

Appendix F – Part 6

Defendants' Supplemental Prior Art Statement
'228 Patent
(TC1385-TC1413)

to

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

Prior Art Analysis

The Documentum/Interleaf system discloses searching of text-based data based on attributes. *See, e.g.:*

- *See, e.g., Ovum Interleaf 1996*, “It is possible to search on attribute combinations and combine these using Boolean operators,” at 262 (and figure H2.6).
- *See, e.g., Ovum Documentum 1996*, “Documentum exposes just about all a document’s attributes to querying,” at 220 (and figure H1.10).

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

The Core Materials on Legal Ethics system discloses searching using attributes.

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

The Federal Rules of Civil Procedure system discloses for searching using attributes.

- **The Law Desk NY System:**

The Law Desk NY system discloses searching using attributes.

- **The Law Desk USCS System:**

The Law Desk USCS system discloses for searching using attributes.

- **The New Mexico Law System:**

The New Mexico Law on Legal Ethics system discloses searching using attributes.

- **The NY Official Reports System:**

The NY Official Reports system discloses searching using attributes.

- **The NY CLS Beta System:**

The NY CLS Beta system discloses searching using attributes.

- **The OnPoint System:**

The OnPoint system discloses searching using attributes.

- **The UCC System:**

The UCC system discloses searching using attributes.

Claim 3: 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

Prior Art Analysis

incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 3:

wherein the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).

• **Arnold-Moore 1994:**

Arnold-Moore 1994 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Arnold-Moore 1994 discloses use of SMGL. For example:

- *See, e.g.*, “SGML can be used to solve a number of the failings of the hyperbase approach. The problem of presentation is addressed by storing Acts of a given jurisdiction in SGML format satisfying a particular DTD,” at *xii*.
- *See, e.g.*, “Both of these references discuss prototype systems which utilize SGML for hypertext database systems with legal applications,” at *xii*.

• **Arnold-Moore 1994-2:**

Arnold-Moore 1994-2 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Arnold-Moore 1994-2 discloses use of SMGL. 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.*, “Standard Generalized Markup Language (SGML), now provides a grammar for describing document structure which is widely used for document exchange,” 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 THOM00196611.

• **Arnold-Moore 1995:**

Arnold-Moore 1995 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Travis & Waldt discloses use of SMGL. 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.

Prior Art Analysis

- *See, e.g.*, “The text database system needs to manage multiple versions of a single document and to manage highly structured documents. We have chosen to use the Structured Information Manager (SIM)...SIM stores documents in the Standard Generalized Markup Language (SGML),” at 299.
- *See, e.g.*, “SGML has received broad acceptance as an appropriate tool for encoding legislation as well as a variety of other types of documents. Many providers of legislation in electronic form use SGM to encode their distribution,” at 299.
- **Arnold-Moore 1997:**

Arnold-Moore 1997 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Arnold-Moore 1997 discloses use of SMGL. For example:

 - *See, e.g.*, “The Themis system manages a library of legislation which is encoded in the Structured Generalized Markup Language (SGML),” at 58.
- **Arnold-Moore 1997-2:**

Arnold-Moore 1997-2 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Arnold-Moore 1997-2 discloses use of SMGL. For example:

 - *See, e.g.*, “Themis uses SGML to store legislation,” at 175.
 - *See, e.g.*, “Law librarians have identified the need for a standard coding of structure in legal texts for ease of distribution and reformatting, particularly identifying SGML as an appropriate scheme,” at 177.
 - *See, e.g.*, “Logical structure is identified by tags which appear interspersed with the text in an SGML document,” at 177.
- **Azaria 1994:**

The Azaria reference 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.
- **Dolan 1998:**

Dolan 1998 discloses that the text-based data is encoded with a markup language, and therefore discloses this method. For example:

 - *See, e.g.*, “One type of item retrieved through computer networks is an HTML document. In an HTML document, links to HTML documents and other non-HTML

Prior Art Analysis

documents are embedded in the text or graphics of the HTML document itself,” at 16:7–11.

• **Fay 1996:**

Fay 1996 discloses “wherein the markup language is Standard Generalized Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Fay discloses the use of SGML. For example:

- *See, e.g.*, “Documents can either be originated within this document management system or can be generated elsewhere and imported. Imported documents are assumed to conform to a Document Type Definition (DTD) specified according to the ISO standard 8879 for document representation known as SGML or Standard Generalized Markup Language. Elements are the logical components of document structure defined in the DTD,” at 3:21–29.

• **Horne 1997:**

Horne 1997 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Horne 1997 discloses use of SMGL. 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.

• **Kim 1996:**

Kim 1996 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Kim 1996 discloses use of SMGL. For example:

- *See, e.g.*, “In this paper, we design a new hypermedia markup language using SGML,” at 496.
- *See, e.g.*, “[W]e propose a markup language for hypermedia using SGML (Standard Generalized Markup Language),” at 496.
- *See, e.g.*, “From now one, we will call our markup language HOML (Hypermedia Object Modeling Language). HOML is an SGML application,” at 497.

