

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4264699

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST IN PATENT RIGHTS
CONVEYING PARTY DATA	
Name	Execution Date
JPMORGAN CHASE BANK, N.A.	02/01/2017
RECEIVING PARTY DATA	
Name:	GRACENOTE, INC.
Street Address:	2000 POWELL STREET
Internal Address:	SUITE #1500
City:	EMERYVILLE
State/Country:	CALIFORNIA
Postal Code:	94608
Name:	CASTTV INC.
Street Address:	435 NORTH MICHIGAN AVENUE
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60611
Name:	TRIBUNE MEDIA SERVICES, LLC
Street Address:	435 NORTH MICHIGAN AVENUE
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60611
Name:	TRIBUNE DIGITAL VENTURES, LLC
Street Address:	435 NORTH MICHIGAN AVENUE
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60611
PROPERTY NUMBERS Total: 263	
Property Type	Number
Patent Number:	7904503
Patent Number:	7849131
Patent Number:	7549052
Patent Number:	7921296

PATENT

Property Type	Number
Patent Number:	7477739
Patent Number:	7908273
Patent Number:	6983289
Patent Number:	7856443
Patent Number:	7680902
Patent Number:	7945645
Patent Number:	5987525
Patent Number:	6230192
Patent Number:	7308485
Patent Number:	7167857
Patent Number:	6240459
Patent Number:	6061680
Patent Number:	6230207
Patent Number:	7328153
Patent Number:	7881931
Patent Number:	6154773
Patent Number:	6330593
Patent Number:	6161132
Patent Number:	7228280
Patent Number:	8468357
Patent Number:	8326584
Patent Number:	7012183
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Patent Number:	8071869
Patent Number:	7907211
Patent Number:	8358376
Patent Number:	7523312
Patent Number:	8472289
Patent Number:	7013301
Patent Number:	7487180
Patent Number:	7613736
Patent Number:	7590035
Patent Number:	8406607
Patent Number:	8805657
Patent Number:	8805854
Patent Number:	8817183
Patent Number:	8855798
Patent Number:	8863165

Property Type	Number
Patent Number:	8996538
Patent Number:	8997164
Patent Number:	9015741
Patent Number:	8229227
Patent Number:	8171030
Patent Number:	8195689
Patent Number:	8335786
Patent Number:	8364703
Patent Number:	8385644
Patent Number:	8189945
Patent Number:	8655878
Patent Number:	8666152
Patent Number:	8666168
Patent Number:	8688731
Patent Number:	8781245
Patent Number:	8959108
Patent Number:	8965863
Patent Number:	9053104
Patent Number:	9058355
Patent Number:	9066114
Patent Number:	9213747
Patent Number:	9262421
Patent Number:	9299364
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Patent Number:	9356914
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Patent Number:	9380383
Patent Number:	9396393
Patent Number:	9407962
Patent Number:	9414008
Patent Number:	9361374
Patent Number:	9378280
Patent Number:	9436689
Patent Number:	9471674
Patent Number:	9431002

Property Type	Number
Patent Number:	9454342
Application Number:	12608349
Application Number:	13904505
Application Number:	13904485
Application Number:	11891301
Application Number:	13460477
Application Number:	13041089
Application Number:	12239082
Application Number:	10208189
Application Number:	12720550
Application Number:	13667683
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Application Number:	12397153
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Application Number:	13345615
Application Number:	13611740
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Application Number:	13778439
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Application Number:	13826282
Application Number:	13826606
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Application Number:	13839782
Application Number:	13838810
Application Number:	14020295
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Application Number:	14061043
Application Number:	14107923
Application Number:	14135173

Property Type	Number
Application Number:	14259083
Application Number:	14147366
Application Number:	14147320
Application Number:	14196932
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Application Number:	14196774
Application Number:	14196908
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Application Number:	61968183
Application Number:	14280337
Application Number:	14280350
Application Number:	14281356
Application Number:	14322611
Application Number:	14322633
Application Number:	14322627
Application Number:	14341503
Application Number:	14341521
Application Number:	14289142
Application Number:	14312007
Application Number:	14333190
Application Number:	14446559
Application Number:	14462402
Application Number:	14475971
Application Number:	62075046
Application Number:	62099398
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Application Number:	62099401
Application Number:	14632140
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Application Number:	13327359
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Property Type	Number
Application Number:	13590701
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Application Number:	14589366
Application Number:	14711054
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Application Number:	14828293
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Application Number:	62306733
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Application Number:	15078056
Application Number:	15134071
Application Number:	15136412

Property Type	Number
Application Number:	15140706
Application Number:	62301293
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Application Number:	62301623
Application Number:	62274591
Application Number:	62275081
Application Number:	15155428
Application Number:	15163004
Application Number:	15164605
Application Number:	15172826
Application Number:	15179143
Application Number:	15185616
Application Number:	15185654
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Application Number:	15186945
Application Number:	62355522
Application Number:	15204366
Application Number:	15209452
Application Number:	15209483
Application Number:	15209490
Application Number:	15209515
Application Number:	15115733
Application Number:	15147548
Application Number:	15166918
Application Number:	15187663
Application Number:	15253354
Application Number:	62382801
Application Number:	62382802
Application Number:	62385574
Application Number:	15273185
Application Number:	15286787
Application Number:	15287063
Application Number:	15287116
Application Number:	15292705
Application Number:	15290364
Application Number:	15297658
Application Number:	15298601
Application Number:	15334752

Property Type	Number
PCT Number:	US1466428
PCT Number:	US1471105
PCT Number:	US1472977
PCT Number:	US1471206
PCT Number:	US1472217
PCT Number:	US1472111
PCT Number:	US1472641
PCT Number:	US1472652
PCT Number:	US1472653
PCT Number:	US1472812
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PCT Number:	US1472825
PCT Number:	US1472829
PCT Number:	US1472830
PCT Number:	US1472836
PCT Number:	US2015019955
PCT Number:	US2015023430
PCT Number:	US2015027117
PCT Number:	US0547293
PCT Number:	US2015032618
PCT Number:	US2015067814
PCT Number:	US2015067889
PCT Number:	US2015068088
PCT Number:	US2016044041
Patent Number:	8285718
Patent Number:	8489584
Patent Number:	8489609
Patent Number:	6778171
Patent Number:	7299483
Patent Number:	7971218

CORRESPONDENCE DATA

Fax Number: (212)909-6836

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 212-909-6000

Email: trademarks@debevoise.com

Correspondent Name: TIAN TIAN ZHU, ESQ.

Address Line 1: 919 THIRD AVENUE

PATENT

REEL: 041656 FRAME: 0811

Address Line 2:	DEBEVOISE & PLIMPTON LLP
Address Line 4:	NEW YORK, NEW YORK 10022

ATTORNEY DOCKET NUMBER:	23266-1127
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NAME OF SUBMITTER:	TIANTIAN ZHU
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SIGNATURE:	/TZ/
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DATE SIGNED:	02/08/2017
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Total Attachments: 22

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RELEASE OF SECURITY INTEREST IN PATENT RIGHTS

This **RELEASE OF SECURITY INTEREST IN PATENT RIGHTS**, dated as of February 1, 2017 (this “Release”), is made by **JPMORGAN CHASE BANK, N.A.** (the “Assignor”), in its capacity as administrative agent under that certain Credit Agreement dated as of December 27, 2013 (as amended by Amendment No. 1 to the Credit Agreement, dated as of June 24, 2015 and Amendment No. 2 to the Credit Agreement, dated as of January 27, 2017, and as may be further amended, amended and restated, extended, supplemented or otherwise modified from time to time, the “Credit Agreement”), in favor of the parties set forth on Schedule 1 hereto (the “Assignees”). Capitalized terms used but not defined herein shall have the meanings set forth in the Credit Agreement.

