



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

(10) **Patent No.:** **US 11,017,020 B2**  
(45) **Date of Patent:** **May 25, 2021**

- (54) **METHOD AND APPARATUS FOR MANAGING DIGITAL FILES**
- (71) Applicant: **Memoryweb, LLC**, Glen Ellyn, IL (US)
- (72) Inventors: **Christopher J. Desmond**, Glen Ellyn, IL (US); **Nancy L. Desmond**, Glen Ellyn, IL (US); **L. Michael Taylor**, Chicago, IL (US)
- (73) Assignee: **MEMORYWEB, LLC**, Glen Ellyn, IL (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **17/079,208**  
(22) Filed: **Oct. 23, 2020**

(65) **Prior Publication Data**  
US 2021/0042349 A1 Feb. 11, 2021

**Related U.S. Application Data**  
(63) Continuation of application No. 16/536,300, filed on Aug. 8, 2019, which is a continuation of application (Continued)

(51) **Int. Cl.**  
**G06F 16/58** (2019.01)  
**G06F 16/51** (2019.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **G06F 16/5866** (2019.01); **G06F 16/51** (2019.01); **G06F 16/901** (2019.01); **G06F 16/907** (2019.01); **G06F 3/0481** (2013.01)


(58) **Field of Classification Search**  
None  
See application file for complete search history.

- (56) **References Cited**
- U.S. PATENT DOCUMENTS
- 5,450,504 A 9/1995 Calia
- 5,694,514 A 12/1997 Evans
- (Continued)
- FOREIGN PATENT DOCUMENTS
- CN 102591922 B 10/2015
- EP 2466869 A3 2/2017
- (Continued)
- OTHER PUBLICATIONS
- Yee et al., "Faceted Metadata for Image Search and Browsing," CHI 2003, pp. 401-408, 2003, ACM.
- (Continued)

*Primary Examiner* — Ashish Thomas  
*Assistant Examiner* — Mellissa M. Ohba  
(74) *Attorney, Agent, or Firm* — Nixon Peabody LLP

(57) **ABSTRACT**  
A computer-implemented method of associating digital tags with digital files comprises storing a plurality of digital files having embedded therein content data and metadata including tags; receiving, via a user interface device of a client device, a first tag label containing alphanumeric text created and inputted by a user of the client device; modifying, using a controller device, a selected first one of the tags of the metadata in a first of the digital files to include the first tag label; receiving, via the user interface device or another user interface device, an instruction to search for all of the digital files having at least the first tag label; responsive to receiving the instruction, automatically searching for all of the digital files having at least the first tag label; and displaying, on a video display device associated with the client device, a first indication of the first tag label.

**59 Claims, 50 Drawing Sheets**



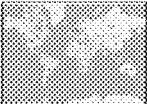
**Clinton Dewitt Firestone IV**

Birth: July 12, 1896  
Death: April 29, 1971  
Parents: [Clinton Dewitt Firestone III](#) and [Viola Miller](#)


Comments: He was a WWII U.S. Air force pilot and POW in WWII and veteran honorably discharged in December of 1947. He worked for 44 years for the Firestone Tire and Rubber Company in retail, wholesale and original equipment sales, marketing and management. He was born in Akron, OH and is buried in Columbiana, OH.

[Edit bio](#)


Locations




Timeline



Family Tree



Recipes



**Related U.S. Application Data**

No. 15/375,927, filed on Dec. 12, 2016, now Pat. No. 10,423,658, which is a continuation of application No. 14/193,426, filed on Feb. 28, 2014, now Pat. No. 9,552,376, which is a continuation-in-part of application No. 13/157,214, filed on Jun. 9, 2011, now Pat. No. 9,098,531.

