Appendix D – Part 2

Defendants' Supplemental Prior Art Statement
'592 Patent
(TC948-TC1087)

to

TimeBase's Memorandum in Support of Its Motion for Summary Judgment of No Invalidity

Prior Art Analysis

- **Horne 1997:**

  Horne 1997 discloses "said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM)." Specifically, Horne 1997 discloses encoding test-based data using DTDs. For example:

  - *See, e.g.*, "A 'language' (or rather, 'Document Type Description', or 'DTD') with a somewhat more sophisticated grammar is used by HMSO to markup the text of these documents," at 2.

- **Lo 1996:**

  Lo 1996 discloses "wherein said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM)." Specifically, Lo 1996 discloses the use of SGML, and the use of DTDs is inherent when SGML is used. For example:

  - *See generally* section 1.4, beginning on page 12, entitled "Standard Generalized Markup Language."
  - *See generally* section 2.3, beginning on page 38, entitled "SGML Support."
  - *See, e.g.*, "For each document, there is a set of rules, known as the *Document Type Definition* (DTD) to specify the definitions of all the elements within," at 38.

- **Promenschenkel 1995:**

  Promenschenkel 1995 discloses "said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM)." Specifically, Promenschenkel 1995 discloses encoding test-based data using DTDs. For example:

  - *See, e.g.*, "The system creates a finished document through use of a Document Type Definition (DTD)," at 2.

- **Sacks-Davis 1994:**

  Sacks-Davis 1994 discloses "said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM)." Specifically, Sacks-Davis 1994 discloses encoding test-based data using DTDs. For example:

  - *See, e.g.*, "Each document consists of a declaration describing the character set and the available facilities; a DTD (or document type definition), that contains a grammar to which the document must conform; and the tagged text itself," at THOM00198836.

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- **Travis & Waldt:**

  Travis & Waldt discloses "said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM)." Specifically, Travis & Waldt discloses encoding test-based data using DTD. For example:

  - *Passim*, especially Chapter 11.

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "wherein said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM)." Specifically, Wilkinson 1998 discloses the use of SGML, and the use of DTDs is inherent when SGML is used. For example:

  - *See generally* section 2.4.6, beginning on page 28 (entitled "SGML").

- **The Astoria System (pre-1997):**

  The Astoria System uses DTD documents. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria can import any document structure, including arbitrary DTDs . . . ," at THOM00211910.
  - *See, e.g.*, XSoft Astoria: "Another feature of the version control system is in its ability to define 'editions,' which are views of a document structure as they existed at a particular moment in time. Editions work across the document hierarchy, and can include objects that have different ancestors, and even different DTDs," at THOM00198652.
  - *See, e.g.*, XSoft: "Adding documents and DTDs to the system does not require specially mapping, tool-building, or modification to the documents or the DTDs. Astoria can accept arbitrary DTDs . . . ," at THOM00198648.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system uses a DTD to store its text-based data. For example:

  - *See, e.g.*, Arnold-Moore 1997-2, text following the heading: "Encoding Structure in *Themis*," at 177.

- **The Documentum/Interleaf System:**

  The Documentum/Interleaf system facilitates SGML & the related DTDs, and their equivalents. For example:

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• Interleaf allows users to utilize DTDs. *See, e.g.*, Consleg 1996, "The operator can select a text zone within a given structure and convert it to a structure that is allowed in the context of a DTD," at 301. • Documentum allows the use of DTDs. *See, e.g.*, Ovum Documentum 1996, "Similarly, Documentum can be integrated with SGML parsers for importing SGML documents: using the parser, a large SGML document is turned into a set of compound documents, based on the internal document structure defined by the Document Type Definition," at 212.
Claim 8: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 8:
wherein said linking means comprises any piece of information additional to the body of the text-based data. • **Agosti 1991:** Agosti 1991 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Agosti 1991 discloses links comprising auxiliary data to the stored text-based data. For example: • *See, e.g.*, "The representation of an object at this level is made by means of: connections to documents which are related to it…connections to the auxiliary data items," at 318. • *See, e.g.*, "The model supports navigation between the two levels by means of the navigability function. In this way it is at all times possible to pass from the hyperdocument to the hyperconcept and back again," at 320. • *See, e.g.*, "By clicking the mouse button the object pointed is activated, i.e. the system receives the order to move in the direction indicated and to present the pertaining information or to execute the requisite function," at 322. • *See, e.g.*, "It is possible to shift directly from any point in the hypertext network to other hyperdocuments by making use of the links existing between them," at 322. • *See, e.g.*, "The nodes included within the single documents contains a function which allows all the links which bind that single document to the others to be displayed," at 323. • **Arnold-Moore 1994:** Arnold-Moore 1994 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Arnold-Moore 1994

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discloses links that are either part of the text, or separate from the text-based data. For example:

- *See, e.g.*, "Within a versioned hypertext, two kinds of links are possible: 1. static links – which refer to a specific version or part of a version; 2. dynamic links – which refer to the latest version or part or, more generally, to the version at a corresponding time," at *xx*.

- *See, e.g.*, "Whether links should be in-line (appearing explicitly in the text) or stored in a separate link table seems dependent on the intended application," at *xx*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Arnold-Moore 1994-2 discloses links to other stored text-based data. For example:

  - *See, e.g.*, "This information is explored by browsing, rather than querying, however we may view the traversal of a link as another kind of query," at THOM00196608.

  - *See, e.g.*, "Finally, we will certainly wish to follow any hypertext links that are provided," at THOM00196608.

  - *See, e.g.*, "When versioning hypertext, links can either be static or dynamic. In order to support static links to elements we require an absolute identifier for each ELF," at THOM00196611.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Arnold-Moore 1997-2 discloses cross references, unique identification codes, and markup allowing departure and destination points. For example:

  - *See, e.g.*, "The *Themis* system uses SGML tags to identify both internal and external cross references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference. . . . These tags—in combination with an SGML display which supports hypertext—allow users to navigate from the text of the reference (See Figure 3) to the fragment which contains the element to which the reference refers (See Figure 5). The identifier from the source tag is used to construct a query which retrieves the appropriate fragment from the database," at 179 (text following the heading "Cross References").

- **Bachman 1973:**

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Bachman 1973 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Bachman 1973 discloses links to other stored text-based data. For example:

- *See, e.g.*, "In sequential file technology, search techniques are well established. Start with the value of the primary data key, of the record of interest, and pass each record in the file through core memory until the desired record, or one with a higher key, is found. (A primary data key is a field within a record which makes that a record unique within the file.) Social security numbers, purchase order numbers, insurance policy numbers, bank account numbers are all primary data keys. Almost without exception, they are synthetic attributes specifically designed and created for the purpose of uniqueness," at 654.

- *See, e.g.*, "He can enter the database with a database key that provides direct access to the physical location of a record," at 656.

- **Campbell 1988:**

Campbell 1988 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Campbell 1988 discloses links comprising notes or other stored statutes. For example:

- *See, e.g.*, "Nodes are related by links. A link defines a relationship between a source node and a destination node and can be followed in either direction. A cross-context link relates two nodes in different contexts and is useful for sharing data between two contexts. The generality provided by link attributes allows application writers to define their own notions of link types or link end-point attachment schemes," at 857.

- *See, e.g.*, "Guide uses buttons – special areas on a screen – to represent links in a document between the information the screen and related information. When a button is selected, by clicking the mouse, Guide follows the link to display the related information. Replacement buttons replace the button icon displayed on the screen with the information associated with that button," at 858.

- *See, e.g.*, "The various button relationships are modeled as links," at 858.

- *See, e.g.*, "Figure 2 shows an example of a note button. The Document Browser contains the text being examined; the icon within the browser represents the note button. The Note Browser contains the note associated with the note button," at 858.

- *See, e.g.*, "Therefore, the other end of the link representing the button can point to the entire node that contains the button's information," at 858.

- **Horne 1997:**

Horne 1997 discloses "said linking means comprises any piece of information additional

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to the body of the text-based data." Specifically, Horne 1997 discloses links to other stored statutes. For example:

- *See, e.g.*, "But markup could go further. It could give the dates on which the amendments were made, the dates on which they took effect, and the names of the Acts or SI which had made them, and the user's program could use this markup to display a statute as it was on a particular date chosen by the user and could offer hypertext cross-references to the amending legislation," at 3.

- *See, e.g.*, "HMSO have a program called 'the Statute Law Database'. This is an electronic version of Statutes in Force. It contains in SGML form the law as it was on a particular date in the 1980s together with all acts and statutory instruments which have come into force since that time. All of these are linked together," at 3.

- **Kim 1996:**

  Kim 1996 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Kim 1996 discloses links to other stored text-based data. For example:

  - *See, e.g.*, "Meanwhile, hypermedia data relate multimedia data by linking them together, and permit users to browse related parts through links," at 496.

  - *See, e.g.*, "Besides, HOML defines virtual objects and dynamic link objects, which can decide a link destination with a query result in run time," at 497.

  - *See, e.g.*, "The anchor element specifies the source or the destination of a link. Since there can be many anchor elements in a text element, each anchor element should have a unique identifier," at 497.

  - *See, e.g.*, "The link element specifies a relation between a source object and a destination object through navigation. According to the number of destination objects, there are single links, multi-destination links and dynamic links," at 498.

- **Lo 1995:**

  Lo 1995 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Lo 1996 discloses links to other stored text-based data. For example:

  - *See, e.g.*, "Links represent inherent associations of content and structure of texts. Efficient management of links allows convenient cross referencing in information browsing," at 339.

  - *See, e.g.*, "intra-version link: both the source and the destination of the link are located in the same version, eg the ink ab; intra-version link: both the source and the

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destination of the link are located in the same document, but different versions, eg the link ef; inter-document link: both the source and the destination of the link are located in different documents, eg the link ed," at 340.

- *See, e.g.*, "In contrast to intra-version links, inter-document links are dynamic in nature, tending towards switching or augmenting destination references whenever new versions are created in which their destinations are duplicated," at 341.

- **Lo 1996:**

Lo 1996 discloses "linking means comprises any piece of information additional to the body of the text-based data." Specifically, Lo 1996 discloses links being information additional to the text itself. For example:

- *See, e.g.*, "In particular, SGML structures can be utilized to implement links," at 12, section 1.4.

- *See generally*, section 2.3.2, starting on page 39, entitled "SGML Support for Linking."

- *See generally* text following heading "Hyperlinks," beginning on page 53.

- **Osterbye 1992:**

Osterbye 1992 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Osterbye 1992 discloses links to other stored text-based data or annotations. For example:

- *See, e.g.*, "Links are one-to-one, and can be anchored to nodes in both ends," at 34.

- *See, e.g.*, "The link is an entity that relates a source node to a destination node (or subtypes of nodes)," at 38.

- *See, e.g.*, "When anchors are part of the node, we must soften the requirement that nodes are completely frozen, as we will otherwise not be able to add annotation links, because new anchors cannot be added," at 35.

- **Povilus 1995:**

Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Sacks-Davis 1994:**

Sacks-Davis 1994 discloses "said linking means comprises any piece of information

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additional to the body of the text-based data." Specifically, Sacks-Davis 1994 discloses links to other stored text-based data. For example:

- *See, e.g.,* "SGML can be used to support advanced presentation modes such as hypertext," at THOM00198835.

- *See, e.g.,* "Access by SGML attributes is a commonly used method for supporting hypertext links," at THOM00198839.

- **Sacks-Davis 1995:**

  Sacks-Davis 1995 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Sacks-Davis 1995 discloses links to other stored text-based data. For example:

  - *See, e.g.,* "A hypertext node is represented by a record in the Hypertext table and consists of a node identifier, a reference to the associated document, the content of the node, and a nested table of links to related nodes," at 455.

  - *See, e.g.,* "In addition to atomic attributes and structured attributes, Atlas supports reference attributes. A reference is a tuple comprising the global key of a record or nested record. In the hypertext example, bidirectional links between documents and their associated nodes are maintained using reference attributes, so that in table Hypertext, attribute doc has values from the domain of the key of the Document table, namely, attribute doc_id," at 456.

  - *See, e.g.,* "Rather than store documents as monolithic objects in a database it is more efficient to represent documents as a set of smaller fragments, which can be connected by links. Links allow users to browse documents by following the original document structure, and to discover knowledge by browsing fragments in the other documents. This is the basic paradigm underlying hypertext systems," at 465.

- **Sciore 1991:**

  Sciore 1991 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Sciore 1991 discloses links to other stored text-based data. For example:

  - *See, e.g.,* "Typically, refinement is implemented by including the scheme of T1 in each T2-object, and extension is implemented by storing a pointer to a T1-ojbect in each T2-object," at 357.

- **Taylor 1994:**

  Taylor 1994 discloses "linking means comprises any piece of information additional to the body of the text-based data." Specifically, Taylor 1994 discloses links between

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entities. For example:

- *See, e.g.,* "We had adopted a schema based upon binary relations (BR) . . . . A binary relationship is a relationship between two entities," at 239.

- *See, e.g.,* "We write relationships as subject-type-object triples enclosed in parentheses, as in (ChainWorks DateBuilt 1880). We refer to the set of triples for a particular universe of discourse as the binary relational store (BRS). . . . The BRS is a data structure into which sets of BR triples can be inserted, deleted or retrieved," at 239–40.

- **Travis & Waldt:**

Travis & Waldt discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Travis & Waldt discloses links to additional saved documents, which are additional to the body of the text-based data. For example:

- *See generally* 241–42 (defining ID, IDREF, IDREFS).

- *See, e.g.,* "In modern terms these [cross-references] are called hyperlinks."; "In SGML, we usually use an empty element to indicate a link to some other part of the document. The ID and IDREF declared values for attribute definition lists are used to assure uniqueness (in the case of ID) and valid reference (in the case of IDREF) within the document," at 293-95.

- **Wilkinson 1998:**

Wilkinson 1998 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Wilkinson 1998 discloses links stored internal or external to the content. For example:

- *See, e.g.,* "As discussed later, it may well be appropriate to store links to and from other documents as attributes rather than as part of the content." at 18.

- *See, e.g.,* "*Link support*: What support is provided for representing internal and external links? The task of representing external links may be particularly challenging as the object referred to may not even be known to the document management system," at 22.

- *See, e.g.,* "Most DDLs provide some support for links, but few provide links to external objects, or provide the indirection that makes management easier. XML is designated as providing excellent linking capabilities as it is assumed to include the companion XLink and XPointer standards. XLink can also be applied to SGML, as can the HyTime standard, the TEI techniques, HTML-style links, or an application-

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specific method," at 38.

- **Wilson 1988:**

  Wilson 1988 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Wilson 1988 discloses links to other stored text-based data. For example:

  - *See, e.g.*, "Justus automatically highlights inter-statute references and intra-statute references. When a user selects a reference, the text corresponding with that reference is displayed," at 27.

  - *See, e.g.*, "Terms that are defined within the interpretation section of the statute are also highlighted through the statute; the definition can be displayed on request," at 27.

  - *See, e.g.*, "Figure 12 shows how extra buttons, [cases], have been added to the text of section 116," at 37.

- **Wilson 1990:**

  Wilson 1990 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Wilson 1990 discloses links to other stored text-based data. For example:

  - *See, e.g.*, "In directed graph systems, the text is divided into segments called nodes: in principle any node in the system should be accessible from any other node," at 123.

  - *See, e.g.*, "Each node in a hypertext system has a label or name or, in Guide, a definition button. This label can be used as a link icon or, in Guide, a usage button or a glossary button, any number of times throughout the text. When a link icon or button (definition, usage or glossary) appears on the display it is highlighted in some way: in Guide, by using bold type face or by underlining. It can be selected using a pointed device such as a mouse. When this happens the hypertext system finds and displays the text associated with that icon or button," at 123.

- **Wilson 1992:**

  Wilson 1992 discloses "said linking means comprises any piece of information additional to the body of the text-based data." Specifically, Wilson 1992 discloses annotational links, such as relevant cases, footnotes, and multiple versions. For example:

  - *See, e.g.*, "The list of relevant cases stored as the replacement text of a local button is an obvious example of an annotational link… Other annotational links are footnotes

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and multiple versions," at 178.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system contained linking means with information additional to the body of the text-based data. For example:

  - *See generally,* Westlaw DB 1991, (describing how the search process within Westlaw used attributes, text, pointers, and database files; the search files are coupled to the text-based data files using a linking means).

  - *See, e.g.,* AMPEX, showing the seven field query of the AMPEX markup language encoded in the text-based data, at §2.

  - The Essential Guide 1996, at 15: "Jump is the feature on WESTLAW that lets you move instantly from one location to another. To use Jump, simply press **Tab** until your cursor reaches the Jump marker (> or ►), then press **Enter**. If you use a mouse, you can position the cursor on the Jump marker and click or double-click."

  - *See generally* The Essential Guide 1996, at Chapter "5.4 Jump"

  - The Essential Guide 1996, at 136, showing a statutory section, including some of the fields within a statute, as well as a link to a related case.

  - The Essential Guide 1996, at 154, showing a link from a law review article to a case.

- **The Pre-1997 Premise System**:

  The Premise system contained linking means with information additional to the body of the text-based data. For example:

  - *See, e.g.,* Premise Software & Statutes: "Browse" the "Document List" in the CA-STAT-AN1 database within the Premise software, including Bus. & Prof. Code § 26, which contains links to other sections.

  - *See, e.g.,* Premise Publisher: "By marking your original source documents, you can add embedded references to create links, which allow you to jump directly to other documents, images, PREMISE electronic books, applications or WESTLAW . . . ."; defining "Hypertext Link" as "A section of text that refers to a related piece of text . . . or an object. The related information is the target of the reference."; explaining "References and Target Points"; showing means for linking in PREMISE; describing how to add links to documents, at 3, 11, 30, 49, and 156-61.

- **The Astoria System (pre-1997):**

  The Astoria System allowed users to use a markup language and to add links to

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documents. For example:

- *See, e.g.*, Astoria 1997-1: "Astoria Link Clusters allow users to link components in hypertext fashion within and between documents. Through Link Clusters, users can identify associations—for instance, topical relationships—between related components without changing the location of the component. This allows Astoria users to organize related information so they can reference and update it more quickly," at THOM00211908.

- *See, e.g.*, XSoft: "LINKS: Users can connect elements to other elements in hypertext fashion within and between documents using links. The links let workers create non-linear paths of relationship through the database," at THOM00198648-49.

- *See, e.g.*, XSoft Astoria: "Astoria has complete version control capabilities. . . . The result is a version control module that is consistent with an SGML environment," at THOM00198652.

- *See, e.g.*, XSoft Premiers Astoria: "Astoria is fully integrated with the XSoft InContext SGML Editor," at THOM00211913. "Astoria is particularly well-suited to working with structured documents based on the Standardized Generalized Markup Language (SGML), making the management of those documents significantly easier and more productive," at THOM00211914. "[I]t builds on the value of SGML with document management capabilities such as version control, revision tracking and component re-use," at THOM00211914.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system uses a markup language, including links, which are sometimes information in addition to the text. For example:

  - *See, e.g.*, Arnold-Moore 1997-2, (text following the heading: "Cross References"), and in particular: "The *Themis* system uses SGML tags to identify both internal and external cross references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference. . . . These tags—in combination with an SGML display which supports hypertext—allow users to navigate from the text of the reference (See Figure 3) to the fragment which contains the element to which the reference refers (See Figure 5). The identifier from the source tag is used to construct a query which retrieves the appropriate fragment from the database," at 179.

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system contained linking means with information

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additional to the body of the text-based data. • **The Federal Rules of Civil Procedure System:** The Federal Rules of Civil Procedure system contained linking means with information additional to the body of the text-based data. • **The Law Desk NY System:** The Law Desk NY system contained linking means with information additional to the body of the text-based data. • **The Law Desk USCS System:** The Law Desk USCS system contained linking means with information additional to the body of the text-based data. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system contained linking means with information additional to the body of the text-based data. • **The NY Official Reports System:** The NY Official Reports system contained linking means with information additional to the body of the text-based data. • **The NY CLS Beta System:** The NY CLS Beta system contained linking means with information additional to the body of the text-based data. • **The OnPoint System:** The OnPoint system contained linking means with information additional to the body of the text-based data. • **The Social Security Plus System:** The Social Security Plus system contained linking means with information additional to the body of the text-based data. • **The UCC System:** The UCC system contained linking means with information additional to the body of the text-based data.

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Claim 9: In addition to the prior art listed above in conjunction with Claims 1 & 8, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 9:
wherein said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data. • **Agosti 1991:** Agosti 1991 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Agosti 1991 discloses links that allow movement between stored text-based documents. For example: • *See, e.g.*, "The representation of an object at this level is made by means of: connections to documents which are related to it…connections to the auxiliary data items," at 318. • *See, e.g.*, "The collection of document objects is organised at the first level of the architecture as a 'hyperdocument', that is in the form of a lattice structure," at 318. • *See, e.g.*, "The hyperdocument is made up of a network of structural links combined with the network of reference links…This means that the user may choose to follow along one path or another even in consideration of the direction of the references present within the semantic units," at 318. • *See, e.g.*, "The model supports navigability through the document collection. Due to the fact that specific cross-references are often present between the documents of the collection, the system must explicitly be able to support navigability through these connections," at 318. • *See, e.g.*, "Each of the two levels of the system's architecture represents a distinct network of nodes and links," at 319. • *See, e.g.*, "The model supports navigation between the two levels by means of the navigability function. In this way it is at all times possible to pass from the hyperdocument to the hyperconcept and back again," at 320. • *See, e.g.*, "By clicking the mouse button the object pointed is activated, i.e. the system receives the order to move in the direction indicated and to present the pertaining information or to execute the requisite function," at 322. • *See, e.g.*, "It is possible to shift directly from any point in the hypertext network to other hyperdocuments by making use of the links existing between them," at 322. • *See, e.g.*, "The nodes included within the single documents contains a function which

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allows all the links which bind that single document to the others to be displayed," at 323.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Arnold-Moore 1994 discloses hyptertext links which can be either static or dynamic, and which allow departure to and from various portions of legislative material. For example:

  - *See, e.g.*, In this context hypertext would allow the note to be visible to the user only after they have selected (usually by pointing and clicking a mouse) a 'button' which is displayed with the text on the screen. The button could be positioned where one might expect an annotation to appear in a paper service. Each separate unit of text which is presented on the screen is termed a node. The interrelated nodes and the links between them together form a hypertext," at *vii*.

  - *See generally xx*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Arnold-Moore 1994-2 discloses links that allow movement between stored text-based documents. For example:

  - *See, e.g.*, "This information is explored by browsing, rather than querying, however we may view the traversal of a link as another kind of query," at THOM00196608.

  - *See, e.g.*, "Finally, we will certainly wish to follow any hypertext links that are provided," at THOM00196608.

  - *See, e.g.*, "When versioning hypertext, links can either be static or dynamic. In order to support static links to elements we require an absolute identifier for each ELF," at THOM00196611.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Arnold-Moore 1997-2 discloses dynamic hyptertext links which allow departure to and from various portions of legislative material. For example:

  - *See, e.g.*, "Themis uses SGML to store legislation," at 175.

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- *See, e.g.*, "Legislation has been described as providing a cross-reference network," at 179.

- *See, e.g.*, "Hypertext allows the user to do exactly that. It's applicability to the legal domain and particularly statutes is widely recognized," at 179.

- *See, e.g.*, "This text needs to be associated with the intended target element. For example the reference to 'section 135' (See Figure 3) will need to be associated with the element which has a section number of '135' (See Figure 5) in the target document," at 181.

- *See, e.g.*, "Thus all links in Themis are dynamic rather than static," at 181.

- *See, e.g.*, "The *Themis* system uses SGML tags to identify both internal and external cross references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference. . . . These tags—in combination with an SGML display which supports hypertext—allow users to navigate from the text of the reference (See Figure 3) to the fragment which contains the element to which the reference refers (See Figure 5). The identifier from the source tag is used to construct a query which retrieves the appropriate fragment from the database" at 179.

- **Bachman 1973:**

  Bachman 1973 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Bachman 1997 discloses links that comprise a unique identification code referred to as a "primary data key." For example:

  - *See, e.g.*, "In sequential file technology, search techniques are well established. Start with the value of the primary data key, of the record of interest, and pass each record in the file through core memory until the desired record, or one with a higher key, is found. (A primary data key is a field within a record which makes that a record unique within the file.) Social security numbers, purchase order numbers, insurance policy numbers, bank account numbers are all primary data keys. Almost without exception, they are synthetic attributes specifically designed and created for the purpose of uniqueness," at 654.

  - *See, e.g.*, "He can enter the database with a database key that provides direct access to the physical location of a record," at 656.

- **Campbell 1988:**

  Campbell 1988 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data."

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Specifically, Campbell 1988 discloses links that can be followed in either direction from a source node to a destination node." For example:

- *See, e.g.*, "Nodes are related by links. A link defines a relationship between a source node and a destination node and can be followed in either direction. A cross-context link relates two nodes in different contexts and is useful for sharing data between two contexts. The generality provided by link attributes allows application writers to define their own notions of link types or link end-point attachment schemes," at 857.

- *See, e.g.*, "Guide uses buttons – special areas on a screen – to represent links in a document between the information the screen and related information. When a button is selected, by clicking the mouse, Guide follows the link to display the related information. Replacement buttons replace the button icon displayed on the screen with the information associated with that button," at 858.

- *See, e.g.*, "The various button relationships are modeled as links," at 858.

- *See, e.g.*, "Figure 2 shows an example of a note button. The Document Browser contains the text being examined; the icon within the browser represents the note button. The Note Browser contains the note associated with the note button," at 858.

- *See, e.g.*, "Therefore, the other end of the link representing the button can point to the entire node that contains the button's information," at 858.

- **Horne 1997:**

Horne 1997 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Horne 1997 discloses links to other stored statutes, which are inherently codes or markup allowing connection between departure and destination points. For example:

- *See, e.g.*, "But markup could go further . . . and could offer hypertext cross-references to the amending legislation," at 3.

- *See, e.g.*, "HMSO have a program called 'the Statute Law Database'. This is an electronic version of Statutes in Force. It contains in SGML form the law as it was on a particular date in the 1980s together with all acts and statutory instruments which have come into force since that time. All of these are linked together," at 3.

- **Kim 1996:**

Kim 1996 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Kim 1996 discloses links that allow movement between stored text-based documents. For example:

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- *See, e.g.*, "Meanwhile, hypermedia data relate multimedia data by linking them together, and permit users to browse related parts through links," at 496.

