UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,
Petitioner,

v.

MEDIA CHAIN, LLC,
Patent Owner.

Case No. IPR2022-00389
U.S. Patent No. 9,715,581

DECLARATION OF JOHN TINSMAN IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,715,581

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   a) Brandstetter discloses "after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user" 237

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I, John Tinsman, declare as follows:

I. INTRODUCTION

1. I have been engaged by Sterne, Kessler, Goldstein & Fox P.L.L.C. on behalf of Roku, Inc. ("Roku") to provide this Declaration concerning technical subject matter relevant to the *inter partes* review of U.S. Patent No. 9,715,581 ("the '581 patent"), which is entitled "Digital Media Reproduction and Licensing."

2. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration.

3. I have reviewed and am familiar with the specification, claims, and prosecution history of the '581 patent. I will cite to the specification of a U.S. Patent using the following format: (Column:Line Number(s)). For example, the citation to the '581 patent, 1:1-10 points to the '581 patent specification at column 1, lines 1-10.

4. In forming my opinions expressed in this Declaration, I have reviewed and, in some cases, relied upon the list of materials provided in Section III in preparation of this Declaration. To the best of my knowledge, those exhibits listed in Section III are true and accurate copies of what they purport to be. An expert in the field would reasonably rely on them to formulate opinions such as those set forth in this Declaration.

5. I am being compensated at my standard rate of $300/hour by Roku for

my time spent in connection with this proceeding. My compensation is not dependent on and in no way affects, the substance of my opinions. Nor is my compensation dependent on the outcome of this proceeding. My findings are based on my education, experience, and background in the fields discussed below.

II. QUALIFICATIONS

6. My academic and professional pursuits are closely related to the subject matter of the ’581 patent. Based on my education and work experience, I am well qualified to serve as a technical expert in this matter.

7. A summary of my educational and professional experience is set forth in my *curriculum vitae* (CV), which is submitted as Exhibit 1015. Some of the relevant points in my CV are described below.

8. I received a Bachelor’s degree and Master’s degree in Physics from the University of California, Santa Barbara in 1981 and 1983, respectively. My specialization for my Master’s degree was medical and scientific instrumentation. I also received a Master’s in Business Administration from San Jose State University in 1995. I am a member of the Institute of Electrical and Electronics Engineers (IEEE) and a registered U.S. Patent and Trademark Office patent agent (Registration No. 73,427).

9. Although originally trained as a physicist, I have more than 35 years of experience designing, developing, and deploying hardware and software for

scientific, consumer, industrial, and professional environments. I also have extensive experience in engineering management and business development, including the management of multinational teams. I have worked for a range of organizations, from academic institutions such as the Stanford Linear Accelerator Center (SLAC) at Stanford University and the Signal Processing Laboratory at the École Polytechnqiue Fédérale de Lausanne (EPFL), to pioneers in multimedia and digital television, such as Radius, Inc., OpenTV Inc., Qualcomm, and the Kudelski Group. In that time, I have published a number of papers and made numerous presentations at academic and professional conferences, as well as before the European Commission.

10. I specialize in the areas of analog and digital signal processing and communications, and the command and control functions that generally accompany them. From 1985 to 1989, I developed analog and digital signal processing hardware and software for data acquisition systems in high energy physics experiments at SLAC. I also worked on the command and control systems used to operate, calibrate, and monitor such experiments, as well as the particle accelerator itself.

11. From 1989 to 1995, I applied these skills to computer graphics and multimedia systems at Radius. Radius was a leader in high end graphics, and an early developer of Macintosh-based audio and video multimedia systems. These systems included multimedia ingest, editing, processing, compression, and delivery,

including server-based delivery over networks. Key markets for these products included pre-press, television post-production, and video serving using video compression.

12. I worked at Radius as an engineer and an engineering manager. Several of my projects were related to video editing and compression using various codecs, such as MPEG-2 and Cinepak. This work included video signal processing and video signal enhancement, as well as the more general aspects of post-production using Apple Computer's QuickTime framework. These aspects included the use of time codes, edit lists, and other metadata to properly combine a collection of input tracks into the final multimedia output. My other technical activities included the development of high-speed networks, custom integrated circuits, and remote rendering and control of high-resolution graphics displays.

13. I joined Visual Edge in 1995 as its Vice President of Engineering. I led a team of engineers in developing and supporting high performance image processing software for rendering and printing text and images on large format high-resolution digital printers. This work involved product definition and engineering, as well as research on algorithms for imaging and color calibration.

14. In 1998, I moved to Switzerland to become a Principal Researcher at the EPFL, supervising a team of researchers and graduate students studying high performance signal processing. Specifically, this work involved using the then-new

multimedia instruction sets appearing in microprocessors to accelerate audio, image and video processing, and compression on high-end desktop computers.

15. My background in signal and media processing also provided me the opportunity to use my skills in related contexts. In 2000 and 2001, I consulted for a search engine company, Albert Inc., to develop a prototype voice navigation and control module for their textual search engine. The target environment for the prototype was high-end automobiles, with the goal of enabling voice-based searches for information and services related to the user's location. As a result, I worked extensively to understand a number of fundamental challenges to gathering, processing, and recognizing speech in an automotive environment.

16. During this period, I also consulted with Pinnacle Systems, a manufacturer of digital video hardware and software for the consumer and broadcast markets. I developed video signal processing algorithms for Pinnacle's custom broadcast television graphics integrated circuits and cards, with an emphasis on noise reduction to improve image quality and compressibility.

17. From 2001 to 2007, I worked at OpenTV Inc. as a director in the Office of the Chief Technology Officer. OpenTV was a premier provider of set-top box middleware for cable and satellite platforms and was deeply involved in technology development and standards making for digital and interactive pay television. In that position, I worked both as a product architect in Europe and as OpenTV's

representative at standards groups, such as the Digital Video Broadcasting (DVB) Project. My architectural job activities included working with other technology providers, including companies that provided conditional access and Video on Demand (VOD) technologies for integration with OpenTV's set-top box middleware, as well as OpenTV's own products for content recording and playback. My standards work included contributions at the DVB to various technical and market development working groups, as well as at the steering board level. This work included significant involvement in the DVB's standardization efforts around their Multimedia Home Platform (MHP) standard for a TV-based interactive television.

18. From 2007 to 2009, I worked at Qualcomm Inc. as a Product Manager, supporting the company's MediaFLO technology. MediaFLO was a technology for transmitting audio, video, and data to portable devices, such as mobile phones. The broadcast media transmitted via MediaFLO included live, real-time audio and video streams, as well as scheduled video and audio clips and shows. My duties included providing technology strategy, requirements analysis, and customer support for the MediaFLO technology.

19. From 2009 to 2014, I returned to OpenTV as its Vice President of Engineering in the Advanced Advertising Group. In this role, I was responsible for architectures, technologies, and product development for OpenTV's advanced

advertising and engagement solutions across multiple platforms. This work included the ingest and processing of television program and schedule information, such as would be used for advertising schedules or electronic program guides. This work also involved searching, categorizing, and reporting such information for the purposes of ad placements and ad verifications. I also led the design and development of a real-time advertising analytics platform. This work involved extensive processing and presentation of advertising and program schedule information, including database and user interface design and implementation.

20. From 2014 to 2017, I served as the Chief Technologist for the Kudelski Group's Intellectual Property and Innovation Group. In this role, I supported inventors and the innovation process across multiple technologies, including multimedia systems related to content ingest, protection, delivery, and consumption. I also supported the company's licensing and acquisition efforts.

21. Currently, I am the Chief Executive Officer of GadgetJazz, an engineering design and innovation practice founded in 2017. Leveraging my past technical experiences, I perform consulting services related to technology and business development, specifically in the areas of multimedia and communications technologies, distributed systems, high performance computing, and consulting on innovation and the development of intellectual property.

22. I am a named inventor on fourteen U.S. patents: (1) Patent No.

10,387,920 titled "System and Method for Offering and Billing Advertisement Opportunities"; (2) Patent No. 10,235,788, titled "Overlay Contrast Control in Augmented Reality Displays"; (3) Patent No. 10,152,815, titled "Overlay Emphasis Modification in Augmented Reality Displays"; (4) Patent No. 10,044,873, titled "Mute Alert"; (5) Patent No. 10,038,859, titled "Same Screen, Multiple Content Viewing Method and Apparatus"; (6) Patent No. 10,032,192, titled "Automatic Localization of Advertisements"; (7) Patent No. 9,877,054, titled "Dynamic Scheduling for Advanced Advertising in Linear Television"; (8) Patent No. 9,799,048, titled "Intelligent Tool to Support Manual Scheduling of Ads"; (9) Patent No. 9,711,128, titled "Combined Audio for Multiple Content Presentation"; (10) – (13) Patent Nos. 9,344,470, 8,782,305, 8,335,873, and 7,930,449, all titled "Method and Systems for Data Transmission"; and (14) Patent No. D759,684, titled "Display Screen with a Graphical User Interface." I am also the named inventor on three European patents: (1) No. 2,700,200, titled "Methods and Systems for Data Transmission"; (2) No. 2,602,996, titled "Dynamic Generation, Delivery, and Execution of Interactive Applications over a Mobile Broadcast Network"; and (3) No. 1,912,441, titled "Buffering and Transmitting Video Data upon Request."

23. Based on my educational background and professional experience, I consider myself an expert in various technologies, including multimedia systems, embedded systems and middleware, content protection technologies, streaming

media content, digital television systems, and client-server architectures. I also have significant experience in standards and standardization related to the DVB project, the European Telecommunications Standards Institute (ETSI), and Cable Labs.

III. MATERIALS CONSIDERED

24. In formulating my opinions, I have relied upon my training, knowledge, and experience that are relevant to the '581 patent. Furthermore, I have considered specifically the following documents listed below in addition to any other documents cited in this Declaration. I understand that the references are true and accurate copies of what they appear to be:

25. I have been asked to provide technical review, analysis, insights, and opinions regarding the references cited in the Petition and discussed below. My opinions are not only based on these references but also based on my over 30 years of experience as a computer architect, computer system designer, personal computer graphics designer, educator, and executive in the electronics industry.

Exhibit No.	Description
1001	U.S. Patent No. 9,715,581 to Estes ("'581 patent")
1003	U.S. Patent Publication No. 2004/0010417 to Peled ("Peled")
1004	U.S. Patent Publication No. 2011/0191246 to Brandstetter *et al.* ("Brandstetter")
1005	U.S. Patent Publication No. 2005/0004873 to Pou *et al.* ("Pou")
1006	U.S. Patent Publication No. 2008/0140433 to Levy *et al.* ("Levy")
1007	U.S. Patent No. 7,818,261 to Weiskopf *et al.* ("Weiskopf")
1008	U.S. Patent Publication No. 2013/0166921 to Vijay *et al.* ("Vijay")

Exhibit No.	Description
1009	Prosecution History of U.S. Patent No. 9,715,581 ("'581 Prosecution History")
1010	Prosecution History of U.S. Patent No. 9,898,590 ("'590 Prosecution History")
1011	Prosecution History of U.S. Patent No. 10,489,560 ("'560 Prosecution History")
1012	Prosecution History of U.S. Patent No. 10,515,191 ("'191 Prosecution History")
1013	Prosecution History of U.S. Patent No. 10,860,691 ("'691 Prosecution History")
1014	Prosecution History of U.S. Patent No. 10,885,154 ("'154 Prosecution History")
1015	*Curriculum Vitae* of John Tinsman
1016	U.S. Patent No. 7,043,473 to Rassool *et al.* ("Rassool")
1017	Mary Madden, The State of Music Online: Ten Years After Napster, Pew Research Center (June 15, 2009) (https://www.pewresearch.org/internet/2009/06/15/the-state-of-music-online-ten-years-after-napster/)
1018	U.S. Patent No. 8,185,475 to Hug ("Hug")
1019	U.S. Patent No. 8,051,130 to Logan ("Logan")
1020	"Digital Rights Management," FTC.org (March 25, 2009) (https://www.ftc.gov/news-events/events-calendar/2009/03/digital-rights-management)
1021	U.S. Patent No. 8,776,216 to Boccon-Gibod *et al.* ("Boccon-Gibod")
1022	Urs Gasser *et al.*, "Case Study: DRM-protected Music Interoperability and e-Innovation," Harvard.edu (November 2007) (https://dash.harvard.edu/bitstream/handle/1/2794938/DRM-protected+Music+Interoperability+and+eInnovation.pdf;jsessionid=FEC1E2A0F87ABB7EB30E41EA93AC1CAC?sequence=2)
1027	U.S. Patent Publication No. 2011/0314378 A1 to Nijim et al. ("Nijim")

Exhibit No.	Description
1028	"Apple TV Coming to Your Living Room,"Apple.com (January 9, 2007) (https://www.apple.com/newsroom/2007/01/09Apple-TV-Coming-to-Your-Living-Room/)
1029	Jaap Haitsma, et al., "A Highly Robust Audio Fingerprinting System," 3rd International Conference on Music Information Retrieval, Paris, France, October 13-17, 2002 ("Haitsma")
1030	U.S. Patent No. 9,554,176 to Gharaat *et al.* ("Gharaat")
1031	Alex Pappademas, "Mood music for the cyber set," CNN.com, archived December 7, 2004 (https://web.archive.org/web/20041207191754/http:/archives.cnn.com/2000/TECH/computing/09/08/mood.music.idg/index.html)
1032	U.S. Patent No. 8,306,976 to Handman *et al.* ("Handman")
1033	U.S. Patent Publication No. 2006/0206478 to Glaser *et al.* ("Glaser")
1034	U.S. Patent No. 7,081,579 to Alcade *et al.* ("Alcade")
1035	Avery Li-Chun Wang, "An Industrial-Strength Audio Search Algorithm," 4th International Conference on Music Information Retrieval, Baltimore, Maryland, USA, October 27-30, 2003
1036	Bryan Jacobs, "How Shazam Works To Identify (Nearly) Every Song You Throw At It," Gizmodo.com (September 24, 2010) https://gizmodo.com/how-shazam-works-to-identify-nearly-every-song-you-th-5647458
1037	European Patent Application Publication No. 1,558,032 to Widevine Technologies, Inc.
1038	U.S. Patent Publication No. 2013/0051772 to Ramaswamy *et al.* ("Ramaswamy")
1039	U.S. Patent No. 5,223,924 to Strubbe, et al. ("Strubbe924")
1040	U.S. Patent Publication No. 2001/0056405 to Muyres *et al.* ("Muyres")
1041	U.S. Patent No. 7,603,382 to Halt, Jr. ("Halt")
1042	U.S. Patent No. 10,447,564 to Abraham *et al.* ("Abraham")
1043	U.S. Patent No. 8,583,089 to Ramer *et al.* ("Ramer")

