

# EXHIBIT 4



US010484749B2

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

(10) **Patent No.:** **US 10,484,749 B2**

(45) **Date of Patent:** **\*Nov. 19, 2019**

(54) **SYSTEMS AND METHODS FOR SECURE  
PLAYBACK OF ENCRYPTED ELEMENTARY  
BITSTREAMS**

(71) Applicant: **DIVX, LLC**, San Diego, CA (US)

(72) Inventors: **Francis Yee-Dug Chan**, San Diego, CA (US); **Kourosh Soroushian**, San Diego, CA (US); **Andrew Jeffrey Wood**, San Diego, CA (US)

(73) Assignee: **DIVX, LLC**, San Diego, CA (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.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/136,170**

(22) Filed: **Sep. 19, 2018**

(65) **Prior Publication Data**

US 2019/0020928 A1 Jan. 17, 2019

**Related U.S. Application Data**

(63) Continuation of application No. 15/615,626, filed on Jun. 6, 2017, now Pat. No. 10,212,486, which is a (Continued)

(51) **Int. Cl.**  
**H04L 29/06** (2006.01)  
**H04N 21/6334** (2011.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ... **H04N 21/63345** (2013.01); **H04L 63/0428** (2013.01); **H04L 65/607** (2013.01);  
(Continued)

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

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,009,331 A 2/1977 Goldmark et al.  
4,694,357 A 9/1987 Rahman et al.  
(Continued)

FOREIGN PATENT DOCUMENTS

AU 2010203605 B2 5/2015  
CN 1169229 12/1997  
(Continued)

OTHER PUBLICATIONS

International Preliminary Report on Patentability for International Application No. PCT/US2010/56733, dated Jun. 5, 2012, 5 pgs.  
(Continued)

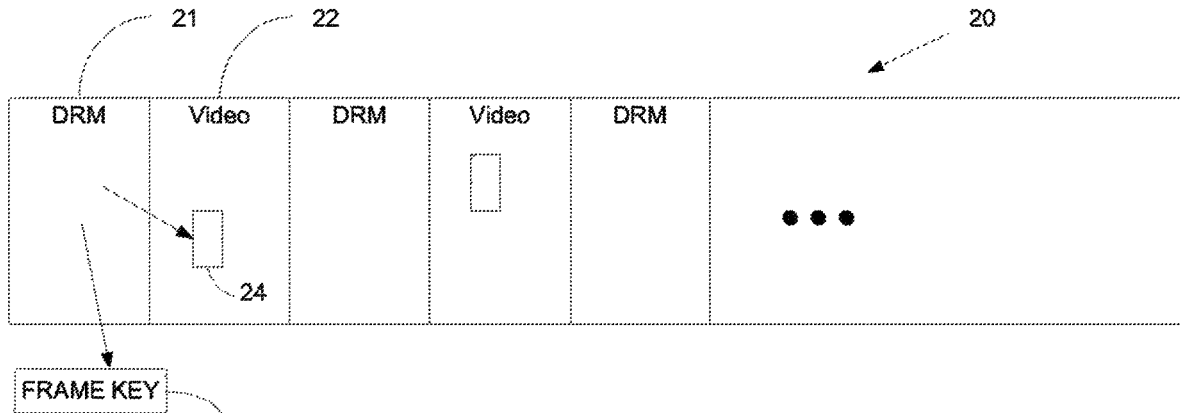
*Primary Examiner* — Malcolm Cribbs

(74) *Attorney, Agent, or Firm* — KPPB LLP

(57) **ABSTRACT**

Systems and methods for providing multimedia content from one process or component to another process or component over an unsecured connection are provided. One embodiment includes obtaining the cryptographic information, extracting the at least partially encrypted video data from the container file to create an elementary bitstream, enciphering the cryptographic information, inserting the cryptographic information in the elementary bitstream, providing the elementary bitstream to a video decoder, extracting the cryptographic information from the elementary bitstream at the video decoder, deciphering the cryptographic information, decrypting the elementary bitstream with the cryptographic information and decoding the elementary bitstream for rendering on a display device using the video decoder.

