

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

**i4i LIMITED PARTNERSHIP**

**Plaintiff**

**vs.**

**MICROSOFT CORPORATION**

**Defendant**

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**CASE NO. 6:07CV113  
PATENT CASE**

**MEMORANDUM OPINION AND ORDER**

This Memorandum Opinion construes the terms in United States Patent No. 5,787,449 (the “449 Patent”). Also before the Court is Microsoft Corporation’s (“Microsoft”) Motion for Partial Summary Judgment of Invalidity of Claims 1–13 of the ‘449 Patent for Indefiniteness Under 35 U.S.C. § 112 ¶ 2 (Docket. No. 83). The Court hereby **GRANTS** Microsoft’s Motion (Docket No. 83).

**BACKGROUND**

The ‘449 Patent, which issued on July 28, 1998, relates to separating encoding conventions from a document’s content. Specifically, the ‘449 Patent is drawn to a system and method for separate manipulation of a document’s architecture and content. In one embodiment, the invention reads a document and separates the document’s structural information, stored as metacodes, from the document’s content. The invention produces a metacode map from the metacodes, where the map entries indicate the locations and addresses of the metacodes within the document. The invention stores the metacode map separately from the document’s content. Thus, this embodiment of the invention allows one to structure the same content in different manners and present the

content differently.

In another embodiment, the invention creates a document as two components, a metacode map and the document's content, and allows a user to solely edit the metacode map or the document's content. In another embodiment, the invention builds a document from its metacode map and corresponding content.

i4i Limited Partnership ("i4i"), assignee of the '449 Patent, asserts Microsoft infringes on various claims of the '449 Patent.

### **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 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. Ficoso 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 means-plus-function limitations 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

### Metacode[s]

The asserted claims contain the term “metacode[s].” i4i asserts “metacode[s]” means “an individual instruction which controls the interpretation of the content of the data.” Microsoft contends “metacode[s]” means “an individual instruction, including but not limited to a descriptive code, that controls the interpretation of the data, i.e., it differentiates content.” The parties dispute whether the construction requires the additional language.

A patentee may define terms in the specification. *Phillips*, 415 F.3d at 1316. The specification defines a “metacode” as “an individual instruction which controls the interpretation of the content of the data.” ‘449 Patent, col. 4:14–17. The specification explains, and the parties agree, that a metacode includes but is not limited to a descriptive code and that metacodes are used to differentiate content. *Id.* This additional language simply clarifies that metacodes can be broader than descriptive codes and further explains how the system uses metacodes. Further, during prosecution, the applicant omitted the additional language from the definition of metacode. i4i’s Opening Brief on Claim Construction, Ex. D, at i4i000000077, i4i000000092–i4i000000093, i4i000000119. Thus, “metacode[s]” means “an individual instruction which controls the interpretation of the content of the data.”

### Address[es] of Use

The asserted claims contain the term “address[es] of use.” i4i contends “address[es] of use” means “an address which defines the portion in the content at which the metacode is to exert its effect.” Microsoft contends the term means “a unique identifier which defines the position of a metacode relative to a mapped content stream and the place in the content at which the metacode is to exert its effect.”

The ‘449 Patent claims a “computer system for the manipulation of the architecture and content of a document . . . by producing a first map of metacodes and their addresses of use in association with mapped content.” ‘449 Patent, col. 15:35–49; *see also id.* at col. 16:18–39 (claiming a “method for producing a first map of metacodes and their addresses of use in association with mapped content”); *see also id.* at col. 16:50–65 (claiming a “method for producing from a document made up of metacodes and content, a map of metacodes and their addresses of use in association with mapped content of the document”). The computer system comprises a “means for compiling said metacodes of the menu by locating, detecting and addressing the metacodes in the document to constitute the map and storing the map in the metacode storage means.” *Id.* at col. 15:35–49; *see also id.* at col. 16:18–39 (claiming method step of “compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes”).

The specification defines “address” as “the place in the content at which the metacode is to exert its effect.” *Id.* at col. 4:19–20. The specification defines “addressing,” which is the step of forming an address, as “forming a unique identifier which defines the position of a metacode relative to the mapped content stream.” *Id.* at col. 4:40–42. In light of the claims and specification, the “address of use” is the address created by the “addressing” step within the “means for compiling” limitation.

The disclosed algorithms uniquely identify the metacodes in the metacode map through the character position of each metacode in the mapped content and the metacode's element number. *Id.* at col. 8:56–col. 10:12 (disclosing algorithm that builds meta code map by storing element number and character position for each metacode in the map); *id.* at col. 10:13–col. 11:40 (same); *id.* at col. 11:41–col. 13:17 (disclosing algorithm that builds a document by using the metacodes' element numbers and character positions to place the metacodes in the content). Nothing in the specification supports a construction of “address of use” that does not require unique identification of each metacode within the metacode map, which is consistent with the specification's use of “addressing.”

In the context of the '449 patent, the “address of use” is a unique identifier that defines the position within the content where the metacode is to exert its effect. Thus, “address[es] of use” means “a unique identifier which defines the position of a metacode relative to a mapped content stream and the place in the content at which the metacode is to exert its effect.”

### **Mapped Content and Metacode Map**

The asserted claims contain the terms “mapped content” and “map of metacodes” or “metacode map.” The terms present similar issues. i4i contends “mapped content” means “the content of a document corresponding to a metacode map.” Microsoft contends “mapped content” means “content with all metacodes separated out and stored in a corresponding metacode map.”

i4i contends “map of metacodes” and “metacode map” mean “a plurality of metacodes and their addresses of use corresponding to mapped content.” Microsoft contends the terms mean “a data structure containing each of the multiplicity of metacodes of the document and an address of use in mapped content where each metacode was or will be embedded.”

