



US009075136B1

(12) **United States Patent**  
**Joao**

(10) **Patent No.:** **US 9,075,136 B1**  
(45) **Date of Patent:** **Jul. 7, 2015**

(54) **VEHICLE OPERATOR AND/OR OCCUPANT INFORMATION APPARATUS AND METHOD**

(75) Inventor: **Raymond Anthony Joao**, Yonkers, NY (US)

(73) Assignee: **GTJ VENTURES, LLC**, Yonkers, NY (US)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 374 days.

(21) Appl. No.: **09/259,957**

(22) Filed: **Mar. 1, 1999**

**Related U.S. Application Data**

(60) Provisional application No. 60/076,800, filed on Mar. 4, 1998.

(51) **Int. Cl.**  
**H04N 7/18** (2006.01)  
**G01S 11/12** (2006.01)  
**B63B 49/00** (2006.01)

(52) **U.S. Cl.**  
CPC **G01S 11/12** (2013.01); **B63B 49/00** (2013.01)

(58) **Field of Classification Search**  
CPC ..... G01S 11/12; G06K 9/00791; B63B 45/02  
USPC ..... 348/113-117, 118, 142-160; 725/105; 701/117; 342/41  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,674,352 A 4/1954 Braun, Sr.  
3,482,037 A 12/1969 Brown, et al.  
3,656,111 A 4/1972 Royster, Sr.

3,669,288 A 6/1972 Young  
4,003,045 A 1/1977 Stockdale  
4,030,088 A 6/1977 McCullough  
4,050,301 A 9/1977 Cushing  
4,064,509 A 12/1977 Stockdale  
4,067,411 A 1/1978 Conley et al.  
4,074,248 A 2/1978 Stockdale  
4,100,543 A 7/1978 Stockdale et al.  
4,137,429 A 1/1979 Stockdale

(Continued)

FOREIGN PATENT DOCUMENTS

CA 1277400 12/1990  
DE 4423328 1/1996

(Continued)

OTHER PUBLICATIONS

"Onstar" at <http://onstar.internetpressroom.com>, pp. 1-37, Oct. 24, 2001.\*

(Continued)

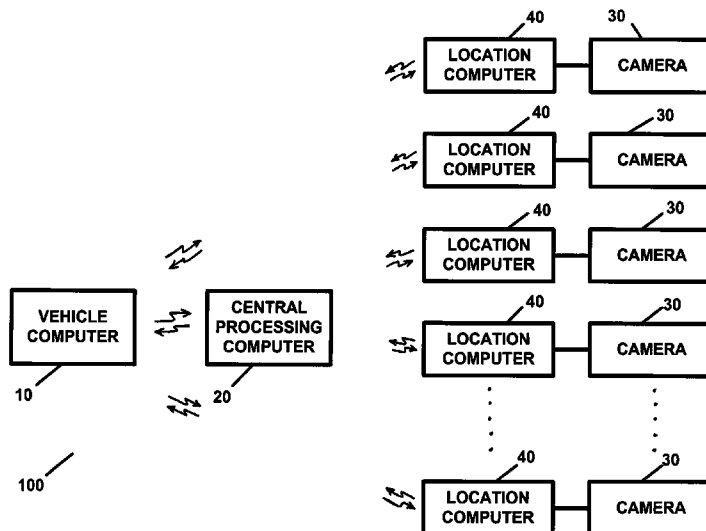
Primary Examiner — Andy Rao

(74) Attorney, Agent, or Firm — Raymond A. Joao, Esq.

(57) **ABSTRACT**

An apparatus including a processing device which identifies a first travel route, on which first travel route a vehicle can travel to a destination, and which generates a first message containing information regarding the first travel route, and a transmitter which transmits the first message to a communication device located at the vehicle. The apparatus automatically detects a departure of the vehicle from the first travel route, identifies a second travel route in response to the detected departure of the vehicle from the first travel route, generates a second message containing information regarding the second travel route, and transmits the second message to the communication device.