WITNESSETH:

WHEREAS, the Assignor and the Assignees are parties to (i) that certain Security Agreement, dated as of December 27, 2013 (as amended, amended and restated, extended, supplemented or otherwise modified from time to time, the “Security Agreement”) and (ii) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of December 27, 2013, (iii) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of March 14, 2014, (iv) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of May 16, 2014, (v) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of August 12, 2014, (vi) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of November 11, 2014, (vii) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of March 6, 2015, (viii) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of May 8, 2015, (ix) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of August 13, 2015, (x) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of November 4, 2015, (xi) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of February 29, 2016, (xii) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of May 10, 2016, (xiii) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of August 9, 2016, (xiv) that certain Notice and Confirmation of Grant of Security Interest in Patents, dated as of November 10, 2016, (the “Patent Security Agreements”);

WHEREAS, pursuant to the Patent Security Agreements, the Assignees pledged and granted to the Assignor a continuing security interest in and Lien on the Assignees’ right, title and interest in and to the items set forth on Schedule 2 hereto (collectively, the “Patent Collateral”);

WHEREAS, the Patent Security Agreements were recorded with the United States Patent and Trademark Office (“USPTO”) as follows: in respect of CastTV Inc. and Tribune Media Services, LLC on January 23, 2014, on Reel 032125, Frame 0204; in respect of Gracenote, Inc. on March 19, 2014, on Reel 032480, Frame 0272; in respect of CastTV Inc. and Tribune Digital Ventures, LLC on May 28, 2014, on Reel 032974, Frame 0785; in respect of

Tribune Digital Ventures, LLC on August 26, 2015, on Reel 036474, Frame 0455; in respect of Gracenote, Inc. and Tribune Digital Ventures, LLC on November 13, 2014, on Reel 034231, Frame 0333; in respect of Gracenote, Inc. and Tribune Digital Ventures, LLC on March 23, 2015, on Reel 035249, Frame 0937; in respect of Gracenote, Inc. on May 14, 2015, on Reel 036354, Frame 0902; in respect of CastTV Inc. and Gracenote, Inc. on August 14, 2015, on Reel 036354, Frame 0793; in respect of CastTV Inc. and Gracenote, Inc. on January 21, 2016, on Reel 037569, Frame 0270; in respect of Gracenote, Inc. on March 1, 2016, on Reel 037960, Frame 0805; in respect of Gracenote, Inc. on May 11, 2016, on Reel 038679, Frame 0458; in respect of CastTV Inc. and Gracenote, Inc. on August 12, 2016, on Reel 039667, Frame 0565; in respect of Tribune Digital Ventures LLC and Gracenote, Inc. on November 14, 2016, on Reel 040306, Frame 0814; and

WHEREAS, the Assignees desire that the Assignor terminate and release its continuing security interest in and Lien on the Assignees' right, title and interest in and to the Patent Collateral.

NOW THEREFORE, in consideration of the premises, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. *Release of Security Interest in Patent Collateral.* The Assignor hereby terminates, releases and discharges fully, without representation, warranty or recourse of any kind, its continuing security interest in and Lien on the Assignees' right, title and interest in and to the Patent Collateral, and reassigns and transfers to the Assignees all right, title and interest that the Assignor may have in the Patent Collateral.

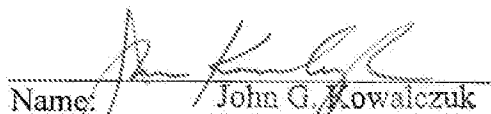
SECTION 2. *Recordation of Release.* The Assignor hereby authorizes the Assignees, or the Assignees' authorized representative or representatives, as the case may be, to record this Release with the USPTO. The Assignor further authorizes and requests that the Commissioner for Patent in the USPTO, and any other necessary United States government officer, record this Release; it being understood that such recordation shall be at the Assignees' sole expense.

SECTION 3. *Governing Law.* This Release shall be governed by and construed in accordance with the laws of the State of New York.

[Signature Page Follows]

IN WITNESS WHEREOF this Release of Security Interest in Patent Rights has been duly executed as of the date first written above.

JPMORGAN CHASE BANK, N.A., as
Assignor

By: 
Name: John G. Kowaleczuk
Title: Executive Director

{Signature Page to Patent Release}

PATENT
REEL: 041656 FRAME: 0815

SCHEDULE 1
to
RELEASE OF SECURITY INTEREST IN PATENT RIGHTS
ASSIGNEES

Gracenote, Inc.
CastTV Inc.
Tribune Media Services, LLC
Tribune Digital Ventures, LLC

SCHEDULE 2
to
RELEASE OF SECURITY INTEREST IN PATENT RIGHTS

PATENT REGISTRATIONS AND APPLICATIONS

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF DECEMBER 27, 2013

USPTO RECORDATION ON JANUARY 23, 2014 AT REEL/FRAME 032125/0204

Issued Patents

Title	Pat. No.	Issue Date	Owner
Clustering Multimedia Search	8285718	10/09/12	CastTV Inc.
Facilitating Media Content	8489584	07/16/13	CastTV Inc.
Indexing Multimedia Web Content	8489609	07/16/13	CastTV Inc.

Title	Pat. No.	Issue Date	Owner
Real World/Virtual World Correlation System Using a 3D Graphics Pipeline	6778171	08/17/04	Tribune Media Services, LLC
System and Method for Determining and Notifying Users of the Expected Time-Channel for a Television Series	7299483	11/20/07	Tribune Media Services, LLC
Distribution of Real-Time Entertainment Scheduling Data	7971218	06/28/11	Tribune Media Services, LLC

Patent Applications

Title	App. No.	Filing Date	Owner
Methods and System for Proxy Component to Perform Plurality of Operations for Applying to an Object	12/608349	09/10/12	CastTV Inc.
Facilitating Media Content Search	13/904505	05/29/13	CastTV Inc.
Indexing Multimedia Web Content	13/904485	05/29/13	CastTV Inc.
Facilitating Video Search	11/891301	08/08/07	CastTV Inc.
Video Matching Service to Offline Counterpart	13/460477	04/30/12	CastTV Inc.

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF MARCH 14, 2014

USPTO RECORDATION ON MARCH 19, 2014 AT REEL/FRAME 032480/0272

Issued Patents

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
METHOD OF ENHANCING RENDERING OF A CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003DE2	8/13/01	1976124.6	60140135.2	10/7/09
METHOD AND SYSTEM FOR OBTAINING	Gracernote, Inc.	2167.003DE3	8/13/01	91723809	60147801	3/20/13