Exhibit No.	Description
1044	Laurie J. Flynn, "Like This? You'll Hate That. (Not All Web Recommendations Are Welcome.)," NYTIMES.com (January 23, 2006) (https://www.nytimes.com/2006/01/23/technology/like-this-youll-hate-that-not-all-web-recommendations-are.html)
1045	U.S. Patent No. 8,375,131 To Rogers *et al.* ("Rogers")
1046	U.S. Patent Publication No. 2012/0233701 to Kidron ("Kidron")
1047	U.S. Patent No. 6,317,722 to Jacobi et al. ("Jacobi")
1048	U.S. Patent No. 8,352,331 to Dunning et al. ("Dunning")
1049	U.S. Patent Publication No. 2003/0086341 to Wells *et al.* ("Wells")
1050	U.S. Patent No. 7,178,720 to Strubbe et al. ("Strubbe")
1051	"Technological Protection Systems for Digitized Copyrighted Works: A Report to Congress," United States Patent and Trademark Office, 2002
1052	Richard Leeming, "DRM – 'digital rights' or 'digital restrictions' management?", EBU Technical Review, January 2007 (https://tech.ebu.ch/docs/techreview/trev_309-digital_rights.pdf)
1053	Jordi Ribas-Corbera, "Windows Media 9 Series – a platform to deliver compressed audio and video for Internet and broadcast applications," EBU Technical Review, January 2003 (https://tech.ebu.ch/docs/techreview/trev_293-ribas.pdf)
1055	Adrian Slywotzky, et al., "The Future of Commerce," Harvard Business Review, January-February 2000 (https://hbr.org/2000/01/the-future-of-commerce)
1056	Benno Stein, *et al.*, "Near Similarity Search and Plagiarism Analysis," 29th Annual Conference of the German Classification Society (GfKI), Magdeburg, Germany, 2006
1057	Chow Kok Kent, *et al.*, "Features Based Text Similarity Detection," Journal of Computing, Vol. 2, Issue 1, January 2010

Exhibit No.	Description
1058	Benjamin Cohen, "How can publishers limit e-book piracy?", Channel 4 News, October 18, 2009 (https://www.channel4.com/news/articles/arts_entertainment/books/how%2Bcan%2Bpublishers%2Blimit%2Bebook%2Bpiracy/3391502.html)
1059	John Timmer, "Publishers cut book sharing deal with Scribd," Ars Technica, March 18, 2009 (https://arstechnica.com/information-technology/2009/03/publishers-cut-book-sharing-deal-with-scribd/)
1060	Eric Robinson, "Digital Rights Management, Fair Use, and Privacy: Problems for Copyright Enforcement through Technology," Other Topics 12, December 2009, (https://soar.usa.edu/other/12)
1061	U.S. Patent Publication No. 2012/0020647 to Vogel (Vogel)
1068	U.S. Patent No. 7,577,703 to Boucher et al. ("Boucher")
1073	U.S. Patent No. 9,898,590 to Estes ("'590 Patent")
1074	U.S. Patent No. 10,489,560 to Estes ("'560 Patent")
1075	U.S. Patent No. 10,515,191 to Estes ("'191 Patent")
1076	U.S. Patent No. 10,860,691 to Estes ("'691 Patent")
1077	U.S. Patent No. 10,885,154 to Estes ("'154 Patent")

26. This Declaration represents the opinions I have formed to date. I may consider additional documents as they become available or other documents that are necessary to form my opinions. I reserve the right to revise, supplement, or amend my opinions based on new information.

27. In light of my review of the exhibits, I recognize that the specification of the '581 patent is directed to systems and methods for distributing and licensing digital media content over the Internet, and for engaging in targeted marketing of such content based on user demographic data and purchase history.

28. I understand that the ’581 patent purports to claim priority to U.S. Provisional Application No. 61/555,810, filed November 4, 2011. I am familiar with the technology at issue in the ’581 patent and the state of the art as of November 4, 2011.

IV. RELEVANT LEGAL STANDARDS

29. When considering the ’581 patent and stating my opinions, I am relying on legal principles that have been explained to me by counsel.

30. I understand that for a claim to be found patentable, the claims must be, among other requirements, novel and nonobvious from what was known at the time of the invention.

31. I understand that the information that is used to evaluate whether a claim is novel and nonobvious is referred to as prior art.

32. I understand that in this proceeding, Petitioner has the burden of proving that each element of the challenged claims is disclosed by the prior art or would have been obvious based on the prior art.

A. Obviousness

33. I understand that a patent claim is invalid if the claims would have been obvious to a person of ordinary skill in the art (“POSA”) at the time of the invention. I understand that the obviousness inquiry should not be done in hindsight, but from the perspective of a POSA as of the time of invention of the patent claim.

34. I understand that to obtain a patent, the claims must have, as of the time of the invention, been nonobvious in view of the prior art.

35. I understand that a claim is obvious when the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a POSA at the time the invention.

36. I understand that to prove that the prior art reference or a combination of prior art references renders a patent obvious, it is necessary to: (1) identify the particular references that, singly or in combination, make the patent obvious; (2) specifically identify which elements of the patent claim appear in each of the asserted references; and (3) explain how a POSA could have combined the prior art references to create the claimed invention and what the combination would be.

37. I understand that to support a conclusion that a prior art reference or a combination of prior art references renders a patent obvious, there must be some documentary evidence. Mere statements about what is basic knowledge or common sense, i.e., common knowledge as a replacement for documentary evidence, is insufficient to support a conclusion of obviousness.

38. I understand that certain objective indicia can be important evidence regarding whether a patent is obvious. Such indicia include: industry acceptance, commercial success of products covered by the patent claims; long-felt need for the invention; failed attempts by others to make the invention; copying of the invention

by others in the field; unexpected results achieved by the invention as compared to the closest prior art; praise of the invention by the infringer or others in the field; taking of licenses under the patent by others; expressions of surprise by experts and those skilled in the art at the making of the invention; and the patentee proceeded contrary to the accepted wisdom of the prior art.

B. Level of Skill in the Art

39. I have been asked to consider the level of ordinary skill in the field that someone would have had at the time the claimed invention was made, which I understand is November 4, 2011. In deciding the level of ordinary skill, I considered the following:

- the educational level of the inventor;
- type of problems encountered in the art;
- prior art solutions to those problems;
- the rapidity with which innovations are made;
- the sophistication of the technology; and
- the educational level of active workers in the field.

40. In my opinion, a person of ordinary skill in the art (POSA) at the time of the invention would have had a Bachelor's degree in electrical engineering, computer engineering, computer science, or equivalent degree with at least two years of relevant industry experience, including in digital media content delivery, digital

media content protection, and statistical analysis of digital media consumption.

41. Throughout my Declaration, even if I discuss my analysis in the present tense, I am always making my determinations based on what a POSA would have known at the time of the invention. Additionally, throughout my Declaration, even if I discuss something stating "I," I am referring to a POSA's understanding.

C. Motivation to Combine and Hindsight Bias

42. I understand that obviousness can be established by combining multiple prior art references to meet each and every claim element, but I also understand that a proposed combination of references can be susceptible to hindsight bias.

43. I understand that references are more likely to be combinable if the nature of the problem to be solved is the same.

44. I understand that if the combination of references results in the references being unsatisfactory for their intended purposes or the combination changes the references' principle of operation, a POSA would not have a motivation to combine the references.

45. I understand that obviousness may be defeated if the prior art indicates that the invention would not have worked for its intended purpose or otherwise teaches away from the invention. I further understand that a reference teaches away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction

divergent from the path that was taken in the claim. I also understand that teaching away, e.g., discouragement, is strong evidence that the references are not combinable and/or that a POSA would not be motivated to combine them. I also understand that a disclosure of more than one alternative does not necessarily constitute a teaching away. I understand that the combination does not need to result in the most desirable embodiment.

D. Claim Construction

46. I understand that the claims of a patent are read in light of the specification of the patent as understood by a POSA at the time of the invention. I understand that "the time of the invention" refers to the effective filing date of the patent in question, which I am informed by counsel is November 4, 2011, for the purposes of this proceeding. Whether or not explicitly stated below, my analysis of the prior art is made as of the time the invention was made.

47. I understand that claim terms are given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art as of the effective filing date. I understand that an inventor may provide a special meaning for a term, but that she must do so in the specification with precision and clarity.

48. In construing claims, I understand that evidence that is intrinsic to the patent and prosecution history is given more weight than extrinsic evidence. For example, if there are specific statements in the specification that define the invention,

those statements are strong evidence of a definition for a term. In this Declaration, I have understood the claims in view of the general principles outlined above. Unless I indicate otherwise below, I have interpreted each claim term discussed herein to have its plain and ordinary meaning.

V. BACKGROUND OF THE TECHNOLOGY

49. The '581 patent is directed to systems and methods for distributing and licensing digital media content over the Internet, and for engaging in targeted marketing of such content based on user demographic data and purchase history. Before addressing the '581 patent in detail, I first describe the state of the art at the time the patent was filed.

A. Licensing and Distribution of Digital Media

1. E-Commerce and the Digital Revolution

50. Since the early 1980s, the Internet has revolutionized the way consumers and businesses engage in commerce by allowing companies to remotely connect with, and sell products and services to, consumers. This electronic form of commerce, or "e-commerce," confers significant advantages to both businesses and consumers alike. For businesses, e-commerce offers affordable advertising and marketing, greater exposure and geographical reach, and flexibility for meeting market demands and customer needs. For consumers, e-commerce offers a more efficient and convenient purchasing experience. *See* EX1055, Slywotzky. Because of these advantages, the Internet has been used to market and sell a wide variety of

products, including multimedia (e.g., books, newspapers, movies, audio recordings, etc.) for the past forty years.

51. In the mid-to-late 1990s, as Internet and computer usage became more prevalent, online product offerings became digitized. As relevant here, for example, companies and consumers began selling and sharing "digital media content"—i.e., media encoded and distributed as digital data, such as audio recordings, films, e-books, and other audiovisual content. EX1016, Rassool, 1:17-37. Advances in compression technology, moreover, allowed such content to be saved in a compressed format (e.g., in an .mp3 format) and thus easily copied and transferred among users with just a click of a mouse.

52. Thus, as one patent from a digital rights management company noted in 2000, the Internet and the digital revolution collectively conferred "enormous" benefits in the provision of such content. *Id.* 1:17-2:5.

2. The Rise of Digital Rights Management Technology

53. But the abundance of digital content on the Internet, and the ease with which it could be transmitted, soon led to the proliferation of unauthorized reproduction of copyrighted works. For example, in the late 1990s and early 2000s, peer-to-peer file-sharing platforms such as Napster and Gnutella allowed users to obtain digital content from others free of charge, and without first obtaining licenses from the copyright holders. EX1017, Madden; EX1016, 2:6-18 (noting that "media

content owners [were] increasingly concerned [about] piracy of their intellectual property over the Internet"); *see also* EX1018, Hug, 1:35-43, describing licensing difficulties when one user attempted to transfer content to another user's device.

54. The Internet's ability to facilitate unauthorized reproduction of digital content in turn led to a focus on developing a "more robust and efficient" market for licensing digital content, EX1019, Logan, 1:53-54, and, in particular, developing and deploying Digital Rights Management ("DRM") technology. DRM technology consists of software and access control measures that restrict the use of copyrighted digital content. *See* EX1020, Digital Rights Management, 1 ("Digital rights management (DRM) refers to technologies typically used by hardware manufacturers, publishers, and copyright holders to attempt to control how consumers access and use media and entertainment content."); *see also* EX1052, Leeming, 3 (providing an overview of DRM and demonstrating how DRM in general confers specific reproduction rights (e.g., parameters that restrict the user's ability to stream or reproduce a particular media content item) such as "when the content is available; how many devices it can be viewed on, … , how many times it can be viewed; how long it is available for … and so on"); EX1053, Ribas-Corbera, 3 (providing yet a further overview of DRM and reproduction according to the terms of a downloaded license: "[w]hen a viewer selects the stream, the playback device connects to the license server, which offers a license for the content. The viewer then

decides whether to accept the terms and price of the license and, if so, the license is downloaded into the viewers device. Then the viewer is able to decrypt and play the content according to the terms of the license.").

55. Although such technology can take a variety of forms, DRM algorithms typically include an encryption step, whereby a media content item requested by a user is encrypted, and an authentication step, whereby the user's computer communicates with a DRM server to ensure that the user has a valid license to reproduce the item. If the user is licensed, the user's computer decrypts the media content item so that the user can download or stream the item. If the user is not licensed, the item remains encrypted unless and until the user purchases a license. EX1051, USPTO White Paper, 4, 7-9 (describing DRM technology and a user's interaction with a "licensing server");[1] EX1021, Boccon-Gibod, 9:33-63; *see*

[1] EX1051, is a copy of a PDF document titled "Technological Protection Systems for Digitized Copyrighted Works: A Report to Congress." The document was prepared by the U.S. Patent & Trademark Office ("PTO") and is accessible on the PTO's website at the following URL: https://www.uspto.gov/sites/default/files/web/offices/dcom/olia/teachreport.pdf. I accessed EX1051 through that URL at least as of December 7, 2021, and the document is still accessible through the URL today. The text of EX1051 is

generally EX1018.

56. Many types of DRM systems were available as of November 2011. For example, online music stores such as iTunes and Rhapsody each launched in 2001 with DRM access control enabled. EX1022, Gasser, 9; *see also* EX1019, 1:43-60; EX1018, 1:22-28.

3. Cloud-Based Streaming and Licensing Models

57. It was not long, moreover, until cloud-based systems emerged containing DRM technology that allowed users to download or stream digital

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complete and appears to flow seamlessly from one page to the next. EX1051 is a true copy in a condition that creates no suspicion about its authenticity. Further, EX1051 is cited by other documents that pre-date the '581 patent's earliest priority date. For example, the article "Light in Custody: Documentary Films, the TEACH Act and the DMCA," was published in the *Santa Clara Computer and High Technology Law Journal* in May 2004 and cites to EX1051, thereby evidencing that EX1051 was available as of May 2004. *See* Gretchen Stoeltje, *Light in Custody: Documentary Films, the TEACH Act, and the DMCA*, 20 Santa Clara Comput. & High Tech. L.J. 1075, 1076 n.4 (2004). In any event, EX1051's description of the state of the art at the time of the alleged invention of the '581 patent is consistent with my understanding as a POSA.

content from central servers using multimedia devices such as set-top boxes or Internet TVs. EX1027, Nijim, ¶2 (2010 Cox Communications reference noting that, in the "digital age, many users use an on demand (OD) system" such as "set-top boxes" and "Internet televisions" to select and view or listen to media content). Apple, for example, has been selling its Apple TV device since 2007. EX1028, Apple TV.