98 Claims, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,137,553	A	1/1979	Tokitsu et al.	4,812,843	A	3/1989	Champion, III et al.
4,138,657	A	2/1979	Shave	4,818,998	A	4/1989	Apsell et al.
4,145,581	A	3/1979	Stockdale	4,821,118	A	4/1989	Lafreniere
4,156,235	A	5/1979	Stockdale	4,831,438	A	5/1989	Bellman, Jr. et al.
4,156,286	A	5/1979	Connors et al.	4,831,539	A	5/1989	Hagenbuch
4,177,466	A	12/1979	Reagan	4,833,450	A	5/1989	Buccola et al.
4,191,948	A	3/1980	Stockdale	4,835,546	A	5/1989	Keller
4,201,908	A	5/1980	Johnson et al.	4,837,798	A	6/1989	Cohen et al.
4,206,449	A	6/1980	Galvin et al.	4,838,275	A	6/1989	Lee
4,216,375	A	8/1980	Ulch et al.	4,841,815	A	6/1989	Takahashi
4,227,588	A	10/1980	Biancardi	4,847,781	A	7/1989	Brown, III et al.
4,236,215	A	11/1980	Callahan et al.	4,853,850	A	8/1989	Krass, Jr. et al.
4,257,063	A	3/1981	Loughry et al.	4,857,912	A	8/1989	Everett, Jr. et al.
4,258,421	A	3/1981	Juhasz et al.	4,860,112	A	8/1989	Nichols et al.
4,263,945	A	4/1981	Van Ness	4,876,597	A	10/1989	Roy et al.
4,325,079	A	4/1982	Little	4,878,175	A	10/1989	Norden-Paul et al.
4,326,221	A	4/1982	Mallos et al.	4,882,579	A	11/1989	Siwiak
4,333,093	A	6/1982	Raber et al.	4,882,743	A	11/1989	Mahmoud
4,337,651	A	7/1982	Yoshino et al.	4,882,746	A	11/1989	Shimada
4,347,590	A	8/1982	Heger et al.	4,891,650	A	1/1990	Sheffer
4,378,574	A	3/1983	Stephenson	4,893,240	A	1/1990	Karkouti
4,402,050	A	8/1983	Tagami et al.	4,896,580	A	1/1990	Rudnicki
4,409,670	A	10/1983	Herndon et al.	4,897,630	A	1/1990	Nykerk
4,420,238	A	12/1983	Felix	4,908,629	A	3/1990	Apsell et al.
4,442,319	A	4/1984	Treidl	4,918,615	A	4/1990	Suzuki et al.
4,454,583	A	6/1984	Schneiderhan et al.	4,931,793	A	6/1990	Fuhrmann et al.
4,455,550	A	6/1984	Iguchi	4,937,569	A	6/1990	Trask et al.
4,470,116	A	9/1984	Ratchford	4,939,522	A	7/1990	Newstead et al.
4,489,387	A	12/1984	Lamb et al.	4,940,964	A	7/1990	Dao
4,491,690	A	1/1985	Daley	4,945,410	A	7/1990	Walling
4,498,075	A	2/1985	Gaudio	4,949,372	A	8/1990	Steele
4,511,886	A	4/1985	Rodriguez	4,951,147	A	8/1990	Aknar et al.
4,517,565	A	5/1985	Nakamura et al.	4,954,886	A	9/1990	Elberbaum
4,521,777	A	6/1985	Nakamura et al.	4,958,454	A	9/1990	Chan et al.
4,522,146	A	6/1985	Carlson	4,959,713	A	9/1990	Morotomi et al.
4,524,243	A	6/1985	Shapiro	4,962,522	A	10/1990	Marian
4,550,317	A	10/1985	Moriyama et al.	4,963,995	A	10/1990	Lang
