

(12) **United States Patent**  
**Rutledge et al.**

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(54) **INFORMATION SEARCH SYSTEM FOR ENABLING A USER OF A USER TERMINAL TO SEARCH A DATA SOURCE**

5,315,636 A 5/1994 Patel ..... 455/461  
 (List continued on next page.)

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FOREIGN PATENT DOCUMENTS

EP 0574138 A1 12/1993 ..... H04N/7/15

(73) Assignee: **AT&T Corp.**, New York, NY (US)

OTHER PUBLICATIONS

N.S., "My Yahoo? News Ticker", PC Magazine, Feb., 18, 1997, v16, n4, p. 143.  
 D.L., "NETdelivery", PC Magazine, Feb., 18, 1997, v16, n4, p. 143.  
 Mace, T., "The PointCast Network", PC Magazine, Feb. 18, 1997, v16, n4, p. 143.

(\*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

(List continued on next page.)

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(57) **ABSTRACT**

A network-based search system in which queries and information records are qualified by temporal and geographical references, such as those provided by a map-based directory system. Briefly, queries are submitted using text strings together with time tags and location tags. Time tags and location tags refer to the date/time the query was last submitted for a search and the geographical area of interest (defined by ranges of latitude and longitude coordinates), respectively. The information records being searched preferably contain similar time and location tags. However, time and location tags associated with information records refer to the date/time the record was last modified and the origin of the record, respectively. A mechanism is also provided for determining location tags for records that do not include location tags. In all, a comparison between the time and location tags associated with a query and the time and location tags associated with the information records permits geographically irrelevant records to be suppressed and allows the user to automatically receive only information that has been modified since the user last requested it. Thus, search results are automatically pre-filtered prior to being transmitted to the user who originated the query, which conserves network resources and reduces the amount of context-based filtering required of the user.

(21) Appl. No.: **08/901,249**

(22) Filed: **Jul. 28, 1997**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 08/824,106, filed on Mar. 25, 1997, which is a continuation-in-part of application No. 08/613,307, filed on Mar. 11, 1996, now abandoned.

(51) **Int. Cl.<sup>7</sup>** ..... **G06F 17/30**

(52) **U.S. Cl.** ..... **701/211; 701/213; 707/3**

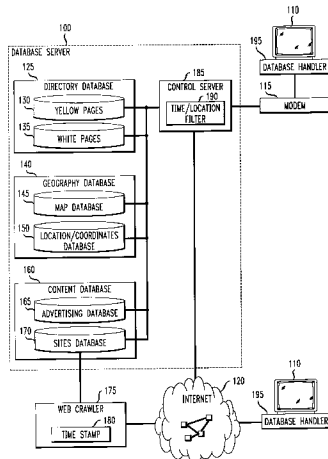
(58) **Field of Search** ..... 707/1, 5, 10, 100–104, 707/200–206; 434/112, 116; 455/12.1, 406, 412, 434, 456, 457, 466; 701/211; 370/352; 358/442

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,811,244 A	3/1989	Shimada et al. ....	345/443
4,850,007 A	7/1989	Marino et al. ....	379/88.2
5,109,399 A	4/1992	Thompson .....	379/45
5,124,915 A	6/1992	Krenznel .....	702/5
5,193,185 A	3/1993	Lanter .....	707/101