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
INFORMATION						
METHOD OF ENHANCING RENDERING OF A CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003EP2	8/13/01	1976124.6	1314110	10/7/09
METHOD AND SYSTEM FOR OBTAINING INFORMATION	Gracernote, Inc.	2167.003EP3	8/13/01	9172380.9	2136306	3/20/13
METHOD AND SYSTEM FOR OBTAINING INFORMATION	Gracernote, Inc.	2167.003ES3	8/13/01	91723809	2136306	3/20/13
METHOD OF ENHANCING RENDERING OF A CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003FR2	8/13/01	1976124.6	1314110	10/7/09
METHOD AND SYSTEM FOR OBTAINING INFORMATION	Gracernote, Inc.	2167.003FR3	8/13/01	91723809	2136306	3/20/13
METHOD OF ENHANCING RENDERING OF A CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003GB2	8/13/01	1976124.6	1314110	10/7/09
METHOD AND SYSTEM FOR OBTAINING INFORMATION	Gracernote, Inc.	2167.003GB3	8/13/01	91723809	2136306	3/20/13
METHOD AND SYSTEM FOR OBTAINING INFORMATION	Gracernote, Inc.	2167.003IT3	8/13/01	91723809	2136306	3/20/13
METHOD OF ENHANCING RENDERING OF CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003US1	8/21/01	09/933,845	7904503	3/8/11
METHOD OF ENHANCING RENDERING OF A CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003US2	5/12/06	11/432,989	7849131	12/7/10
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004DE2	2/7/02	2716271.8	60228202	8/13/08
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004EP2	2/7/02	2716271.8	1362485	8/13/08
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004FR2	2/7/02	2716271.8	1362485	8/13/08
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004GB2	2/7/02	2716271.8	1362485	8/13/08

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004JP1	2/7/02	2002-565363	4723171	4/15/11
GENERATING AND MATCHING HASHED OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004KR1	2/7/02	10-2002-7013737	10-893671	4/9/09
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004US1	2/11/02	10/073,772	7549052	6/16/09
GENERATING AND MATCHING HASHES OF MULTIMEDIA CONTENT	Gracernote, Inc.	2167.004US2	5/7/07	11/800,904	7921296	4/5/11
EFFICIENT STORAGE OF FINGERPRINTS	Gracernote, Inc.	2167.005US1	8/2/04	10/503,245	7477739	1/13/09
METHOD AND SYSTEM FOR MEDIA NAVIGATION	Gracernote, Inc.	2167.011US1	3/9/07	11/716,269	7908273	3/15/11
PLAYBACK DEVICE HAVING TEXT DISPLAY AND COMMUNICATION WITH REMOTE DATABASE OF TITLES	Gracernote, Inc.	2167.017JP1	10/4/02	2003-537073	4045330	11/30/07
PLAYBACK DEVICE HAVING TEXT DISPLAY AND COMMUNICATION WITH REMOTE DATABASE OF TITLES	Gracernote, Inc.	2167.017JP2	10/4/02	2006-330002	4234170	12/19/08
AUTOMATIC IDENTIFICATION OF DVD TITLE USING INTERNET TECHNOLOGIES AND FUZZY MATCHING TECHNIQUES	Gracernote, Inc.	2167.019US1	12/5/01	10/002,627	6983289	1/3/06
AUTOMATIC IDENTIFICATION OF DVD TITLE USING INTERNET TECHNOLOGIES AND FUZZY MATCHING TECHNIQUES	Gracernote, Inc.	2167.019US3	8/13/04	10/917,686	7856443	12/21/10
METHOD AND SYSTEM FOR ACCESSING WEB PAGES BASED ON PLAYBACK OF RECORDINGS	Gracernote, Inc.	2167.022US1	8/20/07	11/841,784	7680902	3/16/10
METHOD AND SYSTEM FOR ACCESSING WEB PAGES BASED ON PLAYBACK OF RECORDINGS	Gracernote, Inc.	2167.022US3	1/12/10	12/686,216	7945645	5/17/11
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025DE2	4/15/98	3006164.2	69841450	1/13/10

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025EP2	4/15/98	3006164.2	1324567	1/13/10
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025FR2	4/15/98	3006164.2	1324567	1/13/10
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025GB2	4/15/98	3006164.2	1324567	1/13/10
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025JP2	4/15/98	2007-59701	4331770	6/26/09
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025JP3	4/15/98	2007-74805	4477028	3/19/10
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025US1	4/15/97	08/838,082	5987525	11/16/99
METHOD AND SYSTEM FOR ACCESSING REMOTE DATA BASED ON PLAYBACK OF RECORDINGS	Gracernote, Inc.	2167.025US2	7/16/99	09/354,166	6230192	5/8/01
METHOD AND SYSTEM FOR ACCESSING WEB PAGES BASED ON PLAYBACK OF RECORDINGS	Gracernote, Inc.	2167.025US3	3/30/01	09/820,722	7308485	12/11/07
METHOD AND SYSTEM FOR ACCESSING WEB PAGES BASED ON PLAYBACK OF RECORDINGS	Gracernote, Inc.	2167.025US4	10/29/02	10/281,948	7167857	1/23/07
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025US5	7/16/99	09/354,164	6240459	5/29/01
METHOD AND SYSTEM FOR FINDING APPROXIMATE MATCHES	Gracernote, Inc.	2167.025US6	7/16/99	09/354,167	6061680	5/9/00

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
IN DATABASE						
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.025US7	7/16/99	09/354,165	6230207	5/8/01
AUTOMATIC IDENTIFICATION OF SOUND RECORDINGS	Gracernote, Inc.	2167.027DE1	7/22/02	2744877.8	1410380	4/28/10
AUTOMATIC IDENTIFICATION OF SOUND RECORDINGS	Gracernote, Inc.	2167.027FR1	7/22/02	2744877.8	1410380	4/28/10
AUTOMATIC IDENTIFICATION OF SOUND RECORDINGS	Gracernote, Inc.	2167.027GB1	7/22/02	2744877.8	1410380	4/28/10
AUTOMATIC IDENTIFICATION OF SOUND RECORDINGS	Gracernote, Inc.	2167.027US1	7/22/02	10/200,034	7328153	2/5/08
AUTOMATIC IDENTIFICATION OF SOUND RECORDINGS	Gracernote, Inc.	2167.027US2	2/4/08	12/025,373	7881931	2/1/11
NETWORK DELIVERY OF INTERACTIVE ENTERTAINMENT COMPLEMENTING AUDIO RECORDINGS	Gracernote, Inc.	2167.030US1	4/15/98	09/060,876	6154773	11/28/00
SYSTEM FOR COLLECTING USE DATA RELATED TO PLAYBACK OF RECORDINGS	Gracernote, Inc.	2167.030US2	8/24/99	09/379,589	6330593	12/11/01
SYSTEM FOR SYNCHRONIZING PLAYBACK OF RECORDINGS AND DISPLAY BY NETWORKED COMPUTER SYSTEMS	Gracernote, Inc.	2167.030US3	8/24/99	09/379,588	6161132	12/12/00
FINDING DATABASE MATCH FOR FILE BASED ON FILE CHARACTERISTICS	Gracernote, Inc.	2167.031US1	7/21/00	09/621,619	7228280	6/5/07
MULTIPLE STEP IDENTIFICATION OF RECORDINGS	Gracernote, Inc.	2167.032JP1	7/31/02	2003-517800	4398242	10/30/09
MULTIPLE STEP IDENTIFICATION OF RECORDINGS	Gracernote, Inc.	2167.032KR1	7/31/02	10-2004-7001538	10-0961461	5/27/10
MULTIPLE STEP IDENTIFICATION OF RECORDINGS	Gracernote, Inc.	2167.032US2	3/9/10	12/720,537	8468357	6/18/13
MUSIC SEARCHING METHODS BASED ON HUMAN PERCEPTION	Gracernote, Inc.	2167.033US1	4/21/00	09/556,086	8326584	12/4/12