- *See, e.g.*, "Besides, HOML defines virtual objects and dynamic link objects, which can decide a link destination with a query result in run time," at 497.

- *See, e.g.*, "The anchor element specifies the source or the destination of a link. Since there can be many anchor elements in a text element, each anchor element should have a unique identifier," at 497.

- *See, e.g.*, "The link element specifies a relation between a source object and a destination object through navigation. According to the number of destination objects, there are single links, multi-destination links and dynamic links," at 498.

- **Lo 1995:**

  Lo 1995 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Lo 1995 discloses links that allow movement between stored text-based documents. For example:

  - *See, e.g.*, "Links and versioning are two important aspects of document management," at 339.

  - *See, e.g.*, "This paper thus attempts to describe a specific set of link versioning behaviors to provide a platform to explore the various issues of link versioning," at 339.

  - *See, e.g.*, "Links represent inherent associations of content and structure of texts. Efficient management of links allows convenient cross referencing in information browsing," at 339.

  - *See, e.g.*, "Link sources and destinations can be defined by SGML tags," at 339.

  - *See, e.g.*, "intra-version link: both the source and the destination of the link are located in the same version, eg the ink ab; intra-version link: both the source and the destination of the link are located in the same document, but different versions, eg the link ef; inter-document link: both the source and the destination of the link are located in different documents, eg the link ed," at 340.

  - *See, e.g.*, "An intra-version link is static in nature," at 340.

  - *See, e.g.*, "In contrast to intra-version links, inter-document links are dynamic in nature, tending towards switching or augmenting destination references whenever new versions are created in which their destinations are duplicated," at 341.

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- *See, e.g.*, "The first method is the traditional method (also employed by SGML) of referencing locations with unique identification. The second method attempts to manage links as objects, each with an identification itself," at 342.

- *See, e.g.*, "Conceptually this method specifies unique identifiers (Ids) for referent elements (destinations); and directional links can be established by making references (Ref) from the reference elements (sources) to the referent elements' identifiers," at 342.

- **Lo 1996:**

  Lo 1996 discloses "linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Lo 1996 discloses links being code or markup providing source and destination information. For example:

  - *See, e.g.*, "Conceptually, a link connects two ends, from the *source* to the *destination*," at 16, figure 2.1 and accompanying text.

  - *See generally*, section 2.3.2, starting on page 39, entitled "SGML Support for Linking."

- **Osterbye 1992:**

  Osterbye 1992 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Osterbye 1992 discloses links that allow movement between stored text-based documents. For example:

  - *See, e.g.*, "Links are one-to-one, and can be anchored to nodes in both ends," at 34.

  - *See, e.g.*, "The link is an entity that relates a source node to a destination node (or subtypes of nodes)," at 38.

  - *See, e.g.*, "When anchors are part of the node, we must soften the requirement that nodes are completely frozen, as we will otherwise not be able to add annotation links, because new anchors cannot be added," at 35.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Sacks-Davis 1994:**

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Sacks-Davis 1994 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Sacks-Davis 1994 discloses links that allow movement between stored text-based documents. For example:

- *See, e.g.*, "SGML can be used to support advanced presentation modes such as hypertext," at THOM00198835.

- *See, e.g.*, "Access by SGML attributes is a commonly used method for supporting hypertext links," at THOM00198839.

- **Sacks-Davis 1995:**

Sacks-Davis 1995 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Sacks-Davis 1995 discloses links that allow movement between stored text-based documents. For example:

- *See, e.g.*, "A hypertext node is represented by a record in the Hypertext table and consists of a node identifier, a reference to the associated document, the content of the node, and a nested table of links to related nodes," at 455.

- *See, e.g.*, "In addition to atomic attributes and structured attributes, Atlas supports reference attributes. A reference is a tuple comprising the global key of a record or nested record. In the hypertext example, bidirectional links between documents and their associated nodes are maintained using reference attributes, so that in table Hypertext, attribute doc has values from the domain of the key of the Document table, namely, attribute doc_id," at 456.

- *See, e.g.*, "Rather than store documents as monolithic objects in a database it is more efficient to represent documents as a set of smaller fragments, which can be connected by links. Links allow users to browse documents by following the original document structure, and to discover knowledge by browsing fragments in the other documents. This is the basic paradigm underlying hypertext systems," at 465.

- **Taylor 1994:**

Taylor 1994 discloses "linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Taylor 1994 discloses links being code or markup providing source and destination information. For example:

- *See, e.g.*, "We had adopted a schema based upon binary relations (BR) . . . . A binary relationship is a relationship between two entities," at 239.

- *See, e.g.*, "We write relationships as subject-type-object triples enclosed in

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parentheses, as in (ChainWorks DateBuilt 1880). We refer to the set of triples for a particular universe of discourse as the binary relational store (BRS). . . . The BRS is a data structure into which sets of BR triples can be inserted, deleted or retrieved," at 239–40.

- **Travis & Waldt:**

Travis & Waldt discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Travis & Waldt discloses hyptertext links to other documents, either stored within the same database or available through an outside source, such as online. For example:

- *See generally* 241–42 (defining ID, IDREF, IDREFS).

- *See, e.g.*, "In modern terms these [cross-references] are called hyperlinks."; "In SGML, we usually use an empty element to indicate a link to some other part of the document. The ID and IDREF declared values for attribute definition lists are used to assure uniqueness (in the case of ID) and valid reference (in the case of IDREF) within the document," at 293-95.

- *See, e.g.*, "Consider the requirement to create a link to an on-line database containing legal citations. The name of the citation must be rendered on the screen in a different color and underlined, which informs the user that the item is associated with an external link. . . . Notice the unique number of the citation is contained in the "num" attribute. This will be used to access the database, while the actual name of the citation is stated separately," at 306–07.

- **Wilkinson 1998:**

Wilkinson 1998 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Wilkinson 1998 discloses links allowing source and destination information. For example:

- *See, e.g.*, "Most DDLs provide some support for links, but few provide links to external objects, or provide the indirection that makes management easier. XML is designated as providing excellent linking capabilities as it is assumed to include the companion XLink and XPointer standards. XLink can also be applied to SGML, as can the HyTime standard, the TEI techniques, HTML-style links, or an application-specific method," at 38.

- *See, e.g.*, "A problem with most current implementations of explicit links is that destinations are usually given in an absolute form, such as a URL (universal resource locator) in an HTML document. Given that one goal of a document management system is to provide location independence for documents, it would be helpful to do

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the same for links. Thus, some form of indirection seems desirable. URNs (universal resource names), which are an attempt to name a resource, rather than locate a resource, are one possibility. A more comprehensive solution may lie with the use of HyTime, or with XML's XLink and XPointer," at 46.

- *See, e.g.*, "If links are extensional, (that is, directly coded in each version), the source document containing the link must be updated as well as the target document, creatingmany new versions in a densely-linked document collection. This can be avoided by using intensional links, requiring a search based on the version information in the source document. The alternative is a link table that identifies both the source and target, which is versioned independently of the documents. This link table can become a bottleneck as every display and update must access it," at 99.

- *See, e.g.*, "The defining characteristic of hypertext is not its ability to accommodate hierarchical structures, but its capacity to support directed graphs; that is, networks were, in principle, any node in the system can be accessed from any other node," at 170.

- **Wilson 1988:**

Wilson 1988 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Wilson 1988 discloses links that allow movement between stored text-based documents. For example:

- *See, e.g.*, "Justus automatically highlights inter-statute references and intra-statute references. When a user selects a reference, the text corresponding with that reference is displayed," at 27.

- *See, e.g.*, "Terms that are defined within the interpretation section of the statute are also highlighted through the statute; the definition can be displayed on request," at 27.

- *See, e.g.*, "Figure 12 shows how extra buttons, [cases], have been added to the text of section 116," at 37.

- **Wilson 1990:**

Wilson 1990 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Wilson 1990 discloses links that allow movement between stored text-based documents. For example:

- *See, e.g.*, "In directed graph systems, the text is divided into segments called nodes: in principle any node in the system should be accessible from any other node," at

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123.

- *See, e.g.*, "Each node in a hypertext system has a label or name or, in Guide, a definition button. This label can be used as a link icon or, in Guide, a usage button or a glossary button, any number of times throughout the text. When a link icon or button (definition, usage or glossary) appears on the display it is highlighted in some way: in Guide, by using bold type face or by underlining. It can be selected using a pointed device such as a mouse. When this happens the hypertext system finds and displays the text associated with that icon or button," at 123.

- **Wilson 1992:**

  Wilson 1992 discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data." Specifically, Wilson 1992 discloses hypertext links that will be replaced by the text of legislative material when it is selected. For example:

  - *See, e.g.*, "Thus, any document, however long and complex, can be represented under the Guide system as a single definition button. When the system is in use and this button is selected, perhaps from a list of documents as in Fig. 1, it will be replaced by the text associated with the button name: the preamble to the act and its structure in Parts: Fig. 2," at 162.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system uses a markup language, including links, which allow departure and destination points between text-based data. For example:

  - *See generally*, Westlaw DB 1991, describing how the search process within Westlaw used attributes, text, pointers, and database files; the search files are coupled to the text-based data files using a linking means.

  - *See, e.g.*, AMPEX, showing the seven field query of the AMPEX markup language encoded in the text-based data, at § 2.

  - The Essential Guide 1996, at 15: "Jump is the feature on WESTLAW that lets you move instantly from one location to another. To use Jump, simply press **Tab** until your cursor reaches the Jump marker (> or ►), then press **Enter**. If you use a mouse, you can position the cursor on the Jump marker and click or double-click."

  - *See generally* The Essential Guide 1996, at Chapter "5.4 Jump"

  - The Essential Guide 1996, at 136, showing a statutory section, including some of the fields within a statute, as well as a link to a related case.

- The Essential Guide 1996, at 154, showing a link from a law review article to a case.**The**

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Pre-1997 Premise System:

The Premise system uses a markup language, including links, which allow departure and destination points between text-based data. For example:

- *See, e.g.,* Premise Software & Statutes: "Browse" the "Document List" in the CA-STAT-AN1 database within the Premise software, including Bus. & Prof. Code § 26, which contains links to other sections.

- *See, e.g.,* Premise Publisher: "By marking your original source documents, you can add embedded references to create links, which allow you to jump directly to other documents, images, PREMISE electronic books, applications or WESTLAW . . . ."; defining "Hypertext Link" as "A section of text that refers to a related piece of text . . . or an object. The related information is the target of the reference," and defining "Target" as "The destination, either a target point, document, book, WESTLAW or an object, to which a reference is linked."; explaining "References and Target Points"; showing means for linking in PREMISE; describing how to add links to documents, at 3, 11, 30, 49, and 156-61.

- **The Astoria System (pre-1997):**

The Astoria System used a markup language, including links, which allow departure and destination points between documents and portions of documents. For example:

- *See, e.g.,* Astoria 1997-1: "Astoria Link Clusters allow users to link components in hypertext fashion within and between documents. Through Link Clusters, users can identify associations—for instance, topical relationships—between related components without changing the location of the component. This allows Astoria users to organize related information so they can reference and update it more quickly," at THOM00211908.

- *See, e.g.,* XSoft: "LINKS: Users can connect elements to other elements in hypertext fashion within and between documents using links. The links let workers create non-linear paths of relationship through the database," at THOM00198648-49.

- *See, e.g.,* XSoft Astoria: "Astoria has complete version control capabilities. . . . The result is a version control module that is consistent with an SGML environment," at THOM00198652.

- *See, e.g.,* XSoft Premiers Astoria: "Astoria is fully integrated with the XSoft InContext SGML Editor," at THOM00211913. "Astoria is particularly well-suited to working with structured documents based on the Standardized Generalized Markup Language (SGML), making the management of those documents significantly easier and more productive," at THOM00211914. "[I]t builds on the value of SGML with document management capabilities such as

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version control, revision tracking and component re-use," at THOM00211914.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system uses a markup language, including links, which allow departure and destination points between text-based data. For example:

  - *See, e.g.*, Arnold-Moore 1997-2, (text following the heading: "Cross References"), and in particular: "The *Themis* system uses SGML tags to identify both internal and external cross references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference. . . . These tags—in combination with an SGML display which supports hypertext—allow users to navigate from the text of the reference (See Figure 3) to the fragment which contains the element to which the reference refers (See Figure 5). The identifier from the source tag is used to construct a query which retrieves the appropriate fragment from the database," at 179.

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system uses a markup language, including links, which allow departure and destination points between text-based data.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system uses a markup language, including links, which allow departure and destination points between text-based data.

- **The Law Desk NY System:**

  The Law Desk NY system uses a markup language, including links, which allow departure and destination points between text-based data.

- **The Law Desk USCS System:**

  The Law Desk USCS system uses a markup language, including links, which allow departure and destination points between text-based data.

- **The New Mexico Law System:**

  The New Mexico Law on Legal Ethics system uses a markup language, including links, which allow departure and destination points between text-based data.

- **The NY Official Reports System:**

  The NY Official Reports system uses a markup language, including links, which allow

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departure and destination points between text-based data. • **The NY CLS Beta System:** The NY CLS Beta system uses a markup language, including links, which allow departure and destination points between text-based data. • **The OnPoint System:** The OnPoint system uses a markup language, including links, which allow departure and destination points between text-based data. • **The Social Security Plus System:** The Social Security Plus system uses a markup language, including links, which allow departure and destination points between text-based data. • **The UCC System:** The UCC system uses a markup language, including links, which allow departure and destination points between text-based data.
Claim 10: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 10:
wherein said at least one linking means comprises an identification code for said respective predefined portion. • **Agosti 1991:** Agosti 1991 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Agosti 1991 discloses links can be used in place of cross-references, such as citations to other legislative material. For example: • *See, e.g.*, "The collection of document objects is organised at the first level of the architecture as a 'hyperdocument', that is in the form of a lattice structure," at 318. • *See, e.g.*, "The hyperdocument is made up of a network of structural links combined with the network of reference links…This means that the user may choose to follow along one path or another even in consideration of the direction of the references present within the semantic units," at 318. • *See, e.g.*, "The model supports navigability through the document collection. Due to the fact that specific cross-references are often present between the documents of the

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collection, the system must explicitly be able to support navigability through these connections," at 318.

- *See, e.g.*, "The nodes included within the single documents contains a function which allows all the links which bind that single document to the others to be displayed," at 323.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Arnold-Moore 1994 discloses static links which refer to a specific version or part of a version. These static links can comprise a formal citation for a particular statutory section. For example:

  - *See, e.g.*, "A formal system of reference (citation) allows each element to be identified clearly and unambiguously," at *v*.

  - *See, e.g.*, "Within a versioned hypertext, two kinds of link are possible: 1. Static links – which refer to a specific version or part of a version," at *xx*.

  - *See, e.g.*, "Using Omnimark (an SGML manipulation tool) we break each Act into atoms (in this case sections and schedules). The atoms are then stored in SIM (indexed on their content) taking note of their record identifier as they are stored," at *xxii*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Arnold-Moore 1994-2 discloses links using an absolute identifier for each stored document. For example:

  - *See, e.g.*, "This information is explored by browsing, rather than querying, however we may view the traversal of a link as another kind of query," at THOM00196608.

  - *See, e.g.*, "Finally, we will certainly wish to follow any hypertext links that are provided," at THOM00196608.

  - *See, e.g.*, "When versioning hypertext, links can either be static or dynamic. In order to support static links to elements we require an absolute identifier for each ELF," at THOM00196611.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "said at least one linking means comprises an

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identification code for said respective predefined portion." Specifically, Arnold-Moore 1997-2 discloses links that comprise a formal citation for a particular statutory section. For example: • *See, e.g.*, "Themis uses SGML to store legislation," at 175. • *See, e.g.*, "Legislation has been described as providing a cross-reference network," at 179. • *See, e.g.*, "Hypertext allows the user to do exactly that. It's applicability to the legal domain and particularly statutes is widely recognized," at 179. • *See, e.g.*, "The *Themis* system uses SGML tags to identify both internal and external cross references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference. . . . These tags—in combination with an SGML display which supports hypertext—allow users to navigate from the text of the reference (See Figure 3) to the fragment which contains the element to which the reference refers (See Figure 5). The identifier from the source tag is used to construct a query which retrieves the appropriate fragment from the database" at 179. • *See, e.g.*, "This text needs to be associated with the intended target element. For example the reference to 'section 135' (See Figure 3) will need to be associated with the element which has a section number of '135' (See Figure 5) in the target document," at 181. • *See, e.g.*, "The Themis system uses SGML tags to identify both internal and external cross-references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference," at 181. • *See, e.g.*, "Thus all links in Themis are dynamic rather than static," at 181. • *See generally* 180-181 (Figures 3 and 5). • **Bachman 1973:** Bachman 1973 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Bachman 1997 discloses links that comprise a unique identification code referred to as a "primary data key." For example: • *See, e.g.*, "In sequential file technology, search techniques are well established. Start with the value of the primary data key, of the record of interest, and pass each record in the file through core memory until the desired record, or one with a higher key, is

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found. (A primary data key is a field within a record which makes that a record unique within the file.) Social security numbers, purchase order numbers, insurance policy numbers, bank account numbers are all primary data keys. Almost without exception, they are synthetic attributes specifically designed and created for the purpose of uniqueness," at 654.

- *See, e.g.*, "He can enter the database with a database key that provides direct access to the physical location of a record," at 656.

- **Campbell 1988:**

  Campbell 1988 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Campbell 1988 discloses links identify specific target destinations, which inherently must be labeled with an identification code. For example:

  - *See, e.g.*, "Nodes are related by links. A link defines a relationship between a source node and a destination node and can be followed in either direction. A cross-context link relates two nodes in different contexts and is useful for sharing data between two contexts. The generality provided by link attributes allows application writers to define their own notions of link types or link end-point attachment schemes," at 857.

  - *See, e.g.*, "Guide uses buttons – special areas on a screen – to represent links in a document between the information the screen and related information. When a button is selected, by clicking the mouse, Guide follows the link to display the related information. Replacement buttons replace the button icon displayed on the screen with the information associated with that button," at 858.

  - *See, e.g.*, "The various button relationships are modeled as links," at 858.

  - *See, e.g.*, "Figure 2 shows an example of a note button. The Document Browser contains the text being examined; the icon within the browser represents the note button. The Note Browser contains the note associated with the note button," at 858.

  - *See, e.g.*, "Therefore, the other end of the link representing the button can point to the entire node that contains the button's information," at 858.

- **Kim 1996:**

  Kim 1996 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Kim 1996 discloses links using a unique identifier for each stored document. For example:

  - *See, e.g.*, "Meanwhile, hypermedia data relate multimedia data by linking them together, and permit users to browse related parts through links," at 496.

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- *See, e.g.*, "Besides, HOML defines virtual objects and dynamic link objects, which can decide a link destination with a query result in run time," at 497.

- *See, e.g.*, "The anchor element specifies the source or the destination of a link. Since there can be many anchor elements in a text element, each anchor element should have a unique identifier," at 497.

- *See, e.g.*, "The link element specifies a relation between a source object and a destination object through navigation. According to the number of destination objects, there are single links, multi-destination links and dynamic links," at 498.

- **Liddy 1996:**

  Liddy 1996 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Lo 1995:**

  Lo 1995 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Lo 1995 discloses links using a unique identifier for each stored document. For example:

  - *See, e.g.*, "Link sources and destinations can be defined by SGML tags," at 339.

  - *See, e.g.*, "intra-version link: both the source and the destination of the link are located in the same version, eg the ink ab; intra-version link: both the source and the destination of the link are located in the same document, but different versions, eg the link ef; inter-document link: both the source and the destination of the link are located in different documents, eg the link ed," at 340.

  - *See, e.g.*, "The first method is the traditional method (also employed by SGML) of referencing locations with unique identification. The second method attempts to manage links as objects, each with an identification itself," at 342.

  - *See, e.g.*, "Conceptually this method specifies unique identifiers (Ids) for referent elements (destinations); and directional links can be established by making references (Ref) from the reference elements (sources) to the referent elements' identifiers," at 342.

- **Lo 1996:**

  Lo 1996 discloses "at least one linking means comprises an identification code for said respective predefined portion." Specifically, Lo 1996 discloses links being code or markup consisting of an identification code. For example:

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- *See generally*, section 2.3.2, starting on page 39, entitled "SGML Support for Linking." For example: "An identifier (ID) is specified for one elements and an [sic] reference identifier (IDREF) for another. The latter can then refer to the former using the specified IDREF. Both ID and IDREF are predefined SGML attribute types."

- *See, e.g.*, "It is possible to expand the format of the identifier to include the document identifier (DocId) and the version number (VerNo) and thus the destination can be located," at 40.

- **Osterbye 1992:**

  Osterbye 1992 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Osterbye discloses links using anchors stored in the nodes. For example:

  - *See, e.g.*, "Links are one-to-one, and can be anchored to nodes in both ends," at 34.

  - *See, e.g.*, "The link is an entity that relates a source node to a destination node (or subtypes of nodes)," at 38.

  - *See, e.g.*, "When anchors are part of the node, we must soften the requirement that nodes are completely frozen, as we will otherwise not be able to add annotation links, because new anchors cannot be added," at 35.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Sacks-Davis 1994:**

  Sacks-Davis 1994 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Sacks-Davis 1994 discloses using element identifiers. For example:

  - *See, e.g.*, "While SGML attributes form part of the text of an SGML document, it may also be necessary to access information stored by the database with the element that does not form part of the SGML text. Examples of this kind of data include a document or element identifier," at THOM00198840.

- **Sacks-Davis 1995:**

  Sacks-Davis 1994 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Sacks-Davis 1994 discloses

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links that use a "node identifier." For example:

- *See, e.g.*, "A hypertext node is represented by a record in the Hypertext table and consists of a node identifier, a reference to the associated document, the content of the node, and a nested table of links to related nodes," at 455.

- *See, e.g.*, "In addition to atomic attributes and structured attributes, Atlas supports reference attributes. A reference is a tuple comprising the global key of a record or nested record. In the hypertext example, bidirectional links between documents and their associated nodes are maintained using reference attributes, so that in table Hypertext, attribute doc has values from the domain of the key of the Document table, namely, attribute doc_id," at 456.

- *See, e.g.*, "Rather than store documents as monolithic objects in a database it is more efficient to represent documents as a set of smaller fragments, which can be connected by links. Links allow users to browse documents by following the original document structure, and to discover knowledge by browsing fragments in the other documents. This is the basic paradigm underlying hypertext systems," at 465.

- **Taylor 1994:**

  Taylor 1994 discloses "wherein said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Taylor 1994 discloses links between entities. For example:

  - *See, e.g.*, "We had adopted a schema based upon binary relations (BR) . . . . A binary relationship is a relationship between two entities," at 239.

  - *See, e.g.*, "We write relationships as subject-type-object triples enclosed in parentheses, as in (ChainWorks DateBuilt 1880). We refer to the set of triples for a particular universe of discourse as the binary relational store (BRS). . . . The BRS is a data structure into which sets of BR triples can be inserted, deleted or retrieved," at 239–40.

- **Travis & Waldt:**

  Travis & Waldt discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Travis & Waldt discloses providing links based on legal citations, or other document identification codes. For example:

  - *See generally* 241–42 (defining ID, IDREF, IDREFS).

  - *See generally* 293–95 ("In modern terms these [cross-references] are called hyperlinks."; "In SGML, we usually use an empty element to indicate a link to some other part of the document. The ID and IDREF declared values for attribute

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definition lists are used to assure uniqueness (in the case of ID) and valid reference (in the case of IDREF) within the document.").

- *See, e.g.*, "Consider the requirement to create a link to an on-line database containing legal citations. The name of the citation must be rendered on the screen in a different color and underlined, which informs the user that the item is associated with an external link. . . . Notice the unique number of the citation is contained in the "num" attribute. This will be used to access the database, while the actual name of the citation is stated separately," at 306–07.

- **Wilkinson 1998:**

Wilkinson 1998 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Wilkinson 1998 discloses links to documents using identification codes. For example:

- *See, e.g.*, list of metadata on pages 19–20, including "Identifier: a string or number used to uniquely identify the resource."

- *See, e.g.*, "Most DDLs provide some support for links, but few provide links to external objects, or provide the indirection that makes management easier. XML is designated as providing excellent linking capabilities as it is assumed to include the companion XLink and XPointer standards. XLink can also be applied to SGML, as can the HyTime standard, the TEI techniques, HTML-style links, or an application-specific method," at 38.

- *See, e.g.*, "A problem with most current implementations of explicit links is that destinations are usually given in an absolute form, such as a URL (universal resource locator) in an HTML document. Given that one goal of a document management system is to provide location independence for documents, it would be helpful to do the same for links. Thus, some form of indirection seems desirable. URNs (universal resource names), which are an attempt to name a resource, rather than locate a resource, are one possibility. A more comprehensive solution may lie with the use of HyTime, or with XML's XLink and XPointer," at 46.

- *See, e.g.*, "If links are extensional, (that is, directly coded in each version), the source document containing the link must be updated as well as the target document, creating many new versions in a densely-linked document collection. This can be avoided by using intentional links, requiring a search based on the version information in the source document. The alternative is a link table that identifies both the source and target, which is versioned independently of the documents. This link table can become a bottleneck as every display and update must access it," at 99.

- **Wilson 1990:**

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Wilson 1990 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Wilson 1990 discloses using code numbers as part of its links. For example:

- *See, e.g.*, "In directed graph systems, the text is divided into segments called nodes: in principle any node in the system should be accessible from any other node," at 123.

- *See, e.g.*, "Each node in a hypertext system has a label or name or, in Guide, a definition button. This label can be used as a link icon or, in Guide, a usage button or a glossary button, any number of times throughout the text. When a link icon or button (definition, usage or glossary) appears on the display it is highlighted in some way: in Guide, by using bold type face or by underlining. It can be selected using a pointed device such as a mouse. When this happens the hypertext system finds and displays the text associated with that icon or button," at 123.

- *See, e.g.*, "The third file is a list of case names and the corresponding code numbers under the Justus system," at 125.

