# Appendix F - Part 10

Defendants' Supplemental Prior Art Statement '228 Patent (TC1500-TC1529)

to

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

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 "allowing a user to select a version date as a primary attribute of a multidimensional space and to input at least one search request." Specifically, Travis & Waldt discloses allowing users to search on multiple attributes including date. For example:

- See, e.g., "SGML browsers offer context-sensitive searching capabilities so that the user can quickly access the required information . . . . For example, a search can be defined to allow a user to search for a part number, but only if it is contained in a chapter that was updated after a certain date. Or, a user can have the browser return a list of all sections containing a particular phrase, but only if the phrase is contained in a note. These are examples of context-sensitive searches," at 52-53.
- See, e.g., pages 194–95 (and figure 61), 198 (and figure 64).
- See, e.g., "The loader also makes available to the database parameterized information that can be used later to search and retrieve the appropriate objects. Such parameter information is object identifiers, author names, creation and modification dates, and perhaps some keywords. Most of this information can be obtained by querying the attributes on the element tags in the content of the document object," at 204.

# • Wilkinson 1998:

Wilkinson 1998 discloses "allowing a user to select a version date as a primary attribute of a multidimensional space and to input at least one search request." Specifically, Wilkinson 1998 discloses a case study about a document management system for legislation (EnAct) which allows searching by time. For example:

- See, e.g. "The major motivation of the project was to develop a system to produce and manage an electronic repository of legislation to track and record legislation as it changes with time, allowing access to the legislation both as it is now and also as it was at any time in the past," at 162
- See, e.g. "The most important differentiating characteristic of EnAct is its support of temporal attributes," at 169.
- See, e.g. "This time point defaults to the current date but can be set in the search

screens, after which every query or link traversal uses that new date until another is provided," at 169.

#### Wilson 1990:

Wilson 1990 discloses "allowing a user to select a version date as a primary attribute of a multidimensional space and to input at least one search request." Specifically, Wilson 1990 discloses allowing a user to search either by keyword or attributes, such as date. For example:

- See, e.g., "When the user enters the Justus running under Guide he is given a choice of three methods of access: direct access, index of pre-defined terms, and boolean query," at 125.
- See, e.g., "it is easy to provide a structured index composed of the terms appearing in the catchwords section," at 125.

#### • Wilson 1992:

Wilson discloses "allowing a user to select a version date as a primary attribute of a multidimensional space and to input at least one search request." Specifically, Wilson discloses examples of searches that users can conduct by author name, key word, and date. For example:

• See generally 183.

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

The Westlaw/Westmate system discloses searching its text-based information by date, and so using the system would entail performing this method. See, e.g.:

- Westlaw DB 1991, generally (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)
- <u>DataBasics 1993</u>, ("United States Code Annotated"): Disclosing mechanisms for searching using words or phrases within portions and amended portions of statutes, at doc no. 79858-59.
- <u>DataBasics 1993</u>, generally: Disclosing annual databases for statutory codes. Selecting an annual database entails selecting a version date.
- Wren 1994: 114–24, 141–42, listing the searchable fields, including, among others, the citation, date, and title fields.

- Password 1991: 5 (limiting your search by date)
- Westlaw Ref 1993: 109–13 (describing date searching in Westlaw)
- The Essential Guide 1996, at 29: "Some documents, such as archival statutes, are not retrievable with Find\*, when you have a citation to one of these documents, access the appropriate database and retrieve it by restricting your search to the citation field (ci)."
- The Essential Guide 1996, at 30: "To retrieve a specific section of the old tax code, e.g., 26 U.S.C.A. § 1201, restrict your search to the citation field with the following query . . . ."
- <u>The Essential Guide 1996</u>, at 36: "**res** Restrictions—displays a screen allowing you to add restrictions to your WIN description, such as date or court"
- 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 58: "To restrict your search to documents decided or issued on, before or after a certain date, or between a range of dates, add a date restriction (da) to your query."

# • The Pre-1997 Premise System:

The Premise system discloses searching its text-based information using a date attribute, and so using the system would entail performing this method. See, e.g.:

• <u>Premise Research</u>: Page 109 (describing how to search documents using the date field)

# • The Astoria System (pre-1997):

The Astoria System allowed a user to select a version as an attribute used for a means of organizing a document or portion of a document. For example:

- See, e.g., Astoria 1997-1: "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: "REVISION TRACKING: Because of its sophisticated integration with SGML editors, Astoria maintains revision information on individual elements, and past versions are always available," at THOM00198648.

- See, e.g., Screen shot at THOM00211908.
- 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 discloses searching its text-based information using a date attribute, and so using the system would entail performing this method. See, e.g.:

• <u>Arnold-Moore 1997-2</u>, at 178, figure 1 (showing ability to search the text-based information using the date and other search requests)

# • The SCALEplus System:

The SCALEplus system discloses searching its text-based information using a date attribute, and so using the system would entail performing this method. See, e.g.:

- <u>Kerr 2000</u>: ¶ 429 (page 11-3), ¶¶ 493–99 (pages 11-14–11-15)
- <u>SCALEplus UM 2:</u> "Advanced Search Screen" at THOM00221692 and text describing the features on that screen, including the "Date Search Options."