**2 Claims, 9 Drawing Sheets**



## U.S. PATENT DOCUMENTS

5,325,423 A	6/1994	Lewis .....	379/93.08	5,771,280 A	6/1998	Johnson .....	379/93.23
5,392,223 A	2/1995	Caci .....	709/218	5,790,121 A	8/1998	Sklar et al. ....	345/356
5,393,964 A	2/1995	Hamilton et al. ....	235/381	5,844,597 A	12/1998	Kettler et al. ....	348/14.08
5,414,462 A	5/1995	Veatch .....	348/135	5,852,810 A *	12/1998	Sotiroff et al. ....	705/27
5,426,780 A	6/1995	Gerull et al. ....	707/3	5,855,015 A *	12/1998	Shoham .....	707/5
5,428,608 A	6/1995	Freeman et al. ....	370/261	5,867,494 A *	2/1999	Krishnaswamy et al. ...	370/352
5,452,353 A	9/1995	Menezes .....	379/355	5,893,093 A *	4/1999	Wills .....	707/5
5,463,671 A	10/1995	Marsh et al. ....	379/56.1	5,914,951 A	6/1999	Bentley et al. ....	370/352
5,470,233 A *	11/1995	Fruchterman et al. ....	434/112	5,919,247 A	7/1999	Van Hoff et al. ....	709/217
5,475,802 A	12/1995	Wescott et al. ....	345/429	5,930,474 A	7/1999	Dunworth et al. ....	709/217
5,481,590 A	1/1996	Grimes .....	340/7.21	5,835,236 A *	8/1999	Barbari .....	358/442
5,515,424 A	5/1996	Kenney .....	379/93.22	5,938,721 A *	8/1999	Dussell et al. ....	701/211
5,530,851 A *	6/1996	Fortier .....	707/2	5,944,768 A *	8/1999	Ito et al. ....	340/990
5,537,324 A	7/1996	Nimura et al. ....	701/208	5,944,769 A	8/1999	Musk et al. ....	701/201
5,559,707 A	9/1996	DeLorme et al. ....	701/200	5,990,886 A	11/1999	Serdy et al. ....	345/329
5,602,903 A *	2/1997	LeBlanc et al. ....	455/456	5,999,525 A *	12/1999	Krishnaswamy et al. ...	370/352
5,682,525 A	10/1997	Bouve et al. ....	707/104	6,044,205 A *	3/2000	Reed et al. ....	709/201
5,701,469 A *	12/1997	Brandli et al. ....	707/102	6,067,500 A *	5/2000	Morimoto et al. ....	340/988
5,727,057 A *	3/1998	Emery et al. ....	379/211	6,138,162 A	10/2000	Pistriotto et al. ....	709/229
5,737,533 A	4/1998	De Hond .....	709/219				
5,740,549 A	4/1998	Reilly et al. ....	705/14				
5,764,736 A	6/1998	Shachar et al. ....	379/93.09				
5,764,906 A *	6/1998	Edelstein et al. ....	709/219				

## OTHER PUBLICATIONS

Loshin, P., "Tune In, Turn On the Web", BYTE, Feb. 1997, v22, n2, p. 145-6.