- **Wilson 1992:**

  Wilson 1992 discloses "said at least one linking means comprises an identification code for said respective predefined portion." Specifically, Wilson 1992 discloses converting statutory or case law citations to hypertext links providing access to the cited material. For example:

  - *See, e.g.*, "This label can be defined as a node icon or, in the Guide hypertext system, a definition button. The replacement text for this definition button is the actual words of the paragraph," at 161.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system used a linking means with attributes specifying an identification code for the targeted predefined portion(s). For example:

  - *See generally*, Westlaw DB 1991, (describing how the search process within Westlaw used attributes, text, pointers, and database files; the search files are coupled to the text-based data files using a linking means).

  - *See, e.g.*, AMPEX, showing the seven field query of the AMPEX markup language encoded in the text-based data, at § 2.

- **The Pre-1997 Premise System**:

  The Premise system used a linking means with attributes specifying an identification

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code for the targeted predefined portion(s). For example:

- *See, e.g.,* Premise Software & Statutes: "Browse" the "Document List" in the CA-STAT-AN1 database within the Premise software, including Bus. & Prof. Code § 26, which contains links to other sections.

- *See, e.g.,* Premise Publisher: "By marking your original source documents, you can add embedded references to create links, which allow you to jump directly to other documents, images, PREMISE electronic books, applications or WESTLAW . . . ."; defining "Hypertext Link" as "A section of text that refers to a related piece of text . . . or an object. The related information is the target of the reference."; explaining "References and Target Points"; showing means for linking in PREMISE; describing how to add links to documents, at 3, 11, 30, 49, and 156-61.

- **The Astoria System (pre-1997):**

  The Astoria System used a used a linking means with attributes specifying an identification code for the targeted predefined portion(s). For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria Link Clusters allow users to link components in hypertext fashion within and between documents. Through Link Clusters, users can identify associations—for instance, topical relationships—between related components without changing the location of the component. This allows Astoria users to organize related information so they can reference and update it more quickly," at THOM00211908.

  - *See, e.g.*, XSoft: "LINKS: Users can connect elements to other elements in hypertext fashion within and between documents using links. The links let workers create non-linear paths of relationship through the database," at THOM00198648-49.

  - *See, e.g.*, Astoria 1997-1: "Astoria provides a mechanism for associating arbitrary, user-definable attributes with Astoria objects. Custom Attributes provide a means for Astoria users to store relevant information directly with any object, providing a robust foundation for object status tracking, and the search and assembly of individual document components." "Astoria users specify a value for the custom attribute and then can search, retrieve, and assemble new documents based on custom attribute values," at THOM00211911.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system uses a markup language, including links, which are sometimes comprised of identification codes for predefined portions. For example:

  - *See, e.g.*, Arnold-Moore 1997-2, (text following the heading: "Cross References"), and in particular: "The *Themis* system uses SGML tags to identify both internal and

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external cross references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference. . . . These tags—in combination with an SGML display which supports hypertext—allow users to navigate from the text of the reference (See Figure 3) to the fragment which contains the element to which the reference refers (See Figure 5). The identifier from the source tag is used to construct a query which retrieves the appropriate fragment from the database," at 179.

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The Law Desk NY System:**

  The Law Desk NY system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The Law Desk USCS System:**

  The Law Desk USCS system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The New Mexico Law System:**

  The New Mexico Law on Legal Ethics system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The NY Official Reports System:**

  The NY Official Reports system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The NY CLS Beta System:**

  The NY CLS Beta system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).

- **The OnPoint System:**

  The OnPoint system used a linking means with attributes specifying an identification

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code for the targeted predefined portion(s). • **The Social Security Plus System:** The Social Security Plus system used a linking means with attributes specifying an identification code for the targeted predefined portion(s). • **The UCC System:** The UCC system used a linking means with attributes specifying an identification code for the targeted predefined portion(s).
Claim 11: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 11:
wherein a first database comprises said plurality of predefined portions of text-based data. • **Agosti 1991:** Agosti 1991 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Agosti 1991 discloses a two level structure with text-based data such as legislation stored at the first level. For example: • *See, e.g.*, "EXPLICIT is based on a two-level architecture which holds the two main parts of the informative resource managed by an information retrieval tool: the collection of documents and the indexing term structure," at 316. • *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms…," at 317. • *See, e.g.*, "The EXPLICIT hypertext retrieval model is based on a two-level architecture, which holds the two main parts of a database managed by an information retrieval system: the collection of documents, and the auxiliary data," at 317. • *See, e.g.*, "1st) the level which contains the networks of documents of interest (e.g. full text documents)," at 317. • *See, e.g.*, "The collection of document objects is organised at the first level of the architecture as a 'hyperdocument', that is in the form of a lattice structure. Each node of the hyperdocument is an informative item consisting of the document representation, which follows the previously introduced structure, together with the text of the document," at 318.

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- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Arnold-Moore 1994 discloses a database for storing pieces of legislative material. For example:

  - *See, e.g.*, "We propose to implement this model using the Structured Information Manager (SIM) . . . to store and manage very large databases of SGML documents and other structured data," at *xxii*.

  - *See, e.g.*, "Using Omnimark (an SGML manipulation tool) we break each Act into atoms (in this case sections and schedules). The atoms are then stored in SIM (indexed on their content) taking note of their record identifier as they are stored," at *xxii*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Arnold-Moore 1994-2 discloses a database of stored legislative material. For example:

  - *See, e.g.*, "A data model and query language for accessing structured documents expressed in SGML is presented," at THOM00196608.

  - *See, e.g.*, "A new class of document databases is emerging. These databases consist of large structured documents. Examples include databases of government legislation, maintenance manuals for systems as complex as aircraft carriers, and encyclopedia, and the documentation associated with a large software engineering project," at THOM00196608.

- **Arnold-Moore 1995:**

  Arnold-Moore 1995 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Arnold-Moore 1995 discloses a database for storing pieces of legislative material. For example:

  - *See, e.g.*, "This paper proposes an architecture for a system which accepts Amending Acts expressed in SGML and produces a database of resulting versions of the Principle Acts, and describes its implementation," at abstract.

  - *See, e.g.*, discussing "computer-aided legal research (CALR) systems," at 297.

  - *See, e.g.*, "The text database system needs to manage multiple versions of a single document and to manage highly structured documents," at 299.

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- **Arnold-Moore 1997:**

  Arnold-Moore 1997 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Arnold-Moore 1997 discloses a database of stored legislative material. For example:

  - *See, e.g.*, "The model also gives flexibility to the implementor to retrieve whole documents and decompose them, retrieve atomic elements and recombine them, or pursue alternatives which retrieve the elements directly," at THOM00196608.
  - *See, e.*g., "In this case, information is typically broken into small units," at THOM00196608.
  - *See, e.g.*, "The database should also allow for partial document retrieval. The whole of a government Act may be an inappropriate retrieval unit, if one is searching for a definition. There may be a number of relevant portions of a single document that are relevant, and yet the whole document may still be an inappropriate retrieval unit," at THOM00196608.
  - *See, e.g.*, "We chose elements as our base rather than whole documents as an SGML document is always an element, and using elements adds generality to the query without undue additional complexity allowing arbitrary node sizes instead of the traditional fixed node size," at THOM00196612.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Arnold-Moore 1997-2 discloses a first database for storing pieces of legislative material. For example:

  - *See, e.g.*, "Themis uses SGML to store legislation," at 175.
  - *See, e.g.*, "Legislation has been described as providing a cross-reference network," at 179.
  - *See, e.g.*, "In this paper we concentrate primarily on the result this system was intended to produce – a digital library of legislation…," at 176.

- **Bachman 1973:**

  Bachman 1973 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Bachman 1973 discloses a database of stored text-based documents such as, for example, personnel files, airline reservations, and laboratory experiments. For example:

  - *See, e.g.*, "From this point, I want to begin the programmer's training as a full

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fledged navigator in an *n*-dimensional data space," at 654.

- *See, e.g.*, "It involves all aspects of storing, retrieving, modifying, and deleting data in the files on personnel and production, airline reservations, or laboratory experiments – data which is used repeatedly and updated as new information becomes available," at 654.

- **Bentley 1979:**

Bentley 1979 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Bentley 1979 discloses a database for publishing various records. For example:

- *See, e.g.*, "The study of data structure for facilitating rapid searching is a fascinating subject of both practical and theoretical interest," at 397.

- *See, e.g.*, "In database terminology a file is a collection of records, each containing several attributes or keys," at 397.

- *See, e.g.*, "In a geographic database of U.S. cities…," at 398.

- *See, e.g.*, "To compile an honor list of older students…," at 398.

- **Campbell 1988:**

Campbell 1988 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Campbell 1988 discloses a database of stored statutes. For example:

- *See, e.g.*, "The Hypertext Abstract Machine (HAM) is a general-purpose, transaction-based, multi-user server for a hypertext storage system," at 856.

- *See, e.g.*, "The HAM stores all of the information it manages in graph, or databases, on a host machine's file systems," at 856.

- *See, e.g.*, "A node contains arbitrary data that can be stored as text or as fixed-length binary blocks," at 856.

- *See, e.g.*, "UNIX manual pages provide a convenient example of how the HAM can model Intermedia webs. The manual page for the mail command is used to create a small web of information. Each document (manual page) is represented as a HAM node," at 859-860.

- **Fay 1996:**

Fay 1996 discloses "a first database comprises said plurality of predefined portions of

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text-based data." Specifically, Fay 1996 discloses that the versioned text is stored separately from its attributes and other information. For example:

- *See, e.g.*, "[T]he data that must be controlled by the user who checked out the element is put in one field, or node, that the user has sole control over, and the remaining data is put in an auxiliary, or shadow, node that is available to all other users," at Summary of the Invention.

- *See, e.g.*, "In addition to the locking units, or tree nodes, there are other types of data which are stored in non-locking units called shadow, or auxiliary, nodes," at 2:40–42.

- **Haake 1992:**

Haake 1992 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Haake discloses a first database containing text-based data, and a second database containing the attributes associated with that text:

- *See, e.g.*, "CHS offers nodes, links, and composites that can be equipped with application-defined attributes. Objects can be accessed by their attribute values using the query language of the underlying database system of CHS," at 46.

- *See, e.g.*, "Next to an internal mob [multi-versioned object] identifier and the version set, CoVer maintains for a mod optional application-defined and application-supplied state-independent attributes (e.g. an elaborated description, project management information such as the name of a responsible person). The attributes carried by the versions represent the state-dependent characteristics of a specific version of a versioned object," at 46.

- **Horne 1997:**

Horne 1997 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Horne 1997 discloses a database of stored statutes. For example:

- *See, e.g.*, "Since the mid 1980s every statute and statutory instrument has been coded using SGML (the Standard Generalized Markup Language)," at 2.

- *See, e.g.*, "HMSO have a program called 'the Statute law Database'. This is an electronic version of Statutes in Force. It contains in SGML form the law as it was on a particular date in the 1980s together with all acts and statutory instruments which have come into force since that time," at 3.

- **Kim 1996:**

Kim 1996 discloses "a first database comprises said plurality of predefined portions of

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text-based data." Specifically, Kim 1996 discloses a database of stored multimedia data, including text-based data. For example:

- *See, e.g.*, "In this paper, we design a new hypermedia markup language using SGML and implement an object-oriented hypermedia system on top of the Postgres," at 496.
- *See, e.g.*, "Multimedia applications, such as digital libraries, electronic publishing, teleconferencing, and visualization, have already become engrained in our practice," at 496.
- *See, e.g.*, "Multimedia data basically concerns with semi-structured and complex data, such as text, audio, images and moving pictures," at 496.
- *See, e.g.*, "The OOHS stores physical hypermedia data in the storage layer," at 498.
- *See generally* 499 (Figure 3).

- **Larson 1988:**

Larson 1988 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Larson 1988 discloses storing electronic documents in a database. For example:

- *See, e.g.*, "Problems in presenting hypertext information also arise when the size of the database becomes very large. For example, depiction of the graph structure of a small scale hypertext systems is relatively straightforward. Each node can be graphically depicted (as an icon) and labeled and shown with its links represented as lines to other nodes. Several hypertext systems use this type of display to provide users with a 'roadmap' of their location in a hypertext structure, and permit the user to jump to any displayed node by selecting its icon. Such navigational tools can help users to avoid becoming lost in a maze of connecting documents. However in large and complex hypertext networks these displays may become equally confusing to user due to the myriad nodes and links represented," at 197.

- **Lo 1995:**

Lo 1995 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Lo 1995 discloses a database of stored text-based documents. For example:

- *See, e.g.*, "Links and versioning are two important aspects of document management," at 339.
- *See, e.g.*, "Recently there is a growing interest and research focus on version control in hypertext systems, which certainly provides support to the domain of document

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management with link versioning," at 339.

- *See, e.g.*, "Furthermore, while the description of a document's structure is primarily applied in publication, database technology could also make use of this structural knowledge to enhance its management of documents," at 339.

- *See, e.g.*, "Currently a prototype that handles links and versioning of documents is being implemented on a Structured Information Manager (SIM), a document management database developed by Collaborative Information Technology Research Institute (CITRI), Melbourne," at 345.

- **Lo 1996:**

  Lo 1996 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Lo 1996 discloses that document management systems often store documents in databases. For example:

  - *See, e.g.*, "Wilkinson sees that the core of a document management system is a document database," at 7, section 1.2.1.

  - *See, e.g.*, "Documents are stored as records in SIM databases . . . . As a result of applying the fragmentation model in the prototype system . . ., two databases are defined: the *basedoc* database and the *fragdoc* database. The former is for storing bases, and the latter for fragments. The schema of the basedoc database defines six attributes for a record. The *body* attribute contains a whole piece of text marked-up in SGML. This piece of text is recognized to be a specific version of a specific document by the values of the *version number (VerNo)* and the *document identified (DocId)* attributes," at 112.

- **Osterbye 1992:**

  Osterbye 1992 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Osterbye 1992 discloses a database of stored text-based documents. For example:

  - *See, e.g.*, "This paper discusses issues related to providing version control in hypertext systems," at 33.

  - *See, e.g.*, "There are two main types of hypertext systems, those for browsing, and those for authoring. The former allow the user to browse through information provided by someone else, but not to add new information. These systems can be found at for instance, museums, or as instruction books. The latter type is typically used for development of products, such as the above mentioned hyperdocuments used at museums, or for e.g. software engineering," at 33.

  - *See, e.g.*, "The datamodel used in this paper is illustrated in figure 1. The top of the

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hierarchy is an entity which allows attributes to be attached to all entities," at 34. • **Peltonen 1993:** Peltonen 1993 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Peltonen 1993 discloses storage of portions of text-based data in a database. For example: • *See, e.g.*, "Documents and various attributes are stored in a centralized database. ," at 2. • **Povilus 1995:** Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others. • **Promenschenkel 1995:** Promenschenkel 1995 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Promenschenkel 1995 discloses a database of stored text-based documents. For example: • *See, e.g.*, "This allows components to be stored, manipulated and eventually assembled automatically as a magazine, electronic journal, book or in virtually any other form chosen by the publishers," at 1. • *See, e.g.*, "STEPS automatically translates the articles into SGML and stores them in a BASISplus database using the BASIS SGML server," at 2. • **Sacks-Davis 1994:** Sacks-Davis 1994 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Sacks-Davis 1994 discloses a database of stored text-based documents. For example: • *See, e.g.*, "This could be achieved by using two different database systems, one relational and one text with a gateway between them rather than using a structured text model which accommodates attributes directly," at THOM00198840. • **Sacks-Davis 1995:** Sacks-Davis 1995 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Sacks-Davis 1995 discloses a database of stored text-based documents. For example:

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- *See, e.g.*, "Advanced database applications require facilities such as text indexing, image storage, and the ability to store data with a complex structure… In this paper we describe Atlas, a nested relational database system that has been designed for text-based applications," at 454.

- *See, e.g.*, "Direct indexes are used for tables with a key attribute whose values are distinct, small integers. For attributes in which each distinct value only occurs a small number of times, and in particular key attributes, linear hashing indexes can be used, at 461.

- **Sciore 1991:**

  Sciore 1991 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Sciore 1991 discloses a database of stored text-based documents. For example:

  - *See, e.g.*, "Many database applications require the storage and manipulation of different versions of data objects," at 355.

  - *See, e.g.*, "There are three application areas for which versioning has become especially important: historical databases, CASE systems, and CAD databases," at 355.

  - *See, e.g.*, "Our results can be used by general-purpose database systems to provide high-level support for versioning; application systems (such as CASE tools) will be much easier to write. Moreover, our results increase the overall understanding of what versioning is all about. Consequently, it seems likely that our ideas can be mapped easily to post-relational and deductive systems," at 357.

  - *See, e.g.*, "Each instance of a BicycleDesign models a design project, and has associated requirements, a sponsoring client, and a due date. Each instance of BicycleVersion models a particular version of a given design," at 358.

  - *See, e.g.*, "Each EmployeeHistory object records a change to its associated employee," at 364.

- **Sciore 1994:**

  Sciore 1994 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Sciore 1994 discloses storing text-based data such as bicycle designs or employment records in a database. For example:

  - *See, e.g.*, "The schema declaration of Figure 1 illustrates the above concepts. Each instance of Bicycle models a CAD design project, and has an associated project name, client and due date. The type BicycleVersion models versions of a given

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bicycle design," at 81.

- *See, e.g.*, "Figure 3 illustrates an historical database in EXTRA-V. This scheme has three conceptual types: Person, Employee, and Company. A version of a conceptual object denotes a pervious or current state of the object. Each time a versioned attribute changes, a new version is created corresponding to the new state," at 87.

- *See, e.g.*, "Each Employee version contains the information about an employee during some time interval," at 87.

- **Stonebraker 1990:**

Stonebraker 1990 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Stonebraker 1990 discloses that POSTGRES is a database capable of storing data, including text. For example:

- *See generally* section II.B, beginning on page 126 (discussing data types including character-based fields)

- **Taylor 1994:**

Taylor 1994 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Taylor 1994 discloses that information is stored in a database. For example:

- *See, e.g.*, "The work described here is part of a hypermedia research project . . . which aims to explore the potential of a semantic database approach to hypermedia architecture," at 239.

- *See, e.g.*, "The current media base is a collection of approximately 100 historical photographs of Pontypridd as well as some textual and oral histories," at 239.

- **Travis & Waldt:**

Travis & Waldt discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Travis & Waldt discloses a two database system with a first database consisting of the text based data. For example:

- *See, e.g.*, "One way this is done is to use the relational database manager to track identifiers and other information about textual objects. The text itself is stored elsewhere, maybe in a file system or some other easily accessible location." at 192 & Figure 60.

- **Wilkinson 1998:**

Wilkinson 1998 discloses "a first database comprises said plurality of predefined

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portions of text-based data." Specifically, Wilkinson 1998 discloses that information is stored in a database, and attributes may be stored separately from the data. For example:

- *See generally* section 2.2.3, beginning on page 17 (entitled "Metadata"). For example:
    - "Document attributes can be embedded in the content of a document assigned by a document management system, or simply never set. These attributes can be stored with the document or managed independently, but in either case they should be separately accessible, as metadata, not simply as part of the content of the document," at 19.
    - "In the first option, a standard general-purpose database is extended to provide text indexing and retrieval capabilities. . . . The second approach is to connect a purpose-built text database with a relational or object-oriented database system . . . ." at 103.

- **Wilson 1988:**

Wilson 1988 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Wilson 1988 discloses a database of stored text-based documents. For example:

- *See, e.g.*, "Justus automatically converts machine-readable versions of a variety of legal documents into hypertext documents for the Guide hypertext system," at 30.
- *See, e.g.*, "In a hypertext system, texts are divided into segments, sometimes called nodes," at 32.
- *See, e.g.*, "The text of a statute is particularly amendable to representation in a hypertext system because it is already highly structured," at 32.
- *See, e.g.*, "Each subsection label provided by the legal draftsmen is automatically converted by Justus into a node name or, in Guide terms, a definition button," at 32.

- **Wilson 1990:**

Wilson 1990 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Wilson 1990 discloses a database of stored text-based documents. For example:

- *See, e.g.*, "The definition file is the full text of the law reports segmented into labeled nodes…The nodes correspond with the basic components of a law report described above," at 124.

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- **Wilson 1992:**

  Wilson 1992 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Wilson 1992 discloses a first "document universe" consisting of legislative material and related texts linked to one another. For example:

  - *See, e.g.*, "So far, all links have been realized through the matching of lexical strings, which have been an intrinsic part of the original text…All are internal to the documentary universe," at 180.

  - *See, e.g.*, "The defining characteristic of hypertext is not its ability to accommodate hierarchical structures, but its capacity to support directed graphs; that is, networks were, in principle, any node in the system can be accessed from any other node," at 170.

  - *See, e.g.*, "Explicit location references in the text to other nodes, either within the same document or in other documents, can be automatically converted to hypertext links. The effect of this conversion is to integrate many disparate documents into a seamless textual universe," at 170.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system included a first database containing portions of text-based data. For example:

  - *See, e.g.*, Westlaw DB 1991, describing how the TEXT file contained the portions of text, at 5, 7, 18-21.

  - *See, e.g.*, DataBasics 1993, ("United States Code Annotated"): Disclosing mechanisms for searching using words or phrases within portions and amended portions of statutes; "A document is an annotated or unannotated of USCA," at doc no. 79858-59.

  - The Essential Guide 1996, at 47: "You can use restrictions to limit your WIN search. For example, in a case law database, you can restrict your search by court, date, judge, attorney or added date."

  - *See generally* The Essential Guide 1996, at "Chapter 9 Searching Statutes Databases"

- **The Pre-1997 Premise System**:

  The Premise system included a first database containing portions of text-based data. For example:

  - *See generally* Premise Software & Statutes: "Browse" the "Document List" in the

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CA-STAT-AN1 database within the Premise software, including Bus. & Prof. Code § 26, which contains links to other sections.

- *See generally* Premise Publisher: (explaining how to build the data within the published database).

- **The Astoria System (pre-1997):**

The Astoria System included a database containing portions of text-based data. For example:

- *See, e.g.,* Astoria 1997-1: "Astoria users navigate through the document depository and view documents down to the individual components that comprise them," at THOM00211907.

- *See, e.g.,* XSoft Astoria: "Astoria [is an] . . . objected-oriented SGML database package," at THOM00198652.

- *See,e.g.,* XSoft: "Because Astoria works directly with SGML elements using an object-oriented database, it can provide unprecedented control over SGML documents as well as unstructured information by allowing fine-grained access and version control," at THOM00198647.

- **The EnAct System** (previously known as Themis)**:**

The EnAct system includes a database containing text-based legislation data. For example:

- *See, e.g.,* TSS 1994-2, showing a database containing portions of text-based legislation data, at SAIC002754, and explanatory material at SAIC002753-81.

- *See e.g,,* Arnold-Moore 1997-2, "The *Themis* system is built on the Structured Information Manager (SIM), a high-volume information retrieval and document management system . . . ," at 176.

- **The SCALEplus System:**

The SCALEplus system stores modified portions of text-based data. For example:

- *See, e.g.,* Kerr 2000, "SCALEplus . . . contains a wide range of legal records including decided cases and the legislation of most jurisdictions," at 6-1, ¶ 168.

- SCALEplus UM 2: "SCALEplus presents all Law Databases obtained and/or prepared by Federal Attorney General's Department as Searchable and Browseable data." (THOM00221675)

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- **The Documentum/Interleaf System:**

  The Documentum/Interleaf system has a first database containing text-based information. For example:

  - *See, e.g.,* Ovum Interleaf 1996, "RDM stores documents in vaults. Vaults are secure directories held on file-server drives . . . . Files are stored in their native format in vaults," at 257 (figure H2.3).

  - *See, e.g.,* Ovum Documentum 1996, "Documentum stores document *objects* in DocBases, using its document-relational model for implementing object stores in RDBMS. Document *content* may be stored in a variety of ways. Typically very small (less than 2k) objects such as SGML fragments are stored directly in the underlying RDBMS; small objects (less than 64k are stored in the RDBMS as Blobs (Binary Large Objects); larger objects are stored in any file store accessible from the Documentum Server or in an external vault," at 213.

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system included a first database containing portions of text-based data.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system included a first database containing portions of text-based data.

- **The Law Desk NY System:**

  The Law Desk NY system included a first database containing portions of text-based data.

- **The Law Desk USCS System:**

  The Law Desk USCS system included a first database containing portions of text-based data.

- **The New Mexico Law System:**

  The New Mexico Law on Legal Ethics system included a first database containing portions of text-based data.

- **The NY Official Reports System:**

  The NY Official Reports system included a first database containing portions of text-

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based data. • **The NY CLS Beta System:** The NY CLS Beta system included a first database containing portions of text-based data. • **The OnPoint System:** The OnPoint system included a first database containing portions of text-based data. • **The Social Security Plus System:** The Social Security Plus system included a first database containing portions of text-based data. • **The UCC System:** The UCC system included a first database containing portions of text-based data.
Claim 12: In addition to the prior art listed above in conjunction with Claims 1 & 11, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 12:
wherein a second database comprises said plurality of attributes for managing said first database. • **Agosti 1991:** Agosti 1991 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Agosti 1991 discloses a two level structure with attributes stored at the second level for managing the text-based data stored at the first level. For example: • *See, e.g.*, "EXPLICIT is based on a two-level architecture which holds the two main parts of the informative resource managed by an information retrieval tool: the collection of documents and the indexing term structure. The term structure is managed as a schema of concepts which can be used by the final user as a frame of reference in the query formulation process," at 316. • *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms…," at 317. • *See, e.g.*, "The EXPLICIT hypertext retrieval model is based on a two-level architecture, which holds the two main parts of a database managed by an information retrieval system: the collection of documents, and the auxiliary data. By

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the term auxiliary data we mean the data describing the document information contents," at 317.

- *See, e.g.*, "2nd) the level which contains the network of the semantically related concepts," at 317.

- *See, e.g.*, "a set of structured data which represents the different deterministic properties of the object (e.g., date of publication, title, list of authors, etc.)," at 318.

- *See, e.g.*, "Objects of the second level result from the application of the classification abstraction mechanism to the objects of the first level; they denote concepts which are variously interrelated, for example through a classification hierarchy," at 319.

- *See, e.g.*, "This level is conceptually located above the hyperdocument and performs the same functions performed by the usual auxiliary data of an operative information retrieval system," at 319.

- *See, e.g.*, "Being a document generally indexed by more than just one single term, a document object proves to be an instance of various different term classes," at 319.

- *See, e.g.*, "When the object is inserted in the network it becomes a node of the structure. The data which the object contains are modeled as property values of the object and become, when inserted, actual node attributes. Some node attributes can be, for example, name, node type (e.g. legal authority documents, law documents, auxiliary data items), or the link type," at 320.