**18 Claims, 8 Drawing Sheets**



**Related U.S. Application Data**

continuation of application No. 14/839,783, filed on Aug. 28, 2015, now Pat. No. 9,706,259, which is a continuation of application No. 14/306,146, filed on Jun. 16, 2014, now Pat. No. 9,124,773, which is a continuation of application No. 12/946,631, filed on Nov. 15, 2010, now Pat. No. 8,781,122.

(60) Provisional application No. 61/266,982, filed on Dec. 4, 2009.

(51) **Int. Cl.**

*H04N 21/235* (2011.01)  
*H04N 21/236* (2011.01)  
*H04N 21/434* (2011.01)  
*H04N 21/4405* (2011.01)  
*H04N 7/167* (2011.01)  
*H04N 21/43* (2011.01)

(52) **U.S. Cl.**

CPC ..... *H04N 7/1675* (2013.01); *H04N 21/2351* (2013.01); *H04N 21/23614* (2013.01); *H04N 21/4302* (2013.01); *H04N 21/4348* (2013.01); *H04N 21/4405* (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,802,170 A 1/1989 Trotter  
 4,964,069 A 10/1990 Ely  
 5,119,474 A 6/1992 Beitel et al.  
 5,274,758 A 12/1993 Beitel et al.  
 5,361,332 A 11/1994 Yoshida et al.  
 5,396,497 A 3/1995 Veltman  
 5,404,436 A 4/1995 Hamilton  
 5,420,801 A 5/1995 Dockter et al.  
 5,420,974 A 5/1995 Morris et al.  
 5,471,576 A 11/1995 Yee  
 5,479,303 A 12/1995 Suzuki et al.  
 5,487,167 A 1/1996 Dinallo et al.  
 5,502,766 A 3/1996 Boebert et al.  
 5,509,070 A 4/1996 Schull  
 5,533,021 A 7/1996 Branstad et al.  
 5,537,408 A 7/1996 Branstad et al.  
 5,539,908 A 7/1996 Chen et al.  
 5,541,662 A 7/1996 Adams et al.  
 5,583,652 A 12/1996 Ware  
 5,589,993 A 12/1996 Naimpally et al.  
 5,621,794 A 4/1997 Matsuda et al.  
 5,627,936 A 5/1997 Prasad  
 5,633,472 A 5/1997 DeWitt et al.  
 5,642,171 A 6/1997 Baumgartner et al.  
 5,655,117 A 8/1997 Goldberg et al.  
 5,664,044 A 9/1997 Ware  
 5,675,382 A 10/1997 Bauchspies  
 5,675,511 A 10/1997 Prasad et al.  
 5,684,542 A 11/1997 Tsukagoshi  
 5,715,403 A 2/1998 Stefik  
 5,717,816 A 2/1998 Boyce et al.  
 5,719,786 A 2/1998 Nelson et al.  
 5,745,643 A 4/1998 Mishina  
 5,751,280 A 5/1998 Abbott  
 5,754,648 A 5/1998 Ryan et al.  
 5,763,800 A 6/1998 Rossum et al.  
 5,765,164 A 6/1998 Prasad et al.  
 5,794,018 A 8/1998 Vrvilo et al.  
 5,805,700 A 9/1998 Nardone et al.  
 5,822,524 A 10/1998 Chen et al.  
 5,828,370 A 10/1998 Moeller et al.  
 5,841,432 A 11/1998 Carmel et al.  
 5,844,575 A 12/1998 Reid  
 5,848,217 A 12/1998 Tsukagoshi et al.