The parties' constructions raise the following issues: whether the constructions of mapped content and metacode map require the invention to separate all metacodes from the document to

form the metacode map; whether a metacode map is a data structure; and whether the construction of metacode map requires limiting the “address of use” to the location in mapped content where each metacode was or will be embedded.

#### Separation of Metacodes from Mapped Content

Claim 1 claims a “computer system . . . [that] produc[es] a first map of metacodes and their addresses of use in association with mapped content” that comprises four elements, none of which describe whether the claimed invention requires complete separation of the metacodes and mapped content. *Id.* at col. 15:35–49; *see also id.* at col. 16:18–38, col. 16:50–65.

Courts presume a difference in meaning and scope when a patentee uses different phrases in separate claims. *Phillips*, 415 F.3d at 1314–15. However, the doctrine of claim differentiation is not a “hard and fast rule,” and courts cannot use the doctrine to broaden claims beyond their correct scope, determined in light of the intrinsic record and relevant extrinsic evidence. *Seachange Int’l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005); *see also Phillips*, 415 F.3d at 1312–15.

Claim 2 claims the computer system in claim 1 that further comprises a “mapped content distinct storage means.” ‘449 Patent, col. 15:50–51. Claim 3 claims the computer system in claim 1 that further comprises a “raw content distinct storage means.” *Id.* at col. 15:52–53.

The parties dispute the constructions of “mapped content distinct storage means” and “raw content distinct storage means.” The specification discloses, and the parties agree at minimum, that the “mapped content storage means” is the place the computer system stores mapped content and the “raw content storage means” is the place the computer system stores raw content. *Id.* at col. 8:56–col. 10:12 (disclosing algorithm that stores content in raw content area); *id.* at col. 10:13–col. 11:40 (same); *id.* at col. 11:41–col. 13:17 (disclosing algorithm that reads raw content from raw



content area to build a document); *id.* at col. 13:26–31 (stating that system stores mapped content in and retrieves mapped content from the distinct mapped content storage); *id.* at col. 14:12–31 (same). Thus, “mapped content” and “raw content” are presumptively different types of content.

The specification states the claimed invention separates metacodes from the content of the document and stores the metacodes in a metacode map and the document content in the mapped content area. *Id.* at 4:3–10. The specification does not indicate whether the invention must separate all metacodes from the document content. Further, the specification does not require the claimed invention to remove metacodes from a document, which would alter the document, to build the metacode map

The specification differentiates between “mapped content” and “raw content” and states “[r]aw content is an extreme example of mapped content wherein the latter is totally unstructured and has no embedded metacodes in the data stream.” *Id.* at col. 4:10–13. This unclear sentence conveys that raw content is a subset of mapped content.

Each disclosed algorithm manipulates a document through a metacode map and the document’s “raw content,” where the “raw content” is unstructured and contains no embedded metacodes. *Id.* at col. 8:56–col. 10:12 (disclosing algorithm that decomposes document into “metacode map” and “raw content area”); *id.* at col. 10:13–col. 11:40 (disclosing algorithm that separates document data into “metacode map” entries or raw content stored in the “raw content area”); *id.* at col. 11:41–col. 13:17 (disclosing algorithm that builds a document from a “metacode map” and “raw content”). The figures and accompanying text do not describe the difference between “mapped content” and “raw content.” *See id.* at Figs. 2, 6, 7, 8, 9; *id.* at col. 13:17–col. 15:26. Thus, the specification implies “mapped content” is broader than “raw content,” and, in the context of the claims and specification, “mapped content” may include metacodes.

During prosecution, the applicant stated that the claimed invention extracts metacodes from an existing document and that the invention separates metacodes from the content. Microsoft's Claim Construction Brief, Ex. B, at FH0076, FH0078, FH0092, FH0119, and FH0134. The applicant's statements do not unequivocally disavow claim scope, as the statements do not require the invention to remove the metacodes and thereby alter a document and do not require the invention to separate all metacodes from the mapped content. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003)("[W]e have . . . consistently rejected prosecution statements too vague or ambiguous to qualify as a disavowal of claim scope . . . . Rather, we have required the alleged disavowing statements to be both so clear as to show reasonable clarity and deliberateness, and so unmistakable as to be unambiguous evidence of disclaimer.") (citations omitted).

In total, the intrinsic record does not rebut the presumption that "mapped content" and "raw content" have different meanings. Further, the intrinsic record indicates "raw content" is a subset of "mapped content," and "mapped content" does not need to be free of all metacodes.

#### Metacode Map as Data Structure

In the art of computer science, a "map" is type of data structure. The specification defines "metacode map" as a "multiplicity of metacodes and their addresses associated with mapped content." This definition relates to the data stored in the "metacode map" and does not alter the ordinary meaning of the term "map." Further, the specification discloses metacode maps that are data structures. *Id.* at col. 9:38–col. 10:11, col. 11:30–40, col. 12:9–18. Thus, a "map" is a type of data structure.

#### Where Each Metacode Was or Will Be Embedded

The specification defines a "metacode map" as a "multiplicity of metacodes and their addresses associated with mapped content." *Id.* at col. 4:17–19. The specification discloses

metacode maps as a multiplicity of metacodes and their addresses of use. *Id.* at col. 9:38–col. 10:11, col. 11:30–40, col. 12:9–18. Although the specification discloses algorithms that operate on metacode maps whose entries indicate the locations where the metacodes were or will be embedded in a document, the specification defines “metacode map” without this additional limitation. Thus, it is improper to limit the term. *Phillips*, 415 F.3d at 1323.