4,554,584	A	11/1985	Elam et al.	4,967,195	A	10/1990	Shipley
4,574,305	A	3/1986	Campbell et al.	4,968,978	A	11/1990	Stolarczyk
4,591,823	A	5/1986	Horvat	4,986,384	A	1/1991	Okamoto et al.
4,596,988	A	6/1986	Wanka	4,988,992	A	1/1991	Heitschel et al.
4,602,127	A	7/1986	Neely et al.	4,989,146	A	1/1991	Imajo
4,604,711	A	8/1986	Benn et al.	4,991,123	A	2/1991	Casamassima
4,619,231	A	10/1986	Stolar et al.	5,000,139	A	3/1991	Wong
4,622,541	A	11/1986	Stockdale	5,002,491	A	3/1991	Abrahamson et al.
4,623,320	A	11/1986	Kakizaki et al.	5,003,317	A	3/1991	Gray et al.
4,630,065	A	12/1986	Ichikawa	5,005,126	A	4/1991	Haskin
4,638,289	A	1/1987	Zottnik	5,006,840	A	4/1991	Hamada et al.
4,644,478	A	2/1987	Stephens et al.	5,008,840	A	4/1991	DePierro
4,644,494	A	2/1987	Muller	5,014,206	A	5/1991	Scribner et al.
4,645,872	A	2/1987	Pressman et al.	5,025,253	A	6/1991	DiLullo et al.
4,651,143	A	3/1987	Yamanaka	5,027,104	A	6/1991	Reid
4,656,475	A	4/1987	Miller et al.	5,031,103	A	7/1991	Kamimura et al.
4,656,585	A	4/1987	Stephenson	5,032,845	A	7/1991	Velasco
4,660,037	A	4/1987	Nakamura	5,054,569	A	10/1991	Scott et al.
4,660,145	A	4/1987	Hansen	5,055,851	A	10/1991	Sheffer
4,671,111	A	6/1987	Lemelson	5,056,056	A	10/1991	Gustin
4,673,937	A	6/1987	Davis	5,056,136	A	10/1991	Smith
4,677,429	A	6/1987	Glotzbach	5,057,932	A	10/1991	Lang
4,682,292	A	7/1987	Bue et al.	5,058,423	A	10/1991	Ozaki et al.
4,709,265	A	11/1987	Silverman et al.	5,061,916	A	10/1991	French et al.
4,710,917	A	12/1987	Tompkins et al.	5,065,321	A	11/1991	Bezos et al.
4,721,954	A	1/1988	Mauch	5,068,656	A	11/1991	Sutherland
4,729,102	A	3/1988	Miller, Jr. et al.	5,075,527	A	12/1991	Ikuma
4,733,215	A	3/1988	Memmola	5,079,538	A	1/1992	DeFino et al.
4,749,992	A	6/1988	Fitzmeyer et al.	5,081,667	A	1/1992	Drori et al.
4,760,547	A	7/1988	Duxbury	5,083,106	A	1/1992	Kostusiak et al.
4,768,087	A	8/1988	Taub et al.	5,084,828	A	1/1992	Kaufman et al.
4,768,740	A	9/1988	Corrie	5,086,385	A	2/1992	Launey et al.
4,772,875	A	9/1988	Maddox et al.	5,097,253	A	3/1992	Eschbach et al.
4,775,028	A	10/1988	De Heering	5,099,245	A	3/1992	Sagey
4,785,404	A	11/1988	Sims et al.	5,113,185	A	5/1992	Ichikawa
4,785,472	A	11/1988	Shapiro	5,113,427	A	5/1992	Ryoichi et al.
				5,115,678	A	5/1992	Ozaki et al.
				5,119,102	A	6/1992	Barnard
				5,119,412	A	6/1992	Attallah
				5,128,874	A	7/1992	Bhanu et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