5,892,900 A 4/1999 Ginter et al.  
 5,903,261 A 5/1999 Walsh et al.  
 5,907,597 A 5/1999 Mark  
 5,946,446 A 8/1999 Yanagihara  
 5,956,729 A 9/1999 Goetz et al.  
 5,959,690 A 9/1999 Toebes, VIII et al.  
 5,970,147 A 10/1999 Davis  
 5,999,812 A 12/1999 Himsworth  
 6,031,622 A 2/2000 Ristow et al.  
 6,038,257 A 3/2000 Brusewitz et al.  
 6,044,469 A 3/2000 Horstmann  
 6,046,778 A 4/2000 Nonomura et al.  
 6,047,100 A 4/2000 McLaren  
 6,058,240 A 5/2000 McLaren  
 6,064,794 A 5/2000 McLaren et al.  
 6,065,050 A 5/2000 DeMoney  
 6,018,611 A 6/2000 Nogami et al.  
 6,079,566 A 6/2000 Eleftheriadis et al.  
 6,097,877 A 8/2000 Katayama et al.  
 6,141,754 A 10/2000 Choy  
 6,155,840 A 12/2000 Sallette  
 6,169,242 B1 1/2001 Fay et al.  
 6,175,921 B1 1/2001 Rosen  
 6,195,388 B1 2/2001 Choi et al.  
 6,204,883 B1 3/2001 Tsukagoshi  
 6,222,981 B1 4/2001 Rijckaert  
 6,282,653 B1 8/2001 Berstis et al.  
 6,289,450 B1 9/2001 Pensak et al.  
 6,292,621 B1 9/2001 Tanaka et al.  
 6,308,005 B1 10/2001 Ando et al.  
 6,330,286 B1 12/2001 Lyons et al.  
 6,374,144 B1 4/2002 Viviani et al.  
 6,389,218 B2 5/2002 Gordon et al.  
 6,389,473 B1 5/2002 Carmel et al.  
 6,395,969 B1 5/2002 Fuhrer  
 6,397,230 B1 5/2002 Carmel et al.  
 6,418,270 B1 7/2002 Steenhof et al.  
 6,449,719 B1 9/2002 Baker  
 6,466,671 B1 10/2002 Maillard et al.  
 6,466,733 B1 10/2002 Kim  
 6,510,513 B1 1/2003 Danieli  
 6,510,554 B1 1/2003 Gordon et al.  
 6,621,979 B1 9/2003 Eerenberg et al.  
 6,625,320 B1 9/2003 Nilsson et al.  
 6,658,056 B1 12/2003 Duruöz et al.  
 6,665,835 B1 12/2003 Gutfreund et al.  
 6,671,408 B1 12/2003 Kaku  
 6,697,568 B1 2/2004 Kaku  
 6,725,281 B1 4/2004 Zintel et al.  
 6,771,703 B1 8/2004 Oguz et al.  
 6,807,306 B1 10/2004 Girgensohn et al.  
 6,810,031 B1 10/2004 Hegde et al.  
 6,810,389 B1 10/2004 Meyer  
 6,819,394 B1 11/2004 Nomura et al.  
 6,850,252 B1 2/2005 Hoffberg  
 6,856,997 B2 2/2005 Lee et al.  
 6,859,496 B1 2/2005 Boroczky et al.  
 6,917,652 B2 7/2005 Lyu  
 6,931,531 B1 8/2005 Takahashi  
 6,944,621 B1 9/2005 Collart  
 6,944,629 B1 9/2005 Shioi et al.  
 6,956,901 B2 10/2005 Boroczky et al.  
 6,965,724 B1 11/2005 Boccon-Gibod et al.  
 6,965,993 B2 11/2005 Baker  
 6,985,588 B1 1/2006 Glick et al.  
 6,988,144 B1 1/2006 Luken et al.  
 7,007,170 B2 2/2006 Morten  
 7,023,924 B1 4/2006 Keller et al.  
 7,043,473 B1 5/2006 Rassool et al.  
 7,103,906 B1 9/2006 Katz et al.  
 7,127,155 B2 10/2006 Ando et al.  
 7,150,045 B2 12/2006 Koelle et al.  
 7,151,832 B1 12/2006 Fetkovich et al.  
 7,151,833 B2 12/2006 Candelore et al.  
 7,165,175 B1 1/2007 Kollmyer et al.  
 7,185,363 B1 2/2007 Narin et al.  
 7,191,335 B1\* 3/2007 Maillard ..... H04N 7/163

(56)