- *See, e.g.*, "It is possible to shift directly from any point of the hypertext network to other hyperdocuments by making use of the links existing between them," at 322.

- **Arnold-Moore 1994:**

Arnold-Moore 1994 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Arnold-Moore 1994 discloses a two-level system where legislative material is stored on a first level and indices of content and time are stored on a second level to permit browsing and linking to the data stored on the first level. For example:

- *See, e.g.*, "The implementation we propose can be viewed as a refinement of the two-level model of Agosti *et al.* involving two distinct sets of data objects: 1. the text (or structure containing the text) of each of the Acts which we term the data; and 2. the indices, table of content and glossaries which provide a means of browsing at a level above the data which are considered to be in the index level," at *xxii*.

- *See generally, xxii - xxiii* (describing "Context Index," "Time Index," and "Link Table").

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- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Arnold-Moore 1994-2 discloses us of indexing schemes to store attributes for managing the first database of text-based data. For example:

  - *See, e.g.*, "These issues and the related issue of index schemes to support such queries are discussed in greater detail elsewhere however a brief summary is appropriate," at THOM00196610.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Arnold-Moore 1997-2 discloses maintaining an index of attributes, such as effective date, for managing the stored legislative material. For example:

  - *See, e.g.*, "A standard inverted-file word index can be used to extract a list of matching documents on content (or an enhanced index to allow queries on structure also), and then this list can be filtered by a time constraint using a time-index," at 179.

  - *See, e.g.*, "Each fragment or table of contents has a valid start and end time associated with it. We then use an inverted-file index to give access to the fragments by content. As described for whole documents, we then filter results using the time information to collect just the fragments which are valid at the specified time defaulting to the current date (See Figure 1)," at 179.

- **Bachman 1973:**

  Bachman 1973 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Bachman 1973 discloses indices of attributes for managing the first database of text-based data. For example:

  - *See, e.g.*, "With small or medium-sized files, it is feasible for a database system to index each record in the file on every field in the record. Such totally indexed files are classified as inverted files. In large active files, however, it is not economically to index every field. Therefore, it is prudent to select the fields whose content will be frequently used as a retrieval criterion and to create secondary indices for those fields only," at 655.

- **Fay 1996:**

  Fay 1996 discloses "a first database comprises said plurality of predefined portions of text-based data." Specifically, Fay 1996 discloses that the versioned text is stored

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separately from its attributes and other information. For example:

- *See, e.g.,* "[T]he data that must be controlled by the user who checked out the element is put in one field, or node, that the user has sole control over, and the remaining data is put in an auxiliary, or shadow, node that is available to all other users," at Summary of the Invention.

- *See, e.g.,* "In addition to the locking units, or tree nodes, there are other types of data which are stored in non-locking units called shadow, or auxiliary, nodes," at 2:40–42.

- **Haake 1992:**

  Haake 1992 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Haake discloses a first database containing text-based data, and a second database containing the attributes associated with that text. For example:

  - *See, e.g.,* "CHS offers nodes, links, and composites that can be equipped with application-defined attributes. Objects can be accessed by their attribute values using the query language of the underlying database system of CHS," at 46.

  - *See, e.g.,* "Next to an internal mob [multi-versioned object] identifier and the version set, CoVer maintains for a mod optional application-defined and application-supplied state-independent attributes (e.g. an elaborated description, project management information such as the name of a responsible person). The attributes carried by the versions represent the state-dependent characteristics of a specific version of a versioned object," at 46.

- **Kim 1996:**

  Kim 1996 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Kim 1996 discloses a second hypermedia layer comprising attributes for managing the stored multimedia data. For example:

  - *See, e.g.,* "The hypermedia layer manages the hypermedia network which is discussed at 3.3 in detail," at 498.

  - *See, e.g.,* "As shown in Figure 3, the storage layer stores raw hypermedia data and the hypermedia layer generates and manages the hypermedia network using document index," at 499.

  - *See generally* 499 (Figure 3).

- **Lo 1996:**

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Lo 1996 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Lo 1996 discloses that document management systems often store documents in two separate databases. For example:

- *See, e.g.*, "Documents are stored as records in SIM databases . . . . As a result of applying the fragmentation model in the prototype system . . ., two databases are defined: the *basedoc* database and the *fragdoc* database. The former is for storing bases, and the latter for fragments. The schema of the basedoc database defines six attributes for a record. The *body* attribute contains a whole piece of text marked-up in SGML. This piece of text is recognized to be a specific version of a specific document by the values of the *version number (VerNo)* and the *document identified (DocId)* attributes,: at 112.

- **Povilus 1995:**

Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Sacks-Davis 1994:**

Sacks-Davis 1994 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Sacks-Davis 1994 discloses a second database comprising attributes about the stored text-based data. For example:

- *See, e.g.*, "This could be achieved by using two different database systems, one relational and one text with a gateway between them rather than using a structured text model which accommodates attributes directly," at THOM00198840.

- **Sacks-Davis 1995:**

Sacks-Davis 1995 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Sacks-Davis 1995 discloses indexes that can be used to store attributes separately from the stored text-based data. For example:

- *See, e.g.*, "Direct indexes are used for tables with a key attribute whose values are distinct, small integers. For attributes in which each distinct value only occurs a small number of times, and in particular key attributes, linear hashing indexes can be used," at 461.

- **Sciore 1994:**

Sciore 1994 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Sciore 1994 discloses maintaining attributes which can be used to organize and access the stored data. For example:

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- *See generally* 81, 94–103.
- *See, e.g.*, "This attribute can be thought of as defining a one-dimensional time line, and allows the version set to be viewed as a function from times to versions," at 95–96.
- *See, e.g.*, "Logical and physical times are orthogonal concepts, and define a two-dimensional version space," at 96.
- *See, e.g.*, "The previous section showed that the semantics of both CAD and historical databases imposes a multidimensional structure on version sets," at 96.
- *See, e.g.*, "Note that under this new definition, instances of *Bicycle* have exactly the same attributes as before . . . . The difference is that three of the attributes have been designated as defining a three-dimensional version space," at 97.

- **Stonebraker 1990:**

Stonebraker 1990 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Stonebraker 1990 discloses that POSTGRES is a database capable of storing data, including text, on which a variety of indexes can be defined for searching and managing the content. For example:

- *See e.g.*, "Because POSTGRES gives each record a unique identifier (OID), it is possible to use the identifier for one record as a data item in a second record. Using optionally definable indexes on OID's it is then possible to navigate from one record to the next by running one query per navigation step," at 126.

- **Travis & Waldt:**

Travis & Waldt discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Travis & Waldt discloses a two database system with a second database consisting of a collection of attributes regarding the text-based data stored in the first database which are used to manage the first database. For example:

- *See, e.g.*, "One way this is done is to use the relational database manager to track identifiers and other information about textual objects. The text itself is stored elsewhere, maybe in a file system or some other easily accessible location." at 192 & Figure 60.
- *See, e.g.*, "When a document is loaded into the database, the database manager creates a record containing this identifier, along with other parameters like the authors name, load date, chapter title, and so on. The document is stored separately, with a pointer in the relational data table pointing to where the text ended up," at

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193.

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Wilkinson 1998 discloses that attributes may be stored separately from the data. For example:

  - *See generally* section 2.2.3, beginning on page 17 (entitled "Metadata"). For example:

    - "Document attributes can be embedded in the content of a document assigned by a document management system, or simply never set. These attributes can be stored with the document or managed independently, but in either case they should be separately accessible, as metadata, not simply as part of the content of the document," at 19.

    - "In the first option, a standard general-purpose database is extended to provide text indexing and retrieval capabilities. . . . The second approach is to connect a purpose-built text database with a relational or object-oriented database system . . . ." at 103.

- **Wilson 1990:**

  Wilson 1990 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Wilson 1990 discloses an index of pre-defined terms stored separately from the first database. For example:

  - *See, e.g.*, "it is easy to provide a structured index composed of the terms appearing in the catchword section," at 125.

- **Wilson 1992:**

  Wilson 1992 discloses "a second database comprises said plurality of attributes for managing said first database." Specifically, Wilson 1992 discloses indices of attributes that can be maintained outside of the document universe, but which link to documents within the document universe. For example:

  - *See, e.g.*, "Index terms, or keywords, used as node icons may be external to the documents and need not necessarily appear in the original text. Connections between index terms and documents are through meaning, not through the exact words used to convey the meaning. These connections provide links from outside the document collection to its interior," at 180.

  - *See, e.g.*, "Other indexes for the All England Law Reports which might be generated and maintained automatically include: court, hearing date, date, catchwords, counsel,

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solicitor/agent, and reporter. The variety of indexes is limited only by our ability to store and maintain them, and automatic systems greatly increase our capabilities," at 183.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system included attributes for managing the first database. For example:

  - *See generally* Westlaw DB 1991: at 5, 7, 18–21 (describing how the TEXT database contained the portions of text as well as attributes); 2–5, 14–15 (disclosing the attributes stored within the TNDX for searching).

- **The Pre-1997 Premise System**:

  The Premise system contains attributes and indexes associated with text-based information. Those attributes and indexes are used for searching and retrieving portions of text.

- **The Astoria System (pre-1997):**

  The Astoria System included a database containing portions of text-based data. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria users navigate through the document depository and view documents down to the individual components that comprise them," at THOM00211907.

  - *See, e.g.*, XSoft Astoria: "Astoria [is an] . . . objected-oriented SGML database package," at THOM00198652.

  - *See,e.g.*, XSoft: "Because Astoria works directly with SGML elements using an object-oriented database, it can provide unprecedented control over SGML documents as well as unstructured information by allowing fine-grained access and version control," at THOM00198647.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system includes a database containing attributes related to the text-based legislation data. For example:

  - *See, e.g.*, TSS 1994-2, showing a database containing portions of text-based legislation data at SAIC002754, and explanatory material at SAIC002753-81.

- **The Documentum/Interleaf System:**

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The Documentum/Interleaf system has a second database containing attributes. For example: • *See, e.g.*, Ovum Interleaf 1996, showing separate database storage for attributes, at 257 (figure H2.3). • *See, e.g.*, Ovum Documentum 1996, "Documentum stores document *objects* in DocBases, using its document-relational model for implementing object stores in RDBMS," at 213.
Claim 13: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 13:
wherein said predefined portions are encoded with one or more attributes. • **Agosti 1991:** Agosti 1991 discloses "said predefined portions are encoded with one or more attributes." Specifically, Agosti 1991 discloses encoding attributes comprising auxiliary data about the predefined portions, such as date, title, author, etc. For example: • *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms…," at 317. • *See, e.g.*, "The EXPLICIT hypertext retrieval model is based on a two-level architecture, which holds the two main parts of a database managed by an information retrieval system: the collection of documents, and the auxiliary data. By the term auxiliary data we mean the data describing the document information contents," at 317. • *See, e.g.*, "a set of structured data which represents the different deterministic properties of the object (e.g., date of publication, title, list of authors, etc.)," at 318. • *See, e.g.*, "Objects of the second level result from the application of the classification abstraction mechanism to the objects of the first level; they denote concepts which are variously interrelated, for example through a classification hierarchy," at 319. • *See, e.g.*, "Being a document generally indexed by more than just one single term, a document object proves to be an instance of various different term classes," at 319. • *See, e.g.*, "The model supports navigation between the two levels by means of the navigability function. In this way it is at all times possible to pass from the hyperdocument to the hyperconcept and back again," at 320. • *See, e.g.*, "When the object is inserted in the network it becomes a node of the

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structure. The data which the object contains are modeled as property values of the object and become, when inserted, actual node attributes. Some node attributes can be, for example, name, node type (e.g. legal authority documents, law documents, auxiliary data items), or the link type," at 320.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "said predefined portions are encoded with one or more attributes." Specifically, Arnold Moore 1994 discloses encoding attributes of effective data, as well as other keys relating to the content of the text based data. For example:

  - *See, e.g.*, "Alternatively multi-dimensional access structures can be used to index simultaneously on time and other keys (in this case content)," at *xvi*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said predefined portions are encoded with one or more attributes." Specifically Arnold-Moore 1994-2 discloses using SGML to add attributes to the stored legislative material. For example:

  - *See, e.g.*, "The language, Structured Generalized Query Language (SGQL), allows efficient access to the content, structure and attributes of documents at any level within their structure," at THOM00196608.

  - *See, e.g.*, "Queries might specify that certain attributes have particular values, but have concentrated on matching against the content of the document," at THOM00196608.

  - *See, e.g.*, "These databases will need to be searched by attribute," at THOM00196608.

  - *See, e.g.*, "SGML describes a tagging scheme and a metagrammar for describing the structure of documents," at THOM00196609.

  - *See, e.g.*, "One can associate typed information with particular SGML elements by using attributes which appear in the text within the begin tag," at THOM00196609.

  - *See, e.g.*, "Thus, we may have associated with each document, or element of a document, a set of attributes that we shall call features, to distinguish them from the attributes defined by the grammar that describes the SGML document class," at THOM00196609.

  - *See, e.g.*, "In order to construct a conceptual model of the database system we consider the database to be a list of ELF's (ELements with Features) where an ELF is: a complete SGML element … a list of features associated with that element," at

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THOM00196611. • **Arnold-Moore 1995:** Arnold-Moore 1995 discloses "said predefined portions are encoded with one or more attributes." Specifically, Arnold-Moore 1995 discloses encoding legislative materials with attributes such as source and effective date. For example: • *See, e.g.*, "The representation must capture particular features of each amendment including "the (Source) element which makes the amendment…the Time at which the amendment is to commence," at 299. • *See, e.g.*, "Since most authorized versions of Acts have the date of commencement as a footnote to the title page, it seems reasonable to expect this date to appear in the SGML encoding of the amending Act," at 301. • **Arnold-Moore 1997:** Arnold-Moore 1997 discloses "said predefined portions are encoded with one or more attributes." Specifically Arnold-Moore 1997 discloses using SGML to add attributes to the stored legislative material. For example: • *See, e.g.*, "Particular instances of the document are marked with tags which show the structure. Each tag can have attributes attached," at 58. • *See, e.g.*, "The section element contains the headnote, and text elements and two attributes, secno which is the number of the section, and id which is a unique identifier within that document for that section which encodes much of the context information about that element," at 58. • **Arnold-Moore 1997-2:** Arnold-Moore 1997-2 discloses "said predefined portions are encoded with one or more attributes." Specifically, Arnold-Moore 1997-2 discloses encoding attributes of effective data, as well as other tags relating to the content of the text based data. For example: • *See, e.g.*, "Logical structure is identified by tags which appear interspersed with the text in an SGML document," at 177. • *See, e.g.*, "Each fragment or table of contents has a valid start and end time associated with it. We then use an inverted-file index to give access to the fragments by content. As described for whole documents, we then filter results using the time information to collect just the fragments which are valid at the specified time defaulting to the current date (See Figure 1)," at 179.

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- *See, e.g.*, "Schemes which rely only on the structure of the document and do not make use of the attributes of the SGML elements produce references that must be changed when the structure of the target document changes," at 181.

- *See, e.g.*, "The Themis system uses SGML tags to identify both internal and external cross-references (typically identified in the user interface by a shaded background). Each target element has an identifier (unique within that document) in the tag which can then be included in the tag of the source of the reference," at 181.

- **Bachman 1973:**

Bachman 1973 discloses "said predefined portions are encoded with one or more attributes." Specifically Bachman 1973 discloses encoding stored text-based data with attributes, referred to as "data keys." For example:

- *See, e.g.*, "Start with the value of the primary data key, of the record of interest, and pass each record in the file through core memory until the desired record, or one with a higher key, is found. (A primary data key is a field within a record which makes that a record unique within the file.) Social security numbers, purchase order numbers, insurance policy numbers, bank account numbers are all primary data keys. Almost without exception, they are synthetic attributes specifically designed and created for the purpose of uniqueness. Natural attributes, e.g. names of people and places, dates, time, and quantities, are not assuredly unique and thus cannot be used," at 654.

- *See, e.g.*, "From this point, I want to begin the programmer's training as a full fledged navigator in an *n*-dimensional data space," at 654.

- *See, e.g.*, "In addition to a record's primary key, it is frequently desirable to be able to retrieve records on the basis of the value of some other fields. For example, it may be desirable, in planning ten-year awards, to select all the employee records with the 'year-of-hire' field value equal to 1964. Such access is retrieval by secondary data key. The actual number of records to be retrieved by a secondary key is unpredictable and may vary from zero to possibly include the entire file. By contract, a primary data key will retrieve a maximum of one record," at 654.

- *See, e.g.*, "With the advent of retrieval on secondary data keys, the previously one-dimensional data space received additional dimensions equal to the number of fields in the record," at 655.

- **Bentley 1979:**

Bentley 1979 discloses "said predefined portions are encoded with one or more attributes." Specifically Bentley 1979 discloses encoding stored data with several attributes or keys. For example:

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- *See, e.g.*, "This subject area, which is often called 'multikey searching,' 'multidimensional searching,' or 'multiple attribute retrieval,' has been the focus of a great deal of research in the past few years," at 397.

- *See, e.g.*, "In database terminology a file is a collection of records, each containing several attributes or keys," at 397.

- *See, e.g.*, "This problem can also be cast in geometric terms by regarding the record attributes as coordinates and the k values for each record as representing a point in a k-dimensional coordinate space. The file of records them becomes a point set in k-space," at 397.

- **Campbell 1988:**

  Campbell 1988 discloses "said predefined portions are encoded with one or more attributes." Specifically Campbell 1988 discloses encoding data with multiple attributes. For example:

  - *See, e.g.*, "The HAM storage model is based on five objects: graphs, contexts, nodes, links, and attributes. The HAM maintains history for these objects, allows selective access through a filtering mechanism, and can allow for access restrictions through a data security mechanism," at 856.

  - *See, e.g.*, "Attributes can be attached to the contexts, nodes, or links. Attribute values can be strings, integers, floating-point numbers, or user-defined types. Attribute/value pairs give semantics to HAM objects. They can represent application-specific properties of objects or contain information that further describes an object. Attributes are also used in the predicates that are part of the HAM filters," at 857.

  - *See, e.g.*, "The HAM provides a filtering mechanism that allows subsets of HAM objects to be extracted from large graphs. Filters allow the user to specify visibility predicates, which are expressions relating attributes and their values. HAM filters only return objects that satisfy the predicates. Filters also allow the user to specify a version time so that earlier versions of a graph can be examined," at 857.

- **Elmasri 1990:**

  Elmasri discloses "said predefined portions are encoded with one or more attributes." Specifically, Elmasri discloses time and other attributes associated with the stored information. For example:

  - *See, e.g.*, "A search for objects that satisfy such a temporal condition combines selection based on a time interval with a selection based on conditions involving attribute values," at Summary of the Invention.

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- *See, e.g.*, "In addition to the regular record attributes, A_i, each record will have an interval attribute, valid_time, consisting of two subattributes, t_s (valid start time), and t_e (valid end time)," at Summary of the Invention.

- **Fay 1996:**

  Fay 1996 discloses "said predefined portions are encoded with one or more attributes." Specifically, Fay 1996 discloses that there are attributes associated with the text-based information. For example:

  - *See, e.g.*, "[T]he imported document instance would contain document, chapter, section, etc., objects having their own attributes and connected according to the structure implied by the descriptive markup," at 3:35–40.

- **Haake 1992:**

  Haake 1992 discloses "said predefined portions are encoded with one or more attributes." Specifically, Haake 1992 discloses predefined portions encoded with attributes. For example:

  - *See, e.g.*, "All hypertext objects are equipped with attributes holding information like names of nodes or labels of links," at 43.

  - *See, e.g.*, "CHS maintains object histories. It stores the creation time and the author of each node, link, composite, and attribute and records each update to these objects with time and author information in an update history," at 46.

  - *See, e.g.*, "Next to an internal mob [multi-versioned object] identifier and the version set, CoVer maintains for a mod optional application-defined and application-supplied state-independent attributes (e.g. an elaborated description, project management information such as the name of a responsible person). The attributes carried by the versions represent the state-dependent characteristics of a specific version of a versioned object," at 46.

- **Horne 1997:**

  Horne 1997 discloses "said predefined portions are encoded with one or more attributes." Specifically Horne 1997 discloses encoding stored statutes with attributes such as date, effective date, and act name. For example:

  - *See, e.g.*, "SGML markup consists of tags in angle brackets," at 2.

  - *See, e.g.*, "But markup could go further. It could give the dates on which the amendments were made, the dates on which they took effect, and the names of the Acts or SI which had made them, and the user's program could use this markup to display a statute as it was on a particular date chosen by the user and could offer

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hypertext cross-references to the amending legislation," at 3.

- **Kim 1996:**

  Kim 1996 discloses "said predefined portions are encoded with one or more attributes." Specifically, Kim 1996 discloses using SGML to add attributes to the stored multi-media data. For example:

  - *See, e.g.*, "Second, since we apply an object-oriented paradigm to modeling hypermedia data and links, we can inherit the properties and methods of the object-oriented model," at 496.
  - *See, e.g.*, "Secondly, we apply an object-oriented approach to modeling hypermedia data as objects," at 496.
  - *See, e.g.*, "SGML provides a syntax flexible enough to describe the logical structure of documents," at 497.
  - *See, e.g.*, "From now on, we will call our markup language HOML (Hypermedia Object Modeling Language). HOML is an SGML application and provides facilities for describing the relations between multimedia data and provides methods for describing hypermedia links and synchronization," at 497.
  - *See, e.g.*, "The text element has attribute values for security, version, and duration," at 497.

- **Larson 1988:**

  Larson 1988 discloses "said predefined portions are encoded with one or more attributes." Specifically, Larson 1988 discloses a multidimensional space with attributes, nodes and links. For example:

  - *See, e.g.*, "The basic conceptual model of hypertext is a multidimensional graph (or network) whose vertices (nodes) are information sources and whose edges (or links) represent both directed associative indices to those sources, and operational programs to display or utilize the information they contain. . . . The concept of an 'information space' that supports a hypertext network is useful. The world's store of recorded human knowledge may be viewed as a N-dimensional 'information space,' where N is the number of possible attributes that may be used to make up any information source," at 195.
  - *See, e.g.*, "Obviously, not all points in this information space will be occupied. Various dimensions of similarity may be considered to provide a useful clustering of information items within this space. The clustering may be based on any number of entity/attribute relationships, such as storage location (e.g., a library collection),

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form, topical, historic, author, citations, language, or literary style," at 196.

- *See, e.g.*, "Neptune also permits any number of descriptive attribute/value pairs to be assigned to any node or link, which may be searched," at 196.

- *See, e.g.*, "The indexes supported in Telesophy include a keyword index (providing Boolean and proximity searching), a 'temporal index' that permits selection by the time an IU was created, and a 'spatial index' that 'places items in an N-dimensional space based on their attributes, then allows the space to be searched," at 197.

- **Lo 1995:**

  Lo 1995 discloses "said predefined portions are encoded with one or more attributes." Specifically, Lo 1995 discloses using SGML to add attributes to the stored documents. For example:

  - *See, e.g.*, "SGML (Standard Generalised Markup Language) was adopted by ISO as an international standard to describe the structure of electronic documents. The reason for using SGML is its international acceptance as an electronic document markup standard. Furthermore, while the description of a document's structure is primarily applied in publication, database technology could also make use of this structural knowledge to enhance its management of documents," at 339.

  - *See, e.g.*, "SGML tags are placed in text to denote its structure and such practice is known as descriptive markup. A component in the text such as a title or a paragraph can be explicitly defined by marking them with these tags," at 339.

  - *See, e.g.*, "Each destination is given an identifier unique to the version…Globally unique identifications are then derived by combining the document identifier (DocId) and the version number (VerNo) with the destination identifier (DestID)," at 340.

  - *See, e.g.*, "Attributes can be associated to this global link table as well to describe the characteristics of the link objects," at 343.

  - *See, e.g.*, "While the Direct Reference Method can also achieve this by incorporating the attributes in the document (may utilize SGML attributes)," at 344.

- **Lo 1996:**

  Lo 1996 discloses "predefined portions are encoded with one or more attributes." Specifically, Lo 1996 discloses attributes associated with text-based information. For example:

  - *See, e.g.*, "Nodes of this document tree are associated with the information of valid time by two attributes: the start valid time and the end valid time," at 31.

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- *See, e.g.*, "*Attributes* can be embedded into the elements to describe some of their aspects, for example, the element chapter may contain the attribute "id" which gives the identifying number of that element," at 38.

- *See e.g.*, section 2.3.3, starting on page 41, entitled "SGML Support for Versioning," including figure 2.5.

- *See, e.g.*, "More precisely, HyTime addresses three aspects: . . . Representing any quantifiable dimension (typically spatial and temporal dimensions) as a coordinate space and placing objects within it," at 48.

- *See, e.g.*, "Such a facility will allow a user to traverse to any version that contains the destination that he wants," at 61.

- *See e.g.*, including: "Documents are stored as records in SIM databases . . . . As a result of applying the fragmentation model in the prototype system . . ., two databases are defined: the *basedoc* database and the *fragdoc* database. The former is for storing bases, and the latter for fragments. The schema of the basedoc database defines six attributes for a record. The *body* attribute contains a whole piece of text marked-up in SGML. This piece of text is recognized to be a specific version of a specific document by the values of the *version number (VerNo)* and the *document identified (DocId)* attributes," at 112.

- **Osterbye 1992:**

  Osterbye 1992 discloses "said predefined portions are encoded with one or more attributes." Specifically, Osterbye 1992 discloses encoding stored nodes with stored attributes. For example:

  - *See, e.g.*, "If an element is versioned, a specific version represents a state in the development. Will it then be possible to annotate it, or to add new attributes?" at 33.

  - *See, e.g.*, "The top of the hierarchy is an entity which allows attributes to be attached to all entities," at 34.

  - *See, e.g.*, "Selection from version groups is based on the attribute values of the modules in the version group. Such attributes can typically contain information about authors, creation date, and release state (tested, experimental, etc.)," at 34.

  - *See, e.g.*, "Adding new attributes to a node might also be attractive," at 35.

  - *See, e.g.*, "For both models methods for controlling change and addition of attributes must be found," at 35.

  - *See, e.g.*, "The general entity provides attributes, which are key-value pairs attached

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to the objects. All information is stored as attributes," at 38.

