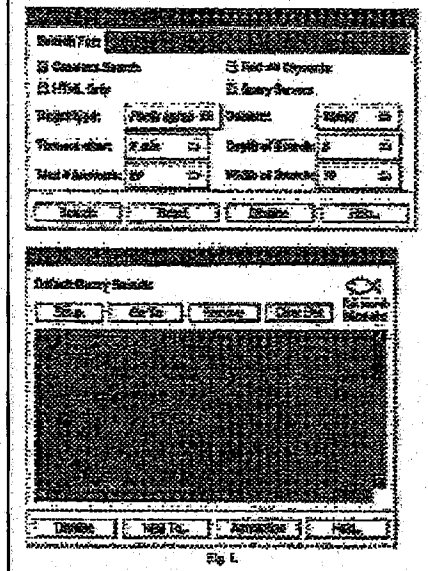
Exhibit 2

INVALIDITY CLAIM CHART FOR US PATENT NO. 5,832,494

BASED ON DE BRA, P. AND POST, R.D.J., "INFORMATION RETRIEVAL IN THE WORLD-WIDE WEB: MAKING CLIENT-BASED SEARCHING FEASIBLE." IN COMPUTER NETWORKS AND ISDN SYSTEMS VOL. 27, PP. 183-192 (1994) ("DEBRA, 1994")

Claim Text from '494 Patent	De Bra, 1994
1. A method of analyzing a database with indirect relationships, using links and nodes, comprising the steps of:	*See, e.g.*, DeBra, 1994, at Abstract, pp. 183-84, 185 Finding specific information in the World Wide Web (WWW or Web for short) is becoming increasingly difficult. (DeBra, 1994, Abstract) The World-Wide Web ... is a fast growing wide-area hypermedia database. It contains information on many related and unrelated topics.... However, a hypertext document like the WWW, distributed over hundreds or even thousands of loosley coupled sites can only be searched by retrieving documents and scanning them for related information, and also scanning them for extracting links pointing to other documents. ... [S]everal types of solutions have been proposed and implemented: (1) specially designing meta-hyperdocuments ... (2) robot-based searchable indecies ... (3) client-based search tools, most notably our fish search (DeBra, 1994, p. 183-84) 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185)

Claim Text from '494 Patent	DeBra, 1994
[1a] Selecting a node for analysis;	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[1b] Generating candidate cluster links for the selected node, wherein the step of generating comprises an analysis of one or more indirect relationships in the database;	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[1c] Deriving actual cluster links from the candidate cluster links;	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those

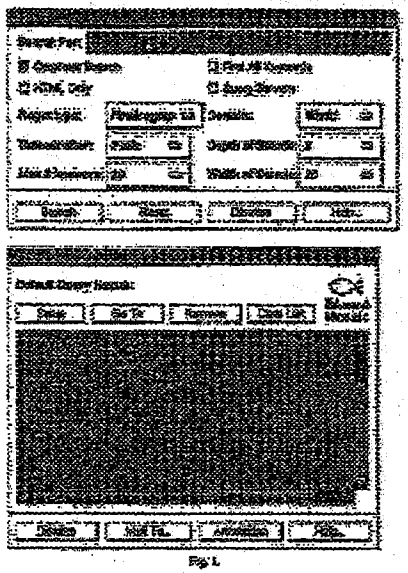
Claim 1 of the '504 Patent	DeBra, 1994
	disclosures here, they are incorporated by reference into this chart.
[1d] identifying one or more nodes for display; and	*See, e.g.*, DeBra, 1994, at p. 185 The result of a search is a list of (relevant documents), with the "relevance score" of each document.
[1e] displaying the identity of one or more nodes using the actual cluster links.	*See, e.g.*, DeBra, 1994, at Fig. 1, p. 185  The result of a search is a list of (relevant documents), with the "relevance score" of each document.

Claim Text from '494 Patent	DeBra, 1994
2. The method of claim 1 wherein each link is given a length, the step of generating the candidate cluster links comprises the steps of:	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185)
[2a] Choosing a number as the maximum number of link lengths that will be examined; and	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185)
[2b] examining only those links which are less than the maximum number of link lengths.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer

Claim 1 of the '604 Patent	DeBra, 1994
	children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185)
3. The method of claim 1 wherein the step of deriving actual cluster links comprises the step of: selecting the top rated candidate cluster links, wherein the top rated candidate cluster links are those which are most closely linked to the node under analysis.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.