58. These systems typically employ one of two licensing models. In the first, "on-demand" model, a user's paid-for subscription provides the user with a blanket license to stream all content within the service's catalog. Rhapsody and Netflix are prime examples of such a model. EX1019, 1:54-60. In the second, "pay-per-view" model, a user may acquire a license for a particular media content item by purchasing the item on a one-off basis. iTunes is an example of such a model. *Id.*

59. As the '581 patent acknowledges, systems employing both models were well known as of November 2011. EX1001, '581 patent, 14:28–32 (stating it was known that "a media content item may be streamed to an external multimedia hardware device over a communication network from a cloud-based storage system, a digital media streaming service (e.g., Pandora, Last.fm, Spotify, iTunes, iCloud, Netflix, and/or other such services)"). And both models offered a simple and straightforward way to provide access to digital content while respecting content creators' copyrights.

B. Digital Fingerprinting

60. As described above, DRM systems have long been used to prevent unauthorized distribution of copyrighted digital content. And, because different versions of digital content may be subject to different licensing terms, it was important for such systems to be able to easily and quickly distinguish between various versions of such content.

61. One well known way to do that was to use identifiers called "fingerprints" derived from inherent characteristics of the digital content. Fingerprint systems themselves "are over one hundred years old," EX1029, Haitsma, 1, but they became particularly prevalent with the rise of the Internet and digitization. For example, systems have long used "digital fingerprints"—i.e., compact digital representations of content that summarize certain characteristics of the content—to uniquely identify digital content. By comparing an item's fingerprint to a database of known fingerprints, the media content item can be accurately identified. *See, e.g., id.* (Haitsma stating that "[t]he prime objective of multimedia fingperinting is an efficient mechanism to establish the perceptual equality of two multimedia objects"); EX1061, Vogel, ¶44 (2010 Rovi reference describing digital fingerprint as a "measure of certain physical properties that is deterministically generated from a digital signal that can be used to identify a sample of a media item and/or quickly locate similar media items in a database").

62. Fingerprints can be derived in any number of ways. For audio recordings, for example, it was well known that "acoustic fingerprints" representing multi-dimensional vectors in a frequency space could be mathematically constructed to uniquely identify the recording. *Id.* ¶¶25, 44 (2010 Rovi reference describing using "acoustic fingerprints" that measure "certain acoustic properties" of an audio file); EX1030, Gharaat, 11:11-15 (2009 TiVo reference describing fingerprints derived by "applying a mathematical function to a spectrogram of an audio file"); EX1031, Pappademas, 2 (describing 2000 music-search technology as being able to successfully identify songs by "analyz[ing] the digital waveform of a piece of music, coding songs based on characteristics such as melody, rhythm and timbre to produce a digital 'fingerprint'"). Such algorithms have been used for many years by companies like Pandora as part of the Music Genome Project, whereby "each song is described by a set of characteristics, or 'genes'" that uniquely identify the song. EX1032, Handman, 11:51-57; EX1033, Glaser, ¶¶25-26 ("Each gene can be thought of as an orthogonal axis of a multi-dimensional space and each song as a point in that space."); *see also* EX1034, Alcade, 3:61-4:23 (describing "audio footprints" for identifying music). These genes are akin to the digital fingerprints described above. Fingerprinting algorithms, however, were not limited to music—they have been used with other types of digital content such as movies, pictures, and e-books for many years. *See, e.g.*, EX1016 (2000 patent describing fingerprinting algorithms for

different types of media content).

63. For literary works such as books in digital format, or "e-books," fingerprints can be derived by applying a mathematical algorithm to chunks of the text comprising a preselected number of words. *See, e.g.*, EX1056, Stein, 2 (noting that a fingerprint "can be considered as a set of encoded substrings taken from" a document, "which serve to identify [the document] uniquely"); EX1057, Kent, 1-2 (explaining that the "most common technique" for detecting plagiarism of literary works "is the Fingerprint Matching technique" in which documents are divided into chunks of a preselected number of words). Indeed, Scribd has been using "digital fingerprinting" to detect the unauthorized distribution of e-books for more than a decade. EX1058, Cohen.

64. In the context of DRM and targeted online marketing, fingerprints provide several well-known benefits. First, fingerprints can be used to identify unknown media content. For example, Shazam has used fingerprints since 2002 to accurately identify songs based on short samples thereof. *See, e.g.*, EX1035, Wang, 1 (explaining that "fingerprints from the unknown sample are matched against a large set of fingerprints derived from the music database"); EX1036, Jacobs, (explaining that Shazam uses fingerprints describing frequency spectrum of songs).

65. Second, fingerprints can be used "to police copyright violations of media files." EX1016, 4:33-39. In particular, fingerprints allow copyright owners to

"track dissemination" of particular content and identify "instances of unauthorized file duplication (i.e., copyright violations)" occurring on the Internet. *Id.* 3:36-65, 24:29-40; *see also* EX1037, Widevine, ¶9, (explaining that fingerprinting can prevent piracy of digital content by "enabling a media player to recognize a piece of content (e.g., some or all of the media file) and to prevent its playback until its home entertainment release date"; EX1007, Weiskopf, 2:23-43, 4:25-67, (describing using fingerprints to differentiate between digital media content in the licensing context); EX1051, 6 (describing the use of fingerprints and watermarks in DRM systems). And, indeed, in response to growing concerns regarding copyright infringement, Napster itself starting using fingerprinting systems aimed at filtering out copyrighted material. EX1029, 3. Likewise, companies like Scribd use digital fingerprints to combat piracy of e-books. EX1058; EX1059, Timmer (explaining that digital fingerprinting may have allowed Scribd to avoid the piracy problems that Napster encountered with digital music).

66. Third, fingerprints can be used for marketing purposes—e.g., to identify additional content that may be of interest to a user based on fingerprints that are similar to the fingerprint of a requested item. *See, e.g.*, EX1038, Ramaswamy, (describing a system that evaluates "media-representative information" corresponding to a particular media content item—e.g., watermarks and other metadata—in order to recognize the item and suggest additional content to the user).

Pandora, for example, has been using fingerprints for this purpose since 2006. *See generally* EX1032; EX1033.

67. In short, fingerprinting techniques for identifying digital content go hand-in-hand with DRM technology and were "known in the field of digital rights management" for many years before the '581 patent was filed. EX1005, Pou, ¶54.

C. Targeted Marketing Based on User Demographics and Preferences

1. Targeted Marketing Over the Internet

68. The Internet also led to the unprecedented ability to engage in targeted marketing based on user demographic data and purchasing behavior that could not be achieved in the pre-Internet era. Of course, targeted marketing concepts such as up-selling (i.e., inviting customers to purchase a comparable higher-end product than the one in question) and cross-selling (inviting customers to purchase related or complementary items) are old ones that were practiced for many years before the Internet. *See, e.g.*, EX1039, Strube, (1993 patent describing generating TV content recommendations based on a user's interaction with a guide).

69. But targeted marketing is particularly effective in the post-Internet era. For example, whereas a customer's demographic information and purchasing habits might not be known to a retailer in the brick-and-mortar context, such information is readily available and discoverable in the online context. Indeed, a customer's demographic data may be apparent from an online profile that the customer creates,

and data related to the customer's web-browsing history and purchasing habits can be generated whenever the customer interacts with a company's webpage.

70. Thus, companies have long developed methods and systems for collecting and harnessing such data "without [the] need [for] human intervention" in order to better tailor product offerings to a particular customer. EX1040, Muyres, ¶¶2, 70 (1997 patent describing a system for "tracking behavior and profiling users in interactive computer networks" to market and deliver "digital content and services"); EX1041, Halt, (1998 patent describing a system for customizing a company's online product offerings based on a user's demographic data and browsing history). Such data "can inform companies about how their and others' products or services are perceived and bought by purchasers or potential purchasers in the marketplace, and how the companies' products or services can be changed to achieve the companies' business goals." EX1042, Abraham, 1:60-65; EX1034, 13:40-14:57 (noting that such data "can be used to determine general trends within the system and therefore is valuable from a business/marketing perspective").

71. One marketing-based concept that is particularly prevalent in the online context is "collaborative filtering." Collaborative filtering "generally involves the collection of preference data from a large group of users," which "may be analyzed statistically to identify subgroups, or characteristics of subgroup members, with similar preference profiles." EX1043, Ramer, 10:25-29. This technique has been

used for many years to customize digital content offerings to consumers, but it is especially useful in e-commerce given the very large number of consumers who purchase products online and the availability of data associated with such purchases. For example, iTunes has used collaborative filtering since at least 2006 "to tailor data automatically to individuals or groups of users." EX1044, Flynn, 2.

72. Numerous prior art references likewise describe using collaborative filtering techniques to facilitate targeted marketing based on user demographic data and/or preferences. Indeed, a Yahoo! patent from 2007 describes a system in which a media toolbar installed on a user's computer observes media played by the user and identifies content "that is likely to be of interest to the user" as well as content that could be of interest to "third parties based on a comparison of the user's media profile and a particular third party's media profile." EX1045, Rogers, 1:31-43. For example, if the toolbar observes that a particular user has a "propensity toward music by … Nine Inch Nails" and that "others with a similar propensity tend to also like music by Filter," then the toolbar can offer to the user "one or more songs by Filter." *Id.* 6:1-6. The patent explains that customized offerings based on such data "allow[s] for more targeted marking of content and services of interest to the user, which can enhance the efficiency of such advertisements." *Id.* 11:1-3.

73. There are many other examples in which such techniques were used for targeted marketing purposes:

- Muyres describes a 1997 system that "track[s] behavior and profil[es] a user during the marketing of digital content" in order to better tailor product offerings. EX1040, ¶¶20, 24, 126.
- Hug describes a 2003 system that can track "listening trends and musical preferences of individual users" to make music recommendations. EX1018, 11:1-5.
- Logan describes a 2006 collaborative filtering algorithm in which music recommendations for a user are generated based on "other users with preferences and past listening habits similar to the user." EX1019, 14:22-25, 19:30-39.
- Kidron describes a 2010 system in which music playlists are created based on "the listener's usage history[]," which includes the user's "thumbs up/down rating of tracks." EX1046, Kidron, ¶¶51, 64.
- Ramaswamy describes a 2011 system in which content is identified "based on the currently and/or previously requested media content … and/or demographics of the persons involved in the request." EX1038, Ramaswamy, ¶43.

74. These are just a few examples. The point is that "[m]ethods for analyzing market needs," as well as "data mining techniques" for collecting and analyzing consumer data to inform marketing decisions, were "well known" long

before the '581 patent was filed. EX1003, Peled, ¶2.

2. Targeted Marketing Based on Users' Negative Preferences

75. Importantly, targeted marketing of digital content was not just limited to analyzing users' "positive" preferences—i.e., preferences inferred from digital content that the user has purchased or expressed an interest in. Rather, it was also known that targeted marketing could be performed by analyzing users' "negative" preferences—i.e., preferences inferred from content that the user has ***refused*** to purchase. Information about products that a consumer does *not* like helps inform which products to offer that consumer and others belonging to the same demographic.

76. For example, a patent filed in 2005 by Jumptap describes monitoring a user's online activity and collecting information about product offerings that the user does not accept. EX1043, 10:49-54. As the patent explains, "if the user looks at a product and decides not to purchase the product, one can draw an inference that the user is not interested in the product, and this [information] may be used as part of a collaborative filtering algorithm." *Id.* 10:50-58; *see also id.* 38:1-10 (providing an example where a user "consistently declin[es], or fail[s] to view, music-oriented programming content," so that the system ensures the user's query for the term 'U2' "return[s] information on Soviet-era spy planes, notwithstanding that for other users such a query would return content related to the rock group U2"). There are many

other examples in the art of targeted marketing based on users' negative preferences, including the following:

- Muyres (referenced above) describes using information about orders "denied[] or refused by the customer" in order to market digital content. EX1040, ¶206.
- Jacobi, a 1998 Amazon patent, describes a system that generates product recommendations for a user based on "items that were recently (e.g., within the last six months) removed from the shopping cart(s) without being purchased." EX1047, Jacobi, 7:49-58.
- Dunning, a 2000 Yahoo! patent, describes a system that monitors a user's song "aborts and skips" to inform music recommendations. EX1048, Dunning, 11:43-53.
- Handman, a 2001 Pandora reference, describes an algorithm in which a user's "negative feedback" about songs likewise informs music recommendations. EX1032, 20:62-21:15, 21:58-22:4.
- Abraham, a 2002 comScore patent, describes a system that tracks and analyzes "products or services a consumer has considered and decides not to purchase" to inform online marketing decisions. EX1042, 7:40-51.
- Strubbe describes a 2004 system in which up-sell offers are based in part on whether "the customer is unlikely to purchase" a particular item. EX1050,

Strubbe, 5:46-49.

Again, these are just a few examples.

77. Notably, data regarding a user's "negative" preferences can be inferred from a user's explicit activity or implicit activity. Explicit activity involves a user "explicitly declining an option to view content." EX1043, 37:48-61. Implicit activity, by contrast, involves a user "implicitly declining—ignoring—the content, such as upon repeated opportunities to view it." *Id.* Both types of activity convey valuable information about customer preferences, as well as "an otherwise hidden demand for products and/or services in segments that a company is not selling to or serving at a given time." EX1003, ¶196. In short, data regarding a user's preferences, including negative preferences, "can be a valuable product in itself." EX1042, 7:40-51.

