EXHIBIT D: DEFENDANTS' INTRINSIC AND EXTRINSIC EVIDENCE

U.S. Patent No. 5,544,352

Claim	Disputed Claim Term	Defendants' Proposed Construction	Defendants' Evidence
26	A non-semantical method	A method of analysis that does not account for phrases and words in a textual object and that is based on explicit references to other textual objects	3:51-59; 11:51-67; 17:63-18:11; '352 FH, 3/25/95 Response to Office Action; '352 FH, 5/4/94 IDS; '352 FH, '352 FH, 8/22/95 Response to Office Action
26	A ... method for numerically representing objects in a computer database and for computerized searching of numerically represented objects in the computer database.	No construction necessary	17:63-18:11; '352 FH, 3/25/95 Response to Office Action; '352 FH, 5/4/94 IDS; '352 FH, '352 FH, 8/22/95 Response to Office Action
26	objects in a computer database	a defined collection of electronic data available for computerized searching	Abstract; 1:39-2:62; 3:42-4:56; 4:5-27; 4:52-56; 12:18-30;
26	creating a first numerical representation for each identified object in the database based upon the object's direct relationship with other objects in the database	creating a first numerical representation for each marked object in the database based upon citations determined to be the object's direct citations to other objects in the database (11:51-67)	4:25-45; 11:51-67; 12:7-60; 14:38-15:17; 15:18-16:7; 16:48-60; 17:63-18:11; Fig. 6; '352 FH, 3/25/95 Response to Office Action
26	generating a second	generating a second numerical	4:25-67; 12:7-60; 14:38-15:17; 15:18-16:7; 16:48-60; 17:63-18:11;

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Claim	Disputed Claim Term	Defendants' Proposed Construction	Defendants' Evidence
	numerical representation of each object based on the analysis of the first numerical representation	representation of each object in the database that describes the indirect citation relationships found by analyzing the first numerical representation	Fig. 6; '352 FH, 3/25/95 Response to Office Action
26	identified object	each object that has been marked	4:25-67; 10:53-11:10; 19:1-22:67; Fig. 4A and 4B; 3/23/95 Response at 26; 6/12/95 Office Action at 6-7
26	analyzing the first numerical representations for indirect relationships	using the first numerical representations to locate and identify the indirect relationships	15:18-16:7; 16:48-60; 17:63-18:11; Fig. 6; '352 FH, 3/25/95 Response to Office Action to OA in 352 FH
26	searching the objects in the database using a computer and the stored second numerical representations	The searching step is performed after the other recited claim steps. construe "searching the objects in the database using a computer " as retrieving objects from a database in response to selection of an object by an end user after the prior recited steps have been completed	4:25-67; 10:53-11:10; 19:1-22:67; 5/4/94 ID; 3/23/95 Response at 26; 6/12/95 Office Action at 6-7
26	storing the first numerical representation for use in computerized searching	See construction for "computerized searching" below.	4:25-67; 10:53-11:10; 19:1-22:67; 5/4/94 ID; 3/23/95 Response at 26; 6/12/95 Office Action at 6-7
26	storing the second numerical representation for use in computerized searching	See construction for "computerized searching" below.	4:25-67; 10:53-11:10; 19:1-22:67; 5/4/94 ID; 3/23/95 Response at 26; 6/12/95 Office Action at 6-7
26	computerized searching	retrieving objects from a database in response to selection of an object by	4:25-67; 10:53-11:10; 19:1-22:67; 5/4/94 ID; 3/23/95 Response at

Claim	Disputed Claim Term	Defendants' Proposed Construction	Defendants' Evidence
		an end user after the prior recited steps have been completed	26; 6/12/95 Office Action at 6-7
27	boolean word index	a list of core English words and the respective paragraph numbers where those words are located	8:33-43; 15:9-17; 17:63-18:11; 18:13-35; '352 FH, 5/4/94 IDS;
27	semantic indexing techniques	creating a word index for text analysis	5:5-14; 5:39-50; 19:36-52; 15:9-17; 17:63-18:11
33	coefficients of similarity	a value between 0 and 100% representing the comparative Euclidean distance between two objects in the database	13:65-14:13; 16:13-19; 16:32-44; 17:57-60; 20:49-53
34	wherein the marking step includes the step of marking subsets of objects in the database	marking portions (words, phrases, paragraphs, or portions of other full textual objects that are referred to in another full textual object) of an object	12:1-31;
34	subset	A portion (words, phrases, paragraphs) of an object or a portion of another object that is referred to in the object	12:1-31;
35	clustering the subsets into sections based upon the subset analysis	grouping paragraphs based on weighing their Euclidean distances and contiguity	4:35-37; 14:11-13; 14:27-29; 17:6-25
35	section	group of contiguous or related paragraphs	11:28-47; 12:18-31; 14:18-32; 17:6-18:67; 19:1-57
37	graphically displaying	displaying a graphic showing the	7:11-13; 24:27-41; Cl. 21; '352 FH, 5/4/94 IDS