For the abovementioned reasons, “mapped content” means “the content of a document corresponding to a metacode map.” “Metacode map” and “map of metacodes” mean “a data structure that contains a plurality of metacodes and their addresses of use corresponding to a mapped content.”

#### **Metacode Map Distinct Storage Means, Mapped Content Distinct Storage Means, and Raw Content Distinct Storage Means**

The asserted claims contain the limitation “metacode map distinct storage means,” “mapped content distinct storage means,” and “raw content distinct storage means.”<sup>1</sup> The parties dispute whether 35 U.S.C. § 112 ¶ 6 governs the construction of these limitations.

The use of a the term “means” in a claim limitation raises a rebuttal presumption that the claim limitation is a means-plus-function limitation governed by 35 U.S.C. § 112 ¶ 6. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1361 (Fed. Cir. 2000). If the claim limitation recites sufficient structure to perform the recited function, the presumption has been overcome and 35 U.S.C. § 112 ¶ 6 does not govern the claim limitation. *Id.* Similarly, 35 U.S.C. § 112 ¶ 6 does not govern a claim limitation if the limitation does not sufficiently connect a “means” to a recited function. *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1574 (Fed. Cir. 1996); *Wenger Mfg., Inc. v. Coating Sys., Inc.*, 239 F.3d 1225, 1236 (Fed. Cir. 2001). Courts

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<sup>1</sup> The parties agree “metacode map distinct storage means,” “metacode storage means,” and “distinct map storage means” should be identically construed. The parties also agree “mapped content storage means” and “mapped content distinct storage means” should be identically construed.

evaluate whether a claim limitation falls within the ambit of 35 U.S.C. § 112 ¶ 6 from the perspective of one of ordinary skill in the art. *Apex Inc. v. Raritan Computer, Inc.*, 324 F.3d 1364, 1374 (Fed. Cir. 2003); *see also Phillips*, 415 F.3d at 1312–13.

The disputed claim limitations contain the term “storage,” which one of ordinary skill in the art would identify as a structural term. *See Centillion Data Sys., LLC v. Convergys Corp.*, 529 F. Supp. 2d 982, 993–95 (S.D. Ind. 2008) (relying on *Gemstar-TV Guide v. Int’l Trade Comm’n*, 383 F.3d 1352 (Fed. Cir. 2004) and holding “storage means for storing” was not a means-plus-function limitation). That the claim limitations include the term “distinct” does not place the limitations under 35 U.S.C. § 112 ¶ 6, as “distinct storage” merely describes the nature of the stored data and is not functional. Further, the specification confirms the structural nature of storage and only discloses storage as structural elements. *E.g.*, ‘449 Patent, Fig. 1; *id.* at col. 8:56–col. 10:12 (disclosing algorithm one step of which “create[s] storage space for raw content”); *id.* at col. 10:13–col. 11:40 (same).

i4i contends each “distinct storage” limitation means “a portion of memory for storing” the data, specifically the metacode map, mapped content, and raw content. Modifying Microsoft’s proposed construction in light of the Court’s holding that 35 U.S.C. § 112 ¶ 6 does not apply, Microsoft contends each “metacode map distinct storage” limitation is limited to separate files on a hard disk.<sup>2</sup>

#### Whether the Storage is Located on a Hard Disk

The ordinary meaning of “storage” does not limit the term to locations on a hard disk. The claims do not limit the terms to storage located on a hard disk. The specification discloses a

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<sup>2</sup> Microsoft contends that the term “raw content distinct storage means” is indefinite and alleges the specification did not disclose any clearly linked structure. As 35 U.S.C. § 112 ¶ 6 does not apply to the term, this is a moot issue.

“primary storage hard disk” as part of a computer system that could implement the claimed invention and only discloses metacode maps and mapped content located in “primary storage.” ‘449 Patent, col. 5:3–8; *id.* at Figs. 1, 2, 3, 4, 5, 6, 7, 8, 9,10. However, in accordance with the ordinary meaning, the specification also states that the computer system that could implement the claimed invention includes “working storage (RAM).” *Id.* at col. 5:3–8.

Microsoft claims the applicants made statements during prosecution of the ‘449 Patent that require the storage to be on a primary hard disk. An applicant’s statements in the prosecution history act to disavow claim scope where the statements “show reasonable clarity and deliberateness, and [are] so unmistakable as to be unambiguous evidence of disclaimer.” *Omega Eng’g*, 334 F.3d at 1324. Courts will not disavow claim scope where the statements are vague or ambiguous. *Id.*

The applicants, in an attempt to transverse a 35 U.S.C. § 102(e) rejection in light of U.S. Pat. No. 5,587,902 (the “Kugimiya Patent”), distinguished their invention from the Kugimiya Patent on the basis that the applicants’ invention created a “persistent (i.e., non-temporary)” metacode map while the “Kugimiya [Patent] . . . does not do anything with the [metacodes] except set them aside temporarily whilst doing other processing.” Microsoft’s Claim Construction Brief, Ex. B, at FH0119, FH0122–FH0123, FH0129, FH0133. In particular, the applicants argued:

In [the] Kugimiya [Patent], a document written in one language, say English, and having [metacodes] embedded therein is processed as follows:

First the tags are extracted and kept temporarily for later re-insertion into the [] translated version of the document.

Then the document (without the [metacodes]) is translated into another language, say Japanese.

Finally, the [metacodes] are re-inserted into the translated version of the document. . . .

[The] Kugimiya [Patent] does nothing else with the extracted [metacodes], and so [the] Kugimiya [Patent] has no reason to and does not keep the tags around after they have been re-inserted into the translated document.

*Id.* at Ex. B, at FH0121–FH0122.

Microsoft contends these statements require storage of the metacode map and mapped content on a hard disk.