- **Peltonen 1993:**

  Peltonen 1993 discloses "said predefined portions are encoded with one or more attributes." Specifically, Peltonen 1993 discloses electronic text-based data associated with attributes. For example:

  - *See, e.g.*, "Documents and various attributes are stored in a centralized database. ," at 2.
  - *See, e.g.*, "The goal of the EDMS project was to develop a system which stores the actual documents contents in addition to attribute data," at 2.
  - *See, e.g.*, "All data, i.e., the actual document contents and various attributes, are stored in a commercial relational database," at 3.
  - *See, e.g.*, "Various data about objects are stored as *attributes*. All objects of the same object kind (e.g., all document versions) have the same *system attributes*. These attributes are defined by EDMS and their values can only be modified by the system. The EDMS administrator can define both *common* and *type-specific* attributes. A common attribute is defined for an object kind; for example, all documents can have a particular attribute. A type-specific attribute is defined for an object type; for example, all versions of documents of the type *drawing* can have a particular attribute," at 9.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Promenschenkel 1995:**

  Promenschenkel 1995 discloses "said predefined portions are encoded with one or more attributes." Specifically, Promenschenkel 1995 discloses using SGML to add attributes to the stored text-based data. For example:

  - *See, e.g.*, "SGML allows documents to move from one environment to another by separating the formatting information from the content and structure of the document," at 3.

- **Sacks-Davis 1994:**

  Sacks-Davis 1994 discloses "said predefined portions are encoded with one or more attributes." Specifically, Sacks-Davis 1994 discloses using SGML to add attributes to

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the stored text-based data. For example:

- *See, e.g.*, "Typed information can be associated with particular SGML elements by using attributes that appear in the text with the begin tag," at THOM00198836.
- *See, e.g.*, "A list of attributes can be associated with each element type, and these attributes contain typed data associated with each element instance," at THOM00198839.
- *See, e.g.*, "While strictly part of the SGML text, data stored as SGML attributes is representative of the data that is typically stored in traditional databases," at THOM198840.

- **Sacks-Davis 1995:**

  Sacks-Davis 1995 discloses "said predefined portions are encoded with one or more attributes." Specifically, Sacks-Davis 1995 discloses using SGML to add attributes to the stored text-based data. For example:

  - *See, e.g.*, "Text created in a word processor generally contains embedded markup that describes the structure of the text and how it should be presented," at 455.
  - *See, e.g.*, "The attributes of records can be atomic values, tuples (structured values), nested tables, or references (pointers)," at 455.
  - *See, e.g.*, "The Document table contains entries consisting of a document identifier, a title, a nested table of authors, and a nested table of references to hypertext nodes contained in that document," at 455.
  - *See, e.g.*, "Information about author names is stored as a structured attribute, name, which is a tuple consisting of two components: surname and first name," at 455.
  - *See, e.g.*, "In addition to atomic attributes and structured attributes, Atlas supports reference attributes. A reference is a tuple comprising the global key of a record or nested record. In the hypertext example, bidirectional links between documents and their associated nodes are maintained using reference attributes, so that in table Hypertext, attribute doc has values from the domain of the key of the Document table, namely, attribute doc_id," at 456.
  - *See, e.g.*, "As in a conventional database, each record contains attribute data such as name, age place of birth, and gender," at 465.

- **Sciore 1991:**

  Sciore 1991 discloses "said predefined portions are encoded with one or more attributes." Specifically, Sciore 1991 discloses adding attributes to the stored text-based

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data. For example:

- *See, e.g.*, "We develop a version specification language at the conceptual level, and a multidimensional specification language at the logical level," at 355.
- *See, e.g.*, "At the conceptual level, we show how versions can be chosen from a version set based on the values of their attributes," at 356-57.
- *See, e.g.*, "At the logical level, we show how the logical semantics of versioning can be encoded explicitly in a dimension type. Arbitrary combinations of dimension types can be associated with a set of versions, according to the desired semantics of an application. Because each dimension types is independent of the others, each combination determines a multi-dimensional space of versions," at 357.
- *See, e.g.*, "The versions of a design object all have the same scheme, so they differ only in the values for their attributes. These different attributes reflect the different design choices that caused the version to be created," at 358.
- *See, e.g.*, "In this section we show how this semantics can be specified as a set of orthogonal dimensions, with each version being a point in the k-dimensional space defined by these dimensions," at 363.
- *See, e.g.*, "The attribute occuredAT records the time at which the change took place. This attribute can be thought of as defining a one-dimensional time line, and allows the version set to be viewed as a function from times to versions," at 364.
- *See, e.g.*, "In particular: there can be an arbitrary number of dimensions, not just two; dimensions can be defined by any attribute, not just the ones corresponding to time; dimensions are not hard-coded into the system. New dimensions can be declared by an application, and different combinations of dimensions can be declared for each generic type," at 365.
- *See, e.g.*, "In general, the attributes chosen as dimensions should form a key of the version set, so that at most one version is associated with any coordinate in the version space," at 366.
- *See, e.g.*, "Our framework provides the means by which a database designer can specify a multi-dimensional logical structure to the version set. This logical structure can then be used to choose versions easily and conveniently," at 367.

- **Sciore 1994:**

  Sciore 1994 discloses "said predefined portions are encoded with one or more attributes." Specifically, Sciore 1994 discloses encoding, for the bicycle example, attributes of style, number of speeds, frame, and design date. For example:

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- *See e.g.,* 81.

- *See, e.g.*, "Values for versioned attributes are stored with the versions of the object. Changes to any of these attributes cause a new version to be created," at 85.

- **Stonebraker 1990:**

  Stonebraker 1990 discloses "predefined portions are encoded with one or more attributes." Specifically, Stonebraker 1990 discloses that database records in POSTGRES are associated with numerous attributes. For example:

  - *See e.g.*, section II.B, beginning on page 126 (discussing attribute types and inheritance)

  - *See, e.g.*, page 126: "It is also possible to interact with at POSTGRES database by utilizing a navigational interface. . . . Because POSTGRES gives each record a unique identifier (OID), it is possible to use the identifier for one record as a data item in a second record. Using optionally definable indexes on OID's it is then possible to navigate from one record to the next by running one query per navigation step."

- **Stonebraker 1994:**

  Stonebraker 1994 discloses "predefined portions are encoded with one or more attributes." Specifically, Stonebraker 1994 discloses numerous attributes stored in a POSTGRES database. For example:

  - "The browser has three ways to relocate its position in N-space: it can move to a previously designated identifier, it can move to a specific N-D-point which it calculates in some fashion, or it can move in some direction, denoted by (Δ_1, …, Δ_N) until some condition F(value) <operator> <constant> is true. This third relocation command is useful, for example, if a user is browsing Hurricane Hugo, and wishes to **fast-forward** the hurricane, i.e. skip or skim through images sorted by time, until Hugo hits land. If landfall of the hurricane can be expressed as a predicate, then the appropriate MOVE command would look like MOVE along (0,0,…,+1) until hits_land(Hurricane.hugo) = TRUE. The +1 means a movement along the positive time axis, assuming time is the last dimension in this coordinate system," at 5.

- **Taylor 1994:**

  Taylor 1994 discloses "predefined portions are encoded with one or more attributes." Specifically, Taylor 1994 discloses media encoded with attributes. For example:

  - *See, e.g.*, "SHIC provides for multiple classifications of an item which is crucial for classifying media items such as photographs where one scene could be classified in

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several different ways," at 240.

- *See, e.g.*, "The temporal classification schema . . . stores information relating artefacts to some existence in time. The schema consists of year time point identifiers that constitute the relevant temporal span," at 240.

- *See* figure 1.

- *See, e.g.*, "The combination of the conceptual, temporal and geographical classification spaces and their respective operators means that information requests do not need to be limited to one particular dimension. They can be multi-dimensional. An example of such a query would be: Show me Costume from Pontypridd during the Victorian era. The temporal dimension provides a method by which a temporal walk through a concept can be obtained. A temporal walk consists of showing the development of an historical concept or geographic area over time. In practical terms this requires the ordering of a set of media items according to the information stored in the temporal schema," at 242.

- **Travis & Waldt:**

  Travis & Waldt discloses "said predefined portions are encoded with one or more attributes." Specifically, Travis & Waldt discloses encoding attributes of, for example, author and creation date into the text-based data. For example:

  - *See, e.g.*, "In addition to the name of an element, the start-tag can contain information about the element. This additional information is called an 'attribute'. Attributes can be used to indicate additional information for processing. For example, although the creation date and author may never be printed in any form from this document, this information might be needed in order to load a database or decide which elements are to be included in a particular rendering," at 221.

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "predefined portions are encoded with one or more attributes." Specifically, Wilkinson 1998 discloses that documents are associated with metadata (attributes). For example:

  - *See, e.g.* section 2.2.3, beginning on page 17 (entitled "Metadata"). For example:

    - "If a document management system implements versioning of documents, an obvious attribute to be stored is the version number of the document," at 18.

    - "Document attributes can be embedded in the content of a document assigned by a document management system, or simply never set. These attributes can be stored with the document or managed independently, but in either case they should be separately accessible, as metadata, not simply as part of

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the content of the document," at 19.

- *See, e.g.*, "Most metadata is organized as a set of (attribute, value) pairs. Thus we need a structure that can support queries of the form 'which documents have value A for attribute B?'" at 100.

- **Wilson 1992:**

  Wilson 1992 discloses "said predefined portions are encoded with one or more attributes." Specifically, Wilson 1992 discloses encoding attributes of, for example, effective date into the text-based data. For example:

  - *See, e.g.* 180-181.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system contained portions of text encoded with attributes. *See, e.g.*:

  - Westlaw DB 1991 at 5,7,18-21 (describing how the TEXT database contained the portions of text as well as attributes); 2-5,14-15 (disclosing the attributes stored within the TNDX for searching).

  - DataBasics 1993, at doc no. 79858–59 ("United States Code Annotated"): Disclosing mechanisms for searching using words or phrases within portions and amended portions of statutes.

  - AMPEX § 2/

  - Wren 1994, "the CALR vendors have divided documents in their databases into units corresponding to elements that recur in cases and other legal authorities. These units are called "fields" in WESTLAW . . . . The term "field," though, is broadly used in computer terminology to refer to divisions within documents in any database . . . ," at 75, 141-42.

  - The Essential Guide 1996, at 47: "You can use restrictions to limit your WIN search. For example, in a case law database, you can restrict your search by court, date, judge, attorney or added date."

  - The Essential Guide 1996, at 136, showing a statutory section, including some of the fields within a statute, as well as a link to a related case.

- **The Pre-1997 Premise System**:

  The Premise system contained portions of text encoded with attributes. *See, e.g.*:

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- Premise Software & Statutes: Select "Search/Search Book…" and then change the "Search Using" field to "Fields Template," which will then list several of the attributes of the portions and amended portions.

- Premise Publisher, (defining "Detail" to be "A set of descriptive information fields about a single object in PREMISE Publisher, e.g., document . . . .); 75–94 (showing the "PARMS" or parameters, which are attributes to be added to the markup tags); 151–154 (showing how to add, change, and delete attributes associated with documents); 181–89 (showing how to add attributes to a Premise database), at 11.

- **The Astoria System (pre-1997):**

  The Astoria System contained attributes associated with portions and amended portions and the use of attributes to organize and access the stored documents. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria provides a mechanism for associating arbitrary, user-definable attributes with Astoria objects. Custom Attributes provide a means for Astoria users to store relevant information directly with any object, providing a robust foundation for object status tracking, and the search and assembly of individual document components." "Astoria users specify a value for the custom attribute and then can search, retrieve, and assemble new documents based on custom attribute values," at THOM00211911.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system includes portions of text encoded with attributes. *See, e.g.*:

  - TSS 1994-2, at SAIC002754, and explanatory material at SAIC002753–2781 (showing a database containing portions of text-based legislation data).

  - Arnold-Moore 1997-2, "Each fragment or table of contents has a valid start and end time associated with it," at 179. *See also*: "The SIM client/server architecture is built around Z39.50 [a standard for searching using attributes]," at 177.

- **The SCALEplus System:**

  The SCALEplus system's legislative data has many attributes. *See, e.g.*:

  - Kerr 2000: Figures accompanying paragraphs 180 (page 6-4), 187 (page 6-6), 429 (page 11-3), 491 (page 11-19).

- **The Documentum/Interleaf System:**

  The Documentum/Interleaf system has many attributes associated with the text-based information. *See, e.g.*:

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- Ovum Interleaf 1996, at 254–55 (and figure H2.3) ("RDM has several mandatory attribute types.").
- Ovum Documentum 1996, at 208-09 ("Documentum offers good scope for organizing documents via the attributes which come built-in with the system.").

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system contained portions of text encoded with attributes.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system contained portions of text encoded with attributes.

- **The Law Desk NY System:**

  The Law Desk NY system contained portions of text encoded with attributes.

- **The Law Desk USCS System:**

  The Law Desk USCS system contained portions of text encoded with attributes.

- **The New Mexico Law System:**

  The New Mexico Law on Legal Ethics system contained portions of text encoded with attributes.

- **The NY Official Reports System:**

  The NY Official Reports system contained portions of text encoded with attributes.

- **The NY CLS Beta System:**

  The NY CLS Beta system contained portions of text encoded with attributes.

- **The OnPoint System:**

  The OnPoint system contained portions of text encoded with attributes.

- **The Social Security Plus System:**

  The Social Security Plus system contained portions of text encoded with attributes.

- **The UCC System:**

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The UCC system contained portions of text encoded with attributes.
Claim 14: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 14:
wherein said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion. • **Agosti 1991:** Agosti 1991 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Agosti 1991 discloses changing predefined portions by, for example, inserting new attributes, adding new attributes, or deleting attributes. For example: • *See, e.g.*, "This means, for example, that the insertion of a new descriptive term into the hyperconcept does not imply any modification of the hyperdocument; in the same way, insertion of a new document doesn't entail any variation in the hyperconcept; the only consequence is an activation of new connections between the hyperconcept and the hyperdocument," at 320. • *See, e.g.*, "An important feature has been devise [sic] in order to permit automatic updating of the hyperconcept and hyperdocument. The model allows insertion and removal of single items of information maintaining the integrity of reference within the two level structure," at 320. • **Arnold-Moore 1994:** Arnold-Moore 1994 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Arnold-Moore 1994 discloses changing original predefined portions of legislative material, by, for example, updating effective date attributes when additional amendments are made to the legislation. For example: • *See, e.g.*, "if an element (e.g. a section) was altered at a given time, t, the time stamp on the old element could be changed to be from the time of insertion to time t and a new alternative element could be inserted immediately following the old with a time-stamp t to the default current time," at *xvii*.

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- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Arnold-Moore 1997-2 discloses changing attributes, such as time-stamps, which relate to stored legislative material. For example:

  - *See, e.g.*, "Fragments and documents are never actually deleted from the repository but dangling references can still be created by changing the time-stamps on a fragment which has been repealed," at 181.

- **Bachman 1973:**

  Bachman 1973 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Bachman 1973 discloses updating, modifying, and deleting stored database fields. For example:

  - *See, e.g.*, "It involves all aspects of storing, retrieving, modifying, and deleting data in the files on personnel and production, airline reservations, or laboratory experiments – data which is used repeatedly and updated as new information becomes available," at 654.

  - *See, e.g.*, "The second activity of database management is to update, which includes the original storage of data, its repeated modification as things change, and ultimately, its deletion from the system when the data is no longer needed," at 655.

  - *See, e.g.*, "The hiring of a new employee would cause a new record to be stored. Reducing available stock would cause an inventory record to be modified. Cancelling an airline reservation would cause a record to be deleted. All of these are recorded and updated in anticipation of future inquiries," at 655.

- **Campbell 1988:**

  Campbell 1988 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Campbell 1988 discloses changing attributes about existing data objects through a change operation. For example:

  - *See, e.g.*, "Change operations modify data associated with an existing object. A

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change operation takes an object index, a version time, and object-dependent data and returns a version time. The object index specifies the unique identifier for the object being modified. The returned version time represents the time the object was modified," at 857.

- **Haake 1992:**

Haake 1992 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Haake 1992 discloses predefined portions encoded with attributes. For example:

- *See, e.g.,* "CHS maintains object histories. It stores the creation time and the author of each node, link, composite, and attribute and records each update to these objects with time and author information in an update history," at 46.

- *See, e.g.,* "Next to an internal mob [multi-versioned object] identifier and the version set, CoVer maintains for a mod optional application-defined and application-supplied state-independent attributes (e.g. an elaborated description, project management information such as the name of a responsible person). The attributes carried by the versions represent the state-dependent characteristics of a specific version of a versioned object," at 46.

- **Lo 1996:**

Lo 1996 discloses "predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Lo 1996 discloses that attributes of documents changes over time. For example:

- *See, e.g.,* "When another new version of the same document is created, the EndDate of the former version will be changed to the time just prior to the StartDate of this newly created version," at 112.

- **Osterbye 1992:**

Osterbye 1992 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Osterbye 1992 discloses adding or changing attributes about existing nodes. For example:

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- *See, e.g.*, "If an element is versioned, a specific version represents a state in the development. Will it then be possible to annotate it, or to add new attributes," at 33.

- *See, e.g.*, "Adding new attributes to a node might also be attractive. Assume that after the node was created, a new tool was introduced into the system. That tool might want to store some information at the nodes," at 35.

- *See, e.g.*, "Not all aspects of the node can be frozen, so we will call this to 'jel' the node," at 35.

- *See, e.g.*, "For both models methods for controlling change and addition of attributes must be found," at 35.

- *See, e.g.*, "For an entity type X, we specify which attributes can be mutated after an entity has been frozen; for nodes we also specify which types of links we can attach to a frozen node," at 38.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Sciore 1991:**

  Sciore 1991 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Sciore 1991 discloses storing versions of text-based documents which have had their attributes updated. For example:

  - *See, e.g.*, "The versions of a design object all have the same scheme, so they differ only in the values for their attributes," at 358.

- **Sciore 1994:**

  Sciore 1994 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Sciore 1994 discloses adding, deleting, or modifying attributes stored with a version. For example:

  - *See, e.g.*, "The versions of a generic object all have the same scheme, so they differ

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only in the values for their attributes," at 80.

- *See, e.g.*, "In this article we discuss the operations most relevant to database applications, namely the operations to insert, delete, and modify objects in a collection," at 83.

- *See, e.*g., "Versions are modified using the replace command. For example, the following command increase the cost of all racing bicycle versions of the BMX product," at 84.

- *See, e.g.*, "Values for versioned attributes are stored with the versions of the object. Changes to any of these attributes cause a new version to be created," at 85.

- **Stonebraker 1990:**

  Stonebraker 1990 discloses "predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Stonebraker 1990 discloses that whenever any field within the POSTGRES database is updated, a the entire field is re-stored as a new record.. For example:

  - *See, e.g.* section IV.A, 137 (discussing the no-overwrite feature of POSTGRES, and saying "the old record remains in the database whenever an update occurs" and "[t]he second benefit of a no-overwrite storage manager is the possibility of *time travel*" and "[t]his storage manager should be contrasted with a conventional one where the previous record is overwritten with a new one").

- **Taylor 1994:**

  Taylor 1994 discloses "predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Taylor 1994 discloses that the media changes over time. For example:

  - *See, e.g.*, "The intention of the project was to generate a model capable of supporting the evolutionary nature of geographical entities. The geography of an area does not stay constant over time; new towns or streets are built and names are all susceptible to change," at 241.

  - *See, e.g.*, "The geographical schema models four editions of the Ordnance Survey maps between 1880 to 1994," at 239.

- **Travis & Waldt:**

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Travis & Waldt inherently discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Travis & Waldt discloses several examples of attributes that change from version to version of a text-based document. *See pages* 187, 189-90 (*e.g.*, version number, date checked in, date modified.)

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Wilkinson 1998 discloses changing attributes such as version number or a timestamp. For example:

  - *See, e.g.*, "Each version can be identified using the document identifier and either an integer version number or a timestamp . . . .," at 97.

- **Wilson 1992:**

  Wilson 1992 inherently discloses "said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion." Specifically, Wilson 1992 discloses encoding attributes of, for example, effective date into the text-based data. This attribute of effective date would necessarily require updating when further amendments are made to the legislation. For example:

  - *See, e.g.* 180-181.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system processes additions, changes, and deletions to the legislation. *See, e.g.*:

  - www.westlaw.com, California Statutes Annotated Database from 1996 (CA-STAN96), CA BUS & PROF § 28 (two versions: one active and one as amended).

  - Wren 1994, "the CALR vendors have divided documents in their databases into units corresponding to elements that recur in cases and other legal authorities. These units are called "fields" in WESTLAW . . . . The term "field," though, is broadly used in computer terminology to refer to divisions within documents in any database . . . ," at 75.

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- **The Astoria System (pre-1997):**

  The Astoria System contained attributes associated with portions and amended portions and the use of attributes to organize and access the stored documents or components. These could be used to add, change or revise the stored documents or components. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria provides a mechanism for associating arbitrary, user-definable attributes with Astoria objects. Custom Attributes provide a means for Astoria users to store relevant information directly with any object, providing a robust foundation for object status tracking, and the search and assembly of individual document components." "Astoria users specify a value for the custom attribute and then can search, retrieve, and assemble new documents based on custom attribute values," at THOM00211911.

  - *See, e.g.*, XSoft Astoria: "Astoria deals with the concept of 'document components.' A document component is a piece that is designed to be maintained as a unit, whether this be at the volume or book level, or at some finer granular point, such as paragraph or list," at THOM00198652.

  - *See, e.g.*, Astoria 1997-1: "Astoria can apply revision information to only the components that change during an editing session. Astoria detects and maintains revision history at the component level, not just at the document level. . . Astoria stores versioning information in an efficient format, and past versions are always available for republishing or for providing an audit trail," at THOM00211908.

  - *See, e.g.*, XSoft: "Because of its sophisticated integration with SGML editors, Astoria maintains revision information on individual elements, and past versions are always available," at THOM00198648.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct processes changes including adding, deleting, and modifying attributes. *See, e.g.*:

  - http://web.archive.org/web/19990430002036/www.thelaw.tas.gov.au/background.html: "Each fragment contains the dates for which that piece of legislation is in force. When legislation is amended, the system automatically builds new versions of fragments which are affected by amendments and keeps the old ones for historical reference."

  - Arnold-Moore 1997-2, : "Each fragment or table of contents has a valid . . . end time associated with it," which must be updated if it is repealed," at 179.

- **The Core Materials on Legal Ethics System:**

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The Core Materials on Legal Ethics system processes additions, changes, and deletions to the text-based data. • **The Federal Rules of Civil Procedure System:** The Federal Rules of Civil Procedure system processes additions, changes, and deletions to the text-based data. • **The Law Desk NY System:** The Law Desk NY system processes additions, changes, and deletions to the text-based data. • **The Law Desk USCS System:** The Law Desk USCS system processes additions, changes, and deletions to the text-based data. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system processes additions, changes, and deletions to the text-based data. • **The NY Official Reports System:** The NY Official Reports system processes additions, changes, and deletions to the text-based data. • **The NY CLS Beta System:** The NY CLS Beta system processes additions, changes, and deletions to the text-based data. • **The OnPoint System:** The OnPoint system processes additions, changes, and deletions to the text-based data. • **The Social Security Plus System:** The Social Security Plus system processes additions, changes, and deletions to the text-based data. • **The UCC System:** The UCC system processes additions, changes, and deletions to the text-based data.
Claim 15: In addition to the prior art listed above in conjunction with Claim 1, and Subject

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to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 15:
wherein said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.

- **Agosti 1991:**

  Agosti 1991 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Agosti 1991 discloses storing updated versions of legislative material that have been changed. For example:

  - *See, e.g.*, "This means, for example, that the insertion of a new descriptive term in the hyperconcept does not imply any modification of the hyperdocument; in the same way, insertion of a new document doesn't entail any variation in the hypderconcept," at 320.

  - *See, e.g.*, "The model allows insertion and removal of single items of information maintaining the integrity of reference within the two level structure," at 320.

  - *See, e.g.*, "When the object is inserted in the network it becomes a node of the structure," at 320.

  - *See, e.g.*, "The system thus created, called HyperLaw, is an experimental tool for handling legal collections of full text and reference documents: law, case law, legal authority," at 321.

  - *See, e.g.*, "It is in fact possible to insert new information items into the hypertext network of the system loading them in from an external source file…This function is particularly important in the handling of a set of information which evolves in time," at 324.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Arnold-Moore 1994 discloses changing predefined portions of legislative material by creating consolidations of the original legislative and subsequent amendments to that legislation. For example:

  - *See, e.g.*, "The version has had the title of the act changed . . . and an extra paragraph

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inserted," at *xix.*

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Arnold-Moore 1994-2 discloses storing updated versions of legislative material that have been changed. For example:

  - *See, e.g.*, "This will, for example, allow a software engineering document that is the right version to be retrieved," at THOM00196608.

- **Arnold-Moore 1995:**

  Arnold-Moore 1995 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Arnold-Moore 1995 discloses making modifications to predefined portions. For example:

  - *See, e.g.*, "The simplest solution is to undo modifications in any subsequent versions, apply the intervening modifications and then reapply the later modifications," at 301.

- **Arnold-Moore 1997:**

  Arnold-Moore 1997 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Arnold-Moore 1997 discloses storing updated versions of legislative material that have been changed. For example:

  - *See, e.g.*, "A consolidation (or reprint) of a Principal Act is that Act as amended at a particular time," at 56.

  - *See, e.g.*, "An ideal drafting tool would present the drafter with the appropriate consolidation of the target of the amendment (see Figure 1) and allow him or her to mark amendments on that consolidation (see Figure 2)," at 57.

  - *See, e.g.*, "There are 6 basic types of amendment, omitting text, inserting text, replacing text, omitting a whole element, inserting a whole element, or replacing a whole element," at 58.

  - *See, e.g.*, "To do this, and RTF to SGML converter … is then applied to the document to produce two separate SGML representations. The strike-through and

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underline is used to generate two parallel trees representing the structure of the document, one before all of the changes and one after the changes have been applied," at 59.