VI. OVERVIEW OF THE '581 PATENT

78. With the background discussed in Section VI, I now turn to the '581 patent, described below.

A. Summary of the Disclosure

79. The '581 patent is directed to a platform for distributing, licensing, and marketing digital media content, including audiovisual files and e-books. EX1001, Abstract, 1:7-10, 1:51-53, 3:24-31. An example of the '581 patent's platform is shown in Figure 2 below:

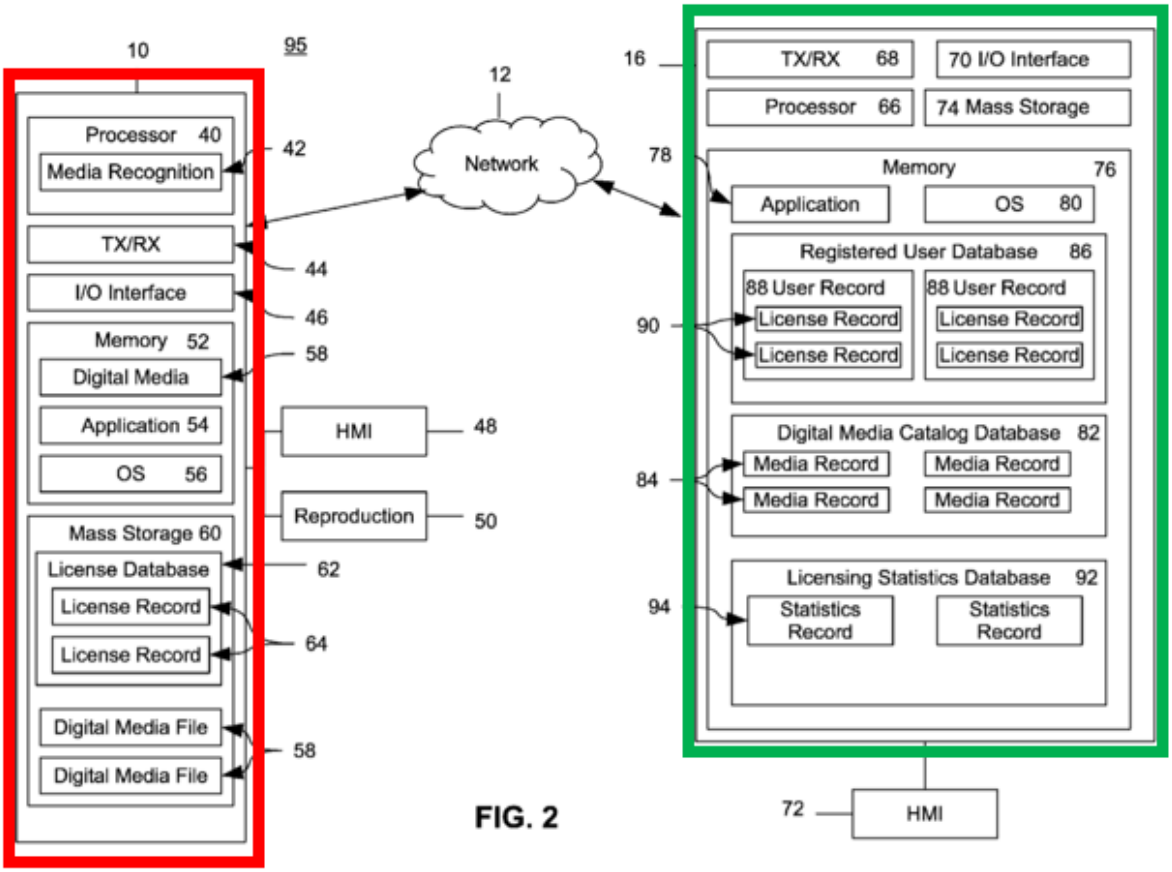


FIG. 2

EX1001, FIG. 2 (annotated).

80. The platform 95 includes a central, server-based "media content licensing and verification system" 16 (green) containing one or more processors 66 and memory 76, as well a plurality of users communicating with the system over the Internet 12 using "multimedia hardware devices" 10 (red) such as computers, tablets, or mobile devices. *Id.* 3:15-23, 3:54-63. Also communicating with the system are digital content providers, retailers, and hardware device manufacturers (not shown). *Id.* FIG. 1, 3:15-23.

81. While the '581 patent focuses on "device 10" and "licensing system

16," I note that the '581 patent broadly describes its functionality as capable of being "implemented on any type of processing (or computing) device having one or more processors." *Id.* 7:65-8:8. "Any software, hardware, and operating system implementations suitable for performing the functions described herein can be used." *See id.* 10:6-10, 11:26-30. Therefore, while the '581 patent describes examples of functionality occurring at "device 10" or "licensing system 16," the '581 patent does not appear to limit its described functionality to either device.

82. The functionality relevant here is the '581 patent's disclosure of how (1) digital content is distributed and licensed, and (2) the platform engages in targeted marketing based on user demographic data and purchasing history.

1. Licensing and Distributing Digital Media Content

83. Prior to licensing and distributing digital media content, the '581 patent describes configuring "licensing system 16" to facilitate the reproduction of digital media content. *See* EX1001, FIG. 3, 8:10-45. Specifically, "a rights-holder or content creator may load a catalog of media content items that may include … a song, a movie, a television show, a novel, and/or any other media content item into licensing system 16." *Id.* 7:29-33. As I will further explain below, "[t]he catalog submissions may be loaded into a natural media fingerprint creation module to generate a natural media fingerprint catalog." *Id.* 13:13-16.

84. After configuring "licensing system 16," the '581 patent describes

licensing and content distribution with reference to Figures 4 and 5:

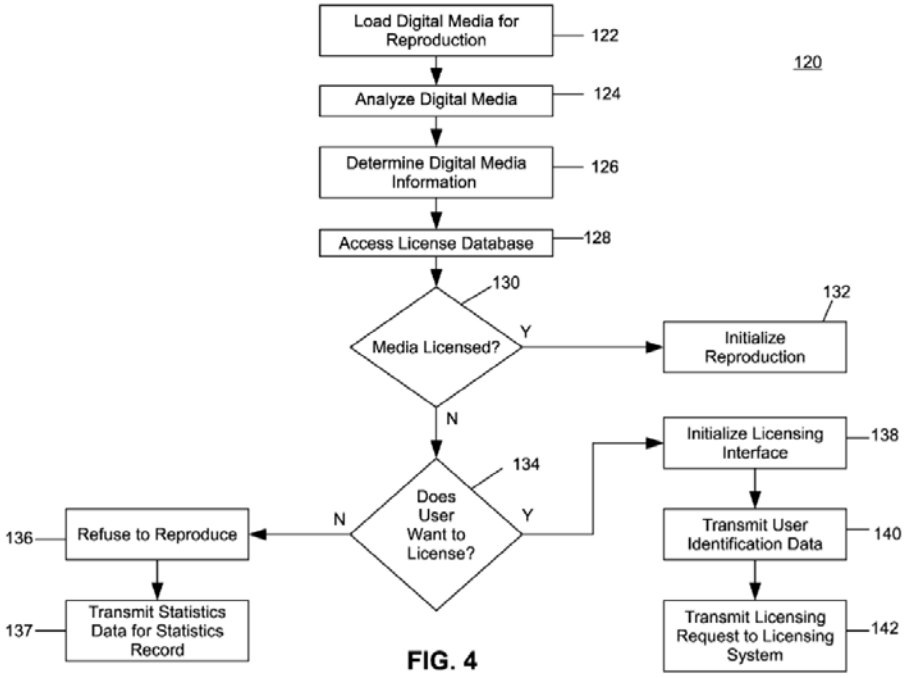


FIG. 4

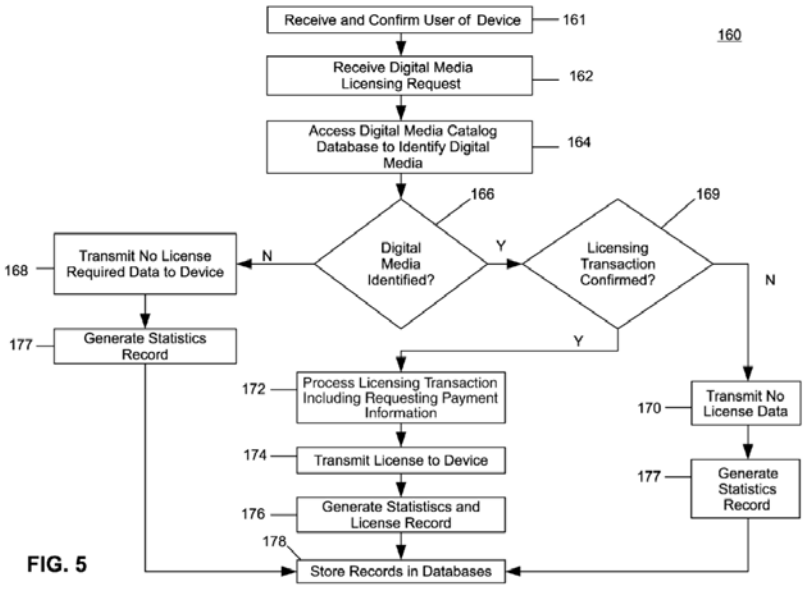


FIG. 5

EX1001, FIGS. 4-5.

85. As I will discuss further in Section VI.B, the ’581 patent does not limit how or where the claimed loading is carried out. For example, as I have laid out

above, the unique media content may be loaded into the licensing system 16. EX1001, 7:27-29. In an alternative example described in the '581 patent, the loading may be performed at or by user device 10 rather than licensing system 16. *Id.*, 4:2-11. For example, as shown in Figure 4 above, the '581 patent describes a scenario where "the user loads the digital media file for reproduction" on the user's device 10. *Id.*, 4:2-11. "Processor 40" of the user device is then "configured to analyze a loaded digital media file to identify the media content item included in the digital media file." *Id.*, 6:47-57.

86. With regard to the loading at the user device, the '581 patent recognizes a scenario where the "digital media file including the media content item may have been procured from various sources that are not licensed to reproduce the media content item and do not collect licensing fees for use of the media content item." EX1001, 3:65-4:2. In this regard, the '581 patent explains that "such unauthorized distribution of the digital media content prohibits the rights-holders of the digital media from covering the costs of creating the original digital media content." Id., 1:43-47. Thus, a user can make a request for a license to reproduce loaded media content. *Id.*, 9:64-10:5, 10:19-27. The '581 patent recognizes that such loaded content may benefit from additional analysis thereafter to determine digital media rights. *Id.*, 1:43-47. As I will explain with reference to Section IX.A. XII.A, this proposed solution to monetize unauthorized distribution of content is similarly

recognized and addressed by the combination of the references cited in the Grounds below.

87. According to the '581 patent, the user device or the licensing system then "analyzes the digital media file" to identify the underlying media content based on "identifying characteristics" that are "inherently present in the media content item." *Id.* 4:2-21, 6:47-57, 8:16-39, 8:59-9:21. The identifying characteristics allow the system to "identif[y] a media content item, even considering the possibility of different versions of the same media content item." *Id.* 9:6-10. The '581 patent explains that such identifying characteristics can represent "a fingerprint, digital watermarking, and/or any other suitable algorithm to identify copyright ownership of the media content item." *Id.* 4:21-27. The patent describes several such algorithms, including those that analyze "the predefined number of words" in an e-book, the lyrics to a song, and "the occurrence of various frequencies at particular points in time" in an audio recording. *Id.* 8:23-26, 9:15-21.

88. Once the selected content item is identified, the '581 patent describes accessing a "license database" and determining based on the fingerprint whether the user is licensed to reproduce the content. *Id.* 4:31-34, 9:22-26, 10:30-38. If the user is licensed, the device "initializes reproduction of the digital media file." *Id.* 9:26-29. If the user is not licensed, the user receives a "display query asking the user whether the user would like to purchase a license." *Id.* 9:30-35, 10:43-47; *see also*

id. 4:34-37. If the user refuses to purchase a license, the device denies access to the item. *Id.* 9:36-38, 10:54-58, 11:9-12. If the user purchases a license, however, the device transmits the licensing request to the licensing system, which processes the request and ultimately permits the user to play or stream the item. *Id.* 4:38-52, 9:47-10:5, 10:58-11:8.

2. Targeted Marketing

89. The ’581 patent’s targeted marketing steps are shown in Figures 4-5 above and Figure 7 below:

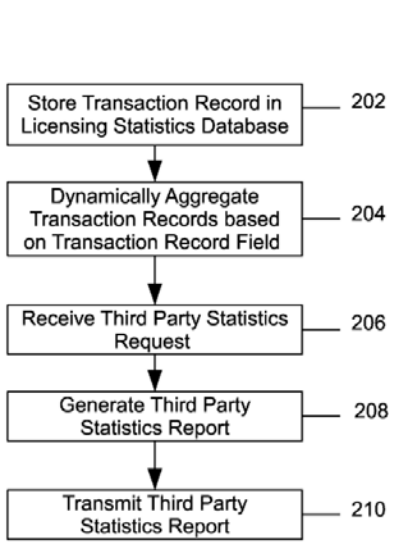


FIG. 7

EX1001, FIG. 7.

90. First, when a user accepts or declines to purchase a license, the user device transmits “statistics data” to the licensing system, which then generates a “statistics record” 94 and stores the record in licensing statistics database 92. *Id.*, 9:38-46, 11:1-25, 11:50-51. The ’581 patent explains that statistics records contain

information about transactions, as well as "demographic information for the user," including "age, gender, location, and/or any other data that may be associated with the user and/or license obtained by the user." *Id.*, 7:51-64.

91. The licensing system then "aggregates the [statistics] records" corresponding to a particular media content item and, in response to a third-party's request for statistics records, generates a "statistics report" and transmits the report to the requesting party. *Id.*, 11:52-12:14. The '581 patent states that the statistics reports convey "valuable licensing and statistics data for media content items for particular demographics of users, genres of media content items, and/or other such categories," and thus allow "online media retailers [to] target the marketing of the media content item to demographics that have shown a trend of interest in the media content item." *Id.*, 5:20-28, 12:10-14. But beyond these generic statements, the '581 patent provides no details about how targeted marketing is performed or how data for a user who declines to purchase a license is used for that purpose.

B. Summary of the Claims

1. Overview of the '581 Patent Claims

92. The '581 patent contains thirty-two claims, four of which (claims 1, 6, 11, and 16) are independent. Claim 1 is representative and recites a computer-implemented method for determining whether a user has already obtained a license to reproduce a media content item, offering a license when one has not been

obtained, and identifying user demographic data based on whether the user acquires or declines the license:

> 1. A computer implemented method for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, comprising:
>
> loading a digital media file for reproduction, wherein the digital media file includes the media content item;
>
> analyzing the digital media file to identify digital media information associated with the media content item;
>
> receiving a license request from a user requesting to engage in a license transaction to reproduce the media content item;
>
> evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item;
>
> accessing a license database to determine whether the user is licensed to reproduce the media content item based on the digital media information;
>
> reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information;
>
> providing a licensing query to the user when the user is not licensed to reproduce the media content item to prompt the user to select to acquire a license to reproduce the media content item or to decline the license to reproduce the media content item;

after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for is the media content item of the copyright owner;

aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request;

storing in the license database the statistics record so that the user data is accessible to the copyright owner of the media content item; and

analyzing a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user.