The applicants' distinguished their invention on the basis that the Kugimiya Patent stored the metacodes only until the translation process completed. Thus, the "persistent (i.e. non-temporary)" metacode map in the claimed invention is a metacode map that exists independent of the execution of the software processes that manipulate a document or its component parts. The applicants did not limit their invention on the basis that it stored metacodes on a hard disk and it would be improper to limit either the metacode map or mapped content storage to memory locations on a hard disk. The intrinsic evidence, as a whole, does not limit the "storage" terms to locations on a hard disk.

#### Whether Metacode Map Distinct Storage Requires a Separate File for the Metacode Map

The claims employ the term "distinct storage." Microsoft contends the specification and statements the applicants made during prosecution of the '449 Patent compel a construction of "distinct" that requires the invention to store the metacode map in a separate file from the mapped content.

The specification states the claimed invention provides the ability to change the structure of a document independently from the document's content and allows individuals to modify a document's structure when they may not be allowed to modify the document's content. '449 Patent, Abstract, col. 7:6–10. Similarly, the specification depicts mapped content and the metacode map as separate "boxes" within primary storage. *Id.* at Figs. 2, 6, 7, 8, 9; *id.* at col. 13:17–31, col. 13:66–col. 15:6. However, the disclosed algorithms create and store the metacode map and mapped content in "storage space" and do not require separate files for the metacode map and the mapped content. *See id.* at col. 9:14–col. 13:16.

Microsoft argues the applicants' made statements during prosecution of the '449 Patent that compel a construction of "distinct" that requires the invention to store the metacode map in a separate file from the mapped content. An applicant's statements in the prosecution history act to disavow claim scope where the statements "show reasonable clarity and deliberateness, and [are] so unmistakable as to be unambiguous evidence of disclaimer." *Omega Eng'g*, 334 F.3d at 1324. Courts will not disavow claim scope where the statements are vague or ambiguous. *Id.*

During prosecution of the '449 Patent, the Examiner rejected most of the applicants' claims under 35 U.S.C. § 103 in light of U.S. Pat. No. 5,404,435 (the "Rosenbaum Patent"). Microsoft's Claim Construction Brief, Ex. B, at FH0066. The Examiner stated "[s]torage is always distinct, even if at distinct addresses." *Id.*

In response to the rejection, the applicants generally described the claimed invention. In particular, the applicants stated:

In the presently claimed invention, the architecture of a document can be treated as a separate entity from the content of the document. Thus, the architecture of the document can be treated as an entity having distinct storage from the content of the document. This separation allows distinct processes to operate on the content and the architecture, with or without knowledge of the other. In other words, using the present invention, one could change the architecture (layout, structure, or presentation format) of a document without even having access to the actual content of the document. This is achieved by extracting metacodes from an existing document and creating a map of the location of the metacodes in the document and then storing the map and the content of the document separately.

*Id.* at Ex. B, at FH0076.

The Examiner subsequently rejected all of the applicants' claims in light of U.S. Pat. No. 5,280,574 (the "Mizuta Patent"). *Id.* at Ex. B, at FH0083. The applicants responded to the Examiner and argued the Mizuta Patent disclosed "meta-information" but does not disclose metacodes, as the "Mizuta[] [Patent's] meta-information has nothing to do with instructions" and the Mizuta Patent "defines meta-information as 'items such as the person and date of the generation

of the original document.” *Id.* at Ex. B, at FH0095–FH0096 (quoting Mizuta Patent, col. 6:27–29). Thus, the applicants concluded “[t]his meta-information is clearly not an instruction of any sort, let alone one which controls the interpretation of the content of the data.” Microsoft’s Claim Construction Brief, Ex. B, at FH0096.

The applicants further argued the Mizuta Patent discloses a document file that includes a matter part, a form part, and an arrangement fashion storage area and that “[n]otably, in [the] Mizuta [Patent] all document information is stored in one file -- the document file.” *Id.* Finally, the applicants noted the Mizuta Patent “lacks any notion of a metacode map, let alone such a map in a ‘metacode distinct storage means,’ as presently taught and claimed.” *Id.*

The applicants’ statements do not unambiguously limit the storage of the metacode map and mapped content to different files. The statements merely note that the Mizuta Patent stores the document information in the document file, but does not state that claimed invention stores the metacode map and the mapped content in two separate files. In total, the statements, in light of the specification, require the claimed computer system or method to differentiate between the stored metacode map and mapped content. In such a situation, different processes and users could edit the metacode map and mapped content independently and without access to both the metacode map and the mapped content. Whether the computer system or method requires the metacode map and mapped content to be stored in separate files depends on a computer’s operating system and how a program interfaces with the operating system to access and store data.

Thus, for the abovementioned reasons, “metacode map distinct storage means,” means “a portion of memory for storing a metacode map,” “mapped content distinct storage means,” means “a portion of memory for storing mapped content,” and “raw content distinct storage means” means “a portion of memory for storing raw content.”



### Means for Providing a Menu of Metacodes to Said Metacode Storage Means

Claim 1 contains the limitation “means for providing a menu of metacodes to said metacode storage means.” The parties agree 35 U.S.C. § 112 ¶ 6 governs the limitation’s construction and agree the recited function is “providing a menu of metacodes to said metacode storage means.” Microsoft contends the claim limitation is indefinite and renders claims 1 through 13 invalid. i4i contends the specification discloses two structures that perform the recited function: (1) software of box 14 and the Processing System 12 (Figs. 1 and 2) that associates the menu of metacodes in box 14 with the metacode map in box 20, and equivalents thereof; and (2) software of box 58 and the software of Processing System 56 (Fig. 3) that associates the menu of metacodes in box 58 with the metacode map in box 66, and equivalents thereof.