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
DEVICE AND METHOD FOR ANALYSING AN AUDIO SIGNAL IN VIEW OF OBTAINING RHYTHM INFORMATION	Gracernote, Inc.	2167.042DE1	5/14/01	10123366.3	10123366.3	8/8/02
DEVICE AND METHOD FOR ANALYSING AN AUDIO SIGNAL IN VIEW OF OBTAINING RHYTHM INFORMATION	Gracernote, Inc.	2167.042EP1	4/25/02	2745267.1	1388145	10/13/04
DEVICE AND METHOD FOR ANALYSING AN AUDIO SIGNAL IN VIEW OF OBTAINING RHYTHM INFORMATION	Gracernote, Inc.	2167.042FR1	4/25/02	2745267.1	1388145	10/13/04
DEVICE AND METHOD FOR ANALYSING AN AUDIO SIGNAL IN VIEW OF OBTAINING RHYTHM INFORMATION	Gracernote, Inc.	2167.042JP1	4/25/02	2002-590149	3914878	2/9/07
DEVICE FOR THE ANALYSIS OF AN AUDIO SIGNAL WITH REGARD TO THE RHYTHM INFORMATION USING AN AUTO-CORRELATION FUNCTION	Gracernote, Inc.	2167.043DE2	5/10/02	2742987.7	50202914.5	4/27/05
DEVICE FOR THE ANALYSIS OF AN AUDIO SIGNAL WITH REGARD TO THE RHYTHM INFORMATION USING AN AUTO-CORRELATION FUNCTION	Gracernote, Inc.	2167.043EP1	5/10/02	2742987.7	1371055	4/27/05
DEVICE FOR THE ANALYSIS OF AN AUDIO SIGNAL WITH REGARD TO THE RHYTHM INFORMATION USING AN AUTO-CORRELATION FUNCTION	Gracernote, Inc.	2167.043GB1	5/10/02	2742987.7	1371055	4/27/05
APPARATUS FOR ANALYZING AN AUDIO SIGNAL WITH REGARD TO RHYTHM INFORMATION OF THE AUDIO SIGNAL BY USING AN AUTOCORRELATION FUNCTION	Gracernote, Inc.	2167.043US1	11/14/03	10/713,691	7012183	3/14/06
METHOD AND DEVICE FOR THE EXTRACTION OF A MELODY ON WHICH AN AUDIO SIGNAL IS BASED	Gracernote, Inc.	2167.046DE2	9/23/05	5790019.3	50 2005 009 467.0-08	4/21/10

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
METHOD AND DEVICE FOR THE EXTRACTION OF A MELODY ON WHICH AN AUDIO SIGNAL IS BASED	Gracernote, Inc.	2167.046EP1	9/23/05	5790019.3	1797552	4/21/10
METHOD AND DEVICE FOR THE EXTRACTION OF A MELODY ON WHICH AN AUDIO SIGNAL IS BASED	Gracernote, Inc.	2167.046FR1	9/23/05	5790019.3	1797552	4/21/10
METHOD AND DEVICE FOR THE EXTRACTION OF A MELODY ON WHICH AN AUDIO SIGNAL IS BASED	Gracernote, Inc.	2167.046GB1	9/23/05	5790019.3	1797552	4/21/10
METHOD AND DEVICE FOR GENERATING AND DETECTING A FINGERPRINT FUNCTIONING AS A TRIGGER MARKER IN A MULTIMEDIA SIGNAL	Gracernote, Inc.	2167.052US1	1/10/06	10/564,297	8020000	9/13/11
APPARATUS AND METHOD FOR DETERMINING A PROMINENT TEMPO OF AN AUDIO WORK	Gracernote, Inc.	2167.057US1	5/6/09	12/436,718	8071869 Notwithstanding the fact that the USPTO's chain of title record for this patent shows an unreleased lien held by "Millennial Research Corporation," such entity is not and never has been a creditor of the Company, nor has it ever held a security interest in this patent.	12/6/11
METHOD AND DEVICE FOR GENERATING AND DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO	Gracernote, Inc.	2167.068DE1	7/20/04	4744615.8	602004008936 T2	9/12/07
METHOD AND DEVICE FOR GENERATING AND DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO	Gracernote, Inc.	2167.068EP1	7/20/04	4744615.8	1652385	9/12/07
METHOD AND DEVICE FOR GENERATING AND	Gracernote, Inc.	2167.068FR1	7/20/04	4744615.8	1652385	9/12/07

Title	Current Owner	SLW File Number	Filing Date	Serial Number	Patent No.	Issue Date
DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO						
METHOD AND DEVICE FOR GENERATING AND DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO	Gracernote, Inc.	2167.068GB1	7/20/04	4744615.8	1652385	9/12/07
METHOD AND DEVICE FOR GENERATING AND DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO	Gracernote, Inc.	2167.068US1	1/20/06	10/566,003	7907211	3/15/11
METHOD AND DEVICE FOR GENERATING AND DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO	Gracernote, Inc.	2167.068US2	2/9/11	13/024,069	8358376	1/22/13
FINGERPRINT DATABASE UPDATING METHOD, CLIENT AND SERVER	Gracernote, Inc.	2167.069US1	5/12/04	10/495,283	7523312	4/21/09
STATIC TOC INDEXING SYSTEM AND METHOD	Gracernote, Inc.	2167.071US1	12/6/10	12/961,470	8472289	6/25/13
AUDIO FINGERPRINTING SYSTEM AND METHOD	Gracernote, Inc.	2167.074US1	9/23/03	10/668,926	7013301	3/14/06
SYSTEM AND METHOD FOR RECOGNIZING AUDIO PIECES VIA AUDIO FINGERPRINTING	Gracernote, Inc.	2167.074US2	1/31/06	11/345,548	7487180	2/3/09
SHARING MUSIC ESSENCE IN A RECOMMENDATION SYSTEM	Gracernote, Inc.	2167.082US1	5/23/06	11/439,723	7613736	11/3/09
SYSTEM AND METHOD FOR GENERATING AND USING TABLE OF CONTENT (TOC) PRINTS	Gracernote, Inc.	2167.083US1	8/29/06	11/512,625	7590035	9/15/09
SELECTION OF CONTENT FROM A STREAM OF VIDEO OR AUDIO DATA	Gracernote, Inc.	2167.092US1	2/9/07	11/573,455	8406607	3/26/13

Pending Patent Applications

Title	Current Owner	SLW File Number	Filing Date	Serial Number
METHOD OF ENHANCING RENDERING OF CONTENT ITEM, CLIENT SYSTEM AND SERVER SYSTEM	Gracernote, Inc.	2167.003US3	03/04/11	13/041089
SYNTHESIZING A PRESENTATION OF A MULTIMEDIA EVENT	Gracernote, Inc.	2167.020US1	9/26/08	12/239082
MULTIPLE STEP IDENTIFICATION OF RECORDINGS	Gracernote, Inc.	2167.032EP1	7/31/02	2763377.5
MULTIPLE STEP IDENTIFICATION OF RECORDINGS	Gracernote, Inc.	2167.032US1	7/31/02	10/208,189
MULTIPLE STEP IDENTIFICATION OF RECORDINGS	Gracernote, Inc.	2167.032US3	3/9/10	12/720,550
MUSIC SEARCHING METHODS BASED ON HUMAN	Gracernote, Inc.	2167.033US2	11/2/12	13/667,683