EX1001, claim 1, 14:57-15:41.

93. As I discuss further below, claim 1 does not explicitly require a single device or system that performs all of the steps of the claimed method. For example, the claimed "loading" step could occur at either a user device or a licensing system.

As I previously explained in Section VI.A, the '581 patent does not appear to limit its described functionality to either device. The context of claim 1, however, suggests that at least some of its limitations would be practiced by the licensing system. For example, claim 1 includes the steps of "receiving a license request," "providing a licensing query," "aggregating the user data into a statistics record," "storing" the record in a license database, and "analyzing a plurality of statistics records." These are processes that occur at the licensing system described in the '581 patent. EX1001, FIG. 5, 7:51-64, 10:43-58, 11:9-25. Therefore, in the context of the other claim limitations, a POSA would have understood claim 1 to be practiced by a similar licensing system.

94. Under any interpretation, however, the prior art references that I discuss below render obvious all of the elements of claim 1. The combination of references presented in the grounds disclose or otherwise render obvious the functionality of claim 1 occurring at both a user device as well as at an analogous licensing system.

95. Independent claim 6 recites a process similar to claim 1 that is explicitly executed by a licensing system. Specifically, claim 6 recites "receiving a media licensing request from an external device associated with a user." Claim 6 further recites the same "extracting," "aggregating," "storing," and "analyzing" steps recited in claim 1. In this manner, the overlap of claims 1 and 6 demonstrates that both claims cover the practice of the claim limitations at a licensing system.

96. Independent claim 11 recites a system claim practicing the method recited in claim 1. Independent claim 16 recites a system claim practicing the method recited in claim 6.

97. Most dependent claims impose additional limitations related to facilitating the execution of the processes outlined in the independent claims. In particular, the claims require: receiving a licensing response to a licensing query (claims 2 and 12); providing a licensing request and preventing reproduction when a user declines a license (claims 3 and 13); receiving a license (claims 4 and 14); using a plurality of "reproduction parameters" (claims 5 and 15); facilitating payment for a license (claims 7-8 and 17-18); storing a license record in a registered user database (claims 9 and 19); using a fingerprint (claims 10 and 20); providing user data access to a third party online media retailer (claims 21, 23, 25, and 27); storing the "geographic location" of a user (claims 29 and 32); and identifying "additional media content items that the user has previously accessed" (claim 30).

98. Other dependent claims include identifying a "quantity of times" that a user has accessed a media content item (claim 31) as well as providing user data access to a hardware device manufacturer (claims 22, 24, 26, and 28).

2. The '581 patent Claims Relative to Other Claims in the Family

99. I understand that Petitioner has filed IPR petitions challenging other patents in the same family as the '581 patent. These include U.S. Patent Numbers

9,898,590; 10,489,560; 10,515,191; 10,860,691; and 10,885,154. EX1073-1077. Two common themes are present in these patents: (1) licensing and distribution of digital media, and (2) subsequent targeted marketing, with many similarities and slight differences. Regarding similarities, each of the patents in the family recite identifying whether the user has accepted or declined an offer to access media content, recording user demographic data, and providing a summary of the user demographic data to requesting parties. As I will further explain below, Peled and Brandstetter each disclose these common concepts.

100. Regarding differences, I have included a table below describing some claim features that are unique to each of the individual patents.

U.S. Patent No.	Claim Features
9,715,581 (EX1001)	Claim 1 includes "loading a digital media file for reproduction" as well as "analyzing the digital media file to identify digital media information."
9,898,590 (EX1073)	Claim 1 of the '590 patent is similar to claim 1 of the '581 patent except that the '590 patent does not recite the "loading" or "analyzing" steps.
10,489,560 (EX1074)	Claim 1 of the '560 patent is similar to claim 1 of the '590 patent except that it introduces the concepts of streaming, offering a "license to stream" a media content item, and

	marketing based on user streaming history.
10,515,191 (EX1075)	Claim 1 of the '191 patent is similar to claim 1 of the '590 patent except that it introduces the concept of two users and aggregating user data for the two users, where one has accepted a license and the other has declined a license.
10,860,691 (EX1076)	Claim 1 of the '691 patent is similar to claim 1 of the '560 patent (includes streaming) except that it introduces the concept of a "media fingerprint" and two users requesting the same media content item.
10,885,154 (EX1077)	Claim 1 of the '154 patent is similar to claim 1 of the '691 patent (includes streaming and fingerprints) except that it involves a single user requesting two different media content items and is written from the perspective of the user's multimedia hardware device.

101. As I will further explain below, the concepts unique to the '581 patent are obvious in view of the combinations that I have described in the grounds of unpatentability included in this Declaration.

C. Summary of the Prosecution History

102. The '581 patent purports to claim priority to a provisional application filed on November 4, 2011. The claims of the '581 patent were rejected several times

during prosecution, and various amendments were added each time. In the last set of amendments before the patent issued, the applicant revised the claims to emphasize the targeted marketing aspect of the purported invention. In particular, the applicant amended the claims to require that user data be collected both when the user acquires a license and when the user declines the license, and that such data be used for targeted marketing purposes. EX1009, '581 Prosecution History, 0344-65. In accepting these amendments, the Examiner found that "none of the prior art discloses the specific combination of limitations claimed including storing demographic data about users that decline a media license in order to inform a marketing analysis in combination with the other limitations of the claims." *Id*., 0376. Based on this finding, the '581 patent issued on July 25, 2017.

VII. OVERVIEW OF THE PRIOR ART

103. Notwithstanding the Examiner's findings during prosecution, the prior art at issue here discloses targeted marketing of digital content, as well as all other limitations recited in the '581 patent claims, well before the patent's purported priority date.

A. Peled

104. Peled, titled "Method and Apparatus for Supporting Electronic Content Distribution," was filed on October 16, 2001, and was published on January 15, 2004. Like the '581 patent, Peled discloses a system for marketing and distributing

digital content over the Internet. EX1003, Abstract, ¶¶1, 155. In particular, Peled describes "electronic information analysis in the field of online purchase/usage information analysis." *Id*., ¶1. This analysis applies to "content distribution over the Internet." *Id*., ¶3. The distributed content may include "[m]ovies or books, or may be other data such as short films or manuscripts … ." *Id*., ¶7. Peled describes a "need to identify and quantify the demand for specific content" to aid with sales and marketing. *Id*., ¶7.

105. To address this need, Peled explains that "[m]ethods for analyzing market needs are well known in the prior art." *Id*., ¶2. "Existing patents and applications deal with the gathering of approved purchase requests, storing them in databases and analyzing personal, organizational and market behavior regarding those requests." *Id.* This applies to "both approved and denied requests." *Id.*

106. Peled builds upon these well-known techniques and describes a system that "provides the ability to study online requests for content." *Id.*, ¶155. In particular, Peled identifies "***online requests that do not result in a sale***, for the purpose of providing content providers with information about potential new markets that are currently being excluded and also to provide consumers with acceptable alternatives." *Id.* Specifically, Peled describes identifying scenarios where users do not complete a purchase. *See id*., ¶¶155, 168-69, 175-78, 186, 196-97.

107. For example, Peled provides two scenarios where a user declines to purchase content:

> An Italian [speaking] consumer requests a movie from an American based company, only to discover that the movie is in English without subtitles. ***The consumer therefore declines to complete the transaction***. The content directing/packaging unit 32 notes the consumer's location in Italy, and offers a version from an Italian content provider with Italian subtitles. Preferably, it is ensured that both the American and Italian content providers are credited for the sale.

EX1003, ¶176 (emphasis added).

> A consumer, who has a history of requesting movies at a given price, makes a request for a movie at a higher price, but then does not complete the transaction. The content directing/packaging unit 32 notes the price difference and assumes that to be the reason for the refusal. It therefore repackages the movie with commercial advertising and offers it at a lower price. Alternatively or additionally, the content provider is provided with statistical information indicating that the content was refused by requesters who had shown a willingness to purchase at a given lower price.

EX1003, ¶177 (emphasis added).

108. As seen from these examples, Peled describes the tracking of user requests and whether users have accepted or declined offers for content. *Id*., ¶¶176-77. In addition to recording this choice, Peled also tracks demographic data related to the user, which includes "geographical factors, temporal market data, pricing

factors, personal data of the individual consumers, personal data of a statistically constructed group of consumers to whom the individual consumer is believed to belong, the state of network infrastructure operability in the vicinity of a requesting party, and content provider distribution factors." *Id.*, ¶169.

109. Peled compiles this demographic data and generates "reports to individual content providers." *Id.*, ¶168. Peled uses "report generator 28 which may arrange statistical information regarding individual content or different content items from a given content source." *Id*. Peled's "method carries out a statistical analysis of data of non-completed requests taken together to determine why requests are not being completed." *Id.*, ¶183. Peled then compiles this statistical analysis into the reports and provides the reports to content providers or content distributors. *Id.*, ¶¶183, 199.

110. With this information, companies may evaluate company policies or business rules based on customer characteristics. *Id.*, ¶196. "The gathered information may also be used in order to evaluate the existing market segmentation criteria and to focus marketing efforts on potential market segments (both for the relevant content and for similar content items)." *Id.*, ¶200; *see also id.*, ¶157. In this manner, Peled provides a process for "evaluating the impact that different business rules (rules enforcing restrictions on distribution, age, region, time etc) have on the demand for usage." *Id.*, ¶9.

111. To track whether a user has acquired or declined an offer for content, Peled describes apparatus 20, which is depicted in Figure 6 and "provides content distribution over a network 22." *Id.*, ¶166.

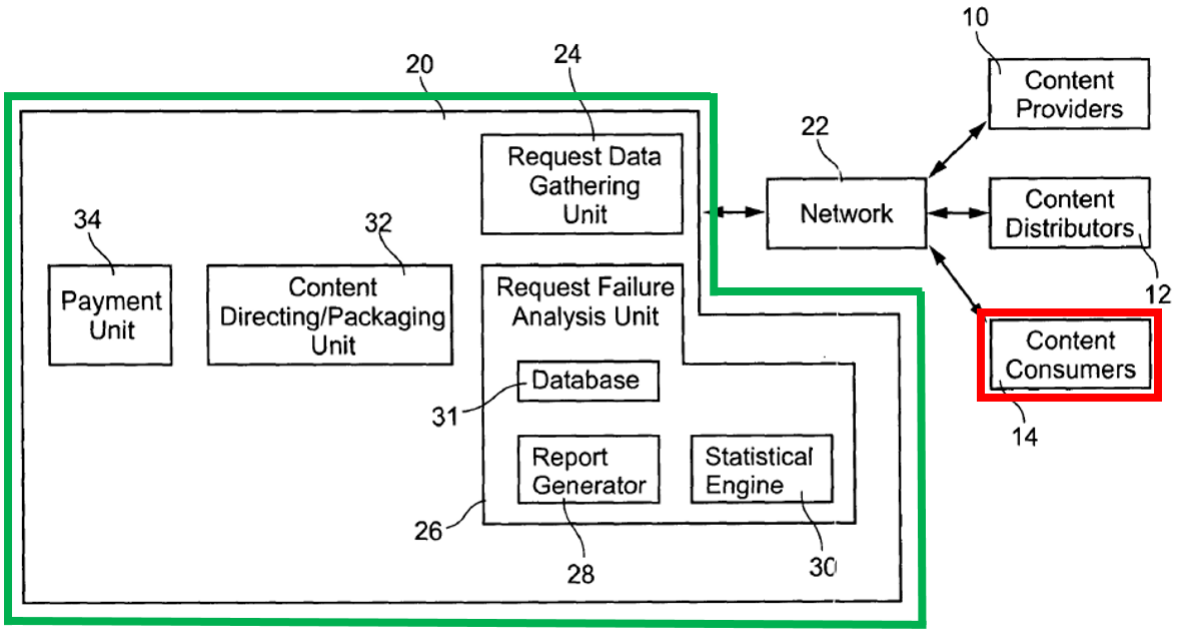


Fig. 6

EX1003, FIG. 6 (annotated).

112. The system includes a server-based apparatus 20 (green), as well as a plurality of consumers 14 (red) communicating with the server and each other via the Internet 22 using their devices (i.e., computers). EX1003, ¶166. Consumers may request to download or stream digital content located at various holding sites on the Internet, and Peled's server then determines where the requested content is located and instructs the holding site to distribute the content to the consumer. *Id.*, ¶¶61, 159, 80, 94, 111, 158-60, 173, 178, 182. Also communicating with the server are content

providers 10 and distributors 12. *Id*., ¶158.

113. Peled's server contains both a "request data gathering unit" 24, which obtains "data of user requests for respective content items," and a "request failure analysis unit" 26, which "uses output of the request gathering unit to analyze request fulfillment failures" to determine "the reasons behind" such failures. *Id*., ¶¶167-168. Request failures comprise transactions "begun and not completed," including those implicitly declined—e.g., "where a consumer simply looks at a content item but then chooses not to buy it"—and those explicitly declined—e.g., where a user "made a purchase attempt" but then aborted the attempt. *Id*., ¶¶185-86. Peled explains that failed requests can occur for any reason, including because the price of the requested content is too high or simply because the user loses interest. *Id*., ¶¶158, 186.

114. Such data is analyzed in conjunction with "a personal profile of an individual consumer if available, or of a profile of a group to which the consumer is deemed to belong," to determine the reasons for the failure and then stored in a database 31. *Id*., ¶¶56, 169, 180. Next, a "report generator" 28 "aggregate[s]" the collected information, including "geographical factors" and "personal data of a statistically constructed group of consumers to whom the individual consumer is believed to belong," and "statistically analyz[es] the data" to generate a report that conveys "why requests are not being completed." *Id*., ¶¶92, 169, 198. The report, which can be generated in real-time or in advance, is then provided to content

providers and other interested parties and analyzed to inform marketing decisions. *Id*., ¶¶155, 168, 171, 183.