5,133,079	A	7/1992	Ballantyne et al.	5,412,708	A	5/1995	Katz
5,133,081	A	7/1992	Mayo	5,418,537	A	5/1995	Bird
5,138,649	A	8/1992	Krisbergh et al.	5,424,940	A	6/1995	Ousborne
5,144,661	A	9/1992	Shamosh et al.	5,428,546	A	6/1995	Shah et al.
5,155,683	A	10/1992	Rahim	5,430,432	A	7/1995	Camhi et al.
5,155,689	A	10/1992	Wortham	5,430,656	A	7/1995	Dekel et al.
5,157,491	A	10/1992	Kassatly	5,432,495	A	7/1995	Tompkins
5,164,839	A	11/1992	Lang	5,432,841	A	7/1995	Rimer
5,168,170	A	12/1992	Hartig	5,434,973	A	7/1995	Lu
5,173,855	A	12/1992	Nielsen et al.	5,436,960	A	7/1995	Campana, Jr. et al.
5,173,932	A	12/1992	Johansson et al.	5,438,517	A	8/1995	Sennott et al.
5,177,604	A	1/1993	Martinez	5,440,334	A	8/1995	Walters et al.
5,189,396	A	2/1993	Stobbe	5,441,047	A	8/1995	David et al.
5,192,999	A	3/1993	Graczyk et al.	5,442,553	A	8/1995	Parrillo
5,195,126	A	3/1993	Carrier et al.	5,445,347	A	8/1995	Ng
5,202,759	A	4/1993	Laycock	5,446,445	A	8/1995	Bloomfield et al.
5,206,934	A	4/1993	Naef, III	5,446,659	A	8/1995	Yamawaki
5,208,756	A	5/1993	Song	5,448,218	A	9/1995	Espinosa
5,210,873	A	5/1993	Gay et al.	5,453,730	A	9/1995	De-Grinis et al.
5,216,596	A	6/1993	Weinstein	5,457,597	A	10/1995	Rothschild
5,218,367	A	6/1993	Sheffer et al.	5,457,630	A	10/1995	Palmer
5,223,816	A	6/1993	Levinson et al.	5,458,494	A	10/1995	Krohn et al.
5,223,844	A	6/1993	Mansell et al.	5,461,372	A	10/1995	Busak et al.
5,224,211	A	6/1993	Roe	5,463,554	A	10/1995	Araki et al.
5,225,842	A	7/1993	Brown et al.	5,465,115	A	11/1995	Conrad et al.
5,229,850	A	7/1993	Toyoshima	5,475,597	A	12/1995	Buck
5,229,941	A	7/1993	Hattori	5,479,206	A	12/1995	Ueno et al.
5,239,468	A	8/1993	Sewersky et al.	5,490,247	A	2/1996	Tung et al.
5,239,674	A	8/1993	Comroe et al.	5,497,419	A	3/1996	Hill
5,247,439	A	9/1993	Gurmu et al.	5,508,733	A	4/1996	Kassatly
5,247,564	A	9/1993	Zicker	5,508,736	A	4/1996	Cooper
5,253,275	A	10/1993	Yurt et al.	5,508,917	A	4/1996	Siegle et al.
5,260,874	A	11/1993	Berner et al.	5,509,009	A	4/1996	Laycock et al.
5,262,875	A	11/1993	Mincer et al.	5,510,828	A	4/1996	Lutterbach et al.
5,263,396	A	11/1993	Ladan et al.	5,510,832	A	4/1996	Garcia
5,272,465	A	12/1993	Meares, Jr.	5,512,902	A	4/1996	Guthrie et al.
5,276,728	A	1/1994	Pagliaroli et al.	5,513,107	A	4/1996	Gormley
5,278,539	A	1/1994	Lauterbach et al.	5,513,244	A	4/1996	Joao et al.
5,278,547	A	1/1994	Suman et al.	5,515,043	A	5/1996	Berard et al.
5,281,367	A	1/1994	Schleck et al.	5,515,285	A	5/1996	Garrett, Sr. et al.
5,283,643	A	2/1994	Fujimoto	5,519,669	A	5/1996	Ross et al.
5,287,398	A	2/1994	Briault	5,523,765	A	6/1996	Ichikawa ..... 342/451
5,291,414	A	3/1994	Tamai et al.	5,523,816	A	6/1996	Sherman, Jr. et al.
5,295,551	A	3/1994	Sukonick	5,523,950	A	6/1996	Peterson
5,299,132	A	3/1994	Wortham	5,526,269	A	6/1996	Ishibashi et al.
5,303,042	A	4/1994	Lewis et al.	5,528,281	A	6/1996	Grady et al.
5,307,058	A	4/1994	Tokizane et al.	5,533,589	A	7/1996	Critzer
5,310,349	A	5/1994	Daniels et al.	5,535,278	A	7/1996	Cahn et al.
5,311,434	A	5/1994	Tamai	5,537,141	A	7/1996	Harper et al.
5,313,201	A	5/1994	Ryan	5,537,143	A	7/1996	Steingold et al.
5,315,515	A	5/1994	Schmitz	5,541,585	A	7/1996	Duhame et al.
5,315,711	A	5/1994	Barone et al.	5,543,778	A	8/1996	Stouffer
5,317,323	A	5/1994	Kennedy et al.	5,544,036	A	8/1996	Brown, Jr. et al.
5,318,450	A	6/1994	Carver	5,544,649	A	8/1996	David et al.
5,319,355	A	6/1994	Russek	5,547,149	A	8/1996	Kalberer et al.
5,321,396	A	6/1994	Lamming et al.	5,548,753	A	8/1996	Linstead et al.
5,321,615	A	6/1994	Frisbie et al.	5,550,738	A	8/1996	Bailey et al.
5,331,577	A	7/1994	Grimes	5,550,863	A	8/1996	Yurt et al.
5,334,974	A	8/1994	Simms et al.	5,553,589	A	9/1996	Middleton et al.
5,347,306	A	9/1994	Nitta	5,553,609	A	9/1996	Chen et al.
5,353,034	A	10/1994	Sato et al.	5,557,254	A	9/1996	Johnson et al.
5,366,896	A	11/1994	Margrey et al.	5,557,522	A	9/1996	Nakayama et al.
5,370,201	A	12/1994	Inubushi	5,559,511	A	9/1996	Ito et al.
5,373,282	A	12/1994	Carter	5,559,707	A	9/1996	DeLorme et al.
5,381,412	A	1/1995	Otani	5,563,453	A	10/1996	Nyfelt
5,382,943	A	1/1995	Tanaka	5,566,084	A	10/1996	Cmar
5,382,948	A	1/1995	Richmond	5,568,535	A	10/1996	Sheffer et al.
5,388,101	A	2/1995	Dinkins	5,572,438	A	11/1996	Ehlers et al.
5,389,935	A	2/1995	Drouault et al.	5,577,689	A	11/1996	Haro
5,392,052	A	2/1995	Eberwine	5,581,297	A	12/1996	Koz et al.
5,396,216	A	3/1995	Morgan	5,586,130	A	12/1996	Doyle
5,400,018	A	3/1995	Scholl et al.	5,587,715	A	12/1996	Lewis
5,406,491	A	4/1995	Lima	5,588,038	A	12/1996	Snyder
				5,592,491	A	1/1997	Dinkins
				5,594,425	A	1/1997	Ladner et al.
				5,594,740	A	1/1997	LaDue
				5,594,953	A	1/1997	Ross et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