- **Arnold-Moore 1997-2:**

Arnold-Moore 1997-2 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Arnold-Moore 1997-2 discloses storing updated versions of legislative material that have been changed. For example:

- *See, e.g.*, "Themis also allows access to different versions of legislation by specifying a point-in-time at which the law is required," at 175.
- *See, e.g.*, "In particular, the complex structure of legislation and different versions of a particular piece of legislation can be better supported," at 175.
- *See, e.g.*, "The other important distinguishing characteristic of legislation is that its content can change with the passage of time," at 176.
- *See, e.g.*, "Ideally a library, paper or digital, would provide ever possible consolidation of every piece of legislation," 176.
- *See, e.g.*, "The following section 3 introduces a system which addresses these needs…The problem of handling multiple versions of legislation is addressed in section 6," at 176.
- *See, e.g.*, "The simplest solution is to apply the amending Statutes (either manually or automatically) once to produce each consolidation, and to store each consolidation as well as the principal Statute (and each of the amending Statutes)," at 179.
- *See, e.g.*, "That means that when a section is modified, only the fragment containing that section needs to be updated, not the whole document," at 179.

- **Bachman 1973:**

Bachman 1973 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Bachman 1973 discloses updating, modifying, and deleting stored text-based data. For example:

- *See, e.g.*, "It involves all aspects of storing, retrieving, modifying, and deleting data in the files on personnel and production, airline reservations, or laboratory experiments – data which is used repeatedly and updated as new information

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becomes available," at 654.

- *See, e.g.*, "The second activity of database management is to update, which includes the original storage of data, its repeated modification as things change, and ultimately, its deletion from the system when the data is no longer needed," at 655.

- *See, e.g.*, "The hiring of a new employee would cause a new record to be stored. Reducing available stock would cause an inventory record to be modified. Cancelling an airline reservation would cause a record to be deleted. All of these are recorded and updated in anticipation of future inquiries," at 655.

- **Campbell 1988:**

  Campbell 1988 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Campbell 1988 discloses storing updated versions of stored data. For example:

  - *See, e.g.*, "A node contains arbitrary data that can be stored as text or as fixed-length binary blocks. A node can be classified as archived, nonarchived, or append-only. When an archived node is updated, a new version of the node is created using the new contents. Previous versions of an archived node can be retrieved. When a nonarchived node is updated, the previous contents are replaced by the new contents. When an append-only node is updated, the new contents are appended to the previous contents," at 856-57.

  - *See, e.g.*, "The version history for a HAM object is updated each time that object is modified. Because each access to an object contains a version time, previous versions of objects can be viewed," at 857.

  - *See, e.g.*, "Change operations modify data associated with an existing object. A change operation takes an object index, a version time, and object-dependent data and returns a version time. The object index specifies the unique identifier for the object being modified. The returned version time represents the time the object was modified," at 857.

- **Fay 1996:**

  Fay 1996 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Fay 1996 discloses that the purpose of the invention is to facilitate the editing of text-based documents. For example:

  - *See, e.g.*, "When a change must be made to an element of a document, it is "checked

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out" by a user, assuming he has the necessary privileged, and is changed in any way by him. During this time, other users can view this element of the document, but can not modify it. After the user has finished his editing, he checks in the document, whereupon it is again available to other users," at Background of the Invention. • **Haake 1992:** Haake 1992 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Haake 1992 discloses predefined portions encoded with attributes: "CHS maintains object histories. For example: • *See, e.g.*, "It stores the creation time and the author of each node, link, composite, and attribute and records each update to these objects with time and author information in an update history," at 46. • **Horne 1997:** Horne 1997 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Horne 1997 discloses storing updated versions of legislative material that have been changed. For example: • *See, e.g.*, "But both the printed and internet versions of the Acts are static, that is to say, they do not show any amendments that have been made by later legislation," at 1. • *See, e.g.*, "In the past this problem was to some extent dealt with by the official printed series called Statutes in Force. This series of volumes suffered from the disadvantage that it took a great deal of time for each particular title to be produced," at 1. • *See, e.g.*, "HMSO have a program called 'the Statute Law Database'. This is an electronic version of Statutes in Force. It contains in SGML form the law as it was on a particular date in the 1980s together with all acts and statutory instruments which have come into force since that time," at 3. • **Kim 1996:** Kim 1996 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Kim 1996 discloses storing updated versions of

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multimedia data that has been changed. For example:

- *See, e.g.*, "Finally, our hypermedia system can provide database management system functions such as … version control of structured document components as separate objects," at 496.
- *See, e.g.*, "Fourthly, we design a version control mechanism that distinguishes versionable objects and non-versionable objects," at 496.
- *See, e.g.*, "Thirdly, an object is classified into versionable object or a non-versionable object," at 497.
- *See, e.g.*, "Versioning is essential to hypermedia system in order to keep track of changes to the hypermedia network," at 498.

- **Larson 1988:**

Larson 1988 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Larson 1988 discloses storing updated versions of material that has been changed. For example:

- *See, e.g.*, "Neptune (like the Xanadu system) retains all versions of a document and permits links to be formed between any two points in a document or between documents," at 196.

- **Lo 1995:**

Lo 1995 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Lo 1996 discloses storing updated versions of multimedia data that has been changed. For example:

- *See, e.g.*, "Versioning is essential to history-keeping of a document. It allows evolutionary information and states of this document to be captured so that future references are possible," at 339.
- *See, e.g.*, "The document database may only carry out modification to a committed document's content by creating a new version of it," at 340.

- **Lo 1996:**

Lo 1996 discloses "predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said

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respective predefined portion, and modifying data of said respective predefined portion." Specifically, Lo 1996 discloses that content of documents changes over time. For example:

- *See, e.g.*, "When a document is versioned, both its content and embedded link information may be changed," at 9, section 1.3.

- **Osterbye 1992:**

  Osterbye 1992 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Osterbye 1992 discloses storing updated versions of stored nodes. For example:

  - *See, e.g.*, "This paper discusses issues related to providing version control in hypertext systems," at 33.
  - *See, e.g.*, "In such systems the very nature of production makes the hypertext evolve over time," at 33.
  - *See, e.g.*, "Version control is the discipline of controlling and tracking the evolution of a product over time," at 33.
  - *See, e.g.*, "If an element is versioned, a specific version represents a state in the development," at 33.
  - *See, e.g.*, "Each module can exist in several versions, and all the versions of a module is often referred to as a version group," at 34.
  - *See, e.g.*, "The node is the basic entity for storing contents. We require all nodes to have an attribute for contents and a name. Nodes are versioned," at 38.
  - *See, e.g.*, "While it is possible to explicitly create new versions of individual nodes, a new-version command is available at the context level," at 39.

- **Peltonen 1993:**

  Peltonen 1993 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.." Specifically, Peltonen 1993 discloses storing updated versions of material that has been changed. For example:

  - *See, e.g.*, "A newly created document version has the same contents as the parent version. The contents of the child version can then be modified until the child is

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used as the parent of another version," at 7.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Promenschenkel 1995:**

  Promenschenkel 1995 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Promenschenkel 1995 discloses storing updated versions of stored documents. For example:

  - *See, e.g.*, "The STEPS systems is designed to take a document through the publishing process from author's draft to finished print version," at 1.

- **Sacks-Davis 1995:**

  Sacks-Davis 1995 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Sacks-Davis 1995 discloses storing updated versions of text-based documents. For example:

  - *See, e.g.*, "For data modification requests, it checks that the new record satisfies all validation constraints defined on the table, such as key constraints," at 460.

  - *See, e.g.*, "The index manager can be supplied with a new record to insert, an old and new version of a record that has been updated, or an existing record to delete," at 460.

- **Sciore 1991:**

  Sciore 1991 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Sciore 1991 discloses storing updated versions of text-based documents. For example:

  - *See, e.g.*, "We often call the generic object the design object, and the associated version object its versions," at 358.

  - *See, e.g.*, "For example, one version might be the result of a bug fix. Creating a revision of a previous version. Another might be the result of an alternative design

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decision," at 359.

- **Sciore 1994:**

  Sciore 1994 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Sciore 1994 discloses that the stored text based data can be modified and stored as a new version. For example:

  - *See, e.g.*, "Each time a versioned attribute changes, a new version is created corresponding to the new state," at 87.

  - *See, e.g.*, "Many database applications require the storage and manipulation of different versions of data objects," at Abstract.

- **Stonebraker 1990:**

  Stonebraker 1990 discloses "predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Stonebraker 1990 discloses that whenever any field within the POSTGRES database is updated (whether or not it contains text-based data), a the entire field is re-stored as a new record.. For example:

  - *See, e.g.* section IV.A, 137 (discussing the no-overwrite feature of POSTGRES, and saying "the old record remains in the database whenever an update occurs" and "[t]he second benefit of a no-overwrite storage manager is the possibility of *time travel*" and "[t]his storage manager should be contrasted with a conventional one where the previous record is overwritten with a new one").

- **Taylor 1994:**

  Taylor 1994 discloses "predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Taylor 1994 discloses that the data changes over time. For example:

  - *See, e.g.*, "The intention of the project was to generate a model capable of supporting the evolutionary nature of geographical entities. The geography of an area does not stay constant over time; new towns or streets are built and names are all susceptible to change," at 241.

  - *See, e.g.*, "To date, we have introduced three extra relationships (fig 1a). Redefines provides a relationship between an old geographic area and a new area that is replacing it. For example, when a name change takes place a Redefines relationship

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is created between the old and new geographic areas," at 241.

- **Travis & Waldt:**

  Travis & Waldt discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Travis & Waldt disclose changing original documents by editing the text. For example:

  - *See, e.g.*, "The version control system maintains a certain control over files by creating a base file plus changes, instead of storing every character in every version that is made. These changes are called "deltas", and allow the system to make efficient use of machine resources," at 186.

  - *See, e.g.*, "When a version is created, all deltas that have been applied to the original document are applied, and a complete document is stored as the new version," at 187.

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Wilkinson 1998 discloses document versioning. For example:

  - *See generally* Section 5.9, starting on page 97.

- **Wilson 1988:**

  Wilson 1988 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Wilson 1988 discloses storing updated versions of stored statutes. For example:

  - *See, e.g.*, "This list can be inverted so that later legislation that amends or clarifies an earlier act may be accessed directly from the act," at 27.

  - *See, e.g.* 28.

  - *See, e.g.*, "Hypertext resolves the difficulties of a single printed version; it can maintain many versions of a single subsection," at 35.

  - *See, e.g.*, "By selecting the button (BEFORE 5 JULY 1973), we can see the text of

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Section 167(2)(a) before it was amended: figure 9," at 35.

- **Wilson 1992:**

  Wilson 1992 discloses "said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion." Specifically, Wilson 1992 discusses the fact that legislation can be frequently amended and that the Guide system can accommodate storing multiple versions of legislative material. For example:

  - *See, e.g.*, "Lawyers often need multiple versions of the same text. Some statutes are subject to frequent amendment. Earlier versions may still be needed for cases brought under early legislation, for legal research or for a proper understanding of contemporary cases…Local buttons are an ideal mechanism for multiple versions. An electronic system makes it easier to store the name of the amending author and the date of the amendment where these are required. Figure 12 shows a section of the Industrial Relations Act 1971 with local buttons for an earlier version. Figure 13 shows the button expanded," at 179-180.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system processes additions, changes, and deletions to the legislation. *See, e.g.*:

  - www.westlaw.com, California Statutes Annotated Database from 1996 (CA-STAN96), CA BUS & PROF § 28 (two versions: one active and one as amended)

- **The Pre-1997 Premise System**:

  The Premise system processes additions, changes, and deletions to the legislation. *See, e.g.*:

  - Premise Publisher, (showing how to add, change, delete text-based information), at 135-54.

- **The Astoria System (pre-1997):**

  The Astoria System processes revisions to documents or document components. For example:

  - *See, e.g.*, XSoft Astoria: "Astoria deals with the concept of 'document components.' A document component is a piece that is designed to be maintained as a unit, whether this be at the volume or book level, or at some finer granular point, such as paragraph or list," at THOM00198652.

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- *See, e.g.*, Astoria 1997-1: "Astoria can apply revision information to only the components that change during an editing session. Astoria detects and maintains revision history at the component level, not just at the document level. . . Astoria stores versioning information in an efficient format, and past versions are always available for republishing or for providing an audit trail," at THOM00211908.

- *See, e.g.*, XSoft: "Because of its sophisticated integration with SGML editors, Astoria maintains revision information on individual elements, and past versions are always available," at THOM00198648.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system processes additions, changes, and deletions to the legislation. *See, e.g.*:

  - LSP: Functional Reqs, at Appendix 2, at SAIC002677–2696.

  - Arnold-Moore 1997-2, (text following the heading: "Managing Versions in *Themis*"), and in particular: "[W]hen a section is modified, only the fragment containing that section needs to be updated, not the whole document," at 179.

  - http://web.archive.org/web/19990430002036/www.thelaw.tas.gov.au/background.html: "When legislation is amended, the system automatically builds new versions of fragments which are affected by amendments and keeps the old ones for historical reference."

- **The Documentum/Interleaf System:**

  The Documentum/Interleaf system (and all of its variations) is primarily for the purpose of creating, editing, and publishing text-based information. *See, e.g.* Ovum Documentum 1996; Ovum Interleaf 1996.

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system processes additions, changes, and deletions to the text-based data.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system processes additions, changes, and deletions to the text-based data.

- **The Law Desk NY System:**

  The Law Desk NY system processes additions, changes, and deletions to the text-based

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data. • **The Law Desk USCS System:** The Law Desk USCS system processes additions, changes, and deletions to the text-based data. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system processes additions, changes, and deletions to the text-based data. • **The NY Official Reports System:** The NY Official Reports system processes additions, changes, and deletions to the text-based data. • **The NY CLS Beta System:** The NY CLS Beta system processes additions, changes, and deletions to the text-based data. • **The OnPoint System:** The OnPoint system processes additions, changes, and deletions to the text-based data. • **The Social Security Plus System:** The Social Security Plus system processes additions, changes, and deletions to the text-based data. • **The UCC System:** The UCC system processes additions, changes, and deletions to the text-based data.
Claim 16: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 16:
wherein said text-based data comprises legislation. • **Agosti 1991:** Agosti 1991 discloses "said text-based data comprises legislation." For example: • *See, e.g.*, "A Two-Level Hypertext Retrieval Model for Legal Data," at Title.

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- *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms," at 317.

- *See, e.g.*, "The collection is made of objects of the real world: in the common practice of information retrieval these objects are textual documents," at 318.

- *See, e.g.*, "The system thus created, called HyperLaw, is an experimental tool for handling legal collections of full text and reference documents: law, case law, legal authority," at 321.

- *See, e.g.*, "The document collection used includes norm texts (State, Regional, Provincial laws, etc.," at 322.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "We discuss a data model for the storage, retrieval and display of legislation in large database collections," at Abstract.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "A new class of document databases is emerging. These databases consist of large structured documents. Examples include databases of government legislation, maintenance manuals for systems as complex as aircraft carriers, and encyclopedia, and the documentation associated with a large software engineering project," at THOM00196608.

  - *See, e.g.*, "The model also gives flexibility to the implementor to retrieve whole documents and decompose them, retrieve atomic elements and recombine them, or pursue alternatives which retrieve the elements directly," at THOM00196608.

  - *See, e.g.*, "In this case, information is typically broken into small units," at THOM00196608.

  - *See, e.g.*, "The database should also allow for partial document retrieval. The whole of a government Act may be an inappropriate retrieval unit, if one is searching for a definition. There may be a number of relevant portions of a single document that are relevant, and yet the whole document may still be an inappropriate retrieval unit," at THOM00196608.

  - *See, e.g.*, "We chose elements as our base rather than whole documents as an SGML

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document is always an element, and using elements adds generality to the query without undue additional complexity allowing arbitrary node sizes instead of the traditional fixed node size," at THOM00196612.

- **Arnold-Moore 1995:**

  Arnold-Moore 1995 discloses "said text-based data comprises legislation." Specifically, Arnold-Moore 1995 discloses a computer based system for publishing legislative material. For example:

  - *See, e.g.*, "This paper proposes an architecture for a system which accepts Amending Acts expressed in SGML and produces a database of resulting versions of the Principle Acts, and describes its implementation," at Abstract.

  - *See, e.g.*, "[L]egislation has a complex structure which follows predefined rules. All Acts contain numbered sections. These sections can themselves contain subsections, paragraphs, subparagraphs, clauses, subclauses and definitions. In larger Acts these sections may be collected in a combination of chapters, parts, divisions and subdivisions. To avoid confusion with the specific meaning of these terms in legislation we collectively describe these as the elements of an Act," at 297.

  - *See, e.g.*, "There is great potential for CALR systems not only to present legislation in a format familiar to lawyers (like that of the paper consolidation) but to present it as it would have appeared at any arbitrary point in time with annotations available with the text. The problems of how to store these various versions in electronic databases are discussed at length elsewhere," at 298.

- **Arnold-Moore 1997:**

  Arnold-Moore 1997 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "The Themis system is an integrated drafting environment for legislation," at 56.

  - *See, e.g.*, "The Themis system manages a library of legislation which is encoded in the Structured Generalized Markup Language (SGML)," at 58.

  - *See, e.g.*, "The Fragments which make up the document are generated rather than simply being assembled or having the results of user queries inserted in particular places," at 58.

  - *See, e.g.*, "The section elements contains the headnote, and text elements and two attributes, secno which is the number of the section, and id which is a unique identifier within that document for that section which encodes much of the context

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information about that element," at 58.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "Themis uses SGML to store legislation," at 175.
  - *See, e.g.*, "In particular, the complex structure of legislation and different versions of a particular piece of legislation can be better supported," at 175.
  - *See, e.g.*, "By contrast, each category of legislation has a strictly defined structure, Statutes are broken into numbered sections (each of which may contain numbered subsections, paragraphs and subparagraphs) and schedules. These sections may be collected in parts, divisions or subdivisions," at 175.
  - *See, e.g.*, "Digital legislation libraries need to reflect this independence by allowing the user to retrieve either individual elements (providing each element is a cohesive whole) or the whole Statute," at 176.
  - *See, e.g.*, "A digital library which makes use of SGML can provide access to elements and not just whole documents," at 177.
  - *See, e.g.*, "In the Themis system we have chosen to fragment documents at the section level for the body of the Statutes as all Statutes have a section (or equivalent), and in the tail, schedules and appendices are fragmented only if they contain Parts, an Annexure or a Code," at 177.

- **Horne 1997:**

  Horne 1997 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "Since the mid 1980s every statute and statutory instrument has been coded using SGML (the Standard Generalized Markup Language)," at 2.
  - *See, e.g.*, "HMSO have a program called 'the Statute law Database'. This is an electronic version of Statutes in Force. It contains in SGML form the law as it was on a particular date in the 1980s together with all acts and statutory instruments which have come into force since that time," at 3.

- **Liddy 1996:**

  Liddy 1996 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by

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reference) and others.

- **Lo 1996:**

  Lo 1996 discloses "text-based data comprises legislation." Specifically, Lo 1996 discloses that document management systems may handle legislation. For example:

  - *See, e.g.*, "Examples of huge documents are an encyclopedia and the Acts of Parliament," page 11, section 1.2.3.

  - *See* page 27, under the heading "Types of Documents": "In the example of legal databases, the role of auxiliary documents is played by Amendment Acts . . . ."

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Promenschenkel 1995:**

  Promenshenkel 1995 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "Because the system is set up uniquely for each individual organization, it can be used in a wide variety of industries to suit specific publication needs," at 2.

- **Sciore 1994:**

  Sciore 1994 inherently discloses "said text-based data comprises legislation." Specifically, Sciore 1994 discloses a system that is an improvement to historical databases, and one skilled in the art would understand that databases storing legislative material are one example of a historical database. Therefore, one skilled in the art would understand that the system discussed in Sciore 1994 could be used to store legislation. For example:

  - *See, e.g.* 78-79.

- **Travis & Waldt:**

  Travis & Waldt discloses "said text-based data comprises legislation." Specifically, Travis & Waldt discloses use of SGML database in connection with legal citations, including use of such a database by Thomson for legal publishing. For example:

  - *See, e.g.*, "Consider the requirement to create a link to an on-line database containing legal citations. The name of the citation must be rendered on the screen in a different

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color and underlined, which informs the user that the item is associated with an external link. . . . Notice the unique number of the citation is contained in the "num" attribute. This will be used to access the database, while the actual name of the citation is stated separately," at 306–07.

- *See, e.g.* , Case Study: RIA TIGRE System, at 371-384.

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "text-based data comprises legislation." Specifically, Wilkinson 1998 discloses a case study about a document management system for legislation (EnAct). For example:

  - *See, e.g.* Chapter 9, starting on page 161 (entitled "Case Study: Managing Legislation").

- **Wilson 1988:**

  Wilson 1988 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "Justus automatically converts machine-readable versions of a variety of legal documents into hypertext documents for the Guide hypertext system," at 30.

  - *See, e.g.*, "In a hypertext system, texts are divided into segments, sometimes called nodes," at 32.

  - *See, e.g.*, "The text of a statute is particularly amendable to representation in a hypertext system because it is already highly structured," at 32.

  - *See, e.g.*, "Each subsection label provided by the legal draftsmen is automatically converted by Justus into a node name or, in Guide terms, a definition button," at 32.

- **Wilson 1990:**

  Wilson 1990 discloses "said text-based data comprises legislation." For example:

  - *See, e.g.*, "The conversion was completed as part of the Justus project, which aims to provide an integrated hypertext law library containing diverse documents all of which have been converted by the Justus programs to hypertext documents," at 119.

- **Wilson 1992:**

  Wilson 1992 discloses "said text-based data comprises legislation." For example:

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- *See, e.g.*, "This paper looks at some common structures for legal documents and describes how these structures can be mapped automatically into the Guide hypertext system," at Abstract.

- *See, e.g.*, "Here we look at four common document types: statutes, law reports, textbooks and dictionaries," at 161.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system contained predefined portions of legislation. *See, e.g.*:

  - DataBasics 1993, at doc no. 79858–59 ("United States Code Annotated"): "A document is an annotated or unannotated section of USCA."

  - www.westlaw.com: any annual statutory database prior to 1998.

  - AMPEX § 2.

  - Wren 1994: 109–11, 141–42 (discussing searching statutory sections and showing attributes within a statutory section)/

  - The Essential Guide 1996, at 136 (showing that the text-based data within WESTLAW is stored as statutory sections)

- **The Pre-1997 Premise System**:

  The Premise system contained predefined portions of legislation. *See, e.g.*:

  - Premise Statutes (including numerous statutory sections).

- **The Astoria System (pre-1997):**

  The Astoria System could be used with any documents or portions of documents, including legislation. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria . . . is a powerful yet east-to-use document component management system that provides the information repository and management infrastructure needed to help organizations capture critical business knowledge and distribute it more efficiently," at THOM00211907.

  - *See, e.g.*, XSoft Premiers Astoria: "Astoria . . . [is] a software system that allows groups of people to more easily collaborate on, create and edit massive or complex documents. Astoria is for use with 'structured' documents, which typically run into the thousands of pages, contain a series of reusable components such as headings, tables, and lists, and require multiple revisions or updates over

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many years," at THOM00198650.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system is a computer-implemented system for creating, processing, and publishing text-based legislation. *See, e.g.*:

  - Arnold-Moore 1997-2, at Abstract.

- **The SCALEplus System:**

  The SCALEplus system stores modified portions of text-based legislative. *See, e.g.*:

  - Kerr 2000: Page 6-1, ¶ 168: "SCALEplus . . . contains a wide range of legal records including decided cases and the legislation of most jurisdictions."

  - SCALEplus Secrets, at 2: "SCALEplus has lots of information that is huge, particularly legislation. SCALEplus data is formatted in HTML which is common to all World Wide Web applications but is ideally suited for one or a few pages—to view a document you have to wait for the browser to load it (often over a modem). Because of this the decision was made to turn each piece of legislation into a number of HTML files, each file being a section of that Legislation. When a results list is returned from SCALEplus what you see are the HTML files that have been found that match your search. For Legislation this will be a section of an Act; for Caselaw an individual case."

  - SCALEplus UM 2: "SCALEplus presents all Law Databases obtained and/or prepared by Federal Attorney General's Department as Searchable and Browseable data." (THOM00221675)

- **The Documentum/Interleaf System:**

  The Documentum/Interleaf system is sometimes used to store legislation. *See, e.g.*:

  - Interleaf has been used to store legislation. *See* Consleg 1996, at 301 ("SGML is used as the representation format for the storage of acts.")

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system contained predefined portions of legislation.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system contained predefined portions of legislation.

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• **The Law Desk USCS System:** The Law Desk USCS system contained predefined portions of legislation. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system contained predefined portions of legislation. • **The NY CLS Beta System:** The NY CLS Beta system contained predefined portions of legislation. • **The OnPoint System:** The OnPoint system contained predefined portions of legislation. • **The Social Security Plus System:** The Social Security Plus system contained predefined portions of legislation. • **The UCC System:** The UCC system contained predefined portions of legislation.
Claim 17: In addition to the prior art listed above in conjunction with Claims 1 & 16, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 17:
wherein each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation. • **Agosti 1991:** Agosti 1991 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Agosti 1991 discloses storing provisions of legislation. For example: • *See, e.g.*, "A Two-Level Hypertext Retrieval Model for Legal Data," at Title. • *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms," at 317. • *See, e.g.*, "The collection is made of objects of the real world: in the common practice of information retrieval these objects are textual documents," at 318.

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- *See, e.g.*, "The system thus created, called HyperLaw, is an experimental tool for handling legal collections of full text and reference documents: law, case law, legal authority," at 321.

- *See, e.g.*, "The document collection used includes norm texts (State, Regional, Provincial laws, etc.," at 322.

- *See, e.g.* , (Figures 2-6), at 323.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Arnold-Moore 1994 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article alternatively as "elements," "nodes," and/or "atoms." For example:

  - *See, e.g.*, "Contrast this with legislation where a single Act of Parliament might be broken down into many hundreds of numbered sections which in turn are broken into numbered sub-sections or paragraphs or sub-paragraphs. In larger Acts these sections are grouped in chapters, parts, divisions and/or sub-divisions each with a label and usually a heading or title. . . . To avoid confusion with these terms which have specific meaning in the context of legislation they are referred to collectively as *elements* of the document," at *iv - v*.

  - *See, e.g.*, "choose a small element (or elements) to be atomic nodes (*atoms*) in the database e.g. sections," at *xviii*.