115. For example, based on the information contained within a report, a "content directing/packaging unit" 32 can up-sell or cross-sell content to certain users. *Id*., ¶¶173, 181. Alternatively, the reports can be used "to focus marketing efforts on potential market segments"—i.e., to target a particular demographic. *Id.*, ¶¶88, 200 ("The gathered information may also be used in order to evaluate the existing market segmentation criteria and to focus marketing efforts on potential market segments (both for the relevant content and for similar content items)."). As depicted in Figure 7, Peled analyzes individual refusals for content as well as aggregated refusals, which are organized into the statistical reports that I previously described. *See generally id*., ¶¶180-200.

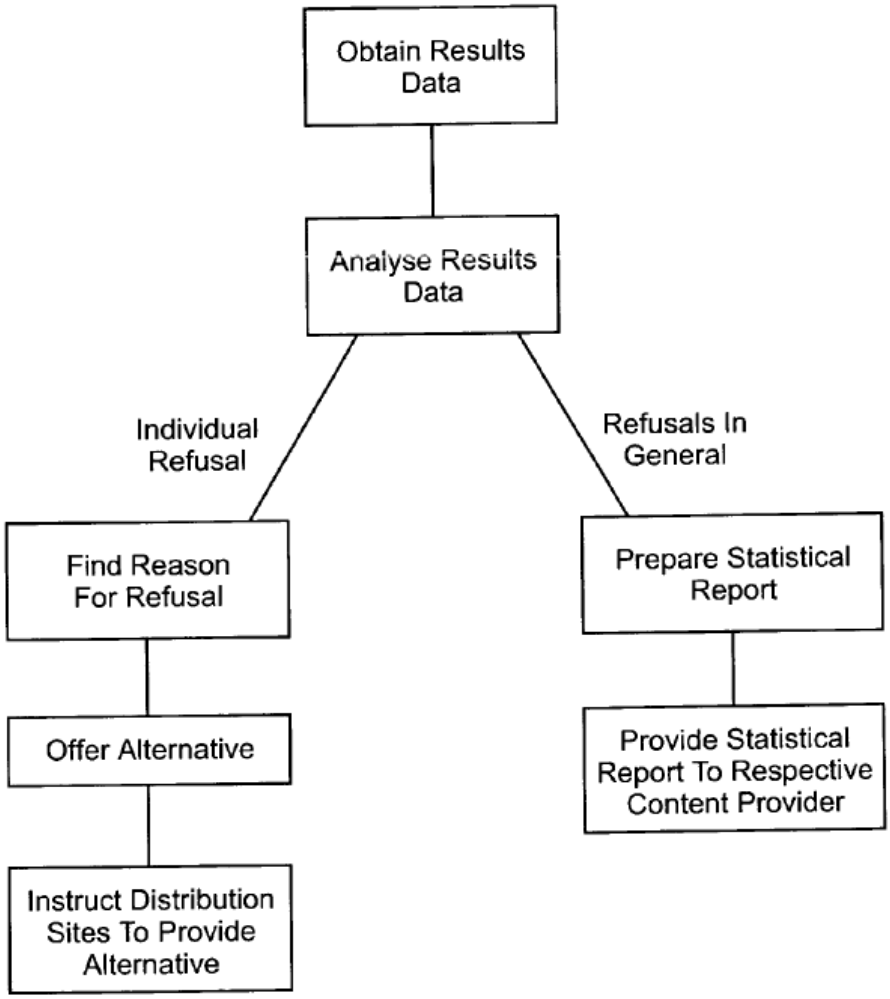


Fig. 7

EX1003, FIG. 7.

116. Based on this process, Peled describes the same monitoring of whether an offer for content has been accepted or declined as described in the '581 patent. Additionally, Peled also describes storing and aggregating user demographic data to provide content providers with statistics related to users who accept or decline content offers. EX1003, ¶¶168-69. By analyzing denied requests in conjunction with demographic data, Peled explains that its system advantageously "reveal[s] an

otherwise hidden demand for products and/or services in segments that a company is not selling to or serving at a given time." *Id*., ¶196.

B. Brandstetter

117. Brandstetter, titled "Systems and Methods Enabling Marketing and Distribution of Media Content by Content Creators and Content Providers," was filed on January 29, 2010, and was published on August 4, 2011. Brandstetter is directed to an online platform in which content creators and providers can market and distribute digital content—including movies, sound recordings, e-books, and digital images—through various interfaces. EX1004, Brandstetter, Abstract, ¶¶69, 118. An example of that platform is shown in Brandstetter's Figure 1C below:

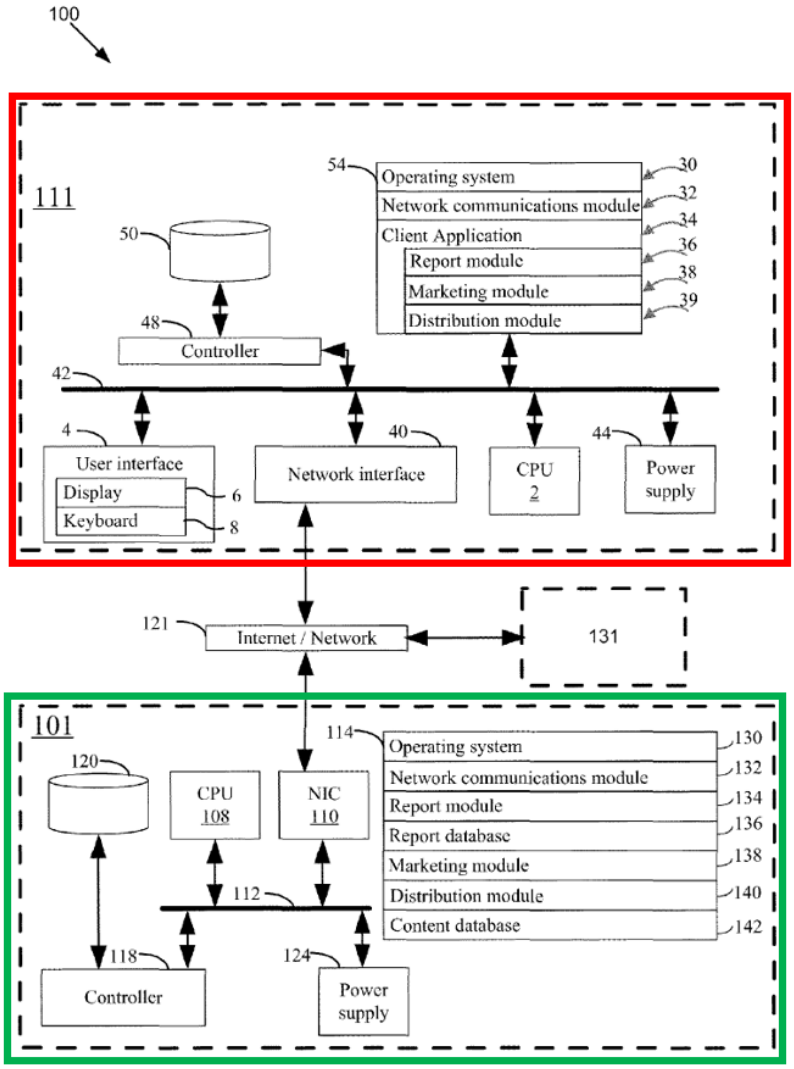


FIG. 1C

EX1004, Fig. 1C (annotated).

118. The platform includes a central server 101 (green) containing one or more processors 108 and memory 114, as well as "hundreds of thousands" of user client devices 111 (red) (e.g., computers or mobile devices), which communicate with the server and each other via the Internet 121. *Id.*, ¶¶91, 109.

119. Brandstetter explains that its platform can license and distribute digital

media content to a user in accordance with the content's licensing requirements. That process begins with a user logging into the platform through a graphical user interface on his or her device and requesting a particular media content item from the server by, for example, searching for the item in a search bar within the interface:

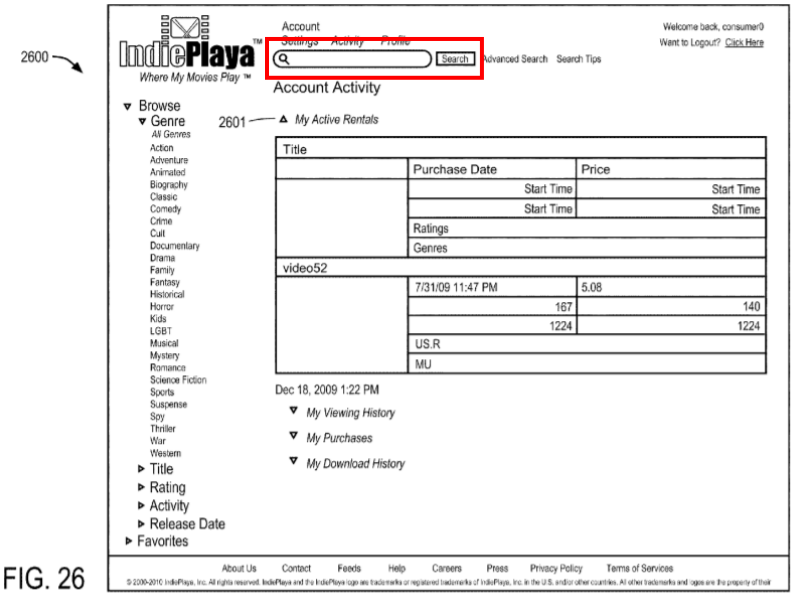


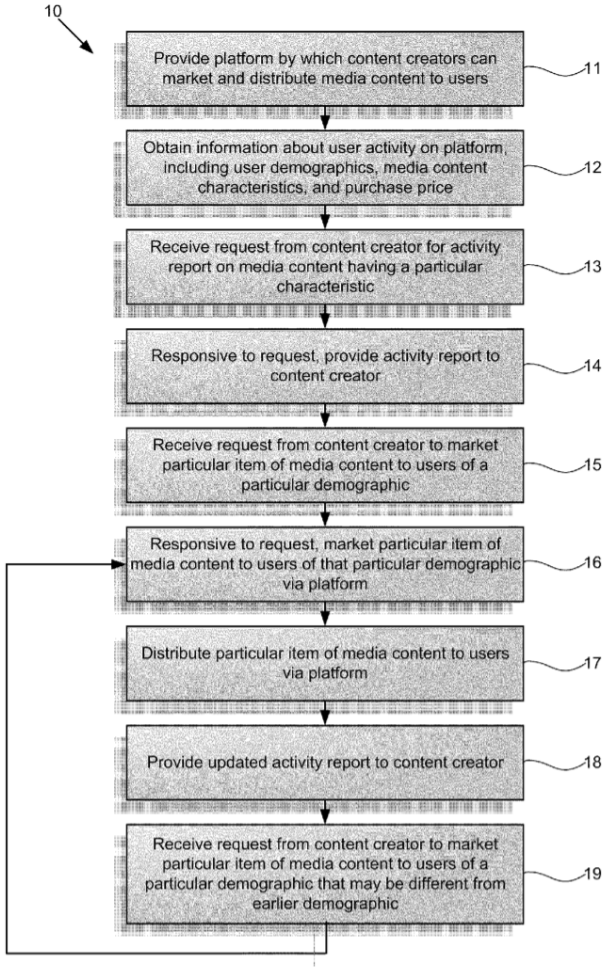
FIG. 26

EX1004, FIG. 26 (annotated).

120. A distribution module 140 on the server receives the request and distributes the item "in accordance with digital rights management constraints defined by the content creator." EX1004, ¶98. For example, a user "can purchase an item or a license to an item, and can download the item over the network." *Id.*, ¶77. Alternatively, the user can rent or stream the content. *Id.*, ¶¶120, 126, 173.

121. Brandstetter also explains that its platform allows content creators and third parties to engage in targeted marketing of digital content based on statistical data about the users who previously purchased or declined to purchase such content.

This is shown, for example, in Brandstetter's Figure 1A:



EX1004, FIG. 1A.

122. Brandstetter explains that a report module 134 on the server "collects information about user activity with respect to media content on the platform" (step 12). EX1004, ¶¶71, 83, 96. Such information includes, for example, "user demographics (e.g., ages, geographical locations, ethnicities, genders)," as well as "the characteristics of the media content with which each of the users interact" and "the way in which the user interacted with the media content." *Id.*, ¶¶65, 71.

123. Such data also includes all user "activity up to and including a purchase" so that, "even if a purchase is not made, data related to audience interaction with content on the website can be indexed and used for later analysis." *Id.*, ¶130. For example, a user may implicitly decline to purchase a license by viewing a media content item and then navigating away. Alternatively, a user may explicitly decline to purchase a license by declining a particular offer provided by Brandstetter's system. For example, as shown in Figure 16, a user may be prompted to "purchase" media content or "rent" media content. A user selecting to "rent" a license rather than "purchase" one affirmatively declines to "purchase" a license.

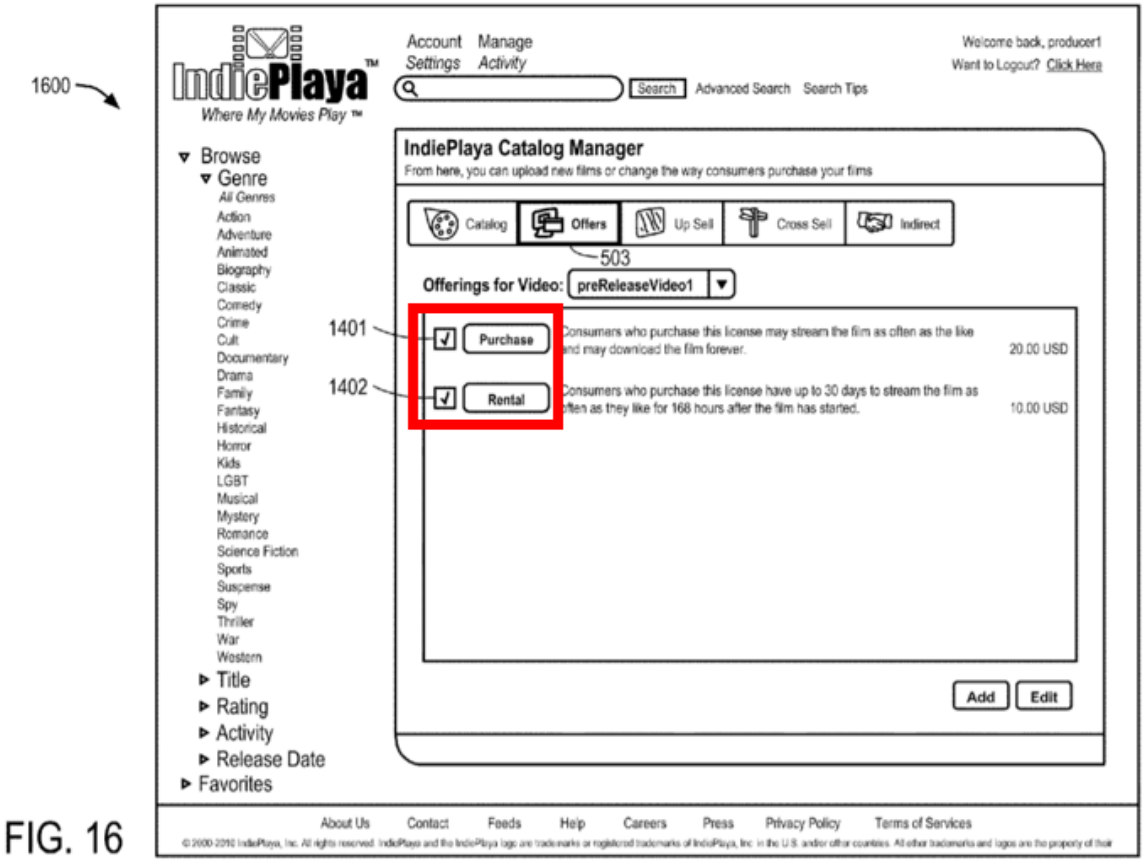


FIG. 16

EX1004, FIG. 16 (annotated), ¶¶130, 147.