(51) **Int. Cl.**

**G06F 16/901** (2019.01)  
**G06F 16/907** (2019.01)  
**G06F 3/0481** (2013.01)

(56)

**References Cited**

U.S. PATENT DOCUMENTS

5,835,616	A	11/1998	Lobo	
5,850,470	A	12/1998	Kung	
5,982,912	A	11/1999	Fukui	
6,002,401	A *	12/1999	Baker	..... G06F 16/10 715/839
6,134,339	A	10/2000	Luo	
6,246,779	B1	6/2001	Fukui	
6,301,370	B1	10/2001	Steffens	
6,629,104	B1	9/2003	Parulski	
6,697,502	B2	2/2004	Luo	
6,714,215	B1	3/2004	Flora	
6,728,401	B1	4/2004	Hardeberg	
6,940,545	B1	9/2005	Ray	
6,965,693	B1	11/2005	Kondo	
7,003,135	B2	2/2006	Hsieh	
7,190,829	B2	3/2007	Zhang	
7,372,976	B2	5/2008	Rhoad	
7,461,099	B1	12/2008	Sharpe	
7,474,317	B2	1/2009	Dolph	
7,475,060	B2	1/2009	Toyama	
7,480,669	B2	1/2009	Lo	
7,522,701	B2	4/2009	Jensen	
7,587,671	B2	9/2009	Saft	
7,634,662	B2	12/2009	Monroe	
7,646,895	B2	1/2010	Haupt	
7,694,236	B2	4/2010	Gusmorino	
7,702,185	B2	4/2010	Keating	
7,804,982	B2	9/2010	Howard	
7,822,746	B2	10/2010	Svendsen	
7,840,344	B2	11/2010	Sloo	
7,840,892	B2 *	11/2010	Pyhalammi	..... G06F 16/58 715/230
7,860,846	B2	12/2010	Takahashi	
7,916,905	B2	3/2011	Yen	
7,929,771	B2	4/2011	Ko	
7,948,502	B2	5/2011	Stanton	
7,962,467	B2	6/2011	Howard	
7,965,908	B2	6/2011	Hayashi	
7,970,240	B1 *	6/2011	Chao	..... G06F 3/04817 382/305
7,991,283	B2	8/2011	Chen	
8,001,124	B2	8/2011	Svendsen	
8,015,144	B2	9/2011	Zheng	
8,024,317	B2	9/2011	Nair	
8,032,508	B2	10/2011	Martinez	
8,055,675	B2	11/2011	Higgins	
8,060,492	B2	11/2011	Nair	
8,069,142	B2	11/2011	Davis	
8,073,461	B2 *	12/2011	Altman	..... H04L 67/04 455/456.1
8,086,048	B2	12/2011	Naaman	
8,086,867	B2	12/2011	Freeman	
8,108,778	B2	1/2012	Athsani	
8,121,408	B2	2/2012	Omori	
8,144,232	B2 *	3/2012	Larson	..... H04N 5/232935 348/333.05
8,150,844	B2	4/2012	Redstone	