  - *See, e.*g., "we break each Act into atoms (in this case sections and schedules)," at *xxii*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Arnold-Moore 1994-2 discloses storing provisions of legislation. For example:

  - *See, e.g.*, "A new class of document databases is emerging. These databases consist of large structured documents. Examples include databases of government legislation, maintenance manuals for systems as complex as aircraft carriers, and encyclopedia, and the documentation associated with a large software engineering project," at THOM00196608.

  - *See, e.g.*, "The model also gives flexibility to the implementor to retrieve whole documents and decompose them, retrieve atomic elements and recombine them, or

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pursue alternatives which retrieve the elements directly," at THOM00196608.

- *See, e.*g., "In this case, information is typically broken into small units," at THOM00196608.

- *See, e.g.*, "The database should also allow for partial document retrieval. The whole of a government Act may be an inappropriate retrieval unit, if one is searching for a definition. There may be a number of relevant portions of a single document that are relevant, and yet the whole document may still be an inappropriate retrieval unit," at THOM00196608.

- *See, e.g.*, "We chose elements as our base rather than whole documents as an SGML document is always an element, and using elements adds generality to the query without undue additional complexity allowing arbitrary node sizes instead of the traditional fixed node size," at THOM00196612.

- **Arnold-Moore 1995:**

  Arnold-Moore 1995 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Arnold-Moore 1995 discloses a computer based system for publishing provisions of legislation. For example:

  - *See, e.g.*, "This paper proposes an architecture for a system which accepts Amending Acts expressed in SGML and produces a database of resulting versions of the Principle Acts, and describes its implementation," at Abstract.

  - *See, e.g.*, "[L]egislation has a complex structure which follows predefined rules. All Acts contain numbered sections. These sections can themselves contain subsections, paragraphs, subparagraphs, clauses, subclauses and definitions. In larger Acts these sections may be collected in a combination of chapters, parts, divisions and subdivisions. To avoid confusion with the specific meaning of these terms in legislation we collectively describe these as the elements of an Act," at 297.

  - *See, e.g.*, "There is great potential for CALR systems not only to present legislation in a format familiar to lawyers (like that of the paper consolidation) but to present it as it would have appeared at any arbitrary point in time with annotations available with the text. The problems of how to store these various versions in electronic databases are discussed at length elsewhere," at 298.

- **Arnold-Moore 1997:**

  Arnold-Moore 1997 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Arnold-Moore 1997 discloses storing provisions of legislation. For example:

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- *See, e.g.*, "The Themis system is an integrated drafting environment for legislation," at 56.

- *See, e.g.*, "The Themis system manages a library of legislation which is encoded in the Structured Generalized Markup Language (SGML)," at 58.

- *See, e.g.*, "The Fragments which make up the document are generated rather than simply being assembled or having the results of user queries inserted in particular places," at 58.

- *See, e.g.*, "The section elements contains the headnote, and text elements and two attributes, secno which is the number of the section, and id which is a unique identifier within that document for that section which encodes much of the context information about that element," at 58.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Arnold-Moore 1997-2 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article as fragments. For example:

  - *See, e.g.*, "Themis uses SGML to store legislation," at 175.

  - *See, e.g.*, "In particular, the complex structure of legislation and different versions of a particular piece of legislation can be better supported," at 175.

  - *See, e.g.*, "By contrast, each category of legislation has a strictly defined structure, Statutes are broken into numbered sections (each of which may contain numbered subsections, paragraphs and subparagraphs) and schedules. These sections may be collected in parts, divisions or subdivisions," at 175.

  - *See, e.g.*, "Digital legislation libraries need to reflect this independence by allowing the user to retrieve either individual elements (providing each element is a cohesive whole) or the whole Statute," at 176.

  - *See, e.g.*, "A digital library which makes use of SGML can provide access to elements and not just whole documents," at 177.

  - *See, e.g.*, "In the Themis system we have chosen to fragment documents at the section level for the body of the Statutes as all Statutes have a section (or equivalent), and in the tail, schedules and appendices are fragmented only if they contain Parts, an Annexure or a Code," at 177.

- **Liddy 1996:** Liddy 1996 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated

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herein by reference) and others.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Travis & Waldt:**

  Travis & Waldt discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Specifically, Travis & Waldt discloses use of SGML database in connection with legal citations, including use of such a database by Thomson for legal publishing. Travis & Waldt further discuss dividing these legal documents, such as legislation, into low level components. For example:

  - *See, e.g.*, "Consider the requirement to create a link to an on-line database containing legal citations. The name of the citation must be rendered on the screen in a different color and underlined, which informs the user that the item is associated with an external link. . . . Notice the unique number of the citation is contained in the "num" attribute. This will be used to access the database, while the actual name of the citation is stated separately," at 306–07.

  - *See, e.g.* , Case Study: RIA TIGRE System, at 371-384.

  - *See, e.g.*, "The information in the TIGRE databases is broken into low level components called atoms. The boundaries of each intellectual element and physical component are used to bound the atoms. A program called the atomizer breaks the SGML data into these atoms according to the needs of both structures and creates database records," at 374.

- **Wilson 1988:**

  Wilson 1988 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Wilson 1988 discloses storing provisions of legislation. For example:

  - *See, e.g.*, "Justus automatically converts machine-readable versions of a variety of legal documents into hypertext documents for the Guide hypertext system," at 30.

  - *See, e.g.*, "In a hypertext system, texts are divided into segments, sometimes called nodes," at 32.

  - *See, e.g.*, "The text of a statute is particularly amendable to representation in a

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hypertext system because it is already highly structured," at 32.

- *See, e.g.*, "Each subsection label provided by the legal draftsmen is automatically converted by Justus into a node name or, in Guide terms, a definition button," at 32.

- **Wilson 1990:**

Wilson 1990 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Wilson 1990 discloses storing provisions of legislation. For example:

- *See, e.g.*, "The conversion was completed as part of the Justus project, which aims to provide an integrated hypertext law library containing diverse documents all of which have been converted by the Justus programs to hypertext documents," at 119.

- *See, e.g.*, "In directed graph systems, the text is divided into segments called nodes: in principle any node in the system should be accessible from any other node," at 123.

- *See, e.g.*, "the lowest level node is a single sentence," at 123.

- *See, e.g.*, "The definition file is the full text of the law reports segmented into labeled nodes…The nodes correspond with the basic components of a law report described above," at 124.

- **Wilson 1992:**

Wilson 1992 discloses "each of the said plurality of predefined portions of said text-based data is a respective provision of said legislation." Specifically, Wilson 1992 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article as nodes. For example:

- *See, e.g.*, "An Act of Parliament may be divided into parts, sections, subsections, and paragraphs; a schedule, into subschedules, paragraphs and subparagraphs. An act must have at least one subsection; a schedule at least one paragraph. Hence, the text is already divided into segments…the text segments are the basic units of information, or lowest level nodes, of the hypertext system," at 161.

- *See, e.g.*, "The Industrial Relations Act itself is a node that consists of the general description of the Act, nine Part nodes, and eight Schedule nodes," at 162.

- **The Pre-1997 Westlaw/Westmate System**:

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The Westlaw/Westmate system contained predefined provisions of legislation. *See, e.g.*:

- DataBasics 1993, at doc no. 79858–59 ("United States Code Annotated"): "A document is an annotated or unannotated section of USCA."
- www.westlaw.com: any annual statutory database prior to 1998.
- Wren 1994, at 109–11, 141–42 (discussing searching statutory sections and showing attributes within a statutory section).
- AMPEX § 2
- The Essential Guide 1996, at 136 (showing that the text-based data within WESTLAW is stored as statutory sections)

- **The Pre-1997 Premise System**:

  The Premise system contained predefined provisions of legislation. *See, e.g.*:

  - Premise Statutes (including numerous statutory sections).

- **The Astoria System (pre-1997):**

  The Astoria System could be used with any documents or portions of documents, including legislation or predefined provisions of legislation. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria . . . is a powerful yet east-to-use document component management system that provides the information repository and management infrastructure needed to help organizations capture critical business knowledge and distribute it more efficiently," at THOM00211907.
  - *See, e.g.*, XSoft Premiers Astoria: "Astoria . . . [is] a software system that allows groups of people to more easily collaborate on, create and edit massive or complex documents. Astoria is for use with 'structured' documents, which typically run into the thousands of pages, contain a series of reusable components such as headings, tables, and lists, and require multiple revisions or updates over many years," at THOM00198650.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system stores legislation in portions smaller than Acts. *See, e.g.*:

  - Arnold-Moore 1997-2, at 177–78: "In the *Themis* system we have chosen to fragment documents at the section level . . . . By using SGML to store the Statutes, we can automate the process of fragmenting large documents and only present to the

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user the part of the document that the user requests."

- http://web.archive.org/web/19990430002036/www.thelaw.tas.gov.au/background.html: "All legislation in the database is broken up into a number of fragments (i.e. one fragment per Section or Schedule)

- **The SCALEplus System:**

  The SCALEplus system stores portions that are provisions of legislation. For example:

  - *See, e.g.,* Kerr 2000, "The standard unit of retrieval for legislation is a section of an Act or a regulation in Regulations . . . and for caselaw is the entire case. Users are able to modify the searchable scope of these retrieved documents," at 11-13, ¶490.

  - SCALEplus Secrets, at 2: "SCALEplus has lots of information that is huge, particularly legislation. SCALEplus data is formatted in HTML which is common to all World Wide Web applications but is ideally suited for one or a few pages—to view a document you have to wait for the browser to load it (often over a modem). Because of this the decision was made to turn each piece of legislation into a number of HTML files, each file being a section of that Legislation. When a results list is returned from SCALEplus what you see are the HTML files that have been found that match your search. For Legislation this will be a section of an Act; for Caselaw an individual case."

  - SCALEplus UM 2: "SCALEplus presents all Law Databases obtained and/or prepared by Federal Attorney General's Department as Searchable and Browseable data." (THOM00221675)

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system contained predefined provisions of legislation.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system contained predefined provisions of legislation.

- **The Law Desk USCS System:**

  The Law Desk USCS system contained predefined provisions of legislation.

- **The New Mexico Law System:**

  The New Mexico Law on Legal Ethics system contained predefined provisions of

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legislation. • **The NY CLS Beta System:** The NY CLS Beta system contained predefined provisions of legislation. • **The OnPoint System:** The OnPoint system contained predefined provisions of legislation. • **The Social Security Plus System:** The Social Security Plus system contained predefined provisions of legislation. • **The UCC System:** The UCC system contained predefined provisions of legislation.
Claim 18: In addition to the prior art listed above in conjunction with Claims 1, 16 & 17, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 18**:**
wherein said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)**.** • **Agosti 1991:** Agosti 1991 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Agosti 1991 discloses storing sections of legislation. For example: • *See, e.g.*, "A Two-Level Hypertext Retrieval Model for Legal Data," at Title. • *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms," at 317. • *See, e.g.*, "The collection is made of objects of the real world: in the common practice of information retrieval these objects are textual documents," at 318. • *See, e.g.*, "The system thus created, called HyperLaw, is an experimental tool for handling legal collections of full text and reference documents: law, case law, legal authority," at 321. • *See, e.g.*, "The document collection used includes norm texts (State, Regional, Provincial laws, etc.," at 322.

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- *See, e.g.* (Figures 2-6), at 323.

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Arnold-Moore 1994 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article alternatively as "elements," "nodes," and/or "atoms." For example:

  - *See, e.g.*, "Contrast this with legislation where a single Act of Parliament might be broken down into many hundreds of numbered sections which in turn are broken into numbered sub-sections or paragraphs or sub-paragraphs. In larger Acts these sections are grouped in chapters, parts, divisions and/or sub-divisions each with a label and usually a heading or title. . . . To avoid confusion with these terms which have specific meaning in the context of legislation they are referred to collectively as *elements* of the document," at *iv - v*.

  - *See, e.g.*, "Using Omnimark (an SGML manipulation tool) we break each Act into atoms (in this case sections and schedules). The atoms are then stored in SIM (indexed on their content) taking note of their record identifier as they are stored," at *xxii*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Arnold-Moore 1994-2 discloses storing sections of legislation. For example:

  - *See, e.g.*, "A new class of document databases is emerging. These databases consist of large structured documents. Examples include databases of government legislation, maintenance manuals for systems as complex as aircraft carriers, and encyclopedia, and the documentation associated with a large software engineering project," at THOM00196608.

  - *See, e.g.*, "The model also gives flexibility to the implementor to retrieve whole documents and decompose them, retrieve atomic elements and recombine them, or pursue alternatives which retrieve the elements directly," at THOM00196608.

  - *See, e.*g., "In this case, information is typically broken into small units," at THOM00196608.

  - *See, e.g.*, "The database should also allow for partial document retrieval. The whole of a government Act may be an inappropriate retrieval unit, if one is searching for a definition. There may be a number of relevant portions of a single document that are relevant, and yet the whole document may still be an inappropriate retrieval unit," at

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THOM00196608.

- *See, e.g.*, "We chose elements as our base rather than whole documents as an SGML document is always an element, and using elements adds generality to the query without undue additional complexity allowing arbitrary node sizes instead of the traditional fixed node size," at THOM00196612.

- **Arnold-Moore 1995:**

Arnold-Moore 1995 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Arnold-Moore 1995 discloses a computer based system for publishing sections of legislation. For example:

- *See, e.g.*, "This paper proposes an architecture for a system which accepts Amending Acts expressed in SGML and produces a database of resulting versions of the Principle Acts, and describes its implementation," at Abstract.

- *See, e.g.*, "[L]egislation has a complex structure which follows predefined rules. All Acts contain numbered sections. These sections can themselves contain subsections, paragraphs, subparagraphs, clauses, subclauses and definitions. In larger Acts these sections may be collected in a combination of chapters, parts, divisions and subdivisions. To avoid confusion with the specific meaning of these terms in legislation we collectively describe these as the elements of an Act," at 297.

- *See, e.g.*, "There is great potential for CALR systems not only to present legislation in a format familiar to lawyers (like that of the paper consolidation) but to present it as it would have appeared at any arbitrary point in time with annotations available with the text. The problems of how to store these various versions in electronic databases are discussed at length elsewhere," at 298.

- **Arnold-Moore 1997:**

Arnold-Moore 1997 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Arnold-Moore 1997 discloses storing sections of legislation. For example:

- *See, e.g.*, "The Themis system is an integrated drafting environment for legislation," at 56.

- *See, e.g.*, "The Themis system manages a library of legislation which is encoded in the Structured Generalized Markup Language (SGML)," at 58.

- *See, e.g.*, "The Fragments which make up the document are generated rather than simply being assembled or having the results of user queries inserted in particular places," at 58.

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- *See, e.g.*, "The section elements contains the headnote, and text elements and two attributes, secno which is the number of the section, and id which is a unique identifier within that document for that section which encodes much of the context information about that element," at 58.

- **Arnold-Moore 1997-2:**

  Arnold-Moore 1997-2 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Arnold-Moore 1997-2 discloses storing sections of legislation. For example:

  - *See, e.g.*, "Themis uses SGML to store legislation," at 175.

  - *See, e.g.*, "In particular, the complex structure of legislation and different versions of a particular piece of legislation can be better supported," at 175.

  - *See, e.g.*, "By contrast, each category of legislation has a strictly defined structure, Statutes are broken into numbered sections (each of which may contain numbered subsections, paragraphs and subparagraphs) and schedules. These sections may be collected in parts, divisions or subdivisions," at 175.

  - *See, e.g.*, "Digital legislation libraries need to reflect this independence by allowing the user to retrieve either individual elements (providing each element is a cohesive whole) or the whole Statute," at 176.

  - *See, e.g.*, "A digital library which makes use of SGML can provide access to elements and not just whole documents," at 177.

  - *See, e.g.*, "In the Themis system we have chosen to fragment documents at the section level for the body of the Statutes as all Statutes have a section (or equivalent), and in the tail, schedules and appendices are fragmented only if they contain Parts, an Annexure or a Code," at 177.

- **Liddy 1996:**

  Liddy 1996 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

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- **Travis & Waldt:**

  Travis & Waldt discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Specifically, Travis & Waldt discloses use of SGML database in connection with legal citations, including use of such a database by Thomson for legal publishing. Travis & Waldt further discuss dividing these legal documents, such as legislation, into low level components. For example:

  - *See, e.g.*, "Consider the requirement to create a link to an on-line database containing legal citations. The name of the citation must be rendered on the screen in a different color and underlined, which informs the user that the item is associated with an external link. . . . Notice the unique number of the citation is contained in the "num" attribute. This will be used to access the database, while the actual name of the citation is stated separately," at 306–07.

  - *See, e.g.* , Case Study: RIA TIGRE System, at 371-384.

  - *See, e.g.*, "The information in the TIGRE databases is broken into low level components called atoms. The boundaries of each intellectual element and physical component are used to bound the atoms. A program called the atomizer breaks the SGML data into these atoms according to the needs of both structures and creates database records," at 374.

- **Wilkinson 1998:**

  Wilkinson 1998 discloses "wherein said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Wilkinson 1998 discloses a case study about a document management system for legislation (EnAct). For example:

  - *See, e.g.* Chapter 9, starting on page 161 (entitled "Case Study: Managing Legislation").

- **Wilson 1988:**

  Wilson 1988 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Wilson 1988 discloses storing sections of legislation. For example:

  - *See, e.g.*, "Justus automatically converts machine-readable versions of a variety of legal documents into hypertext documents for the Guide hypertext system," at 30.

  - *See, e.g.*, "In a hypertext system, texts are divided into segments, sometimes called nodes," at 32.

  - *See, e.g.*, "The text of a statute is particularly amendable to representation in a

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hypertext system because it is already highly structured," at 32.

- *See, e.g.*, "Each subsection label provided by the legal draftsmen is automatically converted by Justus into a node name or, in Guide terms, a definition button," at 32.

- **Wilson 1990:**

Wilson 1990 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Wilson 1990 discloses storing sections of legislation. For example:

- *See, e.g.*, "The conversion was completed as part of the Justus project, which aims to provide an integrated hypertext law library containing diverse documents all of which have been converted by the Justus programs to hypertext documents," at 119.

- *See, e.g.*, "In directed graph systems, the text is divided into segments called nodes: in principle any node in the system should be accessible from any other node," at 123.

- *See, e.g.*, "the lowest level node is a single sentence," at 123.

- *See, e.g.*, "The definition file is the full text of the law reports segmented into labeled nodes…The nodes correspond with the basic components of a law report described above," at 124.

- **Wilson 1992:**

Wilson 1992 discloses "said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s)." Specifically, Wilson 1992 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article as nodes. For example:

- *See, e.g.*, "An Act of Parliament may be divided into parts, sections, subsections, and paragraphs; a schedule, into subschedules, paragraphs and subparagraphs. An act must have at least one subsection; a schedule at least one paragraph. Hence, the text is already divided into segments…the text segments are the basic units of information, or lowest level nodes, of the hypertext system," at 161.

- *See, e.g.*, "The Industrial Relations Act itself is a node that consists of the general description of the Act, nine Part nodes, and eight Schedule nodes," at 162.

- **The Pre-1997 Westlaw/Westmate System**:

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The Westlaw/Westmate system contained predefined portions of legislation. *See, e.g.*:

- DataBasics 1993, at doc no. 79858–59 ("United States Code Annotated"): "A document is an annotated or unannotated section of USCA."
- www.westlaw.com: any annual statutory database prior to 1998.
- Wren 1994: 109–11, 141–42 (discussing searching statutory sections and showing attributes within a statutory section).
- AMPEX § 2
- The Essential Guide 1996, at 136 (showing that the text-based data within WESTLAW is stored as statutory sections)

- **The Pre-1997 Premise System**:

  The Premise system contained predefined sections of legislation. *See, e.g.*:

  - Premise Statutes (including numerous statutory sections).

- **The Astoria System (pre-1997):**

  The Astoria System could be used with any documents or portions of documents, including legislation or portions of legislation, such as a section. For example:

  - *See, e.g.*, Astoria 1997-1: "Astoria . . . is a powerful yet east-to-use document component management system that provides the information repository and management infrastructure needed to help organizations capture critical business knowledge and distribute it more efficiently," at THOM00211907.
  - *See, e.g.*, XSoft Premiers Astoria: "Astoria . . . [is] a software system that allows groups of people to more easily collaborate on, create and edit massive or complex documents. Astoria is for use with 'structured' documents, which typically run into the thousands of pages, contain a series of reusable components such as headings, tables, and lists, and require multiple revisions or updates over many years," at THOM00198650.
  - *See, e.g.*, Astoria 1997-1: "Astoria lets users navigate through the document depository and view documents down to the individual components that comprise them." at THOM00211907.
  - *See, e.g.*, XSoft Astoria: "Astoria deals with the concept of 'document components.' A document component is a piece that is designed to be maintained as a unit, whether this be at the volume or book level, or at some finer

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granular point, such as paragraph or list," at THOM00198652.

- *See, e.g.*, Astoria 1997-1: "Astoria can apply revision information to only the components that change during an editing session. Astoria detects and maintains revision history at the component level, not just at the document level. . . Astoria stores versioning information in an efficient format, and past versions are always available for republishing or for providing an audit trail," at THOM00211908.

- *See, e.g.*, XSoft: "Because of its sophisticated integration with SGML editors, Astoria maintains revision information on individual elements, and past versions are always available," at THOM00198648.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system stores legislation in portions smaller than Acts. *See, e.g.*:

  - Arnold-Moore 1997-2, "In the *Themis* system we have chosen to fragment documents at the section level . . . . By using SGML to store the Statutes, we can automate the process of fragmenting large documents and only present to the user the part of the document that the user requests," at 177-78.

  - http://web.archive.org/web/19990430002036/www.thelaw.tas.gov.au/background.html: "All legislation in the database is broken up into a number of fragments (i.e. one fragment per Section or Schedule)."

- **The SCALEplus System:**

  The SCALEplus system stores sections of text-based legislation. *See, e.g.*:

  - Kerr 2000: Page 11-13, ¶ 490: "The standard unit of retrieval for legislation is a section of an Act or a regulation in Regulations . . . and for caselaw is the entire case. Users are able to modify the searchable scope of these retrieved documents."

  - SCALEplus Secrets, at 2: "SCALEplus has lots of information that is huge, particularly legislation. SCALEplus data is formatted in HTML which is common to all World Wide Web applications but is ideally suited for one or a few pages—to view a document you have to wait for the browser to load it (often over a modem). Because of this the decision was made to turn each piece of legislation into a number of HTML files, each file being a section of that Legislation. When a results list is returned from SCALEplus what you see are the HTML files that have been found that match your search. For Legislation this will be a section of an Act; for Caselaw an individual case."

  - SCALEplus UM 2: "SCALEplus presents all Law Databases obtained and/or prepared by Federal Attorney General's Department as Searchable and Browseable

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data." (THOM00221675) • **The Core Materials on Legal Ethics System:** The Core Materials on Legal Ethics system contained predefined provisions of legislation. • **The Federal Rules of Civil Procedure System:** The Federal Rules of Civil Procedure system contained predefined provisions of legislation. • **The Law Desk USCS System:** The Law Desk USCS system contained predefined provisions of legislation. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system contained predefined provisions of legislation. • **The NY CLS Beta System:** The NY CLS Beta system contained predefined provisions of legislation. • **The OnPoint System:** The OnPoint system contained predefined provisions of legislation. • **The Social Security Plus System:** The Social Security Plus system contained predefined provisions of legislation. • **The UCC System:** The UCC system contained predefined provisions of legislation. • **The Core Materials on Legal Ethics System:** The Core Materials on Legal Ethics system contained predefined provisions of legislation. • **The Federal Rules of Civil Procedure System:** The Federal Rules of Civil Procedure system contained predefined provisions of legislation.

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• **The Law Desk USCS System:** The Law Desk USCS system contained predefined provisions of legislation. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system contained predefined provisions of legislation. • **The NY CLS Beta System:** The NY CLS Beta system contained predefined provisions of legislation. • **The OnPoint System:** The OnPoint system contained predefined provisions of legislation. • **The Social Security Plus System:** The Social Security Plus system contained predefined provisions of legislation. • **The UCC System:** The UCC system contained predefined provisions of legislation.
Claim 19: In addition to the prior art listed above in conjunction with Claim 1, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 19**:**
wherein each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data. • **Agosti 1991:** Agosti 1991 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Agosti 1991 discloses storing sections of legislation which are larger than one word and less than a full document. For example: • *See, e.g.*, "A Two-Level Hypertext Retrieval Model for Legal Data," at Title. • *See, e.g.*, "The experimental prototype, called HyperLaw, manages a collection of full text legal documents and a vocabulary of indexing terms," at 317. • *See, e.g.*, "The collection is made of objects of the real world: in the common practice of information retrieval these objects are textual documents," at 318.

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- *See, e.g.*, "The system thus created, called HyperLaw, is an experimental tool for handling legal collections of full text and reference documents: law, case law, legal authority," at 321.

- *See, e.g.*, "The document collection used includes norm texts (State, Regional, Provincial laws, etc.," at 322.

- *See, e.g.* 323 (Figures 2-6).

- **Arnold-Moore 1994:**

  Arnold-Moore 1994 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Arnold-Moore 1994 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article alternatively as "elements," "nodes," and/or "atoms." For example:

  - *See, e.g.*, "Contrast this with legislation where a single Act of Parliament might be broken down into many hundreds of numbered sections which in turn are broken into numbered sub-sections or paragraphs or sub-paragraphs. In larger Acts these sections are grouped in chapters, parts, divisions and/or sub-divisions each with a label and usually a heading or title. . . . To avoid confusion with these terms which have specific meaning in the context of legislation they are referred to collectively as *elements* of the document," at *iv - v*.

  - *See, e.g.*, "Using Omnimark (an SGML manipulation tool) we break each Act into atoms (in this case sections and schedules). The atoms are then stored in SIM (indexed on their content) taking note of their record identifier as they are stored," at *xxii*.

- **Arnold-Moore 1994-2:**

  Arnold-Moore 1994-2 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Arnold-Moore 1994-2 discloses storing sections of legislation which are larger than one word and less than a full document. For example:

  - *See, e.g.*, "A new class of document databases is emerging. These databases consist of large structured documents. Examples include databases of government legislation, maintenance manuals for systems as complex as aircraft carriers, and encyclopedia, and the documentation associated with a large software engineering project," at THOM00196608.

  - *See, e.g.*, "The model also gives flexibility to the implementor to retrieve whole documents and decompose them, retrieve atomic elements and recombine them, or

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pursue alternatives which retrieve the elements directly," at THOM00196608.