Claim	Disputed Claim Term	Defendants' Proposed Construction	Defendants' Evidence
	one or more of the identified objects	relations, patterns, and similarity found among one or more of the identified objects	
39	pool-importance searching to identify an important pool of textual objects, important in relation to the objects in the selected pool	searching objects to identify a group of important textual objects from the selected pool by ranking the relative importance of the objects in the selected pool	5:46-50; 21:21-34; '352 FH, 3/23/95 Response to Office Action
39	pool-similarity searching to identify a similar pool of textual objects, similar in relation to the objects in marked pool	searching objects to identify a group of similar textual objects to the selected pool by determining the relative similarity of objects in the marked pool	5:46-50; 20:55-21:10; '352 FH, 3/25/95 Response to Office Action
40	identifying a paradigm pool of objects	identifying a group of textual objects with a determined geographic center calculated by the mean of the Euclidean distances of all the textual objects in the pool	5:50-60; 21:7-20; 21:35-57; '352 FH, 3/25/95 Response to Office Action
41	A method for the non-semantical indexing of objects stored in a computer database, the method for use in searching the database for the objects	A method of analysis and searching that does not account for phrases and words in a textual object and that is based on explicit references to other textual objects	3:51-59; 11:51-67; 12:32-35; 17:61-18:11; '352 FH, 3/25/95 Response to Office Action, '352 FH, 8/22/95 Response to Office Action
41	objects stored in a computer database	a defined collection of electronic data available for computerized searching	Abstract; 4:5-27; 4:52-56; 9:46-63; 12:18-30;

Claim	Disputed Claim Term	Defendants' Proposed Construction	Defendants' Evidence
41	generating a second numerical representation for each object based on each object's references to other objects	generating a second numerical representation for each labeled object	4:25-67; 12:7-60; 14:38-15:17; 15:18-16:7; 16:48-60; 17:63-18:11; Fig. 6; '352 FH, 3/25/95 Response to Office Action
41	creating a third numerical representation for each object	creating a third numerical representation for each labeled object	4:25-67; 12:7-60; 14:38-15:17; 15:18-16:7; 16:48-60; 17:63-18:11; Fig. 6; '352 FH, 3/25/95 Response to Office Action
41	calculating a fourth numerical representation for each object based on the euclidean distances between the third numerical representations	calculating a fourth numerical representation for each labeled object based on the euclidean distances between the third numerical representations	6:18-27; 13:56-64; 16:8-43; Fig. 4G; '352 FH , 3/25/95 Response to Office Action
41	determining a fifth numerical representation for each object by processing the fourth numerical representations through similarity processing	determining a fifth numerical representation for each labeled object by processing the fourth numerical representations to determine the degree of similarity between each labeled object and the other labeled objects	5:38-46; 14:2-11; 16:13-19; 16:32-36; 17:57-60; 20:49-21:5
41	storing the fifth numerical representations in the computer database as the index for use in searching for objects in the database	The searching is performed after the other recited claim steps. construe "searching for objects in the database " as retrieving objects from a database in response to selection of an object by an end user after the prior recited steps have been completed	4:25-67; 10:53-11:10; 19:1-22:67; 5/4/94 ID; 3/23/95 Response at 26; 6/12/95 Office Action at 6-7