PERCEPTION				
METHOD AND DEVICE FOR GENERATING AND DETECTING A FINGERPRINT FUNCTIONING AS A TRIGGER MARKER IN A MULTIMEDIA SIGNAL	Gracenote, Inc.	2167.052US2	8/29/11	13/220,267
METHOD AND DEVICE FOR GENERATING AND DETECTING A FINGERPRINT FUNCTIONING AS A TRIGGER MARKER IN A MULTIMEDIA SIGNAL	Gracenote, Inc.	2167.052US3	01/10/2014	14/151,879
SYSTEMS, METHODS, AND APPARATUS FOR GENERATING AN AUDIO-VISUAL PRESENTATION USING CHARACTERISTICS OF AUDIO, VISUAL AND SYMBOLIC MEDIA OBJECTS	Gracenote, Inc.	2167.055US1	1/6/11	12/985,690
METHODS AND APPARATUS FOR DETERMINING A MOOD PROFILE ASSOCIATED WITH MEDIA DATA	Gracenote, Inc.	2167.056US1	6/23/09	12/489,861
METHOD AND DEVICE FOR GENERATING AND DETECTING FINGERPRINTS FOR SYNCHRONIZING AUDIO AND VIDEO	Gracenote, Inc.	2167.068US3	1/11/13	13/739,349
SYSTEMS AND METHODS FOR GENERATING AND EMPLOYING A SOCIAL MEDIA GRAPH	Gracenote, Inc.	2167.073US1	5/24/12	13/480,339
SYSTEM AND METHOD FOR PROVIDING ACOUSTIC ANALYSIS DATA	Gracenote, Inc.	2167.075US6	9/4/12	13/603,074
MUSIC SEARCHING SYSTEM AND METHOD	Gracenote, Inc.	2167.076US2	3/3/09	12/397,153
INTERACTIVE STREAMING CONTENT IDENTIFICATION	Gracenote, Inc.	2167.077EP1	6/29/12	12/174527.7
INTERACTIVE STREAMING CONTENT IDENTIFICATION	Gracenote, Inc.	2167.077JP1	6/29/12	2012-159985
INTERACTIVE STREAMING CONTENT APPARATUS SYSTEMS AND METHODS	Gracenote, Inc.	2167.077US1	11/2/11	13/287,871
MEDIA SOURCE IDENTIFICATION	Gracenote, Inc.	2167.084US1	9/1/11	13/224,172
MEDIA SOURCE IDENTIFICATION	Gracenote, Inc.	2167.084WO1	8/21/12	PCT/US2012/051745
USER INTERFACE TO MEDIA FILES	Gracenote, Inc.	2167.085US1	1/6/12	13/345,615
USER PROFILE BASED ON CLUSTERING TIERED DESCRIPTIONS	Gracenote, Inc.	2167.086US1	9/12/12	13/611,740
USER PROFILE BASED ON CLUSTERING TIERED DESCRIPTIONS	Gracenote, Inc.	2167.086WO1	8/19/13	PCT/US2013/055576
METHOD AND SYSTEM FOR REMOTELY CONTROLLING CONSUMER ELECTRONIC DEVICES	Gracenote, Inc.	2167.087US1	4/14/10	12/760,004
METHOD AND SYSTEM FOR PRESENTING ADDITIONAL CONTENT AT A MEDIA SYSTEM	Gracenote, Inc.	2167.089US1	10/31/11	13/286,138
SELECTION OF CONTENT FROM A STREAM OF VIDEO OR AUDIO DATA	Gracenote, Inc.	2167.092EP1	8/9/05	5773404.8
METHOD AND APPARATUS FOR SELECTION OF CONTENT FROM A STREAM OF DATA	Gracenote, Inc.	2167.092US2	2/27/13	13/778,439
IDENTIFYING VIDEO CONTENT VIA FINGERPRINT MATCHING	Gracenote, Inc.	2167.093US1	1/7/13	13/735,426
INSERTING ADVERTISEMENTS INTO VIDEO CONTENT	Gracenote, Inc.	2167.095US1	3/14/13	13/826,282
AUTHORIZING DEVICES BASED ON IDENTIFYING CONTENT DISTRIBUTOR	Gracenote, Inc.	2167.096US1	3/14/13	13/826,606
DETECTING AN EVENT WITHIN INTERACTIVE MEDIA	Gracenote, Inc.	2167.097US1	3/12/13	13/795,877
SEARCH AND IDENTIFICATION OF VIDEO CONTENT	Gracenote, Inc.	2167.098PRV	1/7/13	61/749,819
SEARCH AND IDENTIFICATION OF VIDEO CONTENT	Gracenote, Inc.	2167.098US1	3/15/13	13/839,782
MATCHING VERSIONS OF A KNOWN SONG TO AN UNKNOWN SONG	Gracenote, Inc.	2167.099US1	3/15/13	13/838,810
DISPLAYING AN ACTIONABLE ELEMENT OVER	Gracenote, Inc.	2167.100US1	9/6/13	14/020,295

PLAYING CONTENT				
MODIFYING PLAYBACK OF CONTENT USING PRE-PROCESSED PROFILE INFORMATION	Gracenote, Inc.	2167.101US1	9/6/13	14/020,420
INSERTING INFORMATION INTO PLAYING CONTENT	Gracenote, Inc.	2167.102US1	9/6/13	14/020,480
IDENTIFYING VIDEO CONTENT VIA COLOR-BASED FINGERPRINT MATCHING	Gracenote, Inc.	2167.103US1	10/23/13	14/061,043
AUDIO FINGERPRINTING	Gracenote, Inc.	2167.104US1	12/16/2013	14/107,923
MEDIA SERVICE	Gracenote, Inc.	2167.107US1	12/19/2013	14/135,173
MODIFICATION OF ELECTRONIC SYSTEM OPERATION BASED ON ACOUSTIC AMBIENCE CLASSIFICATION	Gracenote, Inc.	2167.109US1	01/03/2014	14/147,366
INTERACTIVE PROGRAMMING GUIDE	Gracenote, Inc.	2167.110US1	01/03/2014	14/147,320

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF MAY 16, 2014

USPTO RECORDATION ON MAY 28, 2014 AT REEL/FRAME 032974/0785

Pending Patent Applications

Title	Owner	App. No.	Filing Date
Facilitating Video Search	CastTV Inc.	14/259083	4/22/2014

Title	Owner	Appl. No.	Filing Date
Use of an Anticipated Travel Duration as a Basis to Generate a Playlist	Tribune Digital Ventures, LLC	14/196932	3/4/2014
Generating a Playlist on a Data Generation Attribute	Tribune Digital Ventures, LLC	14/196870	3/4/2014
Dynamic Playout of Audible Punctuation Connection with Playout of Playlist Content	Tribune Digital Ventures, LLC	14/196789	3/4/2014
Personalized News Program	Tribune Digital Ventures, LLC	14/196774	3/4/2014
Real Time Popularity Based Audible Content Acquisition	Tribune Digital Ventures, LLC	14/196908	3/4/2014
Personalized News Program	Tribune Digital Ventures, LLC	14220970	3/20/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	61/968183	3/20/2014

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF AUGUST 12, 2014

USPTO RECORDATION ON AUGUST 26, 2015 AT REEL/FRAME 036474/0455

Pending Patent Applications

Title	Owner	App. No.	Filing Date
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	14/280337	5/16/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	14/280350	5/16/2014
Use of a Remainder Duration as a Basis to Generate a Playlist	Tribune Digital Ventures, LLC	14/281356	5/19/2014
Computing Device and Corresponding Method for Generating Data Representing Text	Tribune Digital Ventures, LLC	14/322611	7/2/2014

Computing Device and Corresponding Method for Generating Data Representing Text	Tribune Digital Ventures, LLC	14/322633	7/2/2014
Computing Device and Corresponding Method for Generating Data Representing Text	Tribune Digital Ventures, LLC	14322627	7/2/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	14/341503	7/25/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	14/341521	7/25/2014