8,166,016	B2	4/2012	Higgins	
8,166,168	B2	4/2012	Hayashi	
8,171,388	B2	5/2012	Zaltzman	
8,175,340	B2	5/2012	Tsutsui	
8,230,338	B2	7/2012	Dugan	
8,239,784	B2	8/2012	Hotelling	
8,255,379	B2	8/2012	Govindachetty	
8,264,570	B2	9/2012	Karimoto	
8,271,506	B2	9/2012	Martinez	
8,281,027	B2	10/2012	Martinez	
8,285,483	B2	10/2012	Amer-Yahia	
8,307,029	B2	11/2012	Davis	
8,315,959	B2	11/2012	Zheng	
8,326,000	B2	12/2012	Jung	
8,332,402	B2	12/2012	Forstall	
8,358,811	B2	1/2013	Adams	
8,359,314	B2	1/2013	Svendsen	
8,364,611	B2	1/2013	Tendjoukian	
8,380,039	B2	2/2013	Luo	
8,386,506	B2	2/2013	Martinez	
8,390,702	B2	3/2013	Bhatt	
8,401,771	B2	3/2013	Krumm	
8,402,356	B2	3/2013	Martinez	
8,416,312	B2	4/2013	Matsunaga	
8,429,156	B2	4/2013	Buchmueller	
8,447,120	B2	5/2013	Ji	
8,458,115	B2	6/2013	Cai	
8,463,931	B2	6/2013	Evans	
8,484,223	B2	7/2013	Ota	
8,489,115	B2	7/2013	Rodriguez	
8,490,011	B2	7/2013	Stapleton	
8,493,495	B2	7/2013	D'Souza	
8,503,791	B2	8/2013	Conwell	
8,504,073	B2	8/2013	Svendsen	
8,520,979	B2	8/2013	Conwell	
D689,079	S	9/2013	Edwards	
D689,080	S	9/2013	Edwards	
D689,083	S	9/2013	Pasceri	
D689,084	S	9/2013	Pasceri	
D689,085	S	9/2013	Pasceri	
8,538,811	B2	9/2013	Higgins	
8,538,813	B2	9/2013	Kakarla	
8,542,294	B2	9/2013	Bhatt	
8,554,623	B2	10/2013	Higgins	
8,560,390	B2	10/2013	Higgins	
8,560,517	B2	10/2013	Yang	
8,583,620	B2	11/2013	Govindachetty	
8,583,668	B2	11/2013	Higgins	
8,584,015	B2	11/2013	Osten	
8,589,389	B2	11/2013	Bisdikian	
8,589,486	B2	11/2013	Martinez	
8,594,702	B2	11/2013	Nauman	
8,606,021	B2	12/2013	Conwell	
8,626,699	B2	1/2014	Xie	
8,649,604	B2	2/2014	Steinberg	
8,660,358	B1	2/2014	Bergboer	
8,671,154	B2	3/2014	Davis	
8,676,001	B2	3/2014	Bracher	
8,698,762	B2 *	4/2014	Wagner	..... G06F 3/04883 345/173
8,706,406	B2	4/2014	Kalaboukis	
8,712,192	B2	4/2014	Thota	
8,743,411	B2	6/2014	Bachman	
8,745,133	B2	6/2014	Martinez	
8,750,574	B2	6/2014	Ganong	
8,762,285	B2	6/2014	Davis	
D708,196	S	7/2014	Pasceri	
D708,197	S	7/2014	Pasceri	
D708,198	S	7/2014	Pasceri	
8,769,099	B2	7/2014	Kalaboukis	
8,769,393	B1	7/2014	Abhyanker	
8,799,371	B2	8/2014	Davis	
8,805,165	B2	8/2014	Luo	
8,806,365	B2	8/2014	Stapleton	
8,810,597	B2	8/2014	Akiya	
8,811,775	B1 *	8/2014	Chao	..... G06F 16/54 382/305

(56)