124. Once user demographic and purchase history data is collected, the data is stored in a database in the report module for later analysis. EX1004, ¶¶71, 96, 130. For example, Brandstetter explains that all client interaction with the platform (e.g., purchase history, user data, license packages, etc.) is "indexed and used for later analysis." *Id.*

125. Next, "any third party granted the right to market or distribute" the content can request from the module an "activity report" for one or more content items (step 13 in Figure 7). *Id.*, ¶¶73, 84, 96, 159. Activity reports statistically summarize how different users perceive a particular media content item and are compiled from aggregated demographic and platform activity data. *Id.*, ¶¶8, 65, 78, 133, 172. An example of an activity report is shown in Figure 48 below:

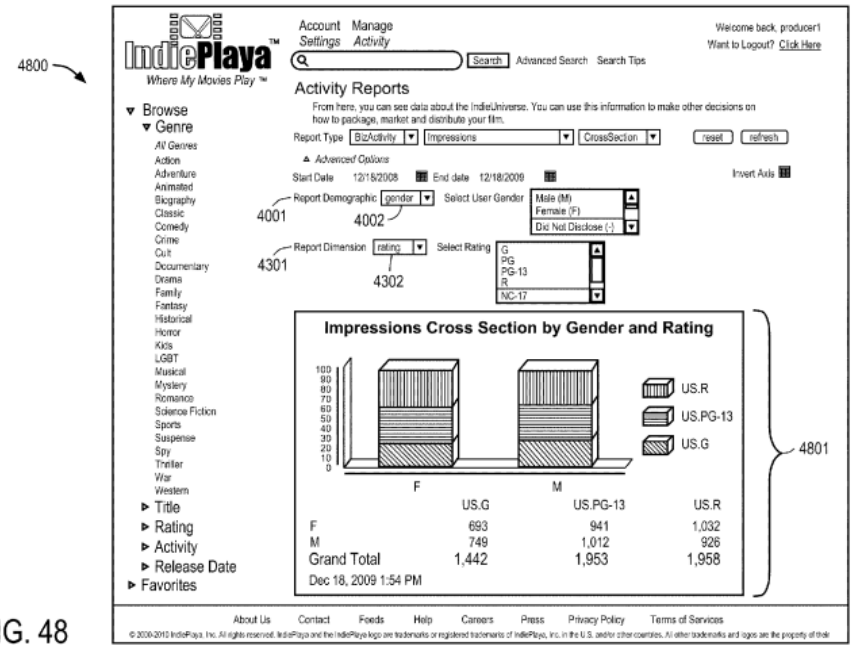


FIG. 48

EX1004, FIG. 48.

126. The report illustrated in Figure 48 breaks down user impressions of a media content item by gender, but Brandstetter makes clear that reports can be generated according to other demographic parameters, such as user location. EX1004, ¶¶173-74, 179. Further, activity reports can be generated either in real-time in response to a request or "ahead of time" and "stored" in a database. *Id*., ¶74.

127. In response to a request, the report module provides the report to the requestor (step 14 of Figure 7), who can then analyze the report to inform marketing decisions. In particular, after analyzing the report, a content distributor may request that the platform's "marketing module" 138 market the content item to a particular "targeted demographic" (steps 15-16). *Id*., ¶¶73, 75-76, 80, 85-86, 97. For example, if a report indicates that "first-person horror films are particularly popular with 18-24 year-old males, then the content creator can develop a strategy for marketing primarily to that demographic." *Id*., ¶66. Brandstetter explains, moreover, that the platform can market content to two different demographics simultaneously. *Id*., ¶81.

128. Additionally, reports can be used to generate "content recommendations or offers (e.g., licensing packages)" for a particular user. *Id*., ¶172. For example, content creators can create up-sell and cross-sell licensing packages for users. *Id*., ¶¶149-157. "[W]hen a user exhibits an interest in licensing content, the content creator can dynamically create and offer the user another license option

for similar content." *Id.*, ¶150.

129. In this manner, Brandstetter's platform "enable[s] content creators to efficiently market and distribute their content to a target audience." *Id.*, ¶6.

C. Pou

130. Pou, titled "Distribution and Rights Management of Digital Content," was filed on December 2, 2003 and published on January 6, 2005, and was published on January 6, 2005. Pou describes "digital rights management, and more particularly [] facilitating authorized licensing and distribution of digital media." EX1005, ¶2. It describes a system and method for managing licenses to digital media content, including music, movies, and e-books. *Id.*, Abstract, ¶¶8, 42. Pou depicts an example system in Figure 2:

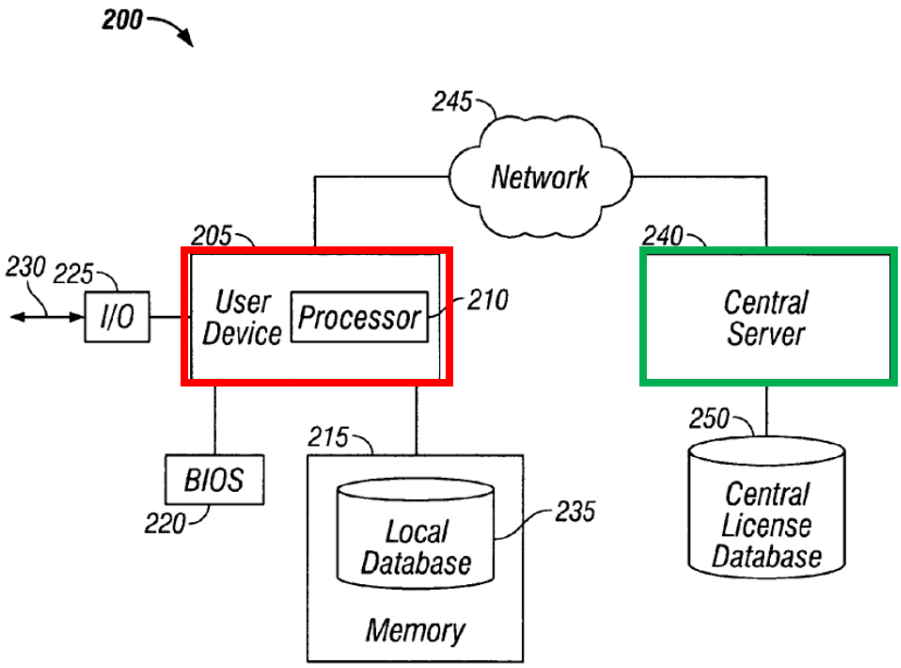


FIG. 2

EX1005, FIG. 2 (annotated).

131. Pou's system includes a "central server" 240 (green), as well as a plurality of "user devices" 205 (red) (e.g., computers or mobile devices), which communicate with the server and each other via the Internet 245. EX1005, ¶¶31, 43, 57. With these systems, Pou describes a process for licensing and managing digital rights to a file with reference to Figure 1. *Id.*, ¶¶31, 50-56.

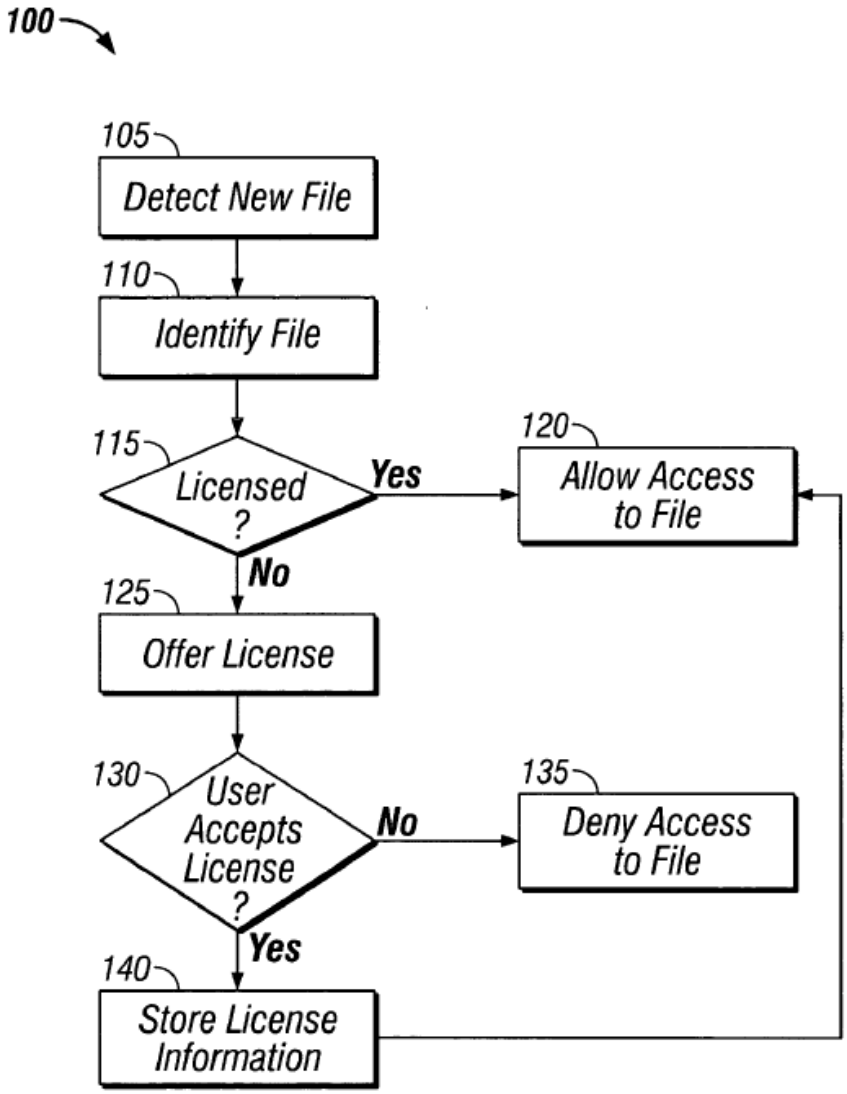


FIG. 1

EX1005, FIG. 1.

132. When a user loads a media file onto his or her device, the file is detected (step 105) and "examined using file identification software in an attempt to identify the file" (step 110). EX1005, ¶¶13, 51, 64, 82. In one embodiment, this may be a digital file that a user has received from another consumer or has purchased in

physical form, such as via a "standard audio CD or DVD." *Id*., ¶¶46, 48, 50-51. Pou explains that its media files are identified using "watermarking and fingerprinting techniques," which Pou notes were "known in the field of digital rights management." *Id*., ¶54.

133. In particular, Pou explains that software can extract from the file "a digital fingerprint" that embodies the "internal attributes" of the file and "compare[] the extracted fingerprint to a database of known works." *Id*., ¶¶13, 51, 54. In this regard, Pou incorporates by reference Wells *et al*., U.S. Patent Application Publication No. 2003/0086341 (EX1049), which describes various algorithms known in 2002 for identifying sound recordings using fingerprints. *Id*., ¶51. As Wells explains, fingerprints are based on "intrinsic properties of" digital content and are advantageous because "nothing is added to the music." EX1049, ¶19. Because such fingerprinting techniques are based on "implicit characteristics," Pou's method "allow[s] for accurate identification of the file even if someone has attempted to disguise the file (e.g., by changing the file name, extensions, or other attributes)." EX1005, ¶¶53-54. Alternatively, Pou states that files can be identified using "explicit file characteristics (e.g., a file identifier stored in a file header)." *Id*., ¶54; *see also id*., ¶15 (describing a "unique file identifier" for digital media files).

134. After a file has been identified, Pou then determines whether the user attempting to access the digital file has already licensed the content. *Id*., ¶55. "This

determination may be performed by referring to one or more license databases, which may be stored locally (e.g., on the user device) and/or remotely (e.g., at a central server)." *Id*. Pou's system checks a "central license database" located on the server which determines whether the file has been licensed for use by the user (step 115). *Id*., ¶¶55, 59, 77, 83. If the file is licensed, the user is provided access to the file (step 120), which may involve decrypting the file, streaming the file to the user's device, and/or downloading the file to the user's device. *Id*., ¶¶55, 60, 84. If the file is not licensed, a license may be offered to the user for purchase (step 125). *Id*., ¶¶56, 85.

> For example, the user may be directed to a website where a purchase can be made, or a pop-up window may appear on a display screen for the user device ***asking whether the user wishes to purchase a license to the file*** or otherwise accept certain license terms and/or the user may be directed to a website where a purchase can be completed.

EX1005, ¶56 (emphasis added).

135. The user may then accept or decline the offered license. EX1005, ¶¶56, 85. For example, Pou's system may receive "an indication that the user clicked on an accept button or a decline button in the pop-up window." *Id*., ¶56. "If the user does not accept the license, access to the file may be denied (step 135). If the user does accept the license, including complying with any payment terms, the user is allowed to access the file…." *Id*. Licensing information indicating that the file has

been licensed is then stored in the license database. *Id*., ¶¶56, 79-80, 85.

136. In this manner, Pou likewise discloses fingerprinting techniques for identifying digital content and providing the content to users in accordance with licensing terms.