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF NOVEMBER 11, 2014

USPTO RECORDATION ON NOVEMBER 13, 2014 AT REEL/FRAME 034231/0333

Issued Patents

Title	Owner	Reg. No.	Issue Date
Music Searching Methods Based on Human Perception	Gracenote, Inc.	8805657	8/12/2014
Methods and Apparatus for Determining a Mood Profile Associated with Media Data	Gracenote, Inc.	8805854	8/12/2014
Method and Device for Generating and Detecting Fingerprints for Synchronizing Audio and Video	Gracenote, Inc.	8817183	8/26/2014
User Interface To Media Files	Gracenote, Inc.	8855798	10/7/2014
Method and System for Presenting Additional Content at a Media System	Gracenote, Inc.	8863165	10/14/2014

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Text Detection in Video	Gracenote, Inc.	5/28/2014	14/289,142
Methods and Apparatus for Determining a Mood Profile Associated with Media Data	Gracenote, Inc.	6/23/2014	14/312,007
Method and Device for Generating and Detecting Fingerprints for Synchronizing Audio and Video	Gracenote, Inc.	7/16/2014	14/333,190
Content-Based Association of Device to User	Gracenote, Inc.	7/30/2014	14/446,559
User Interface to Media Files	Gracenote, Inc.	8/18/2014	14/462,402
Method and System for Presenting Additional Content as a Media System	Gracenote, Inc.	9/3/2014	14/475,971

Title	Owner	App. No.	Filing Date
Electronic Media-Program Guide	Tribune Digital Ventures, LLC	62/075,046	11/4/2014

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF MARCH 6, 2015

USPTO RECORDATION ON MARCH 23, 2015 AT REEL/FRAME 035249/0937

Pending Patent Applications

Title	Owner	App. No.	Filing Date
Media Service	Gracenote, Inc.	PCT/US14/66428	11/19/2014
Modifying Operations Based on Acoustic Ambiance Classification	Gracenote, Inc.	PCT/US14/71105	12/18/2014
Interactive Programming Guide	Gracenote, Inc.	PCT/US14/72977	12/31/2014
Approaches for Categorizing Content Stations	Gracenote, Inc.	62/099398	1/2/2015

Approaches for Recognizing Live Performances	Gracenote, Inc.	62/099399	1/2/2015
Approaches for Selecting Music Mood	Gracenote, Inc.	62/099401	1/2/2015
Systems, methods and Apparatus for Generating an Audio-Visual Presentation Using Characteristics of Audio, Visual and Symbolic Media Objects	Gracenote, Inc.	14/632140	2/26/2015

Title	Owner	App. No.	Filing Date
Playout of Audible Punctuation in Connection with Playout of Playlist Content	Tribune Digital Ventures, LLC	PCT/US14/71206	12/18/2014
Personalized News Program	Tribune Digital Ventures, LLC	PCT/US14/72217	12/23/2014
Real Time Popularity Based Audible Content Acquisition	Tribune Digital Ventures, LLC	PCT/US14/72111	12/23/2014
Audio File Quality and Accuracy Assessment	Tribune Digital Ventures, LLC	PCT/US14/72641	12/30/2014
Use of an Anticipated Travel Duration as a Basis to Generate a Playlist	Tribune Digital Ventures, LLC	PCT/US14/72652	12/30/2014
Use of a Remainder Duration as a Basis to Generate a Playlist	Tribune Digital Ventures, LLC	PCT/US14/72653	12/30/2014
Generating a Playlist Based on a Data Generation Attribute	Tribune Digital Ventures, LLC	PCT/US14/72812	12/30/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	PCT/US14/72817	12/30/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	PCT/US14/72821	12/30/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	PCT/US14/72825	12/30/2014
Personalized News Program	Tribune Digital Ventures, LLC	PCT/US14/72829	12/30/2014
Retrieval and Playout of Media Content	Tribune Digital Ventures, LLC	PCT/US14/72830	12/30/2014
Method for Gathering Data Representing Text	Tribune Digital Ventures, LLC	PCT/US14/72836	12/30/2014

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF MAY 8, 2015

USPTO RECORDATION ON AUGUST 14, 2015 AT REEL/FRAME 036354/0902

Issued Patents

Title	Owner	Reg No.	Issue Date
Systems, Methods, and Apparatus for Generating an Audio-Visual Presentation Using Characteristics of Audio, Visual and Symbolic Media Objects	Gracenote, Inc.	8996538	3/31/2015
Authorizing Devices Based on Identifying Content Distributor	Gracenote, Inc.	8997164	3/31/2015
Method and System for Remotely Controlling Consumer Electronics	Gracenote, Inc.	9015741	4/21/2015

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Authorizing Devices Based on Identifying Content Distributor	Gracenote, Inc.	3/6/2015	14/640,253
Targeted Ad Redistribution	Gracenote, Inc.	3/11/2015	PCT/US2015019955
Method and Device for Generating and Detecting a Fingerprint Functioning as a Trigger Marker in a Multimedia Signal	Gracenote, Inc.	3/16/2015	14/659,044
Method and System for Remotely Controlling Consumer Electronic	Gracenote, Inc.	3/17/2015	14/659,971

Devices			
Content-Based Association of Device to User	Gracernote, Inc.	3/30/2015	PCT/US2015023430
Video-Fingerprinting	Gracernote, Inc.	4/22/2015	PCT/US2015027117
Synthesizing a Presentation of a Multimedia Event	Gracernote, Inc.	4/23/2015	14/694,624
Text Detection in Video	Gracernote, Inc.	4/23/2015	14/694,719
Media Source Identification	Gracernote, Inc.	4/24/2015	14/695,394

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF AUGUST 13, 2015

USPTO RECORDATION ON AUGUST 14, 2015 AT REEL/FRAME 036354/0793

Issued Patents

Title	Owner	Reg. No.	Issue Date
Methods and Apparatus for Providing a Scalable Identification of Digital Video Sequences	Gracernote, Inc.	8229227	7/24/2007
Method and Apparatus for Multi-Dimensional Content Search and Video Identification	Gracernote, Inc.	8171030	5/1/2012
Media Fingerprinting and Identification System	Gracernote, Inc.	8195689	6/5/2012
Multi-Media Content Identification Using Multi-Level Content Signature Correlation and Fast Similarity Search	Gracernote, Inc.	8335786	12/18/2012
Media Fingerprinting and Identification System	Gracernote, Inc.	8364703	1/29/2013
Digital Video Fingerprinting Based on Resultant Weighted Gradient Orientation Computation	Gracernote, Inc.	8385644	2/26/2013
Digital Video Content Fingerprinting Based on Scale Invariant Interest Region Detection with an Array of Antistropic Filters	Gracernote, Inc.	8189945	5/29/2013
Scalable, Adaptable and Manageable System for Multimedia Identification	Gracernote, Inc.	8655878	2/18/2014
Digital Video Content Fingerprinting Using Image Pixel Intensity and Color Information	Gracernote, Inc.	8666152	3/4/2014
Methods and Apparatus for Providing a Scalable Identification of Digital Video Sequences	Gracernote, Inc.	8666168	3/4/2014
Media Fingerprinting and Identification System	Gracernote, Inc.	8688731	4/1/2014
Digital Video Content Fingerprinting Based on Scale Invariant Region Detection with an Array of Anisotropic Filters	Gracernote, Inc.	8781245	7/15/2014
Distributed and Tiered Architecture for Content Search and Content Monitoring	Gracernote, Inc.	8959108	2/17/2015
Scalable, Adaptable and Manageable System for Multimedia Identification	Gracernote, Inc.	8965863	2/24/2015
Media Fingerprinting and Identification System	Gracernote, Inc.	9053104	6/9/2015
Scalable, Adaptable and Manageable System for Multimedia Identification	Gracernote, Inc.	9058355	6/16/2015
Method and Device for Generating and Detecting a Fingerprint Functioning as a Trigger Marker in a Multimedia Signal	Gracernote, Inc.	9066114	6/23/2015