Claim	Disputed Claim Term	Defendants' Proposed Construction	Defendants' Evidence
42	clustering objects having similar characteristics	grouping objects based on weighing their Euclidean distances	5:19-25; 5:27-46; 14:11-27; 16:32-44; 17:17-23
43	clustering adjacent paragraphs that have similar characteristics	grouping paragraphs based on weighing their Euclidean distances and contiguity	5:19-25; 5:27-46; 14:11-27; 16:32-44; 17:17-23
44	empirically defined patterns	patterns of citation relationships previously identified as useful in search	12:31-46; 13:34-53; 15:18-16:7; 16:48-60; 17:63-18:11; Fig. 6; '352 FH, 3/25/95 Response to Office Action
44	weighing the analyzed second numerical representations according to the importance of the patterns	assigning a weight to the second numerical representations according to the results of their analysis against the empirical patterns ranked by importance	13:17-52; 17:63-18:10
45	entering search commands	initiating a search by the end user inputting commands to the computer processor via an input means	8:43-48; 9:64-10:3; 11:4-9; 19:40-48; 20:11; '352 FH, 5/4/94 IDS;
45	presenting one or more objects	presenting a diagram showing an identified object and its connections and interrelations to other identified objects	7:11-13; 24:27-41; Cl. 21; Fig. 5F; '352 FH, 5/4/94 IDS; '352 FH, 3/25/95 Response to Office Action
45	quantifying the relationship of the selected object to each object in the group of objects	calculating the Euclidean distances from the selected object to each object in the group of identified objects	4:25-67; 5:51-61; 12:7-60; 14:38-15:17; 15:18-16:7; 16:48-60; 17:63-18:11; 21:7-20; Fig. 6; '352 FH, 3/25/95 Response to Office Action

U.S. Patent No. 5,832,494

Claim	Disputed Term	Defendants' Proposed Construction	Defendants' Evidence
1	database	a defined collection of electronic data stored in a computer device that is connected to a computer processor	See evidence for database in '352 patent
All	Cluster link	a relationship between two nodes based upon a statistical analysis of multiple relationships between nodes in a database	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21; Uzzi, V-Search Integration Toolkit for Folio Views, User's Manual, 6 Dec. 1995 at 32
All	Candidate cluster links	the set of all possible cluster links between a search node and a target node	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21
All	Actual cluster links	subset of candidate cluster links for use in display based on weights in relation to the selected node under analysis	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21
1	wherein the step of generating comprises an analysis of one or more indirect relationships in the database	wherein the step of generating comprises identifying and classifying one or more non-semantical relationships that are characterized by at least one intermediate node between two nodes in the database	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21; Fig. 3H
1	deriving actual cluster links from the candidate cluster links	See constructions of "actual cluster links" and "candidate cluster links"	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21
All	node	any entity that can be represented by a box on a display, for example, an object in a database, a portion of an object in a database, a document, a section of a document, a World Wide Web page, or an idea or concept, such as a topic name.	12:34-40; 12:57-65; Uzzi, V-Search Integration Toolkit for Folio Views, User's Manual, 6 Dec. 1995 at 32
1	selecting a node for analysis	identifying, by an end user, a node to be non-semantically analyzed	5:24-27; 24:35-51; 25:7-51; 35:14-33
3	selecting the top rated candidate cluster links,	choosing a subset of candidate cluster links whose weights indicate that they	22:32-24:14; 50:15-21

Claim	Disputed Term	Defendants' Proposed Construction	Defendants' Evidence
	wherein the top rated candidate cluster links are those which are most closely linked to the node under analysis*	are the strongest cluster links for the node under analysis	
7	external object	an object that is not within the database	38:42-52; 38:67-39:3; 46:33-67
7	activating the desired node	Indefinite	
8	independent application which can be executed in background	software application that is not within the database and that runs without interaction by the user while the user is working on another task	38:42-52; 38:67-39:3; 46:33-67
9	independent application which can be executed as an extension	software application that is not within the database and that modularly adds functionality to another program	38:42-52; 38:67-39:3; 46:33-67
12	wherein the generating step includes an analysis of one or more indirect relationships in the database	wherein the generating step includes identifying and classifying one or more non-semantical relationships that are characterized by at least one intermediate node between two nodes in the database	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21; Fig. 3H
12	deriving an actual cluster link set for the selected object using the generated candidate cluster link set	determining the subset of candidate cluster links for use in display based on weights in relation to the selected object under analysis	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21
12	selecting an object to determine the proximity of other objects to the selected object	inputting, by an end user, an object to non-semantically determine the relations, patterns, and similarity of other objects to the selected object	5:24-27; 24:35-51; 25:7-51; 35:14-33
14	determining the weight of the path	computing the combined weight of direct links in each path of a candidate cluster link and summing those combined weights	15:54-57; 22:5-45