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.*

“In a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). Disclosure of a general purpose computer without a corresponding algorithm renders the means-plus-function claim indefinite. *Aristocrat Techs. Austral. Pty Ltd. v. Int’l Game Tech.*, — F.3d —, 2008 WL 819764, at \*4 (Fed. Cir. Mar. 28, 2008).

So long as the disclosure defines structure to render the bounds of the claim understandable to one of ordinary skill in the art, the specification need not disclose a specific formula or mathematical equation, and text or a flowchart may sufficiently disclose an algorithm. *AllVoice Computing PLC v. Nuance Comm’cns, Inc.*, 504 F.3d 1236, 1245 (Fed. Cir. 2007); *see also WMS Gaming*, 184 F.3d at 1347–49; *In re Freeman*, 573 F.2d 1237, 1245–46 (C.C.P.A. 1978) (discussing “algorithm” in the context of 35 U.S.C. § 101). However, if the specification merely states a computer or microprocessor performs the claimed function, the specification does not disclose adequate structure and the claim is indefinite. *Aristocrat Techs.*, 2008 WL 819764, at \*5 (holding claim indefinite, as the specification did not disclose sufficient structure where disclosure stated one of ordinary skill in the art could program a computer with “appropriate programming” to perform a “control means” function); *Fisinar Corp. v. The DirecTV Group, Inc.*, 416 F. Supp. 2d 512, 518 (E.D. Tex. 2006) (Clark, J.) (holding claim that included “database editing means . . . for generating

. . . and embedding . . .” limitation was indefinite where the specification merely restated that software performed the recited function); *Gobelli Research Ltd. v. Apple Computer, Inc.*, 384 F. Supp. 2d 1016, 1022–23 (E.D. Tex. 2005) (Ward, J.) (holding claim indefinite where patentee’s proposed structure of “a microprocessor running a procedure call that sets aside resources, such as a memory area” did not set forth an algorithm for performing the claimed “reallocating processing resources as a function of task priority” function); *see also Biomedino LLC v. Waters Techs., Inc.*, 490 F.3d 946, 953 (Fed. Cir. 2007) (holding that claim that included “control means for automatically operating said valving” limitation was indefinite, as the specification merely disclosed a diagram with a box labeled “control” and a stated the invention “may be controlled automatically by known differential pressure, valving and control equipment”). Similarly, the specification does not disclose sufficient structure if it simply describes the outcome of the claimed function and does not disclose a computer programmed to execute a particular algorithm. *Aristocrat Techs.*, 2008 WL 819764, at \*6.

Whether a computer or another structure implements the function of a means-plus-function limitation, the definiteness inquiry focuses on what one of ordinary skill in the art would understand the patent discloses. *AllVoice*, 504 F.3d at 1240. Courts consider an inexhaustive list of factors to determine the level of ordinary skill in the art. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). These factors include: (1) the inventor’s educational level; (2) the types of problems encountered in the art; (3) prior art solutions to those problems; (4) rapid pace of innovation; (5) technological sophistication; and (6) educational level of active workers in the field. *Id.* Regardless of the level of skill of an ordinarily skilled artisan, “[t]he inquiry is whether one of skill in the art would understand the specification itself to disclose a structure, not simply whether that person would be capable of implementing a structure.” *Aristocrat Techs.*, 2007 WL 819764,

at \*7 (quoting *Biomedino*, 490 F.3d at 953).

i4i contends one of ordinary skill in the art of the ‘449 Patent would have Bachelor’s of Science degree in computer science or electrical engineering with an emphasis on computer systems in addition to two to three years programming experience. Microsoft does not propose an alternate level of ordinary skill in the art. The Court adopts i4i’s proposed level of skill in the art, as Microsoft does not propose its own level of skill in the art, and i4i’s assertion is consistent with the level of skill courts have found in software patent disputes. *See AllVoice*, 504 F.3d at 1241 (citing cases).

i4i submitted an expert declaration from Dr. Thomas Payne. In his declaration, Dr. Payne concludes the following portion of the specification discloses an algorithm for “providing a menu of said metacodes to said metacode storage means”:

In a further aspect the invention provides a method for producing a first map of metacodes and their addresses of use in association with mapped content and stored in distinct map storage means; said method comprising providing the mapped content to mapped content storage means; *providing a menu of metacodes*; and compiling a map of the metacodes in the distinct storage means.

The method, optionally, further comprises *detecting and locating a multiplicity of metacodes constituting the menu in a document; storing the multiplicity of metacodes, in whole or in part, in the distinct storage means*; detecting and locating mapped content in the document; and storing the mapped content, in whole or in part, in the mapped content storage means.

‘449 Patent, col. 5:36–51 (emphasis added).

Dr. Payne finds the text in connection to Fig. 7 sufficiently describes the claimed menu of metacodes to one of ordinary skill in the art. i4i’s Response Brief in Opposition to Microsoft’s Motion for Partial Summary Judgment, Ex. 1, at 5. The referenced portion of the specification states “[t]he processing system, represented by Box 134, produces a menu of metacodes to select from using the instructions provided in Box 136.” ‘449 Patent, col. 14:18–20. Dr. Payne also finds that

one of ordinary skill in the art, after a review of Figs. 1 and 2 and the specification text, would recognize the “association of the menu structure with the metacode map storage . . . is accomplished by providing the menu in memory and linking the address of the menu to the address of the metacode map through the use of pointers, i.e., through software addresses.” i4i’s Response Brief in Opposition to Microsoft’s Motion for Partial Summary Judgment, Ex. 1, at 6. In light of these findings, Dr. Payne concludes i4i’s proposed construction is correct, and that software located in the various boxes of Figs. 1, 2, and 3 and the associated processing systems are the structures that provide a menu of metacodes to the metacode storage means. *Id.*

Microsoft has shown by clear and convincing evidence that the term “means for providing a menu of metacodes to said metacode storage means” is indefinite. The portions of the specification Dr. Payne relies on simply restate that the invention includes a “means for providing a menu of metacodes to said metacode storage means” and explain that the processing system produces the menu of metacodes using instructions inside the processing system.