• **Lo 1995:**

Lo 1995 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Lo 1995 discloses use of SMGL. For example:

Prior Art Analysis

- *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.
- **Lo 1996:**

Lo 1996 discloses “wherein the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Lo 1996 discloses the use of SGML. 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.”
- **Promenschenkel 1995:**

Promenschenkel 1995 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Promenschenkel 1995 discloses use of SMGL. For example:

 - *See, e.g.*, “It will encompass capture and conversion of the article, Standard Generalized Markup Language (SGML) editing,” at 1.
- **Sacks-Davis 1994:**

Sacks-Davis 1994 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Sacks-Davis 1994 discloses use of SMGL. For example:

 - *See, e.g.*, “The ISO Standard Generalized Markup Language (SGML) was designed to support document interchange and fulfils this requirement,” at THOM00198835.
- **Sacks-Davis 1995:**

Sacks-Davis 1995 discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Sacks-Davis 1995 discloses use of SMGL. For example:

Prior Art Analysis

- *See, e.g.*, “SGML is a widely used standard for the representation and interchange of documents. SGML defines a language that can be used to specify abstract grammars consisting of tags that are interspersed throughout the text of documents,” at 464.

- **Travis & Waldt:**

Travis & Waldt discloses “the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Travis & Waldt discloses use of SMGL. For example:

 - *Passim*, especially Chapter 10.

- **Wilkinson 1998:**

Wilkinson 1998 discloses “wherein the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).” Specifically, Wilkinson 1998 discloses SGML and many other markup languages. For example:

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

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

The Westlaw/Westmate system uses a markup language called AMPEX that is equivalent to XML and SGML. For example:

 - *See, e.g.*, AMPEX § 2.

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

The Premise system uses a markup language called AMPEX that is equivalent to XML and SGML. For example:

 - *See, e.g.*, Premise Publisher: stating that the chapter is instructing the user how to insert markup code into documents for purposes of publishing them via PREMISE; explaining how to add the correct markup tags and attributes to an ASCII file; defining “Data markup”; defining “Data markup codes”, at 30, 74-96, 359, and 360.

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

The Astoria System allowed users to use a markup language and to add links to SGML documents. Use of the system therefore constitutes a method wherein the markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML). 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,

Prior Art Analysis

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 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.
- *See, e.g.*, XSoft: “Astoria is an object-oriented document production component management system that enable users to easily find, use, share and manage SGML documents and their components, as well as unstructured documents. . . . 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,” THOM00198647.

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

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

- *See, e.g.*, <http://web.archive.org/web/19990430002036/www.thelaw.tas.gov.au/background.html>: “Legislation is stored in a format known as SGML.”
- *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 markup languages such as SGML and its equivalents. For example:

- Interleaf allows users to utilize the SGML markup language. *See, e.g.*, Consleg 1996, (“SGML is used as the representation format for the storage of acts,”) at 301.
- Documentum allows users to utilize the SGML markup language. *See, e.g.*, Ovum Documentum 1996, “Similarly, Documentum can be integrated with SGML parsers for

Prior Art Analysis

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 4: In addition to the prior art listed above in conjunction with Claims 1 and 3, 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 4:

wherein the text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM).

• **Arnold-Moore 1994:**

Arnold-Moore 1994 discloses “the text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM).” Specifically, Arnold-Moore 1994 discloses encoding test-based data using DTD. For example:

- *See, e.g.*, “SGML can be used to solve a number of the failings of the hyperbase approach. The problem of presentation is addressed by storing Acts of a given jurisdiction in SGML format satisfying a particular DTD,” at *xii*.

• **Arnold-Moore 1994-2:**

Arnold-Moore 1994-2 discloses “the text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM).” Specifically, Arnold-Moore 1994-2 discloses encoding test-based data using DTDs. For example:

- *See, e.g.*, “The ELF (ELements with Features) model uses the SGML grammar (DTD) directly as a schema avoiding transformations which can lose information,” at THOM00196608.
- *See, e.g.*, “Each document instance consists of a declaration (which describes the character set and the available facilities), a DTD (document type definition – the grammar which the document satisfies) and the tagged text itself,” at THOM00196609.

• **Arnold-Moore 1997:**

Arnold-Moore 1997 discloses “the text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM).” Specifically, Arnold-Moore 1997 discloses encoding test-based data using DTDs. For example:

- *See, e.g.*, “SGML is a meta-grammar which allows the user to define a grammar (a Document Type Definition or DTD) describing the structure of a document,” at 58.