\* cited by examiner

FIG. 1

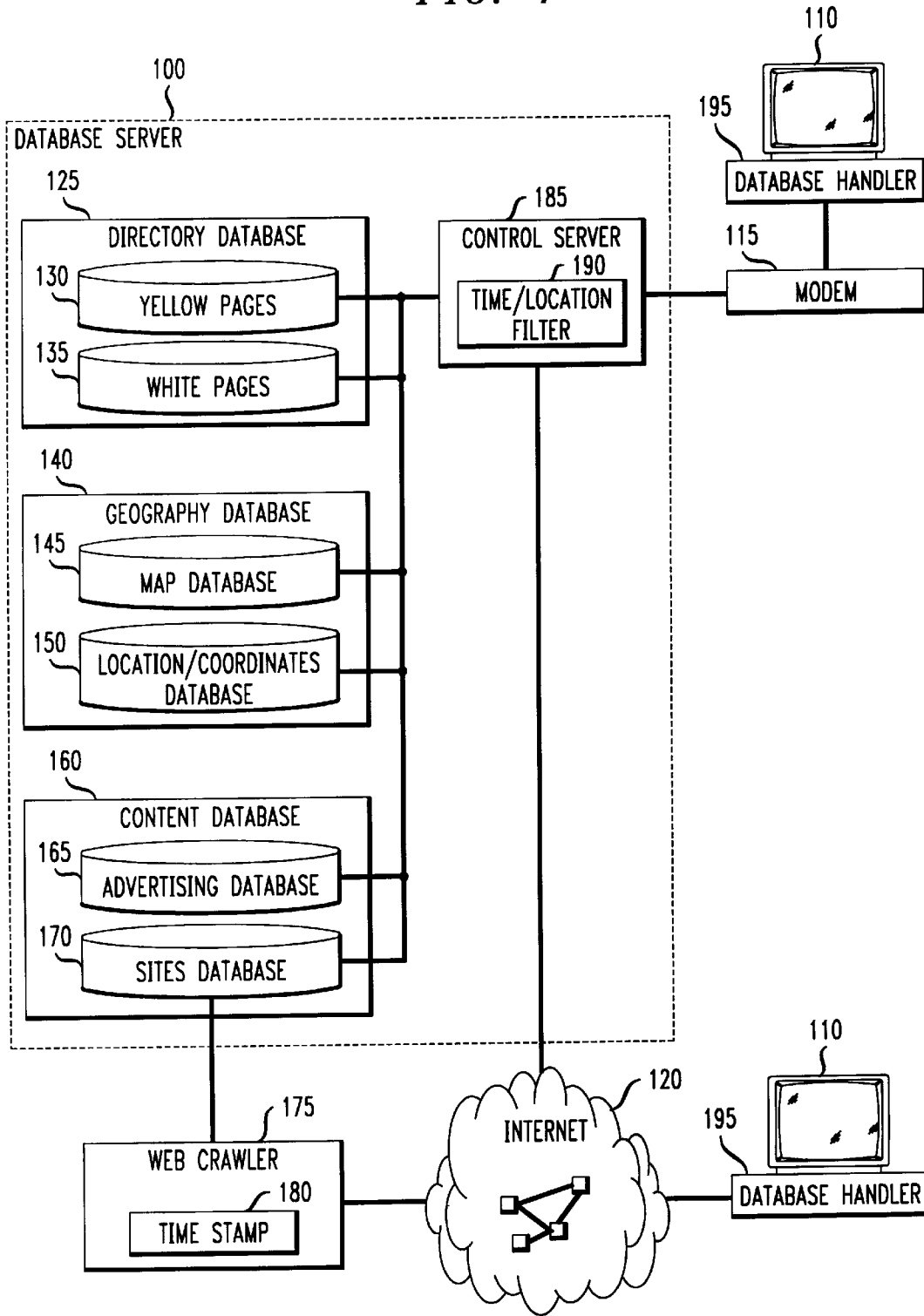


FIG. 2B

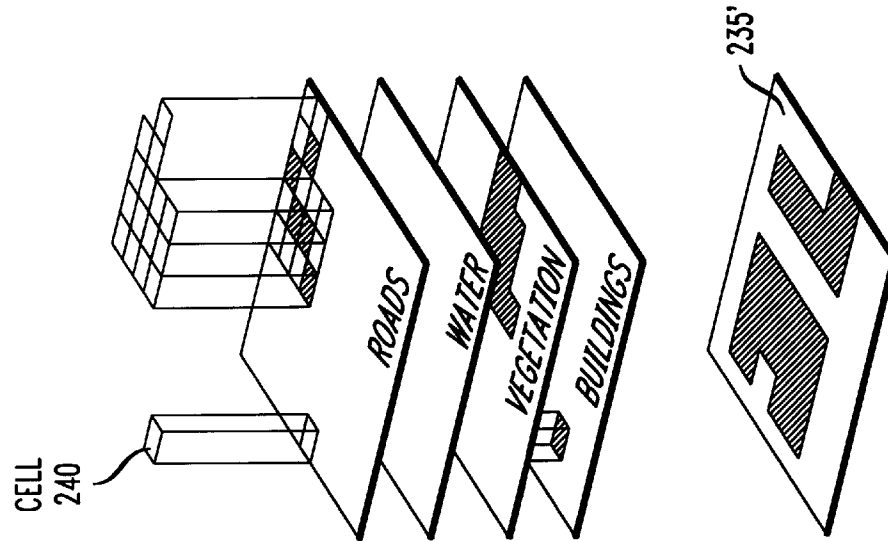


FIG. 2A

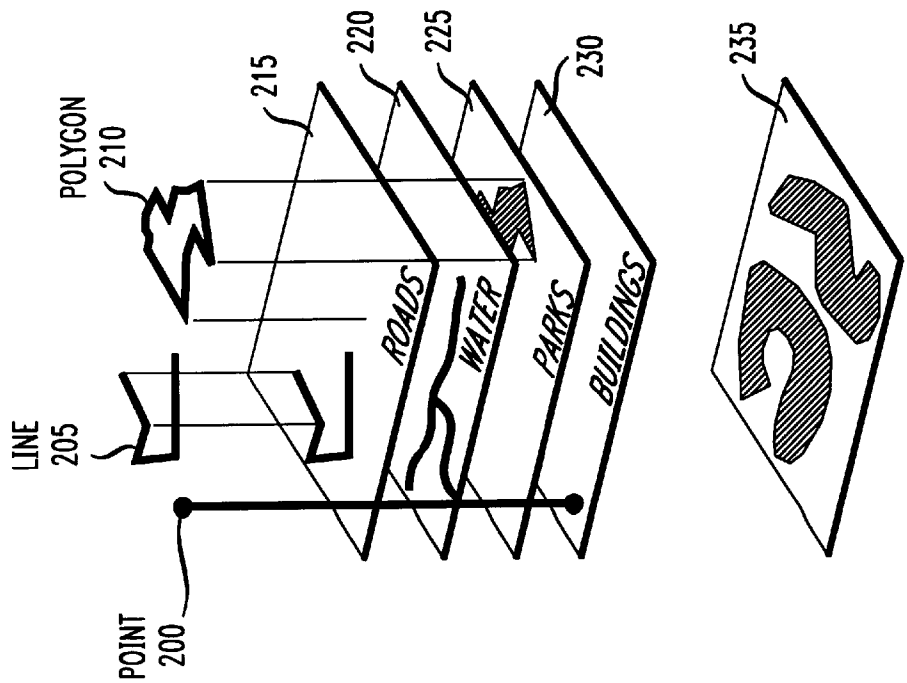