# • The Documentum/Interleaf System:

The Documentum/Interleaf system discloses searching its text-based information using a date attribute, and so using the system would entail performing this method. See, e.g.:

• Ovum Interleaf 1996, at 262 (and figure H2.6) (demonstrating the ability to search on date)

#### • The Law Desk NY System:

The Law Desk NY system a method of using a system which has a means for searching its text-based information by date.

## • The NY Official Reports System:

The NY Official Reports system a method of using a system which has a means for

searching its text-based information by date.

(c) producing results based on the text of the legislation;

## • Agosti 1991:

Agosti 1991 discloses "producing results based on the text of the legislation." Specifically, Agosti 1991 discloses a user interface that displays search results. For example:

- *See generally* 322-324 (Figures 2-8)
- See, e.g., "Figure 7. An example of a node: the representation of a Legal Authority document," at 324.

#### • Arnold-Moore 1994:

Arnold-Moore 1994 discloses "producing results based on the text of the legislation." Specifically, Arnold-Moore 1994 discusses displaying units of text on the screen in response to a search. 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. This 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," at 3.
- See, e.g., "The querying needs of typical full text databases should be supported including the ability to: select Acts from the database using boolean combinations of words and phrases in the Act...rank Acts according to a measure of similarity to a list of words or passage of text (and select the top ten say)," at 4.

#### Arnold-Moore 1994-2:

Arnold-Moore 1994-2 discloses "producing results based on the text of the legislation." Specifically, Arnold-Moore 1994-2 discloses using the described storage system together with a graphical user interface that will display the stored text-based data in response to a search. For example:

- See, e.g., "These databases will need to be searched by attribute. This will, for example, allow a software engineering document that is the right version to be retrieved," at THOM00196608.
- See, e.g., "[I]t is anticipated that SGQL will be primarily used as an API to text and graphical user interfaces rather than used directly by the user. It is presumed that these interfaces will have access to the appropriate DTD's and output specifications

so that users will be able to avoid knowing the exact generic identifiers required for every query," at THOM00196615.

#### Arnold-Moore 1997:

Arnold-Moore 1997 discloses "producing results based on the text of the legislation." Specifically, Arnold-Moore 1997 discloses providing the legislative drafter with a version of the Act or Regulation to be amended in response to a search. For example:

- See, e.g., "Themis provides the legislative drafter with a version of the Act or Regulation to be amended on which the drafter marks the amendments directly," 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., "The drafter can view any Act or search the whole database using Boolean or ranking queries at any time point for which a valid version is stored on the system. This allows a drafter to check out the Principal Act to be amended as it was or will be at a given time," at 59.

## • Arnold-Moore 1997-2:

Arnold-Moore 1997-2 discloses "producing results based on the text of the legislation." Specifically, Arnold-Moore 1997-2 discusses and shows a user interface that shows the stored nodes of text-based data in response to a search. For example:

- See generally 178, 180-181 (Figures 1-5)
- See, e.g., "While most queries are executed through graphical user interfaces," at 177.
- See, e.g., "Using a dual display with a table of contents on one side and the actual provision on the other provides an appropriate compromise (see Figure 3 which shows one of the results from Figure 2). By using SGML to store the Statutes, we can automate the process of fragmenting large documents and only present to the user the parts of the document that the user requests," at 179.

## • Horne 1997:

Horne 1997 discloses "producing results based on the text of the legislation." Specifically, Horne 1997 discloses the display of text-based data to the user in response to a search. For example:

• See, e.g., "SGML is not concerned with how that paragraph is formatted by the

appropriate program on the user's computer," at 2.

• See, e.g., "The program on the user's computer could ignore the repealed text and display the inserted text. But the 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 Sis 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.

#### • Lo 1996:

Lo 1996 discloses "producing results based on the text of the legislation." Specifically, Lo 1996 discloses a document management system, including legislation, which queries on the text. For example:

- See, e.g., "The main purpose of indexing is to provide a means through which the data items can be quickly searched and retrieved without the need to compare every item against a query," at 8-9, section 1.2.2.
- See, e.g., "Notes supports full-text searches that allow users to index and search Notes documents based on user queries. An indexed database can be searched for words, phrases, numbers, and dates," at 65.
- See, e.g., "Basic document management features are provided, such as keyword search or full text retrieval," at 66-67.
- See "Furthermore, the vector space information retrieval paradigm of the SIM DBS supports querying of the documents based on content," at 113.
- 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...."

#### • Travis & Waldt:

Travis & Waldt discloses "producing results based on the text of the legislation." Specifically, Wilson 1988 discusses and shows user interfaces which display the stored text-based data. For example:

- See, e.g., "Hidden beneath the formatted view of information prepared in tools that we commonly call WYSIWYG (What You See Is What You Get), or rich text, is data with buried coding that drives that same formatting... The following formatted view is what an author may wee while editing in a WYSIWYG environment," at 22.
- See generally 23 (Figure 4).
- See, e.g., "SGML browsers offer context-sensitive searching capabilities so that the

user can quickly access the required information...For example, a search can be defined to allow a user to search for a part number, but only if it is contained in a chapter that was updated after a certain date. Or, a user can have the browser return a list of all sections containing a particular phrase, but only if the phrase is contained in a note. These are examples of context-sensitive searches," at 52-53.