Claim Text from '492 Patent	DeBra 1994
5. The method of claim 1 wherein the step of generating the candidate cluster links comprises the step of: eliminating candidate cluster links, wherein the number of candidate cluster links is limited and the closest candidate cluster links are chosen over the remaining links.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
7. The method of claim 1, wherein one or more nodes provide external connections to objects external to the database, the method further comprising the steps of:	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[7a] Activating the desired node; and	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those

Claim Text from '104 Patent	DeBra 1994
	disclosures here, they are incorporated by reference into this chart.
[7b] Accessing the external object linked to the node.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
8. The method of claim 7, wherein the external object is an independent application which can be executed in background, the method further comprising the step of:	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[8a] executing the independent application.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
9. The method of claim 8, wherein one or more nodes provide links to more than one independent application which can be executed as an extension, the method further comprising the steps of:	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[9a] displaying a list of independent applications linked to the node, wherein the step of accessing accesses an independent application.	*See, e.g.*, DeBra, 1994, at Fig. 1, p. 185

Claim(s) of the '404 Patent	DC Tech 1994
	 The result of a search is a list of (relevant documents), with the "relevance score" of each document.
10. The method of claim 8, wherein the connection provides the independent application access to the information stored within the database.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
11. The method of claim 7, wherein the external connection is to another computer, wherein information is located that can be accessed, the step of accessing further comprising the step of:	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.

Claim Text from '540 Patent	DeBra, 1994
[11a] accessing the information located within the computer.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
12. A method for determining the proximity of an object in a stored database to another object in the stored database using indirect relationships, links, and a display, comprising:	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[12a] Selecting an object to determine the proximity of other objects to the selected object;	*See, e.g.*, DeBra, 1994, at p. 185

Claim Text from '494 Patent	DeBra 1994
	2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[12b] generating a candidate cluster link set for the selected object, wherein the generating step includes an analysis of one or more indirect relationships in the database;	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[12c] Deriving an actual cluster link set for the selected object using the generated candidate cluster link set; and	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.

Claim Element from '494 Patent	De Bra, 1994
[12d] Displaying one or more of the objects in the database, referred to in the actual cluster link set, on a display.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
13. The method of 12 wherein a set of direct links exists for the database, and wherein the step of generating a candidate cluster link set comprises: recursively analyzing portions of the set of direct links for indirect links.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
14. A method for representing the relationship between nodes using stored direct links, paths, and candidate cluster links, comprising the steps of:	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and

Claim Text from '494 Patent	DeBra 1994
	searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[14a] initializing a set of candidate cluster links;	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[14b] Selecting the destination node of a path as the selected node to analyze;	*See, e.g.,* DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its

[illegible] Claim Term/Phrase [illegible]	[illegible] DeBra, 1994
	children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[14c] retrieving the set of direct links from the selected node to any other node in the database;	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185)
[14d] Determining the weight of the path using the	Disclosed either expressly or inherently in the teachings of the reference and its

Claim Text from '494 Patent	DeBra, 1994
retrieved direct links;	incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[14e] repeating steps b through d for each path; and	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food … In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[14f] Storing the determined weights as candidate cluster links.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food … In the fish-search each URL corresponds to a fish. When a

Claim Text from '494 Patent	DeBra, 1994
	document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. .... The result of a search is a list of (relevant) documents, with the "relevance score" of each document. (DeBra, 1994, 185)
15. The method of claim 14 further comprising the step of deriving the actual cluster links wherein the actual cluster links are a subset of the candidate cluster links.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
16. The method of claim 15 wherein the step of deriving comprises the step of choosing the top rated candidate cluster links.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
18. A method of analyzing a database having objects and a first numerical representation of direct relationships in the database, comprising the steps of:	*See, e.g.*, DeBra, 1994, at Abstract, pp. 183, 184, 185 Finding specific information in the World Wide Web (WWW or Web for short) is becoming increasingly difficult. (DeBra, 1994, Abstract) The World-Wide Web ... is a fast growing wide-area hypermedia database. It contains information on many related and unrelated topics.... However, a hypertext document like