References Cited

U.S. PATENT DOCUMENTS

8,831,352	B2	9/2014	Gao	9,606,668	B2	3/2017	Hotelling	
8,845,855	B2	9/2014	Hubacek et al.	9,626,685	B2	4/2017	Martinez	
8,849,854	B2	9/2014	Kakarla	9,639,740	B2 *	5/2017	Ganong	G06K 9/00288
8,849,909	B2	9/2014	Farmer	9,646,025	B2	5/2017	Boyns	
D715,819	S	10/2014	Pasceri	9,654,570	B2	5/2017	Bisdikian	
8,880,535	B1	11/2014	Agarwal	9,674,650	B2	6/2017	Hartford	
8,880,568	B2	11/2014	Perczynski	9,677,886	B2	6/2017	Didjusto	
8,890,888	B2	11/2014	Lee	9,679,456	B2	6/2017	East	
8,892,495	B2	11/2014	Hoffberg	9,680,929	B2	6/2017	Tseng	
8,914,342	B2	12/2014	Kalaboukis	9,683,858	B2	6/2017	Zheng	
8,923,889	B2	12/2014	Svendsen	9,691,073	B2	6/2017	Tseng	
8,930,848	B2	1/2015	Lim	9,703,873	B2	7/2017	Fakeih	
8,949,212	B1	2/2015	Dhandapani	9,706,345	B2	7/2017	Davis	
8,954,425	B2	2/2015	Xiao	9,710,961	B2	7/2017	Setlur	
8,966,121	B2	2/2015	Josefsberg	9,715,366	B2	7/2017	Bostick	
8,972,177	B2	3/2015	Zheng	9,721,188	B2	8/2017	Adam	
8,998,422	B1	4/2015	Snavely	9,754,226	B2	9/2017	Zheng	
9,009,177	B2	4/2015	Zheng	9,772,745	B2	9/2017	Hasenei	
9,014,511	B2	4/2015	Bracher	9,787,799	B2	10/2017	Grue	
9,015,617	B2	4/2015	Stapleton	9,805,123	B2	10/2017	Nair	
9,015,633	B2	4/2015	Takamura	9,811,879	B2	11/2017	Miller	
9,020,247	B2	4/2015	Adam	9,836,183	B1	12/2017	Love	
9,031,953	B2	5/2015	Rathnavelu	9,857,941	B2	1/2018	Wagner	
9,032,320	B2	5/2015	Crawford	9,858,348	B1	1/2018	Higgins	
9,047,847	B2	6/2015	Hochmuth	9,870,572	B2	1/2018	Chapin	
9,055,037	B2	6/2015	Evans	9,881,179	B2	1/2018	Patton	
9,063,226	B2	6/2015	Zheng	9,882,994	B2	1/2018	Bisdikian	
9,076,259	B2	7/2015	Hourie	9,916,075	B2	3/2018	Chen	
9,092,409	B2	7/2015	Charaniya	9,942,121	B2	4/2018	Poletto	
9,098,545	B2	8/2015	Abhyanker	10,001,917	B2	6/2018	Kim	
9,104,729	B2	8/2015	Dong	10,019,850	B2	7/2018	Lindberg	
9,104,915	B2	8/2015	Conwell	10,037,327	B2	7/2018	Thomee	
9,110,903	B2	8/2015	Martinez	10,068,178	B2	9/2018	van Zwol	
9,135,751	B2	9/2015	Moore	10,073,584	B2	9/2018	Miura	
9,151,618	B2	10/2015	Amer-Yahia	10,074,093	B2	9/2018	Higgins	
9,152,849	B2	10/2015	Ganong	10,083,533	B2	9/2018	Bhatt	
9,158,794	B2	10/2015	Higgins	10,110,541	B2	10/2018	Li	
9,160,802	B2	10/2015	Svendsen	10,120,947	B2	11/2018	Kritt	
9,172,666	B2	10/2015	Murdock	10,139,989	B2	11/2018	Shiroor	
D742,405	S	11/2015	Choi	10,140,743	B2	11/2018	Hochmuth	
9,202,200	B2	12/2015	Stibel	10,145,704	B2	12/2018	Lanza	
9,218,328	B2	12/2015	Stapleton	10,147,215	B2	12/2018	Lanza	
9,224,172	B2	12/2015	Churchill	10,187,543	B2	1/2019	Lahcanski	
9,235,766	B2	1/2016	Yi	10,223,701	B2	3/2019	King	
9,239,848	B2	1/2016	Liu	10,230,803	B2	3/2019	Higgins	
9,245,041	B2	1/2016	Pilskalns	10,235,444	B2	3/2019	Poletto	
9,261,376	B2	2/2016	Zheng	10,242,051	B2	3/2019	Shinn	
D751,597	S	3/2016	Pasceri	10,282,752	B2	5/2019	Athsani	
9,311,396	B2	4/2016	Meadow	10,288,433	B2	5/2019	Zheng	
9,323,855	B2	4/2016	Hochmuth	10,289,643	B2	5/2019	Brucher	
9,336,240	B2	5/2016	Bhatt	10,303,975	B2	5/2019	Adam	
9,372,931	B2	6/2016	Capt	10,311,611	B2	6/2019	Stoop	
9,390,104	B2	7/2016	Thomee	10,318,110	B2	6/2019	Naaman	
9,405,981	B2	8/2016	Li	10,324,973	B2	6/2019	Circlaeyns	
9,418,485	B2	8/2016	Lindberg	10,331,863	B2	6/2019	Patton	
9,424,595	B2	8/2016	Svendsen	10,360,352	B2	7/2019	Patton	
9,436,374	B2	9/2016	Marr	10,430,452	B2	10/2019	Ross	
9,460,116	B2	10/2016	Pilskalns	10,445,346	B2	10/2019	Govindachetty	
9,462,054	B2	10/2016	Poletto	10,489,980	B1	11/2019	Canavor	
9,465,513	B2	10/2016	sims	10,540,668	B2	1/2020	Hoertz	
9,471,200	B2	10/2016	Dellinger	10,606,449	B2	3/2020	Canavor	
9,471,834	B1	10/2016	Filip	10,628,463	B2	4/2020	Purumala	
9,483,500	B2	11/2016	Blucher	10,643,263	B2	5/2020	Wormhoudt	
9,495,583	B2	11/2016	Gilley	10,650,039	B2	5/2020	Mariner	
9,501,577	B2	11/2016	Zheng	10,650,475	B2	5/2020	Berg	
9,507,778	B2	11/2016	Jaffe	2001/0030667	A1 *	10/2001	Kelts	H04N 21/4314 715/854
9,419,682	B2	12/2016	Pujara	2001/0043727	A1	11/2001	Cooper	
9,535,563	B2	1/2017	Hoffberg	2002/0019224	A1	2/2002	Meyers	
9,536,146	B2	1/2017	Zheng	2002/0075322	A1 *	6/2002	Rosenzweig	G06F 16/58 715/835
9,552,376	B2	1/2017	Desmond	2002/0097894	A1 *	7/2002	Staas	G06F 16/58 382/113
9,557,162	B2	1/2017	Rodriguez	2002/0112237	A1 *	8/2002	Kelts	G06F 16/954 725/39
9,576,253	B2	2/2017	Zaltzman	2002/0191818	A1	12/2002	Matsuo	
9,582,546	B2	2/2017	Hartford	2003/0033296	A1 *	2/2003	Rothmuller	G06F 16/40