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Database Query Processor	Gracernote, Inc.	12/23/2005	11/317,781
Database Query Processor	Gracernote, Inc.	12/28/2005	PCT/US05/47293
TV Content Segmentation, Categorization and Identification and Time-Aligned Applications	Gracernote, Inc.	12/15/2011	13/327,359
Method and Apparatus for Multi-Dimensional Content Search and Video Identification	Gracernote, Inc.	3/28/2012	13/432,914
Media Content Identification on Mobile Devices	Gracernote, Inc.	8/21/2012	13/590,701
Audio Content Fingerprinting Based on Two-Dimensional Constant Q-Factor	Gracernote, Inc.	10/9/2012	13/647,996

Transform Representation and Robust Audio Identification for Time-Aligned Applications			
Method for Efficient Database Formation and Search on Media Devices Acting Synchronously with Television Programming	Gracernote, Inc.	3/14/2013	13/826,502
Systems and Methods to Associate Multimedia Tags with User Modifiable Snippets Around a Tag Time for Efficient Storage and Sharing of Tagged Items	Gracernote, Inc.	4/17/2014	14/255,742
Digital Video Content Fingerprinting Based on Scale Invariant Interest Region Detection with an Array of Anisotropic Filters	Gracernote, Inc.	6/6/2014	14/298,261
Distributed and Tiered Architecture for Content Search and Content Monitoring	Gracernote, Inc.	1/5/2015	14/589,366
Media Fingerprinting and Identification System	Gracernote, Inc.	5/13/2015	14/711,054
Scalable, Adaptable and Manageable System for Multimedia Identification	Gracernote, Inc.	5/21/2015	14/718,218
System and Method for Cross-Library Recommendation	Gracernote, Inc.	6/3/2015	14/729,514
Method and Apparatus for Selection of Content From a Stream of Data	Gracernote, Inc.	7/1/2015	14/789,048
Text Detection in Video	Gracernote, Inc.	5/27/2015	PCT/US2015/032618

Title	Current Owner	Application Number	Filing Date
Clustering Multimedia Search	CastTV Inc.	14/748,631	6/24/2015

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF NOVEMBER 4, 2015

USPTO RECORDATION ON JANUARY 21, 2016 AT REEL/FRAME 037569/0270

Issued Patents

Title	Owner	Reg No.	Issue Date
Synthesizing a Presentation of a Multimedia Event	Gracernote, Inc.	9106804	8/11/2015
Method and Apparatus for Selection of Content From a Stream of Data	Gracernote, Inc.	9143718	9/22/2015
Interactive Streaming Content Apparatus, Systems and Methods	Gracernote, Inc.	9160837	10/13/2015

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Search and Identification of Video Content	Gracernote, Inc.	8/17/2015	14/828,293
Machine-Control of a Device Based on Machine-Detecting Transitions	Gracernote, Inc.	9/9/2015	14/849,370
Media Fingerprinting and Identification System	Gracernote, Inc.	10/16/2015	14/885,110

Title	Owner	App. No.	Filing Date
Clustering Multimedia Search	CastTV Inc.	14/748,631	10/8/2015

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF FEBRUARY 29, 2016

USPTO RECORDATION ON MARCH 1, 2016 AT REEL/FRAME 037960/0805

Issued Patents

Title	Owner	Reg. No.	Issue Date
Systems, Methods and Apparatus for Generating an Audio-Visual Presentation Using Characteristics of Audio, Visual and Symbolic Media Objects	Gracernote, Inc.	9213747	12/15/2015
Distributed and Tiered Architecture for Content Search and Content Monitoring	Gracernote, Inc.	9262421	2/16/2016

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Audio Matching Based on Harmonogram	Gracernote, Inc.	12/28/2015	14/980,622
Machine-Led Mood Change	Gracernote, Inc.	12/28/2015	14/980,650
Audio Matching Based on Harmonogram	Gracernote, Inc.	12/29/2015	PCT/US2015/067814
Machine-Led Mood Change	Gracernote, Inc.	12/29/2015	PCT/US2015/067889
Broadcast Profiling System	Gracernote, Inc.	12/29/2015	14/982,293
Broadcast Profiling System	Gracernote, Inc.	12/30/2015	PCT/US2015/068088
Station Library Creation For a Media Service	Gracernote, Inc.	12/31/2015	14/986,153
Detecting an Event Within Interactive Media Including Spatialized Multi-Channel Audio Content	Gracernote, Inc.	1/21/2016	15/003,658
Audio Fingerprinting	Gracernote, Inc.	1/27/2016	15/008,042
Generating and Distributing Playlists with Related Music and Stories	Gracernote, Inc.	2/12/2016	15/043,059
Generating and Distributing Playlists with Music and Stories Having Related Moods	Gracernote, Inc.	2/12/2016	15/043,073
Generating and Distributing a Replacement Playlist	Gracernote, Inc.	2/12/2016	15/043,085
Distributed and Tiered Architecture for Content Search and Content Monitoring	Gracernote, Inc.	1/7/2016	14/990,565
Audio Content Fingerprinting Based on Two-Dimensional Constant Q-Factor Transform Representation and Robust Audio Identification for Time-Aligned Applications	Gracernote, Inc.	2/22/2016	15/050,123
Media Content Identification on Mobile Devices	Gracernote, Inc.	2/25/2016	15/053,064

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF MAY 10, 2016

USPTO RECORDATION ON MAY 11, 2016 AT REEL/FRAME 038679/0458

Issued Patents

Title	Owner	Reg. No.	Issue Date
Audio Content Fingerprinting Based on Two-Dimensional Constant Q-Factor Transform Representation and Robust Audio Identification for Time-Aligned Applications	Gracernote, Inc.	9299364	3/29/2016
Media Content Identification on Mobile Devices	Gracernote, Inc.	9313359	4/12/2016
Media Fingerprinting and Identification System	Gracernote, Inc.	9323754	4/26/2016
Method and Apparatus for Multi-Dimensional Content Search and Video Identification	Gracernote, Inc.	9323841	4/26/2016

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Selecting Balanced Clusters of Descriptive Vectors	Gracernote, Inc.	3/7/2016	15/063,170
Method for Valuing and Targeting Advertising Using Media Content Recognition	Gracernote, Inc.	3/11/2016	62/306,692