Claim	Disputed Term	Defendants' Proposed Construction	Defendants' Evidence
14	for each path	for each chain of direct links between two nodes	13:21-33; 21:45-23:67; 49:14-50:21; Fig. 3H
14	initializing a set of candidate cluster links	defining the weight of each member of the stored set of candidate cluster links as equal to one path length of zero from the start node	13:24-28; 21:54-67; 22:21-60; 23:43-44; 24:1-4; 50:15-21; Fig. 3H
15	deriving the actual cluster links wherein the actual cluster links are a subset of the candidate cluster links	determining the subset of candidate cluster links for display based on weights in relation to the selected node under analysis	13:24-28; 21:54-67; 22:21-60; 24:1-4; 50:15-21
18	A method of analyzing a database	A non-semantic method of analyzing a database	Abstract; 10:1-56:11; '352 FH, 3/25/95 Response to Office Action in 352 FH; '352 FH, 5/4/94 IDS in 352 FH;
18	identifying at least one object in the database, wherein the stored numerical representation is used to identify objects	non-semantically locating at least one object in the database based on end user input	4:15-25; 11:38-43; 21:30-36; 24:26-34
23	generating a graphical display for representing an object	displaying a graphic showing the relations, patterns, and similarity found between the object and other objects	Abstract; Figs. 5B to 8-4; Figs. 10A-1 to 10C-4;'352 FH, 5/4/94 IDS; 3:27-34
33	A method of representing data in a computer database	A non-semantic method of representing data in a computer database	Abstract; 10:1-56:11
33	generating node identifications based upon the assigned links, wherein node identifications are	identifiers that are unique to each node and that take into account each link associated with each respective node	13:3-9; 13:19-20; 39:9-20

Claim	Disputed Term	Defendants' Proposed Construction	Defendants' Evidence
	generated so that each link represents a relationship between two identified nodes		
33	searching for node identifications using the stored links	using stored links to non-semantically locate node identifications based on end user input	13:3-9; 13:19-20; 39:9-20

U.S. Patent No. 6,233,571

Claim	Disputed Term	Defendants' Construction	Defendants' Evidence
1, 11, 22	activating a link represented on the source map, wherein a user may hyperjump to a node represented as a node of the link	"activating a link" : enabling a reference on a source map to a node to be selectable by a user to allow the user to access the node "source map": see separate definition below	12:39-46; 13:5-7; 35:25-27; 38:51-60; 41:59-42:4; 42:37-47; 43:49-67; 45:1-41; 45:58-46:23; 46:45-49; 47:1-31; Fig. 10B; '571 FH, 6/6/00 Amendment
1	active links	direct links to nodes in a network outside the database and computer that may be accessed	3:27-30; 4:5-9; 45:58-46:23; 50:28-36; Figs. 5A-5H; '571 FH, 6/6/00 Amendment
1	generating a source map, wherein the source map represents hyperjump links that identify a chosen node as a destination of a link	non-semantically evaluating an object in the database to display a map of all of the nodes external to the database and computer that the object directly links to, including the chosen node	9:58-59; 12:39-46; 13:5-7; 37:37-47:40; 48:37-41; Fig. 10B; '352 FH, 5/4/94 IDS; '571 FH, 5/4/98 IDS; Uzzi, V-Search Integration Toolkit for Folio Views, User's Manual, 6 Dec. 1995 at 32-33
2	activating an embedded icon	enabling a small graphical image that represents a minimized, running software application within the source map to be selectable by a user	41:59-42:4; 45:58-46:23; Uzzi, V-Search Integration Toolkit for Folio Views, User's Manual, 6 Dec. 1995 at 32-33
5	choosing a node	identifying, by an end user, a node for non-semantic analysis	12:39-46; 24:32-27:27; 41:59-42:4; 45:58-46:49; 48:28-30; 49:12-16; 50:28-36; Figs. 14A & 14B; '571 FH, 5/4/98 IDS
All	hyperjump data / hyperjump links	direct links that connect web pages, web sites, and documents outside the database	48:19-49:16; 51:6-18