- See, e.g., "It is more common to see a graphical front-end for systems that have traditionally been command-line oriented. Version control systems are no exception. Microsoft SourceSafe has a native graphical front-end in the Windows, Windows NT, and Macintosh versions. This graphical front-end makes it easy to see the structure of a project or group of text files, and to view the current status," at 191.
- See generally 191 (Figure 59).
- See, e.g., pages 194–95 (and figure 61), 198 (and figure 64).
- See, e.g., "The loader also makes available to the database parameterized information that can be used later to search and retrieve the appropriate objects. Such parameter information is object identifiers, author names, creation and modification dates, and perhaps some keywords. Most of this information can be obtained by querying the attributes on the element tags in the content of the document object," at 204.

#### • Wilkinson 1998:

Wilkinson 1998 discloses "producing results based on the text of the legislation." Specifically, Wilkinson 1998 discloses searching on a document's contents. For example:

- See generally section 5.5, beginning on page 87 (entitled "Access by Content").
- See, e.g., "Characteristic of many document storage systems is the ability to query against the content of stored documents. This important task is enabled by indexing documents' text content. The most prevalent form of text index is the *inverted file*," at 100.
- See, e.g., "To satisfy a query, the query engine uses the inverted index to identify those documents that match the query terms and generates an answer list," at 102.

#### • Wilson 1990:

Wilson 1990 discloses "producing results based on the text of the legislation." Specifically, Wilson 1990 discusses and shows user interfaces which display the stored text-based data in response to a search. For example:

• See, e.g., "How the text is displayed varies from hypertext system to hypertext system...In Guide the conventional mode of display for any text is a single linear

window. Whenever a definition button or usage button is selected, the button is expanded in place and the display window is reformatted to accommodate the replacement text for the button," at 123.

- See generally 124-126 (Figures 1-7).
- See, e.g., "When the user enters the Justus running under Guide he is given a choice of three methods of access: direct access, index of pre-defined terms, and boolean query," at 125.

#### • Wilson 1992:

Wilson discloses "producing results based on the text of the legislation." Specifically, Wilson 1992 discusses and shows user interfaces which display the stored text-based data. 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; for paragraph 6(2)(a)," at 161.
- See generally 163-164, 169-174, 178-182 (Figures 1-15).
- See generally 183.

# • The Pre-1997 Westlaw/Westmate System:

The Westlaw/Westmate system displays text-based legislation in response to a search, and so using the system would entail performing this method. See, e.g.:

- Wren 1994: 141–42 (displaying a statutory sections in response to a search)
- Essential Guide: 139–40 (displaying a statutory sections in response to a search)
- Johnson 1991: generally and 84–92 (including figure 4.11)
- The Essential Guide 1996, at 43: "WESTLAW processes your description and displays the 20 documents most closely matching the concepts in your description . . ."
- The Essential Guide 1996, at 43: "You can review the documents you retrieve using standard WESTLAW browsing commands. When you browse documents retrieved by a Natural Language description in term mode, the five portions of each document that most closely match your description are displayed. To view the portion of each document most closely matching your description, type best or b to browse your documents in best mode."

 See generally <u>The Essential Guide 1996</u>, at Chapter "4.6 Using Terms and Connectors"

## • The Pre-1997 Premise System:

The Premise system displays text-based legislation in response to a search, and so using the system would entail performing this method. See, e.g.:

- <u>Premise Software & Statutes:</u> Select "Search/Search Book…" menu item, and conduct a search of the Statutes to see the text of the document retrieved by the search.
- <u>Premise Research:</u> Chapter 7 *generally* ("Retrieving Documents Using Descriptive Words")

## • The Astoria System (pre-1997):

The Astoria System produced results based on the text of a document For example:

- See, e.g., <u>Astoria 1997-1</u>: "Astoria provides a multilingual engine that lets users search on document content, structure, attributes, and version information," at THOM00211909.
- See, e.g., XSoft Astoria: "The search engine allows context-sensitive searching. For example, it can find the phrase "lower taxes," at THOM00198652.
- See, e.g., Screen shot at THOM00211908.
- The EnAct System (previously known as Themis):

The legislation within the EnAct system displays text-based legislation in response to a search, and so using the system would entail performing this method. *See, e.g.*:

• <u>Arnold-Moore 1997-2</u>, at 178, 180, figures 2 & 3 (and p. 179 saying "(see Figure 3 which shows one of the results from Figure 2)").

## • The SCALEplus System:

The SCALEplus system displays text-based legislation in response to a search, and so using the system would entail performing this method. See, e.g.:

- <u>Kerr 2000</u>: Paragraphs 189–92 (page 6-7).
- <u>SCALEplus Secrets</u>, 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."