Claim 1 of the '494 Patent	DeBra, 1994
	the WWW, distributed over hundreds or even thousands of loosley coupled sites can only be searched by retrieving documents and scanning them for related information, and also scanning them for extracting links pointing to other documents. ... [S]everal types of solutions have been proposed and implemented: (1) specially designing meta-hyperdocuments ... (2) robot-based searchable indecies ... (3) client-based search tools, most notably our fish search (DeBra, 1994, p. 183-184) Documents are retrieved (over the Internet) and scanned for relevant information at the receiving (client end). (3) The retrieved documents are scanned to find links to (URLs of) other WWW-documents. (DeBra, 1994, p. 184) When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food), and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a numer of links in a direciton without finding a relevant document the search stops invetsigating that direction (the fish die) . The fish are simulated by means of a list of URLs. The average number of children produced each time is called width. THe number of steps that can be made (by a fish or its offspring) wihtout finding a relevant document is called depth. (DeBra, 1994, p. 185)
[18a] generating a second numerical representation using the first numerical representation, wherein the second numerical representation accounts for indirect relationships in the database;	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called

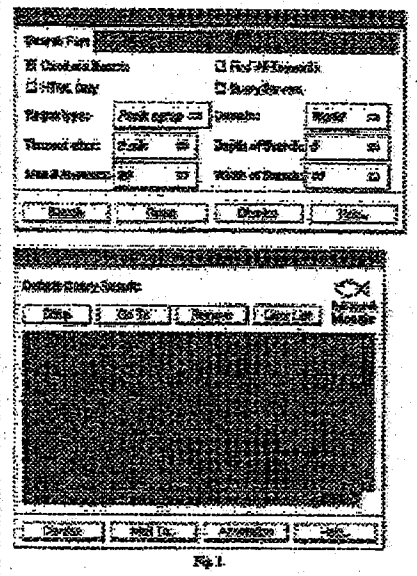
'828 from Text from '424 Parent	DeBra, 1994
	depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[18b] storing the second numerical representation;	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.

Claim Text from '434 Patent	DeBra, 1994
[18c] identifying at least one object in the database, wherein the stored numerical representation is used to identify objects; and	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[18d] displaying one or more identified objects from the database.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
19. The method of claim 18 wherein the step of generating a second numerical representation comprises: selecting an object in the database for analysis;	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those

Claim Text from '494 Patent	DeBra, 1994
	disclosures here, they are incorporated by reference into this chart.
[19a] analyzing the direct relationships expressed by the first numerical representation for indirect relationships involving the selected object; and creating a second numerical representation of the direct and indirect relationships involving the selected object.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food … In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
20. The method of 18 wherein the step of identifying at least one object in the database comprises: searching for objects in a database using the stored numerical representation, wherein direct and/or indirect relationships are searched.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
21. The method of claim 18 wherein the displaying	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at

Claim Text from '104 Patent	DeBra 1994
step comprises: generating a graphical display for representing an object in the database.	the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
23. A method of representing data in a computer database with relationships, comprising the steps of:	*See, e.g.*, DeBra, 1994, at Abstract, pp. 183-84 Finding specific information in the World Wide Web (WWW or Web for short) is becoming increasingly difficult. (DeBra, 1994, Abstract) The World-Wide Web ... is a fast growing wide-area hypermedia database. It contains information on many related and unrelated topics.... However, a hypertext document like the WWW, distributed over hundreds or even thousands of loosley coupled sites can only be searched by retrieving documents and scanning them for related information, and also scanning them for extracting links pointing to other documents. ... [S]everal types of solutions have been proposed and implemented: (1) specially designing meta-hyperdocuments ... (2) robot-based searchable indecies ... (3) client-based search tools, most notably our fish search (DeBra, 1994, pp. 183-84)
[23a] assigning nodes node identifications;	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. ... When adding URL's to the list, the algorithm checks