A Method to Differentiate and Classify Fingerprints Using Fingerprints Neighborhood Analysis	Gracernote, Inc.	3/11/2016	62/306,700
Robust Audio Identification with Interference Cancellation	Gracernote, Inc.	3/11/2016	62/306,707
Digital Video Fingerprinting Using Motion Segmentation	Gracernote, Inc.	3/11/2016	62/306,719
Audio-Video Synchronization Based on Content Fingerfrinting	Gracernote, Inc.	3/11/2016	62/306,733
Actionable Event Detection for Enhanced Television Delivery and Ad Monitoring Based on Video/Audio Content Fingerprinting	Gracernote, Inc.	3/11/2016	62/306,755
Enabling Video/Audio-Content-Synchronous Applications on a Mobile Device	Gracernote, Inc.	3/11/2016	62/306,771
Media Fingerprinting and Identification System	Gracernote, Inc.	3/18/2016	15/073,858
Method and Apparatus for Multi-Dimensional Content Search and Video Identification	Gracernote, Inc.	3/23/2016	15/078,056
Digital Fingerprint Indexing	Gracernote, Inc.	4/20/2016	15/134,071
Video Fingerprinting	Gracernote, Inc.	4/22/2016	15/136,412
Content-Based Association of Device to User	Gracernote, Inc.	4/28/2016	15/140,706
Channel Identification with Multi-Match Detection and Disambiguation	Gracernote, Inc.	2/29/2016	62/301,293
Channel Identification with Multi-Match Detection and Disambiguation	Gracernote, Inc.	2/29/2016	62/301,616
Channel Identification with Multi-Match Detection and Disambiguation	Gracernote, Inc.	2/29/2016	62/301,623
Generating and Distributing Playlists	Gracernote, Inc.	1/4/2016	62/274,591
Video Classifier	Gracernote, Inc.	1/5/2016	62/275,081
Generating and Distributing Playlists with Related Music and Stories	Gracernote, Inc.	2/12/2016	15/043,059

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF AUGUST 9, 2016

USPTO RECORDATION ON AUGUST 12, 2016 AT REEL/FRAME 039667/0565

Issued Patents

Title	Owner	Reg. No.	Issue Date
Content-Based Association of Device to User	Gracernote, Inc.	9356914	5/31/2016
Method for Efficient Database Formation and Search on Media Devices Acting Synchronously with Television Programming	Gracernote, Inc.	9367544	6/14/2016
Detecting an Event within Interactive Media Including Spatialized Multi-Channel Audio Content	Gracernote, Inc.	9372531	6/21/2016
Modifying Playback of Content Using Pre-Preprocessed Profile Information	Gracernote, Inc.	9380383	6/28/2016
Digital Video Content Fingerprinting Based on Scale Invariant Interest Region Detection with an Array of Anisotropic Filters	Gracernote, Inc.	9396393	7/19/2016
Method and Device for Generating and Detecting a Fingerprint Functioning as a Trigger Marker in a Multimedia Signal	Gracernote, Inc.	9407962	8/2/2016
Method and Apparatus for Selection of Content from a Stream of Data	Gracernote, Inc.	9414008	8/9/2016

Title	Owner	Reg. No.	Issue Date
Facilitating Media Content Search	CastTV Inc.	9361374	6/7/2016
Facilitating Video Search	CastTV Inc.	9378280	6/28/2016

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Method for Efficient Database Formation and Search on Media Devices Acting Synchronously with Television Programming	Gracernote, Inc.	5/16/2016	15/155,428

Distributed and Tiered Architecture for Content Search and Content Monitoring	Gracenote, Inc.	5/24/2016	15/163,004
Method and Device for Generating and Detecting a Fingerprint Functioning as a Trigger Marker in a Multimedia Signal	Gracenote, Inc.	5/25/2016	15/164,605
Logo Recognition in Images and Video	Gracenote, Inc.	6/3/2016	15/172,826
Media Channel Identification with Multi-Match Detection and Disambiguation Based on Location	Gracenote, Inc.	6/10/2016	15/179,143
Responding to Remote Media Classification Queries Using Classifier Models and Content Parameters	Gracenote, Inc.	6/17/2016	15/185,616
Model-Based Media Classification Service Using Sensed Media Noise Characteristics	Gracenote, Inc.	6/17/2016	15/185,654
Digital Video Content Fingerprinting Based on Scale Invariant Interest Region Detection with an Array of Anisotropic Filters	Gracenote, Inc.	6/20/2016	15/186,901
Modifying Playback of Content Using Pre-Processed Profile Information	Gracenote, Inc.	6/20/2016	15/186,945
Artist Disambiguation	Gracenote, Inc.	6/28/2016	62/355,522
Method and Apparatus for Selection of Content from a Stream of Data	Gracenote, Inc.	7/7/2016	15/204,366
Computing System with Video Content Generation Feature	Gracenote, Inc.	7/13/2016	15/209,452
Computing System with DVE Template Selection and Video Content Item Generation Feature	Gracenote, Inc.	7/13/2016	15/209,483
Computing System with DVE Template Selection and Video Content Item Generation Feature	Gracenote, Inc.	7/13/2016	15/209,490
Computing System with DVE Template Selection and Video Content Item Generation Feature	Gracenote, Inc.	7/13/2016	15/209,515
Matching Audio Fingerprints	Gracenote, Inc.	7/26/2016	PCT/US16/044041
Matching Audio Fingerprints	Gracenote, Inc.	8/1/2016	15/115,733

Title	Owner	App. No.	Filing Date
Facilitating Media Content Search	CastTV Inc.	15/147,548	5/5/2016
Facilitating Video Search	CastTV Inc.	15/166,918	5/27/2016
Video Matching Service to Offline Counterpart	CastTV Inc.	15/187,663	6/20/2016

NOTICE AND CONFIRMATION OF GRANT OF SECURITY INTEREST IN PATENTS
DATED AS OF NOVEMBER 10, 2016

USPTO RECORDATION ON NOVEMBER 14, 2016 AT REEL/FRAME 040306/0814

Issued Patents

Title	Owner	Reg. No.	Issue Date
Method and Apparatus for Selection of Content from a Stream of Data	Gracenote, Inc.	9414008	8/9/2016
Distributed and Tiered Architecture for Content Search and Content Monitoring	Gracenote, Inc.	9436689	9/6/2016
Media Fingerprinting and Identification System	Gracenote, Inc.	9471674	10/18/2016

Title	Pat. No.	Issue Date	Owner
Real Time Popularity Based Audible Content Acquisition	9431002	8/30/2016	Tribune Digital Ventures, LLC
Generating a Playlist Based on a Data Generation Attribute	9454342	9/27/2016	Tribune Digital Ventures, LLC

Pending Patent Applications

Title	Owner	Filing Date	App. No.
Media Channel Identification with Video Multi-Match Detection and	Gracenote, Inc.	8/31/2016	15/253,354

Disambiguation Based on Audio Fingerprint			
Characterizing Audio Using Transchromagram	Gracnote, Inc.	8/31/2016	62/382,801
System and Methods for Generating Sporting Event Data for a Vehicle	Gracnote, Inc.	9/2/2016	62/382,802
Audio Identification Based on Data Structure	Gracnote, Inc.	9/9/2016	62/385,574
Method and Device for Generating and Detecting a Fingerprint Functioning as a Trigger Marker in a Multimedia Signal	Gracnote, Inc.	9/22/2016	15/273,185
Identifying Video Content Via Color-Based Fingerprint Matching	Gracnote, Inc.	10/6/2016	15/286,787
Identifying Media Content Via Fingerprint Matching	Gracnote, Inc.	10/6/2016	15/287,063
Method and System for Remotely Controlling Consumer Electronic Devices	Gracnote, Inc.	10/6/2016	15/287,116
Method and System for Remotely Controlling Consumer Electronic Devices	Gracnote, Inc.	10/13/2016	15/292,705
Method and Apparatus for Multi-Dimensional Content Search and Video Identification	Gracnote, Inc.	10/11/2016	15/290,364
TV Content Segmentation, Categorization and Identification and Time-Aligned Applications	Gracnote, Inc.	10/19/2016	15/297,658
Audio Matching Based on Harmonogram	Gracnote, Inc.	10/20/2016	15/298,601
Interactive Programming Guide	Gracnote, Inc.	10/26/2016	15/334,752