- <u>SCALEplus UM 2</u>: "Full Text Searching Through the Verity Search Engine". (THOM00221676)
- SCALEplus UM 2: "Advanced Search Screen" at THOM00221692 and text describing the features on that screen, including the "Date Search Options."
- <u>SCALEplus UM 2</u>: "Results List Page" screen shot and the text describing this screen shot. (THOM00221697)

## • The Documentum/Interleaf System:

The Documentum/Interleaf system includes the ability to display text-based legislative data in response to a search. For example:

• 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 a means for searching portions using words or phrases within portions.

# • The Federal Rules of Civil Procedure System:

The Federal Rules of Civil Procedure system contained a means for searching portions using words or phrases within portions.

## • The Law Desk NY System:

The Law Desk NY system contained a means for searching portions using words or phrases within portions.

#### • The Law Desk USCS System:

The Law Desk USCS system contained a means for searching portions using words or phrases within portions.

# • The New Mexico Law System:

The New Mexico Law on Legal Ethics system contained a means for searching portions using words or phrases within portions.

# • The NY Official Reports System:

The NY Official Reports system contained a means for searching portions using words or phrases within portions.

## • The NY CLS Beta System:

The NY CLS Beta system contained a means for searching portions using words or phrases within portions.

## • The OnPoint System:

The OnPoint system contained a means for searching portions using words or phrases within portions.

## • The Social Security Plus System:

The Social Security Plus system contained a means for searching portions using words or phrases within portions.

#### • The UCC System:

The UCC system contained a means for searching portions using words or phrases within portions

(d) displaying the results in a format that is configured to allow the user to select one of the results;

#### • Agosti 1991:

Agosti 1991 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Agosti 1991 discloses a user interface that displays selectable search results. For example:

- *See generally* 322-324 (Figures 2-8)
- See, e.g., "Figure 7. An example of a node: the representation of a Legal Authority document," at 324.

## • Anwar 1996:

Anwar 1996 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Anwar 1996 discloses the ability for a system to display information that a user can use a mouse to click on so that other or additional

data is displayed on a computer screen. For example:

• See, e.g., "Next the buyer rotates the n-gon till the face that represents the Racket Type is in view. The buyer double-clicks on the Tennis face and an n-gon and the display creates n-gon that represents Racket Attributes. The buyer rotates the child—Racket Attributes—n-gon and makes the desired selection," 18:62–67.

#### • Arnold-Moore 1994:

Arnold-Moore 1994 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Arnold-Moore 1994 discusses displaying selectable units of text on the screen in response to a search. 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. This 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," at 3.
- See, e.g., "The querying needs of typical full text databases should be supported including the ability to: select Acts from the database using boolean combinations of words and phrases in the Act...rank Acts according to a measure of similarity to a list of words or passage of text (and select the top ten say)," at 4.

#### • Arnold-Moore 1997-2:

Arnold-Moore 1997-2 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Arnold-Moore 1997-2 discusses and shows a user interface that displays selectable results in response to a search. For example:

- See generally 178, 180-181 (Figures 1-5)
- See, e.g., "While most queries are executed through graphical user interfaces," at 177.
- See, e.g., "Using a dual display with a table of contents on one side and the actual provision on the other provides an appropriate compromise (see Figure 3 which shows one of the results from Figure 2). By using SGML to store the Statutes, we can automate the process of fragmenting large documents and only present to the user the parts of the document that the user requests," at 179.

## • Campbell 1988:

Campbell 1988 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Campbell 1998 discloses displaying

selectable results in response to a search. For example:

- See, e.g., "A filter operation takes a predicate, a version time, and a list of attributes. These operations return a list of objects that satisfy the predicate and a list of requested attributes attached to each object," at 858.
- See, e.g., "Replacement buttons replace the button icon displayed on the screen with the information associated with that button," at 858.

## • Larson 1988:

Larson 1988 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Larson 1988 discloses a user interface that displays selectable links. For example:

• See, e.g., "All of the hypertext systems discussed below make use of the graphical interface features of workstations or personal computers to provide direct manipulation capabilities. They rely on high resolution screens to provide bitmapped windows and graphics, and on pointing devices, such as a 'mouse', for icon and menu selection. Each active (i.e. displayed) node is usually given its own window on the screen, and links to other nodes are represented by icons. Using the mouse, the user simply 'clicks' on these link icons to retrieve and display the linked node," at 196.

## • Taylor 1994:

Taylor 1994 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Taylor 1994 discloses a user interface that displays a list of responsive data to a user. For example:

• See, e.g., figures 3 & 4, showing display of information, including a list of responsive data from which the user can select.

#### • Travis & Waldt:

Travis & Waldt discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Travis & Waldt discusses and shows user interfaces which displays selectable search results. For example:

- See, e.g., "Hidden beneath the formatted view of information prepared in tools that we commonly call WYSIWYG (What You See Is What You Get), or rich text, is data with buried coding that drives that same formatting...The following formatted view is what an author may wee while editing in a WYSIWYG environment," at 22.
- See generally 23 (Figure 4).