(56)

References Cited

U.S. PATENT DOCUMENTS

2003/0063669	A1	4/2003	Lee		2009/0132941	A1	5/2009	Pilskalns	
2003/0103652	A1	6/2003	Lee		2009/0135438	A1	5/2009	Chopra	
2003/0122787	A1	7/2003	Zimmerman		2009/0185784	A1	7/2009	Hiroike	
2003/0133599	A1	7/2003	Tian		2009/0216704	A1	8/2009	Zheng	
2003/0179911	A1	9/2003	Ho		2009/0222302	A1	9/2009	Higgins	
2003/0198368	A1	10/2003	Kee		2009/0254867	A1	10/2009	Farouki	
2003/0210808	A1	11/2003	Chen		2009/0265631	A1	10/2009	Sigurbjornsson	
2004/0081338	A1	4/2004	Takenaka		2009/0278806	A1	11/2009	Duarte	
2004/0109584	A1	6/2004	Lestideau		2009/0279794	A1	11/2009	Brucher	
2004/0125991	A1	7/2004	Yokoi		2009/0288005	A1	11/2009	Stapleton	
2004/0135797	A1	7/2004	Meier		2009/0290812	A1	11/2009	Naaman	
2004/0190758	A1	9/2004	Doi		2009/0307618	A1	12/2009	Lawler	
2004/0205504	A1	10/2004	Phillips		2009/0324018	A1	12/2009	Tell	
2004/0218894	A1	11/2004	Harville		2009/0325602	A1	12/2009	Higgins	
2004/0225635	A1	11/2004	Toyama		2010/0030578	A1*	2/2010	Siddique	G06Q 40/12 705/3
2004/0264780	A1	12/2004	Zhang		2010/0041419	A1	2/2010	Svendsen	
2004/0264810	A1	12/2004	Taugher		2010/0046842	A1	2/2010	Conwell	
2005/0031173	A1	2/2005	Hwang		2010/0053371	A1	3/2010	Karimoto	
2005/0060299	A1	3/2005	Filley		2010/0061631	A1	3/2010	Omori	
2005/0094849	A1	5/2005	Sung		2010/0064239	A1	3/2010	Crawford	
2005/0100195	A1	5/2005	Li		2010/0082427	A1	4/2010	Burgener	
2005/0105806	A1	5/2005	Nagaoka		2010/0083173	A1	4/2010	Germann	
2005/0117802	A1	6/2005	Yonaha		2010/0088641	A1	4/2010	Choi	
2005/0141766	A1	6/2005	Nagahashi		2010/0107125	A1	4/2010	Ockene	
2005/0180627	A1	8/2005	Yang		2010/0153348	A1	6/2010	Perczynski	
2005/0183026	A1	8/2005	Amano		2010/0162411	A1	6/2010	Chang	
2005/0220347	A1	10/2005	Enomoto		2010/0171763	A1*	7/2010	Bhatt	G06F 16/9537 345/660
2005/0251015	A1	11/2005	Takikawa		2010/0172550	A1	7/2010	Gilley	
2005/0265603	A1	12/2005	Porter		2010/0182341	A1	7/2010	Lee	
2006/0001652	A1	1/2006	Chiu		2010/0185509	A1	7/2010	Higgins	
2006/0021027	A1	1/2006	Saito		2010/0231537	A1	9/2010	Pisula	
2006/0029265	A1	2/2006	Kim		2010/0241689	A1	9/2010	Davis	
2006/0050933	A1	3/2006	Adam		2010/0241944	A1	9/2010	Athsani	
2006/0078201	A1	4/2006	Kim		2010/0245614	A1	9/2010	Matsunaga	
2006/0133672	A1	6/2006	Li		2010/0268717	A1	10/2010	Pilskalns	
2006/0165380	A1	7/2006	Tanaka		2010/0268766	A1	10/2010	Bouget	