The diagrams and the accompanying text do not disclose an algorithm and merely restate the claimed function. Figs. 1, 2, and 3 each contain a box labeled “means for providing a menu of metacodes.” ‘449 Patent, Fig. 1, 2, 3. The text that describes these figures is equally functional and states “a processing system . . . generates a menu of metacodes through the instructions for providing a menu of metacodes shown as [boxes labeled “means for providing a menu of metacodes].” *Id.* at col. 13:19–21.

In total, the specification does not disclose any algorithm, as it merely states that a computer programmed to “provid[e] a menu of metacodes to said metacode storage means” is capable of “providing a menu of metacodes to said metacode storage means.” *See Aristocrat Techs.*, 2008 WL 819764, at \*5. The statement that “instructions” perform the recited function does not disclose any

algorithm. *See id.* Further, that one of ordinary skill in the art could create an algorithm to “provid[e] a menu of metacodes to the said metacode distinct storage means” is not the inquiry, as the specification does not disclose any algorithm. *Id.* at \*8; *Biomedino*, 490 F.3d at 953. Thus, the limitation “means for providing a menu of said metacodes to the said metacode storage means” is indefinite and claim 1 is invalid, as are all claims that depend on claim 1.

**Means for Compiling Said Metacodes of the Menu by Locating, Detecting, and Addressing the Metacodes in the Document to Constitute the Map and Storing the Map in the Metacode Storage Means**

**Means for Resolving the Content and the Metacode Map into the Document  
Means for Comparing the Multiplicity of Metacodes in the Map with a Predetermined Set of Criteria**

**Means for Amending the First Map to Produce a Second Map**

**Means for Providing a Multiplicity of Maps in Association with a Mapped Single Content**

**Means for Amending a Plurality of Maps in Consequence of an Amendment of Mapped Content**

**Means for Amending a First Plurality of Maps to Produce a Second Plurality of Amended Maps in a Plurality of Distinct Storage Means**

These limitations only appear in claim 1, which is invalid for indefiniteness, and/or claims that depend on claim 1, which are likewise invalid. Thus, the Court will not address the construction of these limitations.

**Description Code**

Claims 13 and 17 contain the term “description code.”<sup>3</sup> i4i contends a “description code” is “a metacode whose content describes the meaning of a metacode limitation.” Microsoft contends “descriptive code” means “metacode that contains a word [or phrase] describing the instruction provided by the metacode.”

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<sup>3</sup> While claim 13 is invalid under 35 U.S.C. 112 § 2, “description code” also appears in claim 17. Thus, the Court will address the construction of “description code.”

In the context of the ‘449 Patent, a “description code” is a metacode that includes a description of the metacode’s instruction. The intrinsic evidence does not limit the grammatical structure of the descriptive code. As such, it would be improper to limit the “descriptive code” to a phrase. Further, inclusion of the term “content,” which has a particular meaning in the context of “mapped content” and “raw content,” may confuse the jury. Thus, “description code” means “a metacode that includes a description of the instruction provided by the metacode.”

### **Compiling a Map of the Metacodes in the Distinct Storage Means, by Locating, Detecting and Addressing the Metacodes**

Claim 14 contains the term “compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes.” i4i contends the limitation means “creating a map of the metacodes and storing it in a portion of memory by identifying each metacode in the document, finding the position of the metacode relative to the content stream, and forming an address that defines the position in the content at which the metacode is to exert its effect.” Microsoft contends the limitation means “detecting all metacodes embedded in a content stream, separating the metacodes out from the content stream, and persistently storing the metacodes along with data identifying the place where each metacode was embedded in the content stream separately and distinctly from the mapped content so that the metacode map can be edited directly without having access to the mapped content.”

The parties’ constructions raise similar issues as the constructions of “address[es] of use,” “metacode map,” “mapped content,” and the “distinct storage means” terms. Thus, the issues that remain deal with the construction of “compiling . . . in the [metacode map] distinct storage means”<sup>4</sup> and the construction of “locating, detecting, and addressing” the metacodes.

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<sup>4</sup> The “distinct storage means” referenced this limitation in claim 14 is the “distinct map storage means” recited in the preamble of the claim. *Id.* at col. 16:17–38.

A patentee may define terms in the specification. *Phillips*, 415 F.3d at 1316. The specification describes the step of “compiling” as “locating, detecting and addressing the metacodes to constitute the map and storing the map in the metacode storage means.” *Id.* at col. 4:26–36 (describing similar limitation in claim 1). Thus, the compiling step creates the map and then stores the map in metacode map storage means.

The specification also defines “locating,” “detecting,” and “addressing.” “Locating” means “finding the position of a metacode in and relative to an input content stream.” *Id.* at col. 4:38–40. “Detecting” means “recognizing, identifying or differentiating a metacode from content.” *Id.* at col. 4:37–38. As stated above, “addressing” means forming an address of use, in particular forming a unique identifier which defines the position of a metacode relative to the mapped content stream and the place in the content at which the metacode is to exert its effect. *See id.* at col. 4:40–42.