5,600,368	A	2/1997	Matthews, III	5,809,161	A	9/1998	Auty et al.
5,602,450	A	2/1997	Cowan et al.	5,811,886	A	9/1998	Majmudar
5,606,361	A	2/1997	Davidsohn et al.	5,812,931	A	9/1998	Yuen
5,613,055	A	3/1997	Shimoura et al.	5,812,959	A	9/1998	Froeburg et al.
5,619,183	A	4/1997	Ziegler et al.	5,815,093	A	9/1998	Kikinis
5,625,670	A	4/1997	Campana, Jr. et al.	5,815,557	A	9/1998	Larson
5,627,529	A	5/1997	Duckworth et al.	5,816,918	A	10/1998	Kelly et al.
5,627,753	A	5/1997	Brankin et al.	5,818,439	A	10/1998	Nagasaka et al.
5,629,980	A	5/1997	Stefik et al.	5,819,172	A	10/1998	Campana, Jr. et al.
5,633,872	A	5/1997	Dinkins	5,819,201	A	10/1998	DeGraaf
5,636,211	A	6/1997	Newlin et al.	5,821,718	A	10/1998	Shaffer et al.
5,638,280	A	* 6/1997	Nishimura et al. .... 701/209	5,821,880	A	10/1998	Morimoto et al.
5,640,442	A	6/1997	Fitzgerald et al.	5,823,948	A	10/1998	Ross, Jr. et al.
5,648,769	A	7/1997	Sato et al.	5,825,283	A	10/1998	Camhi
5,650,774	A	7/1997	Drori	5,826,827	A	10/1998	Coyaso et al.
5,652,564	A	7/1997	Winbush	5,835,376	A	11/1998	Smith et al.
5,660,246	A	8/1997	Kaman	5,835,871	A	11/1998	Smith et al.
5,661,651	A	8/1997	Geschke et al.	5,838,250	A	11/1998	Maekawa
5,668,537	A	9/1997	Chansky et al.	5,838,255	A	11/1998	Di Croce
5,671,158	A	9/1997	Fournier et al.	5,838,683	A	11/1998	Corley et al.
5,680,123	A	10/1997	Lee	5,841,638	A	11/1998	Purdom et al.
5,682,133	A	10/1997	Johnson et al.	5,842,199	A	11/1998	Miller et al.
5,689,442	A	11/1997	Swanson et al.	5,842,978	A	12/1998	Levy
5,694,335	A	12/1997	Hollenberg	5,844,473	A	12/1998	Kaman
5,699,276	A	12/1997	Roos	5,844,601	A	12/1998	McPheely et al.
5,708,417	A	1/1998	Tallman et al.	5,845,203	A	12/1998	LaDue
5,710,970	A	1/1998	Walters et al.	5,845,227	A	12/1998	Peterson
5,712,789	A	1/1998	Radican	5,845,240	A	12/1998	Fielder
5,715,905	A	2/1998	Kaman	5,845,283	A	12/1998	Williams et al.
5,717,379	A	2/1998	Peters	5,848,373	A	12/1998	DeLorme et al.
5,717,392	A	2/1998	Eldridge	5,850,250	A	12/1998	Konopka et al.
5,719,771	A	2/1998	Buck et al.	5,854,969	A	12/1998	Gullner
5,721,550	A	2/1998	Lopez	5,861,799	A	1/1999	Szwed
5,721,829	A	2/1998	Dunn et al.	5,862,330	A	1/1999	Anupam et al.
5,724,092	A	3/1998	Davidsohn et al.	5,862,500	A	1/1999	Goodwin
5,724,475	A	3/1998	Kirsten	5,862,511	A	1/1999	Croyle et al.
5,727,950	A	3/1998	Cook et al.	5,867,208	A	2/1999	McLaren