- See, e.g., "SGML browsers offer context-sensitive searching capabilities so that the user can quickly access the required information...For example, a search can be defined to allow a user to search for a part number, but only if it is contained in a chapter that was updated after a certain date. Or, a user can have the browser return a list of all sections containing a particular phrase, but only if the phrase is contained in a note. These are examples of context-sensitive searches," at 52-53.
- See, e.g., "It is more common to see a graphical front-end for systems that have traditionally been command-line oriented. Version control systems are no exception. Microsoft SourceSafe has a native graphical front-end in the Windows, Windows NT, and Macintosh versions. This graphical front-end makes it easy to see the structure of a project or group of text files, and to view the current status," at 191.
- See generally 191 (Figure 59).
- See, e.g., pages 194–95 (and figure 61), 198 (and figure 64).
- See, e.g., "The loader also makes available to the database parameterized information that can be used later to search and retrieve the appropriate objects. Such parameter information is object identifiers, author names, creation and modification dates, and perhaps some keywords. Most of this information can be obtained by querying the attributes on the element tags in the content of the document object," at 204.

#### • Wilkinson 1998:

Wilkinson 1998 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Wilkinson 1998 discloses allowing the user to select a document from the answer list. For example:

- See, e.g., "To satisfy a query, the query engine uses the inverted index to identify those documents that match the query terms and generates an answer list," at 102.
- *See, e.g.,* Figure 9.1.
- See, e.g., "In the Web interface, an alternative view is used to give some view of the temporal nature of a document. A full table of contents is replaced by a skeleton outline of each of the fragments together with a version list for each fragment," at 169.

#### Wilson 1990:

Wilson 1990 discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Wilson 1990 discusses and shows user interfaces which display selectable search results. For example:

• See, e.g., "How the text is displayed varies from hypertext system to hypertext

system...In Guide the conventional mode of display for any text is a single linear window. Whenever a definition button or usage button is selected, the button is expanded in place and the display window is reformatted to accommodate the replacement text for the button," at 123.

- See generally 124-126 (Figures 1-7).
- See, e.g., "When the user enters the Justus running under Guide he is given a choice of three methods of access: direct access, index of pre-defined terms, and boolean query," at 125.

#### • Wilson 1992:

Wilson discloses "displaying the results in a format that is configured to allow the user to select one of the results." Specifically, Wilson 1992 discusses and shows user interfaces which display selectable search results. 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; for paragraph 6(2)(a)," at 161.
- See generally 163-164, 169-174, 178-182 (Figures 1-15).
- See generally 183.

# The Pre-1997 Westlaw/Westmate System:

After a search was conducted in the Westlaw/Westmate system, the system displayed a list of results in a format that allowed a user to select one of the results, and so using the system would entail performing this method. See, e.g.:

- Johnson 1991: generally and 84–92 (including figure 4.12)
- The Essential Guide 1996, at 43: "WESTLAW processes your description and displays the 20 documents most closely matching the concepts in your description . . ."
- The Essential Guide 1996, at 43: "You can review the documents you retrieve using standard WESTLAW browsing commands. When you browse documents retrieved by a Natural Language description in term mode, the five portions of each document that most closely match your description are displayed. To view the portion of each document most closely matching your description, type **best** or **b** to browse your documents in best mode."
- See generally The Essential Guide 1996, at Chapter 5 "Browsing Documents"

# • The Pre-1997 Premise System:

After a search was conducted in the Premise system, the system displayed a list of results in a format that allowed a user to select one of the results, and so using the system would entail performing this method. See, e.g.:

- <u>Premise Software & Statutes:</u> Select "Search/Search Book..." and then conduct a search to see the results list.
- Premise Research: page 115, figure 8-A.

## • The Astoria System (pre-1997):

The Astoria System produced results based on the user's selection. For example:

- See, e.g., <u>Astoria 1997-1</u>: "Astoria provides a multilingual engine that lets users search on document content, structure, attributes, and version information," at THOM00211909.
- See, e.g., XSoft Astoria: "The search engine allows context-sensitive searching. For example, it can find the phrase "lower taxes," at THOM00198652.
- See, e.g., Screen shot at THOM00211908.
- The EnAct System (previously known as Themis):

The legislation within the EnAct system displays text-based legislation in response to a search, and so using the system would entail performing this method. See, e.g.:

• Arnold-Moore 1997-2, at 178, 180, figures 2 & 3 (and p. 179 saying "(see Figure 3 which shows one of the results from Figure 2)").

# • The SCALEplus System:

After a search was conducted in the SCALEplus system, the system displayed a list of results in a format that allowed a user to select one of the results, and so using the system would entail performing this method. See, e.g.:

- Kerr 2000: Paragraphs 189–92 (page 6-7).
- <u>SCALEplus UM 2:</u> "Search Results Page" screen shot, and the text describing this screen shot. (THOM00221679)
- <u>SCALEplus UM 2:</u> "Entering a search term using the Topic Query Language in any of the available search pages will search the current selected databases and display a result list. The result list will show the Title, Database and Size of the found item.