2006/0204034	A1	9/2006	Steinberg		2010/0272363	A1	10/2010	Steinberg	
2006/0222215	A1	10/2006	Jung		2010/0280913	A1	11/2010	O'Sullivan	
2006/0222217	A1	10/2006	Kitamura		2010/0283743	A1	11/2010	Coddington	
2006/0224738	A1*	10/2006	McIntyre	H04N 1/00132 709/225	2010/0287053	A1	11/2010	Ganong	
2007/0110305	A1	5/2007	Corcoran		2010/0293035	A1	11/2010	Athsani	
2007/0118508	A1	5/2007	Svendsen		2010/0293193	A1	11/2010	Harrison	
2007/0152984	A1	7/2007	Ording		2010/0302179	A1	12/2010	Aim	
2007/0206834	A1	9/2007	Shinkai		2010/0312596	A1*	12/2010	Saffari	G06F 3/0481 705/7.32
2007/0211925	A1	9/2007	Aoki		2011/0040779	A1	2/2011	Svendsen	
2007/0239764	A1	10/2007	Song		2011/0063108	A1	3/2011	Aonuma	
2007/0271297	A1	11/2007	Jaffe		2011/0093458	A1	4/2011	Zheng	
2007/0282908	A1	12/2007	Van der Meulen		2011/0109769	A1	5/2011	Bhatt	
2008/0040034	A1	2/2008	Kanno		2011/0113064	A1	5/2011	Govindachetty	
2008/0051994	A1	2/2008	Fisher		2011/0145258	A1	6/2011	Kankainen	
2008/0052945	A1	3/2008	Matas		2011/0188713	A1	8/2011	Chin	
2008/0056580	A1	3/2008	Okada		2011/0191014	A1	8/2011	Feng	
2008/0080743	A1*	4/2008	Schneiderman	G08B 13/196 382/118	2011/0191253	A1	8/2011	Pilskalns	
2008/0122944	A1	5/2008	Zhang		2011/0202267	A1	8/2011	Svendsen	
2008/0148175	A1	6/2008	Naaman		2011/0208426	A1	8/2011	Zheng	
2008/0168349	A1	7/2008	Lamiroux		2011/0289031	A1	11/2011	Zheng	
2008/0168402	A1	7/2008	Blumenberg		2011/0301832	A1	12/2011	Zheng	
2008/0201302	A1	8/2008	Kimchi		2011/0307836	A1	12/2011	Cho	
2008/0212849	A1	9/2008	Gao		2011/0314016	A1	12/2011	Svendsen	
2008/0212879	A1	9/2008	Torii		2012/0047457	A1	2/2012	Park	
2008/0220750	A1	9/2008	Steinberg		2012/0096361	A1	4/2012	Osten	
2008/0232695	A1	9/2008	Noda		2012/0113475	A1	5/2012	Sugiyama	
2008/0250398	A1	10/2008	Takahashi		2012/0114249	A1	5/2012	Conwell	
2008/0298766	A1*	12/2008	Wen	G06F 16/5854 386/282	2012/0158755	A1	6/2012	Gammill	
2008/0309632	A1	12/2008	Westerman		2012/0162249	A1	6/2012	Tsuda	
2008/0317379	A1	12/2008	Steinberg		2012/0192110	A1	7/2012	Wu	
2009/0013041	A1	1/2009	Farmer		2012/0204101	A1	8/2012	Yoshida	
2009/0019085	A1	1/2009	Abhyanker		2012/0210200	A1*	8/2012	Berger	G06F 3/0481 715/202
2009/0049408	A1	2/2009	Naaman		2012/0218150	A1	8/2012	Oyabu	
2009/0106705	A1	4/2009	Takamura		2012/0220311	A1	8/2012	Rodriguez	
					2012/0251011	A1	10/2012	Gao	
					2012/0266090	A1	10/2012	Nealer	
					2012/0278171	A1	11/2012	Tang	