5,729,217	A	3/1998	Ito et al.	5,867,821	A	2/1999	Ballantyne et al.
5,729,452	A	3/1998	Smith et al.	5,877,707	A	3/1999	Kowalick
5,731,785	A	3/1998	Lemelson et al.	5,878,368	A	3/1999	DeGraaf
5,732,074	A	3/1998	Spaur et al.	5,880,720	A	3/1999	Iwafune et al.
5,734,413	A	3/1998	Lappington et al.	5,884,032	A	3/1999	Bateman et al.
5,734,963	A	3/1998	Fitzgerald et al.	5,884,202	A	3/1999	Arjmand
5,736,927	A	4/1998	Stebbins et al.	5,890,079	A	3/1999	Levine
5,737,222	A	4/1998	Palmer	5,892,437	A	4/1999	Scheibe et al.
5,742,924	A	4/1998	Nakayama	5,895,440	A	4/1999	Proctor et al.
5,745,161	A	4/1998	Ito	5,896,020	A	4/1999	Pyo
5,751,245	A	5/1998	Janky et al.	5,897,602	A	4/1999	Mizuta
5,752,217	A	* 5/1998	Ishizaki et al. .... 701/201	5,897,623	A	4/1999	Fein et al.
5,754,430	A	5/1998	Sawada	5,898,392	A	4/1999	Bambini et al.
5,756,934	A	5/1998	Purdom	5,899,956	A	5/1999	Chan
5,757,640	A	5/1998	Monson	5,900,905	A	5/1999	Shoff et al.
5,758,300	A	5/1998	Abe	5,903,226	A	5/1999	Suman et al.
5,758,313	A	5/1998	Shah et al.	5,903,816	A	5/1999	Broadwin et al.
5,760,742	A	6/1998	Branch et al.	5,908,465	A	6/1999	Ito et al.
5,761,625	A	6/1998	Honcik et al.	5,910,882	A	6/1999	Burrell
5,765,152	A	6/1998	Erickson	5,911,582	A	6/1999	Redford et al.
5,769,643	A	6/1998	Stevens, III	5,911,776	A	6/1999	Guck
5,772,446	A	6/1998	Rosen	5,913,917	A	6/1999	Murphy
5,774,064	A	6/1998	Lambropoulos et al.	5,914,685	A	6/1999	Kozlov et al.
5,774,876	A	6/1998	Woolley et al.	5,917,405	A	6/1999	Joao
5,786,746	A	7/1998	Lombardo et al.	5,917,406	A	6/1999	Postel
5,788,508	A	8/1998	Lee et al.	5,917,434	A	6/1999	Murphy
5,790,019	A	8/1998	Edwin	5,919,244	A	7/1999	Danz et al.
5,791,441	A	8/1998	Matos et al.	5,922,037	A	7/1999	Potts
5,793,300	A	8/1998	Suman et al.	5,922,041	A	7/1999	Anderson
5,793,980	A	8/1998	Glaser et al.	5,925,103	A	7/1999	Magallanes et al.
5,796,365	A	8/1998	Lewis	5,929,850	A	7/1999	Broadwin et al.
5,796,612	A	8/1998	Palmer	5,931,878	A	8/1999	Chapin, Jr.
5,796,728	A	8/1998	Rondeau et al.	5,936,553	A	8/1999	Kabel
5,798,647	A	8/1998	Martin et al.	5,938,721	A	8/1999	Dussell et al.
5,801,618	A	9/1998	Jenkins	5,944,768	A	8/1999	Ito et al.
5,801,943	A	* 9/1998	Nasburg ..... 701/117	5,945,919	A	8/1999	Trask
				5,948,026	A	9/1999	Beemer, II. et al.
				5,948,040	A	9/1999	DeLorme et al.
				5,949,345	A	9/1999	Beckert et al.
				5,950,543	A	9/1999	Oster