Each item in the result list can be clicked to show the document that was found." (THOM00221686)

• <u>SCALEplus UM 2</u>: "Results List Page" screen shot and the text describing this screen shot. (THOM00221697)

## • The Core Materials on Legal Ethics System:

The Core Materials on Legal Ethics system involves a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

## • The Federal Rules of Civil Procedure System:

The Federal Rules of Civil Procedure system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

## • The Law Desk NY System:

The Law Desk NY system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

#### • The Law Desk USCS System:

The Law Desk USCS system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

# • The New Mexico Law System:

The New Mexico Law on Legal Ethics system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

## • The NY Official Reports System:

The NY Official Reports system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

## • The NY CLS Beta System:

The NY CLS Beta system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the

results.

# • The OnPoint System:

The OnPoint system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

# • The Social Security Plus System:

The Social Security Plus system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

# • The UCC System:

The UCC system a method of using a system which, after a search was conducted, displayed a list of results in a format that allowed a user to select one of the results.

(e) displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request;

## • Agosti 1991:

Agosti 1991 discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Agosti 1991 discloses displaying the stored legislation when a selectable search result is selected. For example:

- *See generally* 322-324 (Figures 2-8)
- See, e.g., "Figure 7. An example of a node: the representation of a Legal Authority document," at 324.

## • Arnold-Moore 1994:

Arnold-Moore 1994 discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Arnold-Moore 1994 discusses displaying the stored legislation when a selectable search result is selected. 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. This 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," at 3.

• See, e.g., "The querying needs of typical full text databases should be supported including the ability to: select Acts from the database using boolean combinations of words and phrases in the Act...rank Acts according to a measure of similarity to a list of words or passage of text (and select the top ten say)," at 4.

#### • Arnold-Moore 1997-2:

Arnold-Moore 1997-2 discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Arnold-Moore 1997-2 discusses and shows a user interface that displays the stored legislation when a selectable search result is selected. For example:

- See generally 178, 180-181 (Figures 1-5)
- See, e.g., "While most queries are executed through graphical user interfaces," at 177.
- See, e.g., "Using a dual display with a table of contents on one side and the actual provision on the other provides an appropriate compromise (see Figure 3 which shows one of the results from Figure 2). By using SGML to store the Statutes, we can automate the process of fragmenting large documents and only present to the user the parts of the document that the user requests," at 179.

#### • Travis & Waldt:

Travis & Waldt discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Travis & Waldt discusses and shows user interfaces which display the stored legislation when a selectable search result is selected. For example:

- See, e.g., "Hidden beneath the formatted view of information prepared in tools that we commonly call WYSIWYG (What You See Is What You Get), or rich text, is data with buried coding that drives that same formatting...The following formatted view is what an author may wee while editing in a WYSIWYG environment," at 22.
- See generally 23 (Figure 4).
- See, e.g., "SGML browsers offer context-sensitive searching capabilities so that the user can quickly access the required information...For example, a search can be defined to allow a user to search for a part number, but only if it is contained in a chapter that was updated after a certain date. Or, a user can have the browser return a list of all sections containing a particular phrase, but only if the phrase is contained in a note. These are examples of context-sensitive searches," at 52-53.
- See, e.g., "It is more common to see a graphical front-end for systems that have

traditionally been command-line oriented. Version control systems are no exception. Microsoft SourceSafe has a native graphical front-end in the Windows, Windows NT, and Macintosh versions. This graphical front-end makes it easy to see the structure of a project or group of text files, and to view the current status," at 191.

- See generally 191 (Figure 59).
- See, e.g., pages 194–95 (and figure 61), 198 (and figure 64).
- See, e.g., "The loader also makes available to the database parameterized information that can be used later to search and retrieve the appropriate objects. Such parameter information is object identifiers, author names, creation and modification dates, and perhaps some keywords. Most of this information can be obtained by querying the attributes on the element tags in the content of the document object," at 204.

#### • Wilkinson 1998:

Wilkinson 1998 discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Wilkinson 1998 discloses showing the document selected from a search. For example:

- See, e.g., "To satisfy a query, the query engine uses the inverted index to identify those documents that match the query terms and generates an answer list," at 102.
- See, e.g., Figure 9.1.
- See, e.g., "In the Web interface, an alternative view is used to give some view of the temporal nature of a document. A full table of contents is replaced by a skeleton outline of each of the fragments together with a version list for each fragment," at 169.

#### • Wilson 1990:

Wilson 1990 discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Wilson 1990 discusses and shows user interfaces which display the stored legislation when a selectable search result is selected. For example:

• See, e.g., "How the text is displayed varies from hypertext system to hypertext system...In Guide the conventional mode of display for any text is a single linear window. Whenever a definition button or usage button is selected, the button is expanded in place and the display window is reformatted to accommodate the replacement text for the button," at 123.

- See generally 124-126 (Figures 1-7).
- See, e.g., "When the user enters the Justus running under Guide he is given a choice of three methods of access: direct access, index of pre-defined terms, and boolean query," at 125.

#### • Wilson 1992:

Wilson discloses "displaying the result as a portion of legislation corresponding to a selected result that corresponds to the primary attribute and the at least one search request." Specifically, Wilson 1992 discusses and shows user interfaces which display the stored legislation when a selectable search result is selected. 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; for paragraph 6(2)(a)," at 161.
- See generally 163-164, 169-174, 178-182 (Figures 1-15).
- See generally 183.