Claim	Disputed Term	Defendants' Construction	Defendants' Evidence
5	wherein the step of determining comprises proximity analyzing the identified hyperjump data	analyzing the identified hyperjump data by using statistical techniques and empirically developed algorithms to non-semantically determine the relations, patterns, and similarity between objects	Abstract; 3:31-39; 3:54-4:36; 7:41-47; 11:35-52; 13:40-55; 50:4-27; '571 FH, 5/4/98 IDS
10	visually representing more than one coordinate plane	displaying information using more than two axes	Abstract; 6:6-24; 35:65-42:36; 50:40-50; Figs. 5B to 8-4; Figs. 10A-1 to 10C-4; James, Mathematics Dictionary, 5th ed.; James, Mathematics Dictionary, 4th ed.; Karush, Webster's New World Dictionary of Mathematics; Clapham, The Concise Oxford Dictionary of Mathematics, 2d ed.
11	generating a source map using one or more of the determined hyperjump data, wherein the source map represents hyperjump links that identify the chosen node as a destination of a link	non-semantically evaluating a node by using the determined hyperjump data to display a map of all of the other nodes external to the database and computer that the node directly links to, including the chosen node	9:58-59; 12:39-46; 13:5-7; 37:37-47:40; 48:37-41; Fig. 10B; '352 FH, 5/4/94 IDS; '571 FH, 5/4/98 IDS; Uzzi, V-Search Integration Toolkit for Folio Views, User's Manual, 6 Dec. 1995 at 32-33
12	choosing an identifiable web page	identifying, by an end user, an identifiable web page for non-semantical cluster analysis	12:39-46; 24:32-27:27; 41:59-42:4; 45:58-46:49; 48:28-30; 49:12-16; 50:28-36; Figs. 14A & 14B; '571 FH, 5/4/98 IDS
12	cluster analyzing the Universal Resource Locators for indirect relationships	non-semantically generating the set of candidate cluster links for web pages indirectly related to the chosen web page using the Universal Resource Locators, assigning weights to the candidate cluster links and deriving actual cluster links from the set of candidate cluster links based on the assigned weights	Abstract; 13:31-36; 21:30-24:11; 48:46-50:3; Figs. 3G, 3H, 10C, 14B; '571 FH, 5/4/98 IDS

Claim	Disputed Term	Defendants' Construction	Defendants' Evidence
15	generate a graphical user display	displaying a graphic showing the relations, patterns, and similarity found between the web page and other web pages	Abstract; 3:31-39; 3:51-53; 6:25-33; 29:51-52; 35:65-47:40; 50:28-51:5; Figs. 5B to 8-4; Figs. 10A-1 to 10C-4; '352 FH, 5/4/94 IDS; '571 FH, 5/4/98 IDS
16	cluster analyzing the Universal Resource Locators for indirect relationships	non-semantically generating the set of candidate cluster links for documents indirectly related to the chosen document using the Universal Resource Locators, assigning weights to the candidate cluster links and deriving actual cluster links from the set of candidate cluster links based on the assigned weights	Abstract; 13:31-36; 21:30-24:11; 48:46-50:3; Figs. 3G, 3H, 10C, 14B; '571 FH, 5/4/98 IDS
16	choosing a document	identifying, by an end user, a document for non-semantical cluster analysis	12:39-46; 24:32-27:27; 41:59-42:4; 45:58-46:49; 48:28-30; 49:12-16; 50:28-36; Figs. 14A & 14B; '571 FH, 5/4/98 IDS
18	cluster analyzing the pages	non-semantically generating the set of candidate cluster links for pages indirectly related to the chosen page using the Universal Resource Locators, assigning weights to the candidate cluster links and deriving actual cluster links from the set of candidate cluster links based on the assigned weights	Abstract; 13:31-36; 21:30-24:11; 48:46-50:3; 51:6-11; Figs. 3G, 3H, 10C, 14B; '571 FH, 5/4/98 IDS
21	choosing a node	identifying, by an end user, a node for non-semantical analysis	12:39-46; 24:32-27:27; 41:59-42:4; 45:58-46:49; 48:28-30; 49:12-16; 50:28-36; Figs. 14A & 14B; '571 FH, 5/4/98 IDS
22	indirect reference	a reference where at least one intermediate node exists between two nodes and where the intermediate nodes connect the two nodes through a chain of explicit citations	See evidence for "indirect relationships " in '352 patent

Claim	Disputed Term	Defendants' Construction	Defendants' Evidence
22	generating a source map using one or more of the determined hyperjump data, wherein the source map represents hyperjump links that identify the chosen node as a destination of a link	non-semantically evaluating a node by using the determined hyperjump data to display a map of all of the other nodes that the hyperjump data directly links to, including the chosen node	9:58-59; 12:39-46; 13:5-7; 37:37-47:40; 48:37-41; Fig. 10B; '352 FH, 5/4/94 IDS; '571 FH, 5/4/98 IDS; Uzzi, V-Search Integration Toolkit for Folio Views, User's Manual, 6 Dec. 1995 at 32-33