## References Cited

## U.S. PATENT DOCUMENTS

7,206,940	B2	4/2007	Evans et al.	8,472,792	B2	6/2013	Butt et al.
7,209,892	B1	4/2007	Galuten et al.	8,473,630	B1	6/2013	Galligan et al.
7,231,132	B1	6/2007	Davenport	8,510,303	B2	8/2013	Soroushian et al.
7,237,061	B1	6/2007	Boic	8,510,404	B2	8/2013	Carmel et al.
7,242,772	B1	7/2007	Tehranchi	8,515,265	B2	8/2013	Kwon et al.
7,243,346	B1	7/2007	Seth et al.	8,516,529	B2	8/2013	Lajoie et al.
7,295,673	B2	11/2007	Grab et al.	8,527,645	B1	9/2013	Proffit et al.
7,328,345	B2	2/2008	Morten et al.	8,595,378	B1	11/2013	Cohn
7,330,875	B1	2/2008	Parasnis et al.	8,606,069	B2	12/2013	Okubo et al.
7,340,528	B2	3/2008	Noblecourt et al.	8,640,166	B1	1/2014	Craner et al.
7,349,886	B2	3/2008	Morten et al.	8,649,669	B2	2/2014	Braness et al.
7,356,143	B2	4/2008	Morten	8,656,183	B2	2/2014	Russell et al.
7,356,245	B2	4/2008	Belknap et al.	8,677,428	B2	3/2014	Lewis et al.
7,366,788	B2	4/2008	Jones et al.	8,681,866	B1	3/2014	Jia
7,376,831	B2	5/2008	Kollmyer et al.	8,689,267	B2	4/2014	Hunt
7,406,174	B2	7/2008	Palmer	8,726,264	B1	5/2014	Allen et al.
7,421,411	B2	9/2008	Kontio et al.	RE45,052	E	7/2014	Li
7,454,780	B2	11/2008	Katsube et al.	8,767,825	B1	7/2014	Wang et al.
7,457,359	B2	11/2008	Mabey et al.	8,774,609	B2	7/2014	Drake et al.
7,460,668	B2	12/2008	Grab et al.	8,781,122	B2	7/2014	Chan et al.
7,472,280	B2	12/2008	Giobbi	8,805,109	B2	8/2014	Shoham et al.
7,478,325	B2	1/2009	Foehr	8,806,188	B2	8/2014	Braness et al.
7,484,103	B2	1/2009	Woo et al.	8,832,434	B2	9/2014	Apostolopoulos et al.
7,493,018	B2	2/2009	Kim	8,843,586	B2	9/2014	Pantos et al.
7,499,938	B2	3/2009	Collart	8,856,218	B1	10/2014	Inskip
7,515,710	B2	4/2009	Russell et al.	8,908,984	B2	12/2014	Shoham et al.
7,526,450	B2	4/2009	Hughes et al.	8,909,922	B2	12/2014	Kiefer et al.
7,594,271	B2	9/2009	Zhuk et al.	8,914,534	B2	12/2014	Braness et al.
7,610,365	B1	10/2009	Kraft et al.	8,914,836	B2	12/2014	Shivadas et al.
7,640,435	B2	12/2009	Morten	8,918,535	B2	12/2014	Ma et al.
7,689,510	B2	3/2010	Lamkin et al.	8,918,636	B2	12/2014	Kiefer
7,720,352	B2	5/2010	Belknap et al.	8,918,908	B2	12/2014	Ziskind et al.
7,747,853	B2	6/2010	Candelore et al.	8,948,249	B2	2/2015	Sun et al.
7,761,892	B2	7/2010	Ellis et al.	8,997,161	B2	3/2015	Priyadarshi et al.
7,779,097	B2	8/2010	Lamkin et al.	8,997,254	B2	3/2015	Amidei et al.
7,788,271	B2	8/2010	Soma et al.	9,014,471	B2	4/2015	Shoham et al.
7,817,608	B2	10/2010	Rassool et al.	9,025,659	B2	5/2015	Soroushian et al.
7,869,691	B2	1/2011	Kelly et al.	9,042,670	B2	5/2015	Carmel et al.
7,882,034	B2	2/2011	Hug et al.	9,060,207	B2	6/2015	Scherkus et al.