In light of the intrinsic evidence and the constructions of “address[es] of use,” “metacode map,” “mapped content,” and the “distinct storage means” terms, “compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes” means “creating and storing a map of metacodes in the distinct storage means by: finding the positions of the metacodes in and relative to an input content stream; recognizing, identifying or differentiating the metacodes from content; and forming unique identifiers which define the positions of the metacodes relative to the mapped content stream and the places in the content at which the metacodes are to exert their effect.”

### **Providing the Document as the Content of the Document and [Separately From] the Metacode Map of the Document**

Claim 14 contains the term “providing the document as the content of the document and the metacode map of the document.” *Id.* contains the limitation means “resolving the content and the metacode map into a single composite document, or providing the document as two separate discrete



elements, i.e., mapped content and a metacode map.” Microsoft contends the limitation means “providing the document as the separately and distinctly stored metacode map and mapped content, so that each of the metacode map or the mapped content can be edited directly without accessing the other.” Claim 20 contains a similar limitation and claims a method step of “providing the document as the content of the document separately from the metacode map of the document.” i4i contends this limitation means “providing the document as two discrete elements, i.e., mapped content and metacode map.” Microsoft proposes an identical construction to its proposed construction of the limitation in claim 14. The parties agree, and the language of claim 20 dictates, that the “providing the document as the content of the document separately from the metacode map of the document” requires separately providing the content and metacode map.

Courts presume a difference in meaning and scope when a patentee uses different phrases in separate claims. *Phillips*, 415 F.3d at 1314–15. However, the doctrine of claim differentiation is not a “hard and fast rule,” and courts cannot use the doctrine to broaden claims beyond their correct scope, determined in light of the intrinsic record and relevant extrinsic evidence. *Seachange*, 413 F.3d at 1369; *see also Phillips*, 415 F.3d at 1312–15. Thus, it is presumed “providing the document as the content of the document and the metacode map of the document” is not limited to separately providing the metacode map and mapped content.

The specification supports the presumption that the “providing” step in claim 14 is not limited to providing the metacode map and mapped content as separate entities that can be edited directly without accessing the other. In particular, the specification discloses an embodiment where the invention provides a combined document. ‘449 Patent, col. 7:66–8:7 (“The third [implementation of the invention] is building a combined view from the constituent parts, which is necessary because interaction with the document may be done as a visual whole rather than in its

constituent parts.”); *id.* at col. 11:41–col. 13:16 (disclosing algorithm that builds document by combining metacode map with mapped content).

During prosecution, the Examiner rejected prior versions of claims 14 and 20 as anticipated by the Kugimiya Patent under 35 U.S.C. § 102(e). Microsoft’s Claim Construction Brief, Ex. B, at FH0108. The applicants subsequently amended claims 14 and 20 and added the “providing” limitations “to clarify that, according to an aspect of this invention, a document is provided as ‘the content of the document and the metacode map of the document.’” *Id.* at Ex. B, at FH0119. The applicants argued:

[The] Kugimiya [Patent] does not, as in the present invention, treat a document as being “content and a metacode map which describes it.” And so [the] Kugimiya [Patent] does not teach or in any way suggest, as claimed, “providing the document as the content of the document and the metacode map of the document.”

*Id.* at Ex. B, at FH0122 (emphasis in original).

The prosecution history does not support Microsoft’s construction. The applicants’ statements during prosecution merely repeat the claim language added to claim 14. The statements, in addition to the specification, do not alter, and do not purport to alter, the clear claim language which does not limit the “providing the document” step in claim 14 to providing the document as the separately and distinctly stored metacode map and content. Thus, “providing the document as the content of the document and the metacode map of the document” is not limited to providing the content and metacode map as separate entities that can be edited directly without accessing the other, and the “providing the document” step in claim 14 allows the method to provide the document as a composite document or separately as the metacode map and mapped content.

The parties also dispute whether the “providing the document” step in claim 14 allows the method to “resolv[e] . . . or provid[e]” depending on the structure of the provided data. There is no support for i4i’s contention that the “providing the document” step in claim 14 “resolv[es] the

content and the metacode map into a single composite document” if the method provides the composite document or “provid[es] the document as two separate discrete elements, i.e., mapped content and a metacode map” if the method provides the content and metacode map separately. The ordinary meaning of “provide” is akin to “supply,” “deliver,” or “furnish” and is different than manipulation or “resolving” of data to create the provided data.

The specification discloses an algorithm that, from an existing document, creates content and a metacode map. *Id.* at col. 8:56–col. 10:12. The specification also discloses an algorithm that, from existing content and a metacode map, creates a composite document. *Id.* at col. 11:41–col. 13:17. Neither algorithm includes steps that provide the resulting data, whether the composite document or the separated metacode map and content, and the specification does not indicate the “providing the document” step requires execution of either algorithm. Thus, the specification does not alter the ordinary meaning of “providing” and implies the creation of the provided data is different than providing the data, whether the method provides a document as a composite document or as a separate metacode map and content. Therefore, in the context of the ‘449 Patent, “providing the document” does not mean manipulating or “resolving” data to create the document to be provided.

For the abovementioned reasons, “providing the document as the content of the document and the metacode map of the document” means “providing the document as a single composite document or providing the document as two separate discrete elements, specifically the content of the document and a metacode map of the document” and “providing the document as the content of the document separately from the metacode map of the document” means “providing the document as two separate discrete elements, specifically the content of the document and a metacode map of the document.”

**CONCLUSION**

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table as Appendix B. The claims with the disputed terms in bold are set forth in Appendix A. The Court **GRANTS** Microsoft's Motion for Partial Summary Judgment of Invalidity of Claims 1–13 of the '449 Patent for Indefiniteness Under 35 U.S.C. § 112 ¶ 2 (Docket. No. 83).

**So ORDERED and SIGNED this 10th day of April, 2008.**

A handwritten signature in black ink, appearing to read "Leonard Davis", written over a horizontal line.

**LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE**

APPENDIX A

U.S. Pat. No. 5,787,449

1. A computer system for the manipulation of the architecture and content of a document having a plurality of **metacodes** and content by producing a first **map of metacodes** and **their addresses of use** in association with **mapped content**; said system comprising:  
**metacode map distinct storage means**;  
**means for providing a menu of metacodes to said metacode storage means**;  
and **means for compiling said metacodes of the menu by locating, detecting and addressing the metacodes in the document to constitute the map and storing the map in the metacode storage means**; and  
means for resolving the content and the metacode map into the document.
2. A system as claimed in claim 1 further comprising **mapped content distinct storage means**.
3. A system as claimed in claim 1 further comprising **raw content distinct storage means**.
5. A system as claimed in claim 1 further comprising **means for comparing the multiplicity of metacodes in the map with a predetermined set of criteria**.
6. A system as claimed in claim 1 further comprising **means for amending the first map to produce a second map**.
9. A system as claimed in claim 1 further comprising **means for providing a multiplicity of maps in association with a mapped single content**.
10. A system as claimed in claim 1 further comprising **means for amending a plurality of maps in consequence of an amendment of mapped content**.
12. A system as claimed in claim 1 comprising **means for amending a first plurality of maps to produce a second plurality of amended maps in a plurality of distinct storage means**.
13. A system as claimed in claim 1 wherein **metacode** is a **description code**.
14. A method for producing a first **map of metacodes** and their **addresses of use** in association with **mapped content** and stored in **distinct map storage means**, the method comprising:  
providing the **mapped content** to **mapped content storage means**;  
providing a menu of **metacodes**; and  
**compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes**; and  
**providing the document as the content of the document and the metacode map of the document**.
15. A method as claimed in claim 14 further comprising:  
detecting and locating a multiplicity of **metacodes** constituting the menu in a document;  
storing the multiplicity of **metacodes**, in whole or in part, in the **distinct storage means**;  
detecting and locating **mapped content** in the document;  
and storing the **mapped content**, in whole or in part, in the **mapped content storage means**.
16. A method as claimed in claim 15 further comprising amending the multiplicity of the **metacodes** to produce a second **map**.
17. A method as claimed in claim 16 wherein **metacode** is a **description code**.
18. A method as claimed in claim 14 further comprising comparing the multiplicity of **metacodes** in the **map** with a predetermined set of criteria.

20. A method for producing from a document made up of **metacodes** and content, a **map of metacodes** and their **addresses of use** in association with **mapped content** of the document and stored in **distinct map storage means**, the method comprising:

- (a) reading the content of the document until a **metacode** is found;
- (b) copying the content and storing the copied content in a mapped content storage;
- (c) noting in the map the found **metacode** and its position in the content;
- (d) repeating the processing of (a)-(c) until the entire document has been processed; and then
- (e) **providing the document as the content of the document separately from the metacode map of the document.**

## APPENDIX B

Ref. Nos.	Term or Phrase to be Construed (Claims)	Court's Construction
1	metacode[s]  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20)	an individual instruction which controls the interpretation of the content of the data
2	address[es] of use  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20)	a unique identifier which defines the position of a metacode relative to a mapped content stream and the place in the content at which the metacode is to exert its effect
3	mapped content  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20)	the content of a document corresponding to a metacode map
4	map of metacodes / metacode map  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20)	a data structure that contains a plurality of metacodes and their addresses of use corresponding to a mapped content
5	metacode map distinct storage means / metacode storage means / distinct map storage means  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20)	a portion of memory for storing a metacode map
6	mapped content distinct storage means / mapped content storage means  (claims 2, 14, 15, 16, 17, 18)	a portion of memory for storing mapped content
7	raw content distinct storage means  (claim 3)	a portion of memory for storing raw content
8	means for providing a menu of metacodes to said metacode storage means  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13)	Function: providing a menu of metacodes to said metacode storage means (AGREED)  Structure: indefinite
9	means for compiling said metacodes of the menu by locating, detecting and addressing the metacodes in the document to constitute the map and storing the map in the metacode storage means  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>
10	means for resolving the content and the metacode map into the document  (claims 1, 2, 3, 5, 6, 9, 10, 12, 13)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>

Ref. Nos.	Term or Phrase to be Construed (Claims)	Court's Construction
11	means for comparing the multiplicity of metacodes in the map with a predetermined set of criteria  (claim 5)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>
12	means for amending the first map to produce a second map  (claim 6)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>
13	means for providing a multiplicity of maps in association with a mapped single content  (claim 9)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>
14	means for amending a plurality of maps in consequence of an amendment of mapped content  (claim 10)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>
15	means for amending a first plurality of maps to produce a second plurality of amended maps in a plurality of distinct storage means  (claim 12)	<i>Construction moot in light of "means for providing a menu of metacodes to said metacode storage means"</i>
16	description code  (claims 13, 17)	a metacode that includes a description of the instruction provided by the metacode
17	compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes  (claims 14, 15, 16, 17, 18)	creating and storing a map of metacodes in the distinct storage means by: finding the positions of the metacodes in and relative to an input content stream; recognizing, identifying or differentiating the metacodes from content; and forming unique identifiers which define the positions of the metacodes relative to the mapped content stream and the places in the content at which the metacodes are to exert their effect
18	providing the document as the content of the document and the metacode map of the document  (claims 14, 15, 16, 17, 18)	providing the document as a single composite document or providing the document as two separate discrete elements, specifically the content of the document and a metacode map of the document
19	providing the document as the content of the document separately from the metacode map of the document  (claim 20)	providing the document as two separate discrete elements, specifically the content of the document and a metacode map of the document