- *See, e.*g., "In this case, information is typically broken into small units," at THOM00196608.

- *See, e.g.*, "The database should also allow for partial document retrieval. The whole of a government Act may be an inappropriate retrieval unit, if one is searching for a definition. There may be a number of relevant portions of a single document that are relevant, and yet the whole document may still be an inappropriate retrieval unit," at THOM00196608.

- *See, e.g.*, "We chose elements as our base rather than whole documents as an SGML document is always an element, and using elements adds generality to the query without undue additional complexity allowing arbitrary node sizes instead of the traditional fixed node size," at THOM00196612.

- **Arnold-Moore 1995:**

Arnold-Moore 1995 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Arnold-Moore 1995 discloses a computer based system for publishing sections of legislation. For example:

- *See, e.g.*, "This paper proposes an architecture for a system which accepts Amending Acts expressed in SGML and produces a database of resulting versions of the Principle Acts, and describes its implementation," at Abstract.

- *See, e.g.*, "[L]egislation has a complex structure which follows predefined rules. All Acts contain numbered sections. These sections can themselves contain subsections, paragraphs, subparagraphs, clauses, subclauses and definitions. In larger Acts these sections may be collected in a combination of chapters, parts, divisions and subdivisions. To avoid confusion with the specific meaning of these terms in legislation we collectively describe these as the elements of an Act," at 297.

- *See, e.g.*, "There is great potential for CALR systems not only to present legislation in a format familiar to lawyers (like that of the paper consolidation) but to present it as it would have appeared at any arbitrary point in time with annotations available with the text. The problems of how to store these various versions in electronic databases are discussed at length elsewhere," at 298.

- **Arnold-Moore 1997:**

Arnold-Moore 1997 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Arnold-Moore 1997 discloses storing sections of legislation, which are larger than a single word but less than an entire document. For

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example:

- *See, e.g.*, "The Themis system is an integrated drafting environment for legislation," at 56.
- *See, e.g.*, "The Themis system manages a library of legislation which is encoded in the Structured Generalized Markup Language (SGML)," at 58.
- *See, e.g.*, "The Fragments which make up the document are generated rather than simply being assembled or having the results of user queries inserted in particular places," at 58.
- *See, e.g.*, "The section elements contains the headnote, and text elements and two attributes, secno which is the number of the section, and id which is a unique identifier within that document for that section which encodes much of the context information about that element," at 58.

- **Arnold-Moore 1997-2:**

Arnold-Moore 1997-2 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Arnold-Moore 1997-2 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article as fragment. For example:

- *See, e.g.*, "Themis uses SGML to store legislation," at 175.
- *See, e.g.*, "In particular, the complex structure of legislation and different versions of a particular piece of legislation can be better supported," at 175.
- *See, e.g.*, "By contrast, each category of legislation has a strictly defined structure, Statutes are broken into numbered sections (each of which may contain numbered subsections, paragraphs and subparagraphs) and schedules. These sections may be collected in parts, divisions or subdivisions," at 175.
- *See, e.g.*, "Digital legislation libraries need to reflect this independence by allowing the user to retrieve either individual elements (providing each element is a cohesive whole) or the whole Statute," at 176.
- *See, e.g.*, "A digital library which makes use of SGML can provide access to elements and not just whole documents," at 177.
- *See, e.g.*, "In the Themis system we have chosen to fragment documents at the section level for the body of the Statutes as all Statutes have a section (or equivalent), and in the tail, schedules and appendices are fragmented only if they

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contain Parts, an Annexure or a Code," at 177.

- **Bachman 1973:**

Bachman 1973 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Bachman 1973 discloses storing personnel files, airline reservations, or laboratory experiments, which are larger than a single word. Bachman 1973 also does not require that these records be stored as entire documents. For example:

- *See, e.g.*, "It involves all aspects of storing, retrieving, modifying, and deleting data in the files on personnel and production, airline reservations, or laboratory experiments – data which is used repeatedly and updated as new information becomes available," at 654.

- *See, e.g.*, "It involves all aspects of storing, retrieving, modifying, and deleting data in the files on personnel and production, airline reservations, or laboratory experiments – data which is used repeatedly and updated as new information becomes available," at 654.

- *See, e.g.*, "The second activity of database management is to update, which includes the original storage of data, its repeated modification as things change, and ultimately, its deletion from the system when the data is no longer needed," at 655.

- *See, e.g.*, "The hiring of a new employee would cause a new record to be stored. Reducing available stock would cause an inventory record to be modified. Cancelling an airline reservation would cause a record to be deleted. All of these are recorded and updated in anticipation of future inquiries," at 655.

- **Bentley 1979:**

Bentley 1979 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Bentley 1979 discloses storing records which are larger than a single word. Bentley 1979 also does not require that these records be stored as entire documents. For example:

- *See, e.g.*, "The study of data structure for facilitating rapid searching is a fascinating subject of both practical and theoretical interest," at 397.

- *See, e.g.*, "In database terminology a file is a collection of records, each containing several attributes or keys," at 397.

- *See, e.g.*, "In a geographic database of U.S. cities…," at 398.

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- *See, e.g.*, "To compile an honor list of older students…," at 398.

- **Campbell 1988:**

  Campbell 1988 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Campbell discloses storing individual pages of a user manual. For example:

  - *See, e.g.*, "A node contains arbitrary data that can be stored as text or as fixed-length binary blocks," at 856.

  - *See, e.g.*, "UNIX manual pages provide a convenient example of how the HAM can model Intermedia webs. The manual page for the mail command is used to create a small web of information. Each document (manual page) is represented as a HAM node," at 859-860.

- **Fay 1996:**

  Fay 1996 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Fay 1996 discloses that documents are broken down into subparts. For example:

  - *See, e.g.*, "Each element of a document is associated with a data field. For example, one node of a tree may be a chapter, and contain textual data in the form of a chapter heading, a chapter introductory paragraph, a chapter abstract, etc., as well as "structural" data such as the identity of a parent (document), identity of children (sections), and connections to other places in other documents where the same language may also be used," at 1:25-32.

- **Horne 1997:**

  Horne 1997 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Horne 1997 discloses storing statutes which are larger than a single word. Horne 1997 also does not require that these records be stored as entire documents. For example:

  - *See, e.g.*, "Since the mid 1980s every statute and statutory instrument has been coded using SGML (the Standard Generalized Markup Language)," at 2.

  - *See, e.g.*, "HMSO have a program called 'the Statute law Database'. This is an electronic version of Statutes in Force. It contains in SGML form the law as it was on a particular date in the 1980s together with all acts and statutory instruments

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which have come into force since that time," at 3.

- **Kim 1996:**

  Kim 1996 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Kim 1996 discloses storing a document as several "atomic nodes." For example:

  - *See, e.g.*, "Fourthly, since a composite object can refer elements, i.e., atomic objects, the composite object provides a syntax for the synchronization of its reference elements," at 497.

  - *See, e.g.*, "The paradigm also provides some capabilities for supporting structured complex operations. Therefore, the object-oriented paradigm most closely represents the complex hypermedia data model," at 498.

- **Larson 1988:**

  Larson 1988 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Larson 1988 discloses storing portions of text-based data that are portions of documents. For example:

  - *See, e.g.*, "A hypertext system is made up of a set of 'nodes' and 'links'. Nodes represent information sources in digital form. They may be segments of text . . . .," at 195.

- **Lo 1996:**

  Lo 1996 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Lo 1996 discloses a system for storing, managing, querying, and displaying portions of data. For example:

  - *See, e.g.*, "Hypertext is characterized by the notion of non-linear organization and presentation of textual information. The non-linearity is achieved by breaking down documents into a number of pages, which are then linked to each other in a network" at 23.

  - *See, e.g.*, "Since structure can be recognized in documents, components such as chapters or sections can be recognized and hence be manipulated individually. The fragmentation model makes use of this advantage brought by the described structure to store only the modified components of a document when a new version of it is created," at page 32, text following heading "The Fragmentation Model."

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- *See, e.g.*, "Möller recognizes that structured documents can be partitioned into a number of smaller units (fragments), each of which may contain one specific information item," at 34.

- *See, e.g.* section 2.3.4, starting on page 44, entitled "SGML Document Fragmentation."

- **Osterbye 1992:**

Osterbye 1992 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Osterbye 1992 discloses storing portions of documents that are greater than a single word, such as paragraphs or chapters. For example:

- *See, e.g.*, "Is it desirable to keep versions of the individual nodes and links, or do we only want to track entire 'hyperdocuments'?" at 33.

- *See, e.g.*, "Nodes are entities which have contents, and are specialized into atomic nodes which do not contain other entities, and composites which do contain other entities," at 34.

- *See, e.g.*, "In software engineering there are two levels of versioning. The lowest levels are the different modules that make up the programs. Each module can exist in several versions, and all the versions of a module is often referred to as a version group," at 34.

- *See, e.g.*, "Nodes correspond to modules; notes will normally be short, e.g. sections or paragraphs rather than chapters, or routines rather than files," at 35.

- *See, e.g.*, "The node is the basic entity for storing contents. We require all nodes to have an attribute for contents and a name. Nodes are versioned," at 38.

- **Peltonen 1993:**

Peltonen 1993 discloses "ach predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Peltonen 1993 discloses storing portions of text-based data that are subsets of documents. For example:

- *See, e.g.*, "*Documents* represent any data for design tools: drawings, manuals, bitmap images, etc. Originally we only used the concepts of a document and document version. However, our industrial partner turned out to require a considerably richer document structure. A document therefore includes a number of subdocuments, each subdocument has a number of subdocument versions, and each subdocument version has a number of representations," at 6.

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- *See, e.g.*, Figure 2.

- *See, e.g.*, "Documents are composed of *subdocuments*. For instance, suppose a drawing comprises several sheets, each of which is manipulated as a separate file by the drawing tool. The sheets of the drawing as a whole form a single document, and each sheet is a subdocument. Subdocuments are also needed for a text document which includes figures made with a separate drawing program. The text file and the graphics files are stored in the database as separate subdocuments," at 7.

- **Povilus 1995:**

  Povilus 1995 discloses, teaches or renders obvious this claim for the reasons stated by the Patent Examiner in the Office Action of March 24, 2000 (incorporated herein by reference) and others.

- **Promenschenkel 1995:**

  Promenshenkel 1995 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Promenshenkel 1995 discloses storing sections of documents which can be compiled. For example:

  - *See, e.g.*, "This allows components to be stored, manipulated and eventually assembled automatically as a magazine, electronic journal, book or in virtually any other form chosen by the publishers," at 1.

- **Sacks-Davis 1994:**

  Sacks-Davis 1994 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Sacks-Davis 1994 discloses storing sections of text less than a full document. For example:

  - *See, e.g.*, "The last possibility we consider is to use an element-based model designed specifically for SGML documents. While alternatives that rely on retrieving multiple tuples or objects must then combine the objects to give the full text of the element, and those retrieving whole documents must decompose documents to extract the elements, the element approach supports retrieval by element directly," at THOM00198841.

  - *See, e.g.*, "It is also possible to index the atomic elements (objects or relations) and then define a join operation for text objects or relations that allows these results to be combined to access higher level elements, an approach applicable to either relational or object-based models," at THOM00198844.

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- **Sciore 1994:**

  Sciore 1994 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Sciore 1994 discloses storing predefined portions of, for example, portions of employment records. For example:

  - *See, e.g.*, "Figure 3 illustrates an historical database in EXTRA-V. This scheme has three conceptual types: Person, Employee, and Company. A version of a conceptual object denotes a pervious or current state of the object. Each time a versioned attribute changes, a new version is created corresponding to the new state," at 87.

  - *See, e.g.*, "Each Employee version contains the information about an employee during some time interval," at 87.

- **Sacks-Davis 1995:**

  Sacks-Davis 1995 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Sacks-Davis 1995 discloses storing sections of text less than a full document. For example:

  - *See, e.g.*, "Rather than store documents as monolithic objects in a database it is more efficient to represent documents as a set of smaller fragments, which can be connected by links," at 465.

  - *See, e.g.*, "Once the structure is determined, a document can be partitioned into fragments to be stored in a database system," at 465.

  - *See, e.g.*, "Since document parts, such as chapters or sections, are represented as subtrees within a document tree, the Hypertext table will typically contain an attribute identifying the parent of a node and another attribute identifying the sibling order of a node within a tree," at 465.

- **Travis & Waldt:**

  Travis & Waldt discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Travis & Waldt discloses that granularity can be chose by any particular user of an SGML database based on their particular needs. Travis & Waldt then goes on to recommend that granularity be selected at a level larger than a single word and smaller than an entire document. For example:

  - *See, e.g.*, "Currently, the documents are stored in either complete document form, or as very large document fragments. Access to smaller document fragments concurrently by multiple authors could expedite editing speed and allow for easier

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reuse of information. Storing document information as logical elements, which may be very small portions of documents, will create a large number of units of information that will need to be managed. Again, the DBMS is designed to manage large numbers of smaller information elements," at 17.

- *See, e.g.*, "In implementing an SGML database, the most important factor is to determine the level of granularity. That is, which objects should be tracked and managed as a single piece. Sometimes this is a chapter or section, but it could be as large as the entire book or as small as every element or word," at 110-11.

- *See, e.g.*, "The key to successful entity management is to break a document into logical pieces, which can be managed independently, while maintaining their identity in a particular document or set of documents," at 185.

- *See, e.g.*, "The most important factor when implementing an SGML-enabled database is to determine the level at which the document information will be split. This is usually called 'granularity', and each piece is called a 'grain' or 'atom'." "Grains are typically chapters or parts, but we have seen implementations where each paragraph is stored separately." "Setting the grain size too large may cause unnecessary data access overhead." "Setting the grain size too small causes problems, also," at 202–03.

- *See, e.g.*, "Determining the proper level of granularity is largely a matter of how the data is structured, and what its purpose is in the enterprise," at 203.

- *See, e.g.*, "Sometimes, the level of granularity is self-defining. A common way is to break by chapter or sub-chapter. It is the level at which the author is likely to work. In many situations, even if a book has several authors or maintainers, a chapter will be owned by a single person. By setting the grain size to this object, the database reflects what the users do naturally," at 203.

- *See, e.g.*, "There are also technical factors to keep in mind when determining granularity. There is a certain amount of database overhead for each object. If each word were tracked, the overhead could easily be more than the actual data," at 203.

- *See, e.g.*, "A database loader in an SGML-enabled system contains some kind of "atomizer" that breaks the source document into the grain-sized pieces mentioned above," at 204.

- **Wilkinson 1998:**

Wilkinson 1998 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Wilkinson 1998 discloses a system for storing, managing, querying, and displaying portions of data. For example:

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- *See, e.g.*, "[E]ither documents or their components have to be stored. The key task in using components is to decide on how documents are to be partitioned into components. The advantage in storing components instead of whole documents is that useful fragments can be retrieved without incurring the cost of retrieving whole documents," at 100.

- *See, e.g.*, "Alternatively, documents can be regarded as sets of fragments that have properties including type, parents, and children," at 103.

- **Wilson 1988:**

Wilson 1988 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Wilson 1988 discloses storing sections of legislation which are more than a word but less than a full document. For example:

- *See, e.g.*, "Justus automatically converts machine-readable versions of a variety of legal documents into hypertext documents for the Guide hypertext system," at 30.

- *See, e.g.*, "In a hypertext system, texts are divided into segments, sometimes called nodes," at 32.

- *See, e.g.*, "The text of a statute is particularly amendable to representation in a hypertext system because it is already highly structured," at 32.

- *See, e.g.*, "Each subsection label provided by the legal draftsmen is automatically converted by Justus into a node name or, in Guide terms, a definition button," at 32.

- **Wilson 1990:**

Wilson 1990 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Wilson 1990 discloses storing sections of legislation which are more than a word but less than a full document. For example:

- *See, e.g.*, "Justus automatically converts machine-readable versions of a variety of legal documents into hypertext documents for the Guide hypertext system," at 30.

- *See, e.g.*, "In a hypertext system, texts are divided into segments, sometimes called nodes," at 32.

- *See, e.g.*, "The text of a statute is particularly amendable to representation in a hypertext system because it is already highly structured," at 32.

- *See, e.g.*, "Each subsection label provided by the legal draftsmen is automatically

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converted by Justus into a node name or, in Guide terms, a definition button," at 32.

- **Wilson 1992:**

  Wilson 1992 discloses "each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data." Specifically, Wilson 1992 discloses storing predefined portions of legislative acts such as sections, which are referred to in the article as nodes. For example:

  - *See, e.g.*, "An Act of Parliament may be divided into parts, sections, subsections, and paragraphs; a schedule, into subschedules, paragraphs and subparagraphs. An act must have at least one subsection; a schedule at least one paragraph. Hence, the text is already divided into segments…the text segments are the basic units of information, or lowest level nodes, of the hypertext system," at 161.

  - *See, e.g.*, "The Industrial Relations Act itself is a node that consists of the general description of the Act, nine Part nodes, and eight Schedule nodes," at 162.

- **The Pre-1997 Westlaw/Westmate System**:

  The Westlaw/Westmate system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. *See, e.g.*:

  - Database Guide, at doc no. 79858–59 ("United States Code Annotated"): "A document is an annotated or unannotated section of USCA."

  - www.westlaw.com: any annual statutory database prior to 1998.

  - AMPEX § 2

  - Wren 1994, at109–11, 141–42 (discussing searching statutory sections and showing attributes within a statutory section).

  - The Essential Guide 1996, at 136 (showing that the text-based data within WESTLAW is stored as statutory sections)

- **The Pre-1997 Premise System**:

  The Premise system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. *See, e.g.*:

  - Premise Statutes (including numerous statutory sections).

- **The Astoria System (pre-1997):**

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The Astoria System could be used with any documents or portions of documents, including legislation or portions of legislation, such as a section or blocks which are larger than words, but smaller than all Acts, or Codes. For example:

- *See, e.g.*, Astoria 1997-1: "Astoria . . . is a powerful yet east-to-use document component management system that provides the information repository and management infrastructure needed to help organizations capture critical business knowledge and distribute it more efficiently," at THOM00211907.

- *See, e.g.*, XSoft Premiers Astoria: "Astoria . . . [is] a software system that allows groups of people to more easily collaborate on, create and edit massive or complex documents. Astoria is for use with 'structured' documents, which typically run into the thousands of pages, contain a series of reusable components such as headings, tables, and lists, and require multiple revisions or updates over many years," at THOM00198650.

- *See, e.g.*, Astoria 1997-1: "Astoria lets users navigate through the document depository and view documents down to the individual components that comprise them." at THOM00211907.

- *See, e.g.*, XSoft Astoria: "Astoria deals with the concept of 'document components.' A document component is a piece that is designed to be maintained as a unit, whether this be at the volume or book level, or at some finer granular point, such as paragraph or list," at THOM00198652.

- *See, e.g.*, Astoria 1997-1: "Astoria can apply revision information to only the components that change during an editing session. Astoria detects and maintains revision history at the component level, not just at the document level. . . Astoria stores versioning information in an efficient format, and past versions are always available for republishing or for providing an audit trail," at THOM00211908.

- *See, e.g.*, XSoft: "Because of its sophisticated integration with SGML editors, Astoria maintains revision information on individual elements, and past versions are always available," at THOM00198648.

- **The EnAct System** (previously known as Themis)**:**

  The EnAct system stores portions of text-based data that are larger than a word and smaller than an entire document. *See, e.g.*:

  - Arnold-Moore 1997-2, at 177–78: "In the *Themis* system we have chosen to fragment documents at the section level . . . . By using SGML to store the Statutes, we can automate the process of fragmenting large documents and only present to the user the part of the document that the user requests."

  - http://web.archive.org/web/19990430002036/www.thelaw.tas.gov.au/background.html

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: "All legislation in the database is broken up into a number of fragments (i.e. one fragment per Section or Schedule)."

- **The SCALEplus System:**

  The SCALEplus system stores portions of text-based data that are larger than a word and smaller than an entire document. *See, e.g.*:

  - Kerr 2000: Page 11-13, ¶ 490: "The standard unit of retrieval for legislation is a section of an Act or a regulation in Regulations . . . and for caselaw is the entire case. Users are able to modify the searchable scope of these retrieved documents."

  - SCALEplus Secrets, at 2: "SCALEplus has lots of information that is huge, particularly legislation. SCALEplus data is formatted in HTML which is common to all World Wide Web applications but is ideally suited for one or a few pages—to view a document you have to wait for the browser to load it (often over a modem). Because of this the decision was made to turn each piece of legislation into a number of HTML files, each file being a section of that Legislation. When a results list is returned from SCALEplus what you see are the HTML files that have been found that match your search. For Legislation this will be a section of an Act; for Caselaw an individual case."

- **The Documentum/Interleaf System:**

  The Documentum/Interleaf system stores portions of text-based data that are larger than a word and smaller than an entire document. *See, e.g.*:

  - Interleaf provides support for compound documents, wherein documents are broken into components. *See* Ovum Interleaf 1996, at 256–57.

  - Documentum provides support for compound documents, wherein documents are broken into components. *See* Ovum Documentum 1996, at 210–212 ("Similarly, Documentum can be integrated with SGML parsers for importing SGML documents: using the parser, a large SGML document is turned into a set of compound documents, based on the internal document structure defined by the Document Type Definition.").

- **The Core Materials on Legal Ethics System:**

  The Core Materials on Legal Ethics system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes.

- **The Federal Rules of Civil Procedure System:**

  The Federal Rules of Civil Procedure system contained predefined portions of

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legislation, which are larger than words, but smaller than all Acts, or Codes. • **The Law Desk NY System:** The Law Desk NY system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The Law Desk USCS System:** The Law Desk USCS system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The New Mexico Law System:** The New Mexico Law on Legal Ethics system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The NY Official Reports System:** The NY Official Reports system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The NY CLS Beta System:** The NY CLS Beta system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The OnPoint System:** The OnPoint system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The Social Security Plus System:** The Social Security Plus system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes. • **The UCC System:** The UCC system contained predefined portions of legislation, which are larger than words, but smaller than all Acts, or Codes.
Claim 20: Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious the following elements of Claim 20:

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(a) A computer-readable recording medium for publishing an electronic publication using text- based data, comprising Each of the references and systems cited above in Claim 1 similarly applies to Claim 20 and discloses "a computer-readable recording medium for publishing an electronic publication using text-based media," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 20.
(b) a plurality of predefined portions of text-based data with each predefined portion being stored; Each of the references and systems cited above in Claim 1 similarly applies to Claim 20 and discloses "a plurality of predefined portions of text-based data with each predefined portion being stored," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 20.
(c) at least one predefined portion being modified and stored; Each of the references and systems cited above in Claim 1 similarly applies to Claim 20 and discloses "at least one predefined portion being modified and stored," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 20.
(d) a plurality of linking means of a markup language, each predefined portion of said text-based data and said at least one modified predefined portion of text-based data being encoded with at least one linking means; and Each of the references and systems cited above in Claim 1 similarly applies to Claim 20 and discloses "a plurality of linking means of a markup language, each predefined portion of said text-based data and said at least one modified predefined portion of text-based data being encoded with at least one linking means," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 20.
(e) a plurality of attributes, each attribute being a point on an axis of a multidimensional space for organizing said plurality of predefined portions and said at least one modified predefined portion of said text-based data. Each of the references and systems cited above in Claim 1 similarly applies to Claim 20 and discloses "a plurality of attributes, each attribute being a point on an axis of a multidimensional space for organizing said plurality of predefined portions and said at least one modified predefined portion of said text-based data," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 20.
Claim 21: In addition to the prior art listed above in conjunction with Claim 20, and Subject

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to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 21**:**
wherein means for searching can be used to search the recording medium. Each of the references and systems cited above in Claim 2 similarly applies to Claim 21 and discloses "means for searching can be used to search the recording medium," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 21.
Claim 22: In addition to the prior art listed above in conjunction with Claims 20 and 21, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 22**:**
wherein said searching means uses one or more attributes. Each of the references and systems cited above in Claim 3 similarly applies to Claim 22 and discloses "said searching means uses one or more attributes," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 22.
Claim 23: In addition to the prior art listed above in conjunction with Claims 20 & 21, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 23**:**
wherein said searching means uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification. Each of the references and systems cited above in Claim 4 similarly applies to Claim 23 and discloses "said searching means uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 23.
Claim 24: In addition to the prior art listed above in conjunction with Claim 20, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 24**:**
further comprising means for searching at least one of said predefined portions of said text-based data uses said plurality of attributes, wherein said plurality of attributes are

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coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a point in said multidimensional space. Each of the references and systems cited above in Claim 5 similarly applies to Claim 24 and discloses "means for searching at least one of said predefined portions of said text-based data uses said plurality of attributes, wherein said plurality of attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a point in said multidimensional space," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 24.
Claim 25: In addition to the prior art listed above in conjunction with Claim 20, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 25**:**
wherein said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML). Each of the references and systems cited above in Claim 6 similarly applies to Claim 25 and discloses "said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML,)" because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 25.
Claim 26: In addition to the prior art listed above in conjunction with Claims 20 & 25, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 26**:**
wherein said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM). Each of the references and systems cited above in Claim 7 similarly applies to Claim 26 and discloses "said text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM,)" because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 26.
Claim 27: In addition to the prior art listed above in conjunction with Claim 20, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 27**:**

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wherein said linking means comprises any piece of information additional to the body of the text-based data. Each of the references and systems cited above in Claim 8 similarly applies to Claim 27 and discloses "said linking means comprises any piece of information additional to the body of the text-based data," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 27.
Claim 28: In addition to the prior art listed above in conjunction with Claims 20 & 27, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 28**:**
wherein said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data. Each of the references and systems cited above in Claim 9 similarly applies to Claim 28 and discloses "said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 28.
Claim 29: In addition to the prior art listed above in conjunction with Claim 20, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 29**:**
wherein said at least one linking means comprises an identification code for said respective predefined portion. Each of the references and systems cited above in Claim 10 similarly applies to Claim 29 and discloses "said at least one linking means comprises an identification code for said respective predefined portion," because the references and the systems disclosed were or would be understood to be stored on a computer-readable recording medium as claimed in Claim 29.
Claim 30: In addition to the prior art listed above in conjunction with Claim 20, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 30**:**
wherein a first database comprises said plurality of predefined portions of said text-based data. Each of the references and systems cited above in Claim 11 similarly applies to Claim 30