7,949,703	B2	5/2011	Matsuzaki et al.	9,094,737	B2	7/2015	Shivadas et al.
7,962,942	B1	6/2011	Craner	9,098,335	B2	8/2015	Muthiah et al.
7,974,714	B2	7/2011	Hoffberg	9,124,773	B2	9/2015	Chan et al.
7,991,156	B1	8/2011	Miller	9,125,073	B2	9/2015	Oyman et al.
8,023,562	B2	9/2011	Zheludkov et al.	9,184,920	B2	11/2015	Grab et al.
8,046,453	B2	10/2011	Olaiya	9,191,457	B2	11/2015	Van Der Schaar
8,054,880	B2	11/2011	Yu et al.	9,197,685	B2	11/2015	Soroushian
8,065,708	B1	11/2011	Smyth et al.	9,203,816	B2	12/2015	Brueck et al.
8,069,260	B2	11/2011	Speicher et al.	9,210,481	B2	12/2015	Braness et al.
8,082,442	B2	12/2011	Keljo et al.	9,215,466	B2	12/2015	Zhai et al.
8,195,714	B2	6/2012	Mckibben et al.	9,247,311	B2	1/2016	Kiefer
8,201,264	B2	6/2012	Grab et al.	9,247,312	B2	1/2016	Braness et al.
8,225,061	B2	7/2012	Greenebaum	9,247,317	B2	1/2016	Shivadas et al.
8,233,768	B2	7/2012	Soroushian et al.	9,253,178	B2	2/2016	Blom et al.
8,245,124	B1	8/2012	Gupta	9,264,475	B2	2/2016	Shivadas et al.
8,249,168	B2	8/2012	Graves	9,294,531	B2	3/2016	Zhang et al.
8,261,356	B2	9/2012	Choi et al.	9,313,510	B2	4/2016	Shivadas et al.
8,265,168	B1	9/2012	Masterson et al.	9,343,112	B2	5/2016	Amidei et al.
8,270,473	B2	9/2012	Chen et al.	9,344,517	B2	5/2016	Shivadas et al.
8,270,819	B2	9/2012	Vannier	9,344,721	B2	5/2016	Dikvall
8,275,871	B2	9/2012	Ram et al.	9,479,805	B2	10/2016	Rothschild et al.
8,289,338	B2	10/2012	Priyadarshi et al.	9,485,546	B2	11/2016	Chen et al.
8,291,460	B1	10/2012	Peacock	9,571,827	B2	2/2017	Su et al.
8,296,434	B1	10/2012	Miller et al.	9,584,557	B2	2/2017	Panje et al.
8,311,111	B2	11/2012	Xu et al.	9,584,847	B2	2/2017	Ma et al.
8,311,115	B2	11/2012	Gu et al.	9,621,522	B2	4/2017	Kiefer et al.
8,321,556	B1	11/2012	Chatterjee et al.	9,706,259	B2	7/2017	Chan et al.
8,341,715	B2	12/2012	Sherkin et al.	9,712,890	B2	7/2017	Shivadas et al.
8,386,621	B2	2/2013	Park	9,798,863	B2	10/2017	Grab et al.
8,396,114	B2	3/2013	Gu et al.	9,813,740	B2	11/2017	Panje et al.
8,401,900	B2	3/2013	Cansler et al.	9,866,878	B2	1/2018	Van Der Schaar et al.
8,407,753	B2	3/2013	Kuo	9,883,204	B2	1/2018	Braness et al.
8,412,841	B1	4/2013	Swaminathan et al.	9,906,785	B2	2/2018	Naletov et al.
8,423,889	B1	4/2013	Zagorie et al.	9,967,189	B2	5/2018	Patel et al.
				9,967,305	B2	5/2018	Braness
				10,212,486	B2	2/2019	Chan et al.
				2001/0030710	A1	10/2001	Werner
				2001/0036355	A1	11/2001	Kelly et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0026560	A1	2/2002	Jordan et al.	2004/0139335	A1	7/2004	Diamand et al.	
2002/0034252	A1	3/2002	Owen et al.	2004/0143760	A1	7/2004	Alkove et al.	