D. Levy

137. Levy, titled "Rights Management Systems and Methods using Content Identifiers," was filed on October 1, 2007, and was published on June 12, 2008. Levy describes "integrating content identifiers with digital rights management systems." EX1006, Levy, ¶3. Levy describes that "some companies maintain extensive content databases to promote their products" and that "[c]ustomers or service providers such as advertising and marketing firms can access this content remotely via [the] internet." *Id*., ¶5. Levy describes a "need to enable digital rights management systems to reliably link content with additional, related data—including related content," and "a need … to reliably link content with related usage billing information." *Id*., ¶6.

138. To address this need, Levy discloses "a digital watermarking system [that] includes (or communicates with) a secondary component—a database." *Id*., ¶10. Levy explains that such "a database preferably includes data related to content," and that such data may include "content owner or copyright information, metadata, usage rights, enhanced or interactive content, and billing information." *Id.* Levy

recognizes that its "user-friendly digital rights management system provides transparent usage models to consumers while protecting the content." *Id.*, ¶11.

139. To manage digital rights, Levy describes a "Media Server" user device, which may be a "cell phone, MP3 player, iPod®, or computer" that includes "Client Player Application" software for playing content. *Id.*, ¶¶83-84. Levy depicts a method for authenticating content usage rights in FIG. 17d. *See also id.*, FIG. 17a.

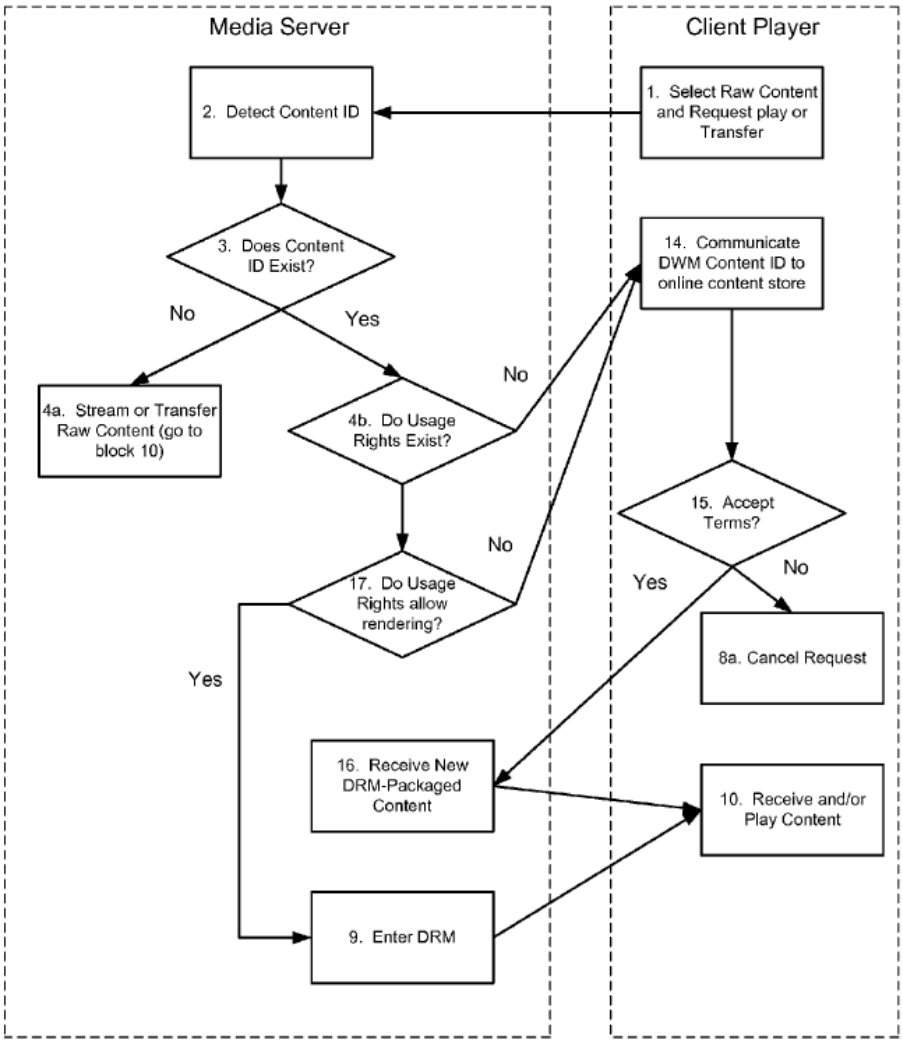


Fig. 17d

EX1006, FIG. 17d.

140. When a "user selects raw content for playing," the Media Server identifies a corresponding digital watermark (DWM) Content ID. *Id.*, ¶¶17, 108. "Raw content" includes files downloaded from a Peer-to-Peer (P2P) network or ripped from CDs. *Id.*, ¶107. The DWM Content ID may be a "fingerprint" and may be extracted using a fingerprinting algorithm. *Id.*, Abstract, ¶¶140-142, claims 19, 23, 26, 33, 39. A "fingerprint (e.g., a hash, derived signature or reduce-bit representation of content)" allows Levy's system to "uniquely identify" media content. *Id.*, ¶140. Levy's Media Server "calculates or derives a fingerprint of content" and uses the fingerprint to identify corresponding "Usage Rights." *Id.* "Usage Rights" refers to a "License" and defines the conditions for playing the media content. *Id.*, ¶87.

141. Levy's Media Server identifies Usage Rights from a "Rights Registry" database that may be local to or remote from the Media Server. *Id.*, ¶¶90, 97-98. As seen in FIG. 17d, Levy determines whether Usage Rights exist that allow playing of the media. *Id.*, ¶115. "If not, the Media Server is directed to an online content store." *Id.* The online store then presents an offer for the user to purchase a license to the content. Id., ¶112. "The user can accept or reject the Usage Rights." EX1006, ¶110. If the user declines, the Client Player Application "prohibits access" to the file. *Id.* If the user accepts, "the content is played." *Id.*

142. To illustrate this process and to track the status of content, usage rights, and user interaction with the content, Levy describes a home rights management system 10, which is depicted in Figure 1 and provides content distribution over a network.

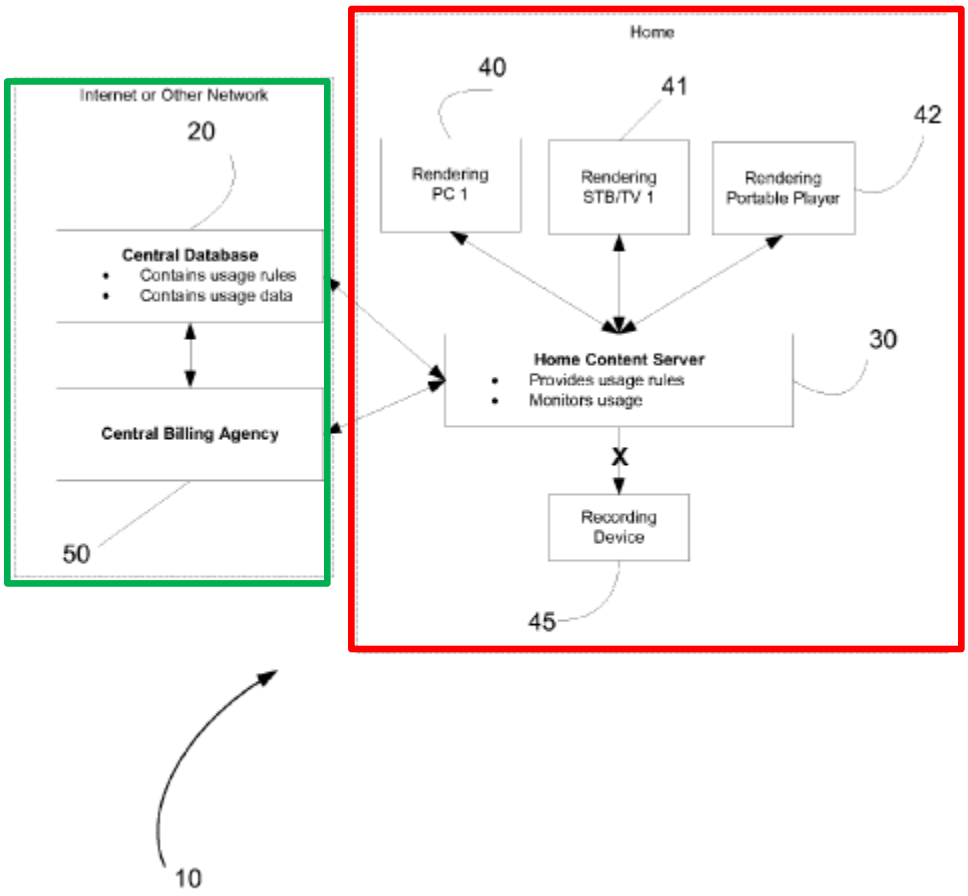


FIG. 2

EX1006, FIG. 2 (annotated).

143. System 10 includes a local home network (red), that includes a home

content server 30 in continuous communication with rendering devices 40-42 (e.g., PC, TV, STB, Portable Player, etc.). EX1006, ¶49. While the home network server is located within the home in this example, Levy recognizes that the home content server 30 can be located in any other remote location. *Id.*

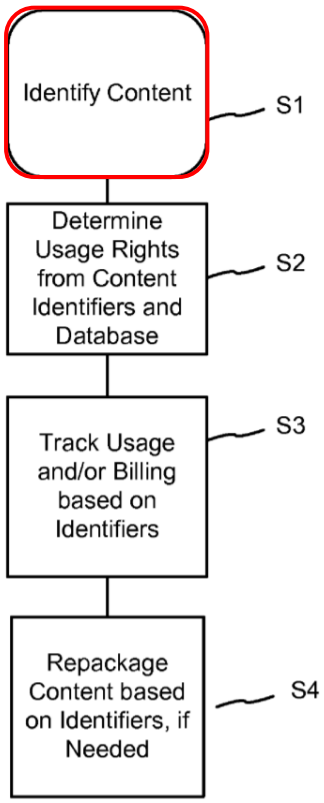
144. Levy discloses that system 100 also includes central database 20 and central billing agency 50. *Id.*, ¶51. Levy explains that:

> ***Central database 20 preferably maintains a set of usage rules. The usage rules define use limits (or permitted use) for related content***. The usage rules can be communicated to various network locations, such as to home content server 30. Home content server 30 can query central database 20 to obtain or update usage rules, or updated rules can be pushed to home content server 30. Server 30 can also cache the usage rules locally, or can occasionally query database 20 to obtain updates, etc.

EX1006, ¶52 (emphasis added).

145. In one example, Levy describes that when content playing is requested from a user, either "a rendering device 40-42 or home content server 30 checks the content item and/or [content] headers for an identifier" such as a watermark or fingerprint in order to identify the content. EX1006, ¶54. In particular, as shown in Figure 1 below, Levy describes an algorithm by which multimedia files such as songs, videos, and images are "identified" before being rendered:

Fig. 1



EX1006, FIG. 1 (annotated), ¶¶4, 42, 69, 93; *see also id.*, FIGS. 17*a*-18, ¶¶108-109.

146. Levy explains that this identification can be performed using a fingerprinting algorithm. EX1006, Abstract, ¶¶140-142, claims 19, 23, 26, 33, 39. In particular, a "fingerprint (e.g., a hash, derived signature or reduce-bit representation of content)" allows Levy's system to "uniquely identify" media content. *Id.*,¶142. Levy explains that this fingerprint "***is generated during content creation***." *Id.*, ¶140 (emphasis added).

147. As I will illustrate herein below, Levy's fingerprinting and the scenario disclosed in Figure 17d of Levy mirrors the licensing and distributing features of digital media recited in the independent claims.

148. In this manner, Levy likewise discloses fingerprinting techniques for identifying digital content and providing the content to users in accordance with licensing terms.

E. Vijay

149. Vijay, titled "Porting Digital Rights Management Service to Multiple Computing Platforms," was filed on May 31, 2011, and was published on June 27, 2013. Similar to the '581 patent, Vijay discloses protecting electronic content using a "digital rights management ('DRM') system." EX1008, Vijay, ¶¶2-3. This content may include "documents, e-books, video, music, computer applications, or games." *Id*. To provide this DRM protection, Vijay describes "device manufacturer 114" depicted in Figure 1. *Id*., ¶22.

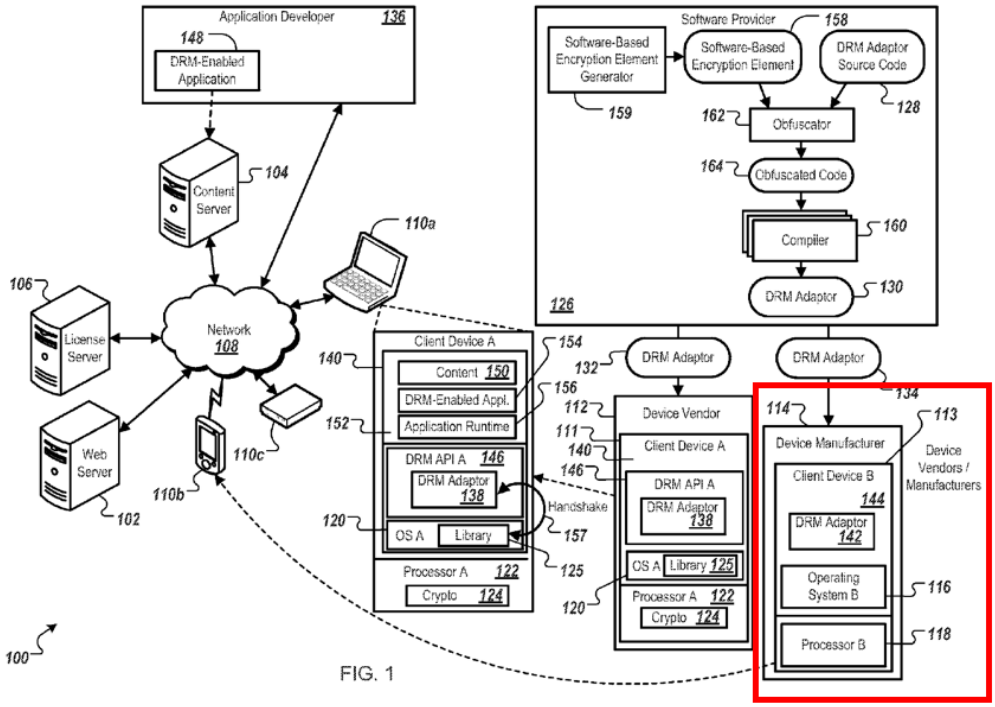