# • The Pre-1997 Westlaw/Westmate System:

After a use selected one of the results, the Westlaw/Westmate system displayed the selected portion corresponding to a selected result, and so using the system would entail performing this method.

- The Essential Guide 1996, at 43: "WESTLAW processes your description and displays the 20 documents most closely matching the concepts in your description . . "
- The Essential Guide 1996, at 43: "You can review the documents you retrieve using standard WESTLAW browsing commands. When you browse documents retrieved by a Natural Language description in term mode, the five portions of each document that most closely match your description are displayed. To view the portion of each document most closely matching your description, type **best** or **b** to browse your documents in best mode."
- See generally The Essential Guide 1996, at Chapter 5 "Browsing Documents"

# • The Pre-1997 Premise System:

The Premise system displays text-based information to a user, and so using the system would entail performing this method. See, e.g.:

• Premise Software & Statutes: Select "Search/Search Book..." and then conduct a

search to see the results list, and then select one of the results.

• Premise Research: Page 117, figure 8-C.

## • The Astoria System (pre-1997):

The Astoria System produced results based on the user's selection of an attribute. For example:

- See, e.g., <u>Astoria 1997-1</u>: "Astoria provides a multilingual engine that lets users search on document content, structure, attributes, and version information," at THOM00211909.
- See, e.g., XSoft Astoria: "The search engine allows context-sensitive searching. For example, it can find the phrase "lower taxes," at THOM00198652.
- 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., Screen shot at THOM00211908.

#### • The EnAct System (previously known as Themis):

The legislation within the EnAct system displays text-based legislation in response to a search, and so using the system would entail performing this method. *See, e.g.*:

• Arnold-Moore 1997-2, at 178, 180, figures 2 & 3 (and p. 179 saying "(see Figure 3 which shows one of the results from Figure 2)").

# • The SCALEplus System:

After a search was conducted in the SCALEplus system, the system displayed allows the user to select from the list of results, and so using the system would entail performing this method. See, e.g.:

- Kerr 2000: Paragraphs 189–92 (page 6-7).
- <u>SCALEplus Secrets</u>, 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."

- <u>SCALEplus UM 2</u>: "SCALEplus presents all Law Databases obtained and/or prepared by Federal Attorney General's Department as Searchable and Browseable data." (THOM00221675)
- <u>SCALEplus UM 2</u>: "Results List Page" screen shot and the text describing this screen shot. (THOM00221697)
- <u>SCALEplus UM 2</u>: "Document Display Page" screen shot and the text describing this screen shot. (THOM00221701)

# • The Core Materials on Legal Ethics System:

The Core Materials on Legal Ethics system involves a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

## • The Federal Rules of Civil Procedure System:

The Federal Rules of Civil Procedure system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

## • The Law Desk NY System:

The Law Desk NY system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

#### • The Law Desk USCS System:

The Law Desk USCS system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

## • The New Mexico Law System:

The New Mexico Law on Legal Ethics system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

# • The NY Official Reports System:

The NY Official Reports system a method of using a system which, after a search was

conducted, displayed the selected portion corresponding to a selected result.

## • The NY CLS Beta System:

The NY CLS Beta system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

#### • The OnPoint System:

The OnPoint system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

# • The Social Security Plus System:

The Social Security Plus system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

# • The UCC System:

The UCC system a method of using a system which, after a search was conducted, displayed the selected portion corresponding to a selected result.

(f) displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation; and

#### • Agosti 1991:

Agosti 1991 discloses "displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation." Specifically, Agosti 1991 discloses displaying links to related documents, including versions of legislation and related cases. For example:

- See e.g., "The system thus created, called HyperLaw, is an experimental tool for handling legal collections of full text and reference documents: laws, case law, legal authority," at 321.
- 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 requested function," at 322.
- 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.
- See e.g., "We indicate along the bottom the cardinality of each cluster of documents bound to the specific term (see Figure 5)," at 323.

- 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.
- See generally 324 (Figure 8).
- 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.

#### Wilkinson 1998:

Wilkinson 1998 discloses "displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation." Specifically, Wilkinson 1998 discloses displaying selectable links allowing the user to find related documents. Further, Wilkinson 1998 discloses displaying earlier versions of legislation. For example:

- See, e.g., "A user's ability to find documents is enhanced if there are links between a currently viewed document and related documents. This is a consequence of the clustering hypothesis: closely associated documents tend to be relevant to the same requests. If one document of a cluster is identified, then others can be reached by navigation," at 96.
- See, e.g. "The major motivation of the project was to develop a system to produce and manage an electronic repository of legislation to track and record legislation as it changes with time, allowing access to the legislation both as it is now and also as it was at any time in the past," at 162.