2002/0051494	A1	5/2002	Yamaguchi et al.	2004/0146276	A1	7/2004	Ogawa	
2002/0057898	A1	5/2002	Normile	2004/0158878	A1	8/2004	Ratnakar et al.	
2002/0062313	A1	5/2002	Lee et al.	2004/0184534	A1	9/2004	Wang	
2002/0076112	A1	6/2002	Devara	2004/0184616	A1	9/2004	Morten et al.	
2002/0087569	A1	7/2002	Fischer et al.	2004/0202320	A1	10/2004	Amini et al.	
2002/0091665	A1	7/2002	Beek et al.	2004/0217971	A1	11/2004	Kim	
2002/0093571	A1	7/2002	Hyodo	2004/0243488	A1*	12/2004	Yamamoto .....	G06F 21/10
2002/0110193	A1	8/2002	Yoo et al.					705/30
2002/0116481	A1	8/2002	Lee	2004/0255115	A1	12/2004	DeMello et al.	
2002/0118953	A1	8/2002	Kim	2004/0255236	A1	12/2004	Collart	
2002/0120934	A1	8/2002	Abrahams et al.	2005/0004875	A1	1/2005	Kontio et al.	
2002/0136298	A1	9/2002	Anantharamu et al.	2005/0005025	A1	1/2005	Harville et al.	
2002/0143413	A1	10/2002	Fay et al.	2005/0015797	A1	1/2005	Noblecourt et al.	
2002/0143547	A1	10/2002	Fay et al.	2005/0038826	A1	2/2005	Bae et al.	
2002/0147980	A1	10/2002	Satoda	2005/0055399	A1	3/2005	Savchuk	
2002/0159598	A1	10/2002	Rubinstein et al.	2005/0071280	A1	3/2005	Irwin et al.	
2002/0161462	A1	10/2002	Fay	2005/0108320	A1	5/2005	Lord et al.	
2002/0180929	A1	12/2002	Tseng et al.	2005/0114534	A1	5/2005	Lee	
2002/0184159	A1	12/2002	Tadayon et al.	2005/0114896	A1	5/2005	Hug	
2002/0184515	A1	12/2002	Oho et al.	2005/0132208	A1*	6/2005	Hug .....	G06F 21/10
2002/0191112	A1	12/2002	Akiyoshi et al.					713/189
2002/0191959	A1	12/2002	Lin et al.	2005/0149450	A1	7/2005	Stefik et al.	
2002/0191960	A1	12/2002	Fujinami et al.	2005/0180641	A1	8/2005	Clark	
2003/0001964	A1	1/2003	Masukura et al.	2005/0183120	A1	8/2005	Jain et al.	
2003/0002578	A1	1/2003	Tsukagoshi et al.	2005/0193070	A1	9/2005	Brown et al.	
2003/0005442	A1	1/2003	Brodersen et al.	2005/0193322	A1	9/2005	Lamkin et al.	
2003/0021296	A1	1/2003	Wee et al.	2005/0196147	A1	9/2005	Seo et al.	
2003/0031178	A1	2/2003	Haeri	2005/0204289	A1	9/2005	Mohammed et al.	
2003/0035488	A1	2/2003	Barrau	2005/0207442	A1	9/2005	Van Zoest et al.	
2003/0035545	A1	2/2003	Jiang	2005/0207578	A1	9/2005	Matsuyama et al.	
2003/0035546	A1	2/2003	Jiang et al.	2005/0254508	A1	11/2005	Aksu et al.	
2003/0041257	A1	2/2003	Wee et al.	2005/0273695	A1	12/2005	Schnurr	
2003/0061305	A1	3/2003	Copley et al.	2005/0275656	A1	12/2005	Corbin et al.	
2003/0061369	A1	3/2003	Aksu et al.	2006/0015580	A1	1/2006	Gabriel et al.	
2003/0065777	A1	4/2003	Mattila et al.	2006/0026294	A1	2/2006	Virdi et al.	
2003/0078930	A1	4/2003	Surcouf et al.	2006/0026302	A1	2/2006	Bennett et al.	
2003/0093799	A1	5/2003	Kauffman et al.	2006/0036549	A1	2/2006	Wu	