Claim Text from '516 Patent	DeBra 1994
	whether the URL already ocurs in the list. ... The esult of a search is a list of (relevant) documents... DeBra, 1994, 185)
[23b] generating links, wherein each link represents a relationship between two nodes and is identified by the two nodes in which the relationship exists;	*See, e.g.,* DeBra, 1994, at Abstract, pp. 183-84 Finding specific information in the World Wide Web (WWW or Web for short) is becoming increasingly difficult. (DeBra, 1994, Abstract) The World-Wide Web ... is a fast growing wide-area hypermedia database. It contains information on many related and unrelated topics.... However, a hypertext document like the WWW, distributed over hundreds or even thousands of loosley coupled sites can only be searched by retrieving documents and scanning them for related information, and also scanning them for extracting links pointing to other documents. ... [S]everal types of solutions have been proposed and implemented: (1) specially designing meta-hyperdocuments ... (2) robot-based searchable indecies ... (3) client-based search tools, most notably our fish search (DeBra, 1994, pp. 183-84) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[23c] allocating a weight to each link, wherein the weight signifies the strength of the relationship represented by the link relative to the strength of other relationships represented by other links; and	*See, e.g.,* DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without

Claim Text from '498 Patent	DeBra, 1994
	finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. .... The result of a search is a list of (relevant) documents, with the "relevance score" of each document. (DeBra, 1994, 185)
[23d] displaying a node identification.	*See, e.g.*, DeBra, 1994, at Fig. 1, p. 185  Fig.1 The result of a search is a list of (relevant documents), with the "relevance score" of each document.

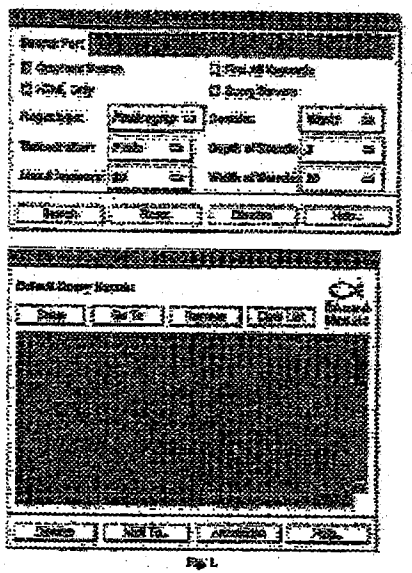
Claim Text from '594 Patent	[illegible] 1994
24. The method of claim 23, wherein the data in the database is objects, wherein the nodes represent objects and each object is assigned a node identification, and wherein the relationships that exist comprise direct relationships between objects, further comprising the step of: searching generated links, wherein nodes are located by searching the generated links.	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. ... When adding URL's to the list, the algorithm checks whether the URL already ocurs in the list. ... The esult of a search is a list of (relevant) documents... DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
25. The method of claim 23 further comprising the step of: generating link sub-types, comprising the steps of:	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[25a] identifying each link sub-type with a name; and	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at

Claim Text from '494 Patent	DeBra, 1994
	the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[25b] Providing a comment to one or more link subtypes.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
31. The method of claim 23 wherein attributes are assigned to nodes.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
32. The method of claim 31 further comprising the step of: generating node sub-types wherein the node sub-types are assigned information.	Disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
33. A method of representing data in a computer database and for computerized searching of the data, wherein relationships exist in the database, comprising:	*See, e.g.*, DeBra, 1994, at Abstract, pp. 183-84 Finding specific information in the World Wide Web (WWW or Web for short) is becoming increasingly difficult. (DeBra, 1994, Abstract) The World-Wide Web ... is a fast growing wide-area hypermedia database. It contains information on many related and unrelated topics.... However, a hypertext document like the WWW, distributed over hundreds or even thousands of loosley coupled sites can only be searched by retrieving documents and scanning them for related information, and also scanning them for extracting links pointing to other documents. ... [S]everal types of solutions have been proposed and implemented: (1) specially designing meta-