(56)

## References Cited

## OTHER PUBLICATIONS

## U.S. PATENT DOCUMENTS

2012/0331091	A1	12/2012	Tseng
2013/0018881	A1	1/2013	Bhatt
2013/0036165	A1	2/2013	Tseng
2013/0063613	A1	3/2013	Conwell
2013/0073202	A1	3/2013	Zheng
2013/0101157	A1	4/2013	Li
2013/0138685	A1	5/2013	Brucher
2013/0141612	A1	6/2013	Bhatt
2013/0151597	A1	6/2013	Akiya
2013/0185676	A1	7/2013	Cao
2013/0202198	A1	8/2013	Adam
2013/0275536	A1	10/2013	Murdock
2013/0339440	A1	12/2013	Balassanian
2014/0040774	A1	2/2014	Chartyoniuk
2014/0059477	A1	2/2014	Wong
2014/0059492	A1	2/2014	Hashida
2014/0071272	A1	3/2014	Rodriguez
2014/0088861	A1	3/2014	Nash
2014/0089811	A1	3/2014	Meadow
2014/0101531	A1	4/2014	Capt
2014/0101601	A1	4/2014	Tang
2014/0112553	A1	4/2014	Yamaguchi
2014/0143247	A1	5/2014	Rathnavelu
2014/0149036	A1	5/2014	Amer-Yahia
2014/0161326	A1	6/2014	Ganong
2014/0181089	A1	6/2014	Desmond
2014/0188880	A1	7/2014	Abhyanker
2014/0193087	A1	7/2014	Conwell
2014/0207444	A1	7/2014	Heiman
2014/0258850	A1	9/2014	Carey
2014/0354628	A1	12/2014	Lindberg
2015/0039630	A1	2/2015	Thomee
2015/0066919	A1	3/2015	Park
2015/0070165	A1	3/2015	East
2015/0070397	A1	3/2015	Miller
2015/0116540	A1	4/2015	Gilman
2015/0117713	A1	4/2015	Zheng
2015/0131872	A1	5/2015	Ganong
2015/0156247	A1	6/2015	Hensel
2015/0186389	A1	7/2015	Zheng
2015/0213057	A1	7/2015	Brucher
2015/0213329	A1	7/2015	Adam
2015/0244794	A1	8/2015	Poletto
2015/0244833	A1	8/2015	Gru
2015/0358224	A1	12/2015	Poletto
2016/0048279	A1	2/2016	Han
2016/0092741	A1	3/2016	Li
2016/0162512	A1	6/2016	Battistini
2016/0247307	A1	8/2016	Stoop
2016/0253358	A1	9/2016	Bhatt
2016/0314187	A1	10/2016	Poletto
2016/0321269	A1	11/2016	Thomee
2016/0328444	A1	11/2016	Shinn
2016/0344888	A1	11/2016	Lahcanski
2016/0357822	A1	12/2016	Woods
2017/0024415	A1	1/2017	Brucher
2017/0046565	A1	2/2017	Gilley
2017/0069123	A1	3/2017	Hochmuth
2017/0103081	A1	4/2017	Jones
2017/0192645	A1	7/2017	Murray
2017/0357672	A1	12/2017	Circlaey
2018/0181281	A1	6/2018	Suki
2018/0364872	A1	12/2018	Miura

## FOREIGN PATENT DOCUMENTS

EP	2410414	B1	10/2019
WO	WO 2011/070225	A1	6/2011

Kustanowitz et al., "Motivating Annotation for Personal Digital Phot Libraries: Lowering Barriers while Raising Incentives," tech. Report HCIL-2004-18, U. Maryland, 2005 (10 pages).