2003/0123855	A1	7/2003	Okada et al.	2006/0037057	A1	2/2006	Xu	
2003/0128296	A1	7/2003	Lee	2006/0052095	A1	3/2006	Vazvan	
2003/0133506	A1	7/2003	Haneda	2006/0053080	A1	3/2006	Edmonson et al.	
2003/0152370	A1	8/2003	Otomo et al.	2006/0064605	A1	3/2006	Giobbi	
2003/0163824	A1	8/2003	Gordon et al.	2006/0078301	A1	4/2006	Ikeda et al.	
2003/0165328	A1	9/2003	Grecia	2006/0093320	A1	5/2006	Hallberg et al.	
2003/0174844	A1	9/2003	Candelore	2006/0120378	A1	6/2006	Usuki et al.	
2003/0185302	A1	10/2003	Abrams	2006/0129909	A1	6/2006	Butt et al.	
2003/0185542	A1	10/2003	McVeigh et al.	2006/0165233	A1*	7/2006	Nonaka .....	G06F 21/10
2003/0206558	A1	11/2003	Parkkinen et al.					380/44
2003/0216922	A1	11/2003	Gonzales et al.	2006/0168639	A1	7/2006	Gan et al.	
2003/0229900	A1	12/2003	Reisman	2006/0173887	A1	8/2006	Breitfeld et al.	
2003/0231863	A1	12/2003	Eerenberg et al.	2006/0179239	A1	8/2006	Fluhr	
2003/0231867	A1	12/2003	Gates et al.	2006/0181965	A1	8/2006	Collart	
2003/0233464	A1	12/2003	Walpole et al.	2006/0235880	A1	10/2006	Qian	
2003/0236836	A1	12/2003	Borthwick	2006/0245727	A1	11/2006	Nakano et al.	
2003/0236907	A1	12/2003	Stewart et al.	2006/0259588	A1	11/2006	Lerman et al.	
2004/0006701	A1	1/2004	Kresina	2006/0263056	A1	11/2006	Lin et al.	
2004/0021684	A1	2/2004	Millner	2006/0267986	A1	11/2006	Bae	
2004/0024688	A1	2/2004	Bi et al.	2006/0274835	A1	12/2006	Hamilton et al.	
2004/0025180	A1	2/2004	Begeja et al.	2006/0294164	A1	12/2006	Armangau et al.	
2004/0031058	A1	2/2004	Reisman	2007/0005333	A1	1/2007	Setiohardjo et al.	
2004/0039916	A1	2/2004	Aldis et al.	2007/0031110	A1	2/2007	Rijckaert	
2004/0047614	A1	3/2004	Green	2007/0033419	A1	2/2007	Kocher et al.	
2004/0052501	A1	3/2004	Tam	2007/0044010	A1	2/2007	Sull et al.	
2004/0071453	A1	4/2004	Valderas	2007/0047901	A1	3/2007	Ando et al.	
2004/0081333	A1	4/2004	Grab et al.	2007/0053513	A1	3/2007	Hoffberg	
2004/0081434	A1	4/2004	Jung et al.	2007/0058928	A1	3/2007	Naito et al.	
2004/0084035	A1	5/2004	Newton	2007/0067622	A1*	3/2007	Nakano .....	H04L 9/0822
2004/0093618	A1	5/2004	Baldwin et al.					713/163
2004/0101142	A1*	5/2004	Nasyzny .....	2007/0083617	A1	4/2007	Chakrabarti et al.	
			G06F 21/602	2007/0086528	A1	4/2007	Mauchly et al.	
			380/278	2007/0100757	A1	5/2007	Rhoads	
2004/0105549	A1	6/2004	Suzuki et al.	2007/0133603	A1	6/2007	Weaver	
2004/0114687	A1	6/2004	Ferris et al.	2007/0136817	A1	6/2007	Nguyen	
				2007/0140647	A1	6/2007	Kusunoki et al.	
				2007/0154165	A1	7/2007	Hemmerlyckz-Deleersnijder et al.	
				2007/0168541	A1	7/2007	Gupta et al.	

# 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.