Claim Text from '434 Patent	DeBra 1994
	hyperdocuments ... (2) robot-based searchable indecies ... (3) client-based search tools, most notably our fish search (DeBra, 1994, p. 183-84)
[33a] assigning links to represent relationships in the database;	*See, e.g.*, DeBra, 1994, at pp. 184, 185 Documents are retrieved (over the Internet) and scanned for relevant information at the receiving (client end). (3) The retrieved documents are scanned to find links to (URLs of) other WWW-documents. (DeBra, 1994, p. 184) When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food), and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a numer of links in a direciton without finding a relevant document the search stops invetsigating that direction (the fish die) . The fish are simulated by means of a list of URLs. The average number of children produced each time is called width. THe number of steps that can be made (by a fish or its offspring) wihtout finding a relevant document is called depth. (DeBra, 1994, p. 185)
[33b] generating node identifications based upon the assigned links, wherein node identifications are generated so that each link represents a relationship between two identified nodes;	*See, e.g.*, DeBra, 1994, at pp. 184, 185 Documents are retrieved (over the Internet) and scanned for relevant information at the receiving (client end). (3) The retrieved documents are scanned to find links to (URLs of) other WWW-documents. (DeBra, 1994, p. 184) When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food), and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a numer of links in a direciton without finding a relevant document the search stops invetsigating that direction (the fish die) . The fish are simulated by means of a list of URLs. The average number of children produced each time is called width. THe number of steps that can be made (by a fish or

[Claim Text From 5,894,554 Patent]	DeBra, 1994
	its offspring) wihtout finding a relevant document is called depth. (DeBra, 1994, p. 185)
[33c] storing the links and node identifications, wherein the links and nodes may be retrieved;	*See, e.g.*, DeBra, 1994, at pp. 184, 185 Documents are retrieved (over the Internet) and scanned for relevant information at the receiving (client end). (3) The retrieved documents are scanned to find links to (URLs of) other WWW-documents. (DeBra, 1994, p. 184) When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food), and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a numer of links in a direciton without finding a relevant document the search stops invetsigating that direction (the fish die) . The fish are simulated by means of a list of URLs. The average number of children produced each time is called width. THe number of steps that can be made (by a fish or its offspring) wihtout finding a relevant document is called depth. (DeBra, 1994, p. 185)

Claim Text from '404 Patent	DeBra, 1994
[33d] searching for node identifications using the stored links; and	*See, e.g.*, DeBra, 1994, at p. 185 2.2 The schools of fish metaphor. The algorithm simulates a school fish, breeding and searching for food ... In the fish-search each URL corresponds to a fish. When a document is retrieved the fish breeds a number of children, depending on whether the document is relevant (contains food) and also depending on the number of links (URLs) embedded in the document. Each time a relevant document is found the fish and its children become stronger. If a document is not relevant the fish become weaker and fewer children are produced. After following a number of links in a direction without finding a relevant document the search stops .... 2.3 The implementation of the search .... The fish are simulated by means of a list of URLS. The average number of children produced each time is called width. The number of steps made (by a fish or its offspring) without finding a relevant document is called depth. Each time a relevant document is found a selection of the embedded links are added to the front of this list. (DeBra, 1994, 185) Further, disclosed either expressly or inherently in the teachings of the reference and its incorporated disclosures taken as a whole, or in combination with the state of the art at the time of the alleged invention, as evidenced by substantial other references identified in Defendants' P. R. 3-3 statement and accompanying charts. Rather than repeat those disclosures here, they are incorporated by reference into this chart.
[33e] displaying node identifications, wherein the displayed node identifications are located in the searching step.	*See, e.g.*, DeBra, 1994, at Fig. 1, p. 185

Claim Text from '494 Patent	The Bing Search Engine
	 The result of a search is a list of (relevant documents), with the "relevance score" of each document.

Defendants reserve the right to revise this contention chart concerning the invalidity of the asserted claims, as appropriate, for example depending upon the Court's construction of the asserted claims, any findings as to the priority date of the asserted claims, and/or positions that Plaintiff or its expert witness(es) may take concerning claim interpretation, construction, infringement, and/or invalidity issues.

Plaintiff's Infringement Contentions are based on an apparent construction of the claim terms. Defendants disagree with these apparent constructions. Nothing stated herein shall be treated as an admission or suggestion that Defendants agree with Plaintiff regarding either the scope of any of the asserted claims or the claim constructions advanced by Plaintiff in its Infringement Contentions or anywhere else, or that any of Defendants' accused technology meets any limitations of the claims. Nothing stated herein shall be construed as an admission or a waiver of any particular construction of any claim term. Defendants also reserve all their rights to challenge any of the claim terms herein under 35 U.S.C. § 112, including by arguing that they are indefinite, not supported by the written description and/or not enabled. Accordingly, nothing stated herein shall be construed as a waiver of any argument available under 35 U.S.C. § 112.