Jaffe et al., "Generating Summaries and Visualization for Large Collections of GeoReferenced Photographs," MIR '06, pp. 89-98, 2006 ACM.

Snavely et al., "Photo Tourism: Exploring Photo Collection in 3D," SIGGRAPH '06 ACM Transactions on Graphics, 25(3): 835-846, 2006 ACM.

Ahern et al., "World Explorer: Visualizing Aggregate Data From Unstructured Text in Geo-Referenced Collections," JCDL '07, pp. 1-10, 2007, ACM.

Ames et al., "Why we tag: motivations for annotation in mobile and online media," CHI-07 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, pp. 971-980, ACM, 2007 (10 pages).

Chen, Y-F. et al.; "GeoTracker: Geospatial and Temporal RSS Navigation"; At&T Labs—Research, Florham Park, NJ; WWW 2007 / Track: Browsers and User Interfaces, Session: Smarter Browsing, pp. 41-50 (10 pages).

Ferre, "CAMELIS: Organizing and Browsing a Personal Photo Collection with a Logical Information System," Int. Conf. Concept Lattices and Their Applications, pp. 112-123, 2007, HAL.

Goodman, E.; "Destination Services: Tourist media and networked places"; School of Information, UC Berkeley; Mar. 2, 2007 (11 pages).

Kang et al., "Capture, Annotate, Browse, Find, Share: novel Interfaces for Personal Photo Management," International Journal of Human-Computer Interaction, 23(3): 315-337, 2007, Lawrence Erlbaum Associates, Inc.

Kennedy, L. et al.; "How Flickr Helps Us Make Sense of the World: Context and Content in Community-Contributed Media Collections"; MM '07, Sep. 23-28, 2007; Augsburg, Bavaria, Germany; Copyright 2007; ACM 978-1-59593-701-8/07/0009 (10 pages).

Rattenbury, T. et al.; "Towards Automatic Extraction of Event and Place Semantics from Flickr Tags"; SIGIR '07, Jul. 23-27, 2007; Amsterdam, The Netherlands; ACM 978-1-59593-597-7/07/0007 (8 pages).

Slingsby, A. et al.; "Interactive tag maps and tag clouds for the multiscale exploration of large spatio-temporal datasets"; Information Visualization, pp. 497-504; 2007, IV '07. 11<sup>th</sup> International Conference. ISSN: 1550-6037 (9 pages).

Torniai et al., "Sharing, Discovering and Browsing Geotagged Pictures on the Web," 2007, Hewlett-Packard Development Company, L.P., pp. 1-18.

Amundsen, J.; "Using the Geographical Location of Photos in Mobile Phones"; Master of Science in Computer Science submission; Norwegian University of Science and Technology; Jul. 2008 (112 pages).

Hollenstein, L.; "Capturing Vernacular Geography from Georeferenced Tags"; Master Thesis; Institute of Geography, University of Zurich; Nov. 2008 (139 pages).

Kopf et al., "Deep photo: model-based photograph enhancement and viewing," ACM Transactions on Graphics, vol. 27, No. 5, Article 116, Dec. 2008, ACM (10 pages).

Miller et al., Give and take: a study of consumer photo-sharing culture and practice, CHI 07 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, pp. 347-356, 2008 (10 pages).

Bartolini et al., "Integrating Semantic and Visual Facets for Browsing Digital Photo Collections," SBED, pp. 65-72, 2009.

Kisilevich et al., "Event-based analysis of People's Activities and Behavior Using Flickr and Panoramio Geotagged Photo Collections," 14<sup>th</sup> International Conference Information Visualization, pp. 289-296, 2010 IEEE.

Gentile, L; "Using Flickr Geotags to Find Similar Tourism Destinations"; master thesis, 2011; Politecnico di Milano, Dept. of Computer Engineering (96 pages).

Hoffman, A.; "Create Great iPhone Photos: Apps, Tips, Tricks, and

# 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.