#### Wilson 1988:

Wilson 1988 discloses "displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation." Specifically, Wilson 1988 discusses and shows links to related cases and prior versions of legislation. 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. References to statutes within cases are handled in the same way," at 27.
- See, e.g., "The current version is displayed for the user. If it is appropriate to his purpose, he need look no further; if it is not, he can request the previous version. In figure 8, the glossary window shows that an inverse reference has been added to the text of Section 167(2)(a) to show that it has been amended by the National Health Service Reorganisation Act 1973. It is the amended text that is displayed; the amendments are delimited by extra spaces and brackets. By selecting the button

[BEFORE 5 JULY 1973], we can see the text of Section 167(2)(a) before it was amended: figure 9. This version is also an amended text; if required, an earlier version can be displayed," at 35.

• See, e.g., "It is as easy for Justus to build a statute citation index while processing cases, as it is to build one while processing statutes. Figure 12 shows how extra buttons, [cases], have been added to the text of section 116. Each [case] button has been aliased to the list of cases where the interpretation of the section or subsection has been argued. Selecting [cases] will cause the list of relevant cases to be displayed: Figure 13," at 37-38.

#### • Wilson 1992:

Wilson 1992 discloses "displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation." Specifically, Wilson 1992 discusses and shows links to related cases and prior versions of legislation. For example:

- See generally 173 (Figure 8), 179 (Figure 11), 180 (Figure 12) and 181 (Figure 13).
- See, e.g., "Citations indexes can be built automatically for: (i) statutes from later statutes (ii) for statutes from cases and (iii) for cases from cases. If the legal database contains the cited text a reference to the citing text (e.g. the amending act or subsequent case) can be inserted automatically in the earlier text (e.g. the amended act or cited case.) Each such reference is a location link or, in Guide, a gloassary button. In Justus, lists of inverse references are concealed behind local buttons," at
- See, e.g., "The icon or label for a local button need not be unique and, indeed, the icon [cases] is used in statutes throughout the Justus system to give access to the list of cases which have cited that section of statute. Figure 8 shows how extra [case] buttons have been added to the text of section 22(1). When one of these is selected a list of cases is displayed: Fig. 11. A more detailed description of the inverse reference problem can be found in (Wilson 1989a)," at 177-178.
- See, e.g., "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 180.

## The Pre-1997 Westlaw/Westmate System:

When the Westlaw/Westmate system displayed the links and means of navigation to cases and versions, it allowed the user to select the case link or navigate to the additional versions, and so using the system would entail performing this method.

• <u>The Essential Guide 1996</u>, 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:

When the Premise system displayed the links and means of navigation to cases and versions, it allowed the user to select the case link or navigate to the additional versions, and so using the system would entail performing this method.

# • The Astoria System (pre-1997):

The Astoria System was used to display links to portions of documents and links to additional versions of portions of documents. For example:

- See, e.g., Screen shots, at THOM00211907-08.
- See, e.g., <u>Astoria 1997-1</u>: "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." (THOM00198652)
- See, e.g., <u>Astoria 1997-1</u>: "Astoria provides a multilingual engine that lets users search on document content, structure, attributes, and version information," at THOM00211909.
- See, e.g., Astoria 1997-1: "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: "REVISION TRACKING: Because of its sophisticated integration with SGML editors, Astoria maintains revision information on individual elements, and past versions are always available," at THOM00198648.
- 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., <u>Astoria 1997-1</u>: "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.

## • The Federal Rules of Civil Procedure System:

The Federal Rules of Civil Procedure system a method of using a system which displayed links to navigate to the additional versions of legislation.

## • The Law Desk USCS System:

The Law Desk USCS system a method of using a system which displayed links to cases related to the displayed portion.

#### • The New Mexico Law System:

The New Mexico Law on Legal Ethics system a method of using a system which displayed links to cases related to the displayed portion.

## • The NY CLS Beta System:

The NY CLS Beta system a method of using a system which displayed links to navigate to the additional versions of legislation.

## • The OnPoint System:

The OnPoint system a method of using a system which displayed links to navigate to the additional versions of legislation.

# (g) allowing the user to select the version link or the case link;

Each of the references discussed above with regard to claim 13(f) discloses both "displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation" and "allowing the user to select the version link or the case link." The supporting quotations for this assertion are provided above in connection with claim 13(f).

(h)wherein, when the user selects the case link or version link, the portion of legislation is replaced with a list of portions of text-based data associated with the case link or the version link, respectively.

Each of the references discussed above with regard to claim 13(f) discloses both "displaying a link to cases related to the portion of legislation and a link to additional versions of the legislation" and "wherein, when the user selects the case link or version link, the portion of legislation is replaced with a list of portions of text-based data associated with the case link or the version link, respectively." The supporting quotations for this assertion are provided above in connection with claim 13(f).

Claim 14: In addition to the prior art listed above in conjunction with Claim 13, 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 the results are produced using one or more attributes.

## • Agosti 1991:

Agosti 1991 discloses "the results are produced using one or more attributes." Specifically, Agosti 1991 discloses using attributes in query formation and indicates that the disclosed model could be extended to include attribute searching. 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 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., "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., "Following the results of the user's requirements analysis which has been initially conducted, it has been decided to include in the model only a simple string search function, because the results of the analysis have indicated that it was not considered really important to include particularly sophisticated search functions," at