Prior Art Analysis

• **Arnold-Moore 1997-2:**

Arnold-Moore 1997-2 discloses “the text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM).” Specifically, Arnold-Moore 1997-2 discloses encoding test-based data using both DTD and style sheets. For example:

- *See, e.g.*, “SGML allows the construction of a DTD (or Document Type Description) which describes the structure of a class of documents, describing what documents are valid and what they can contain,” at 177.
- *See, e.g.*, “While a DTD describes the logical structure of a class of documents, a style sheet is used to map logical structure to an appropriate representation of that structure,” at 177.

• **Azaria 1994:**

The Azaria reference 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.

• **Fay 1996:**

Fay 1996 discloses “wherein the text-based data is encoded using one or more Document Type Definitions (DTD) or Style Sheet Mechanisms (SSM).” Specifically, Fay discloses the use of SGML. For example:

- *See, e.g.*, “Documents can either be originated within this document management system or can be generated elsewhere and imported. Imported documents are assumed to conform to a Document Type Definition (DTD) specified according to the ISO standard 8879 for document representation known as SGML or Standard Generalized Markup Language. Elements are the logical components of document structure defined in the DTD,” at 3:21–29.

• **Horne 1997:**

Horne 1997 discloses “the 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:**

Prior Art Analysis

Lo 1996 discloses “wherein the 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 “the 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 “the 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.

• **Travis & Waldt:**

Travis & Waldt discloses “the 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 the 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

Prior Art Analysis

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:

- 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 5: 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

Prior Art Analysis

incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 5:

wherein the at least one link comprises any piece of information additional to the text of the text-based data.

• **Agosti 1991:**

Agosti 1991 discloses “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text of the text-based data.” Specifically, Arnold-Moore 1994 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:**

Prior Art Analysis

Arnold-Moore 1994-2 discloses “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text 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:**

Bachman 1973 discloses “the at least one link comprises any piece of information additional to the text 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.

Prior Art Analysis

- *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 “the at least one link comprises any piece of information additional to the text 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.

- **Dolan 1998:**

Dolan 1998 discloses that links comprise information additional to the text-based data, displayed, and linked, and therefore discloses this method. *See, e.g.*:

- “Author field of a link record contains data specifying the author of the subject item . . . Access date/time field contains data specifying the date and time the subject item was last retrieved from either item cache . . . or computer network.” 12:44–55.

- **Horne 1997:**

Horne 1997 discloses “the at least one link comprises any piece of information additional to the text 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

Prior Art Analysis

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 "the at least one link comprises any piece of information additional to the text 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 "the at least one link comprises any piece of information additional to the text 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 link 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.

Prior Art Analysis

- *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 “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text 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

Prior Art Analysis

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 “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text 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-object 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 entities. For example:

- *See, e.g.*, “We had adopted a schema based upon binary relations (BR) A

Prior Art Analysis

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 “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text 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-specific method,” at 38.

- **Wilson 1988:**

Prior Art Analysis

Wilson 1988 discloses “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text 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 “the at least one link comprises any piece of information additional to the text 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 and multiple versions,” at 178.

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

Prior Art Analysis

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-ANI 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 documents. Use of this system therefore constitutes a method wherein the at least one link comprises any piece of information additional to the text of the text-based data. For example:

Prior Art Analysis

- 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 additional to the body of the text-based data.

Prior Art Analysis

• **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.

Claim 6: In addition to the prior art listed above in conjunction with Claims 1 & 5, and Subject to the Court's claim construction, and given Defendants' understanding of Plaintiff's

Prior Art Analysis

incomplete contentions regarding the construction and application of the claims, the following references disclose, teach or render obvious Claim 6:

wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the text-based data.

• **Agosti 1991:**

Agosti 1991 discloses “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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 allows all the links which bind that single document to the others to be displayed,” at

Prior Art Analysis

323.

• **Arnold-Moore 1994:**

Arnold-Moore 1994 discloses “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the text-based data.” Specifically, Arnold-Moore 1994 discloses hypertext 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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the text-based data.” Specifically, Arnold-Moore 1997-2 discloses dynamic hypertext 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.

Prior Art Analysis

- *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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the text-based

Prior Art Analysis

data.” 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.

• **Dolan 1998:**

Dolan 1998 discloses that links comprise markup language encoded in the HTML documents, and therefore discloses this method. *See, e.g.*:

- “Author field of a link record contains data specifying the author of the subject item . . . Access date/time field contains data specifying the date and time the subject item was last retrieved from either item cache . . . or computer network.” 12:44–55.
- “One type of item retrieved through computer networks is an HTML document. In an HTML document, links to HTML documents and other non-HTML documents are embedded in the text or graphics of the HTML document itself.” 16:7–11.

• **Horne 1997:**

Horne 1997 discloses “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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-

Prior Art Analysis

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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the text-based data.” Specifically, Kim 1996 discloses links that allow movement between stored text-based documents. 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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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.

Prior Art Analysis

- *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 link 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.
- *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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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

Prior Art Analysis

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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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 “wherein the at least one link comprises a code or markup that allows departure and destination points to be created between portions of the 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