(56)

References Cited

U.S. PATENT DOCUMENTS

5,959,577	A	9/1999	Fan et al.	6,091,956	A *	7/2000	Hollenberg .....	455/456
5,960,337	A	9/1999	Brewster et al.	6,102,487	A	8/2000	.O slashed.vreb.o slashed.	
5,961,571	A	10/1999	Gorr et al.	6,104,815	A	8/2000	Alcorn et al.	
5,963,202	A	10/1999	Polish	6,108,493	A	8/2000	Miller et al.	
5,969,595	A	10/1999	Schipper et al.	6,108,591	A	8/2000	Segal et al.	
5,969,714	A	10/1999	Butcher	6,108,603	A	8/2000	Karunanidhi	
5,969,953	A	10/1999	Purdum et al.	6,112,141	A	8/2000	Briffe et al.	
5,973,619	A	10/1999	Paredes	6,113,493	A	9/2000	Walker et al.	
5,974,349	A	10/1999	Levine	6,124,825	A	9/2000	Eschenbach	
5,974,446	A	10/1999	Sonnenreich et al.	6,131,060	A	10/2000	Obradovich et al.	
5,976,567	A	11/1999	Wheeler et al.	6,131,096	A	10/2000	Ng et al.	
5,976,648	A	11/1999	Li et al.	6,131,116	A	10/2000	Riggins et al.	
5,978,567	A	11/1999	Rebane et al.	6,137,485	A	10/2000	Kawai et al.	
5,978,648	A	11/1999	George et al.	6,138,241	A	10/2000	Eckel et al.	
5,978,799	A	11/1999	Hirsch	6,141,608	A	10/2000	Rother	
5,982,048	A	11/1999	Fendt et al.	6,141,620	A	10/2000	Zybur et al.	
5,982,418	A	11/1999	Ely	6,141,621	A	10/2000	Piwowski et al.	
5,983,161	A	11/1999	Lemelson et al.	6,144,318	A	11/2000	Hayashi et al.	
5,988,645	A	11/1999	Downing	6,144,702	A	11/2000	Yurt et al.	
5,991,690	A	11/1999	Murphy	6,148,081	A	11/2000	Szymanski et al.	
5,991,692	A	11/1999	Spencer, II et al.	6,148,291	A	11/2000	Radican	
5,995,705	A	11/1999	Lang	6,151,539	A	11/2000	Bergholz et al.	
5,999,808	A	12/1999	LaDue	6,151,606	A	11/2000	Mendez	
6,001,065	A	12/1999	DeVito	6,151,626	A	11/2000	Tims et al.	
6,001,066	A	12/1999	Canfield et al.	6,161,005	A	12/2000	Pinzon	
6,002,326	A	12/1999	Turner	6,163,269	A	12/2000	Millington et al.	
6,002,720	A	12/1999	Yurt et al.	6,163,753	A	12/2000	Beckmann et al.	
6,002,972	A	12/1999	Palmer	6,167,432	A	12/2000	Jiang	
6,003,007	A	12/1999	DiRienzo	6,169,955	B1	1/2001	Fultz	
6,006,159	A	12/1999	Schmier et al.	6,172,641	B1	1/2001	Millington	
6,007,095	A	12/1999	Stanley	6,173,232	B1	1/2001	Nanba et al.	
6,007,426	A	12/1999	Kelly et al.	6,178,380	B1	1/2001	Millington	
6,009,355	A	12/1999	Obradovich et al.	6,181,994	B1	1/2001	Colson et al.	
6,009,356	A	12/1999	Monroe	6,188,325	B1	2/2001	Vogel	
6,009,363	A	12/1999	Beckert et al.	6,188,956	B1	2/2001	Walters	
6,009,370	A	12/1999	Minowa et al.	6,191,825	B1	2/2001	Sprogis et al.	
6,014,447	A	1/2000	Kohnen et al.	6,192,314	B1	2/2001	Khavakh et al.	
6,014,569	A	1/2000	Bottum	6,202,026	B1	3/2001	Nimura et al.	
