Patent and Claim)	**Court's Construction**
a graphical iconic representation of a collection of said first plurality of documents ('101 Patent, Claims 1, 5, and 9)	a collection of two or more document icons displayed together
means for displaying a graphical iconic representation of a collection of said first plurality of documents ('101 Patent, Claim 5)	Function: displaying a graphical iconic representation of a collection of said first plurality of documents Corresponding Structure: a video display screen, such as a video (CRT) display monitor or a liquid crystal display, and a display controller, coupled to a system bus that receives commands and data from a processor, and structural equivalents
means for displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation ('101 Patent, Claim 5)	Function: displaying a first indicia of a first document of said collection by selecting a first position from said graphical iconic representation Corresponding Structure: (a) a video display screen, such as a video (CRT) display monitor or a liquid crystal display, and a display controller, coupled to a system bus that receives commands and data from a processor, and structural equivalents; and (b) an I/O controller to control receiving signals from a cursor control device such as a mouse, and structural equivalents
means for displaying in series a second indicia of a second document and a third indicia of a third document by position said cursor first on a second position on said graphical iconic representation next on a third position on said graphical iconic representation ('101 Patent, Claim 5)	Function: displaying in series a second indicia of a second document and a third indicia of a third document by positioning said cursor first on a second position on said graphical iconic representation next on a third position on said graphical iconic representation Corresponding Structure: (a) a video display screen, such as a video (CRT) display monitor or a liquid crystal display, and a display controller, coupled to a system bus that receives commands and data from a processor, and structural equivalents; and (b) an I/O controller to control receiving signals from a cursor control device such as a mouse, and structural equivalents
adjacent ('101 Patent, Claims 2, 4, 6, 8, 10, and 12)	close to