FIG. 3

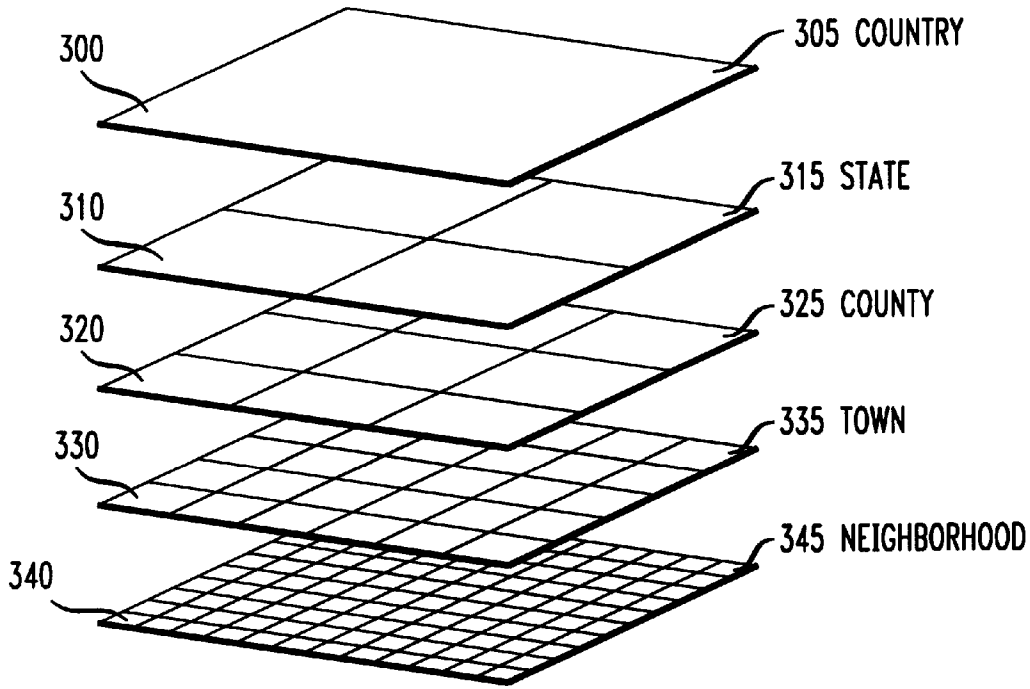
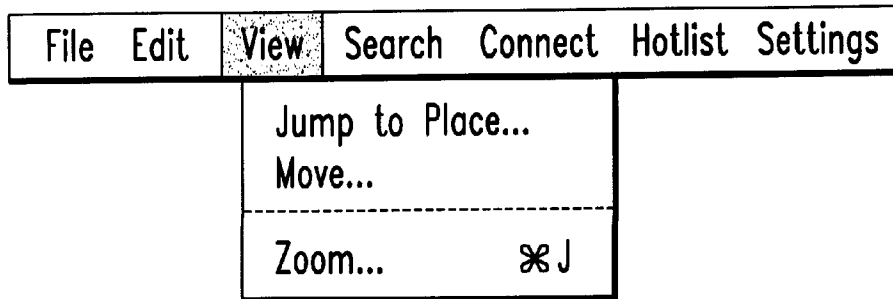


FIG. 4A



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