6,016,475	A	1/2000	Miller et al.	6,208,379	B1	3/2001	Oya et al.	
6,018,710	A	1/2000	Wynblatt et al.	6,208,386	B1	3/2001	Wilf et al.	
6,020,825	A	2/2000	Chansky et al.	6,208,973	B1	3/2001	Boyer et al.	
6,020,826	A	2/2000	Rein	6,211,798	B1	4/2001	Albrecht et al.	
6,021,371	A	2/2000	Fultz	6,216,104	B1	4/2001	Moshfeghi et al.	
6,023,708	A	2/2000	Mendez et al.	6,222,583	B1	4/2001	Matsumura et al.	
6,028,505	A	2/2000	Drori	6,226,389	B1	5/2001	Lemelson et al.	
6,028,537	A	2/2000	Suman et al.	6,229,479	B1	5/2001	Kozlov et al.	
6,028,550	A	2/2000	Froeberg et al.	6,233,341	B1	5/2001	Riggins	
6,029,111	A	2/2000	Croyle	6,233,506	B1	5/2001	Obradovich et al.	
6,037,942	A	3/2000	Millington	6,233,517	B1	5/2001	Froeberg	
6,037,977	A	3/2000	Peterson	6,236,330	B1	5/2001	Cohen	
6,038,509	A	3/2000	Poppen et al.	6,243,691	B1	6/2001	Fisher et al.	
6,044,990	A	4/2000	Palmeri	6,244,758	B1	6/2001	Solymer et al.	
6,046,678	A	4/2000	Wilk	6,249,241	B1 *	6/2001	Jordan et al. ....	342/41
6,047,264	A	4/2000	Fisher et al.	6,252,522	B1	6/2001	Hampton et al.	
6,049,711	A	4/2000	Ben-Yehzekel et al.	6,256,029	B1	7/2001	Millington	
6,049,755	A	4/2000	Lou et al.	6,263,322	B1	7/2001	Kirkevold et al.	
6,052,646	A	4/2000	Kirkhart et al.	6,266,612	B1	7/2001	Dussell et al.	
6,055,314	A	4/2000	Spies et al.	6,269,392	B1	7/2001	Cotichini et al.	
6,055,479	A	4/2000	Kirkhart et al.	6,273,856	B1	8/2001	Sun et al.	
6,058,339	A	5/2000	Takiguchi et al.	6,275,231	B1	8/2001	Obradovich	
6,059,843	A	5/2000	Kirkhart	6,278,396	B1	8/2001	Tran	
6,061,570	A	5/2000	Janow	6,281,797	B1	8/2001	Forster et al.	
6,064,322	A	5/2000	Ohira	6,282,490	B1	8/2001	Nimura et al.	
6,064,335	A	5/2000	Eschenbach	6,282,495	B1	8/2001	Kirkhart et al.	
6,067,451	A	5/2000	Campana, Jr. et al.	6,283,761	B1	9/2001	Joao	
6,067,571	A	5/2000	Igarashi et al.	6,292,227	B1	9/2001	Wilf et al.	
6,070,932	A	6/2000	Lopez-Baquero et al.	6,292,828	B1	9/2001	Williams	
6,072,402	A	6/2000	Kniffin et al.	6,295,492	B1	9/2001	Lang et al.	
6,073,106	A	6/2000	Rozen et al.	6,296,544	B1	10/2001	Hochfeld	
6,075,527	A	6/2000	Ichihashi et al.	6,297,853	B1	10/2001	Sharir et al.	
6,076,039	A	6/2000	Kabel et al.	6,298,303	B1	10/2001	Khavakh et al.	
6,076,066	A	6/2000	DiRienzo et al.	6,307,948	B1	10/2001	Kawasaki et al.	
6,078,800	A	6/2000	Kasser	6,308,134	B1	10/2001	Croyle et al.	
				6,317,592	B1	11/2001	Campana, Jr. et al.	
				6,318,536	B1	11/2001	Korman et al.	
				6,321,158	B1	11/2001	DeLorme et al.	
				6,321,221	B1	11/2001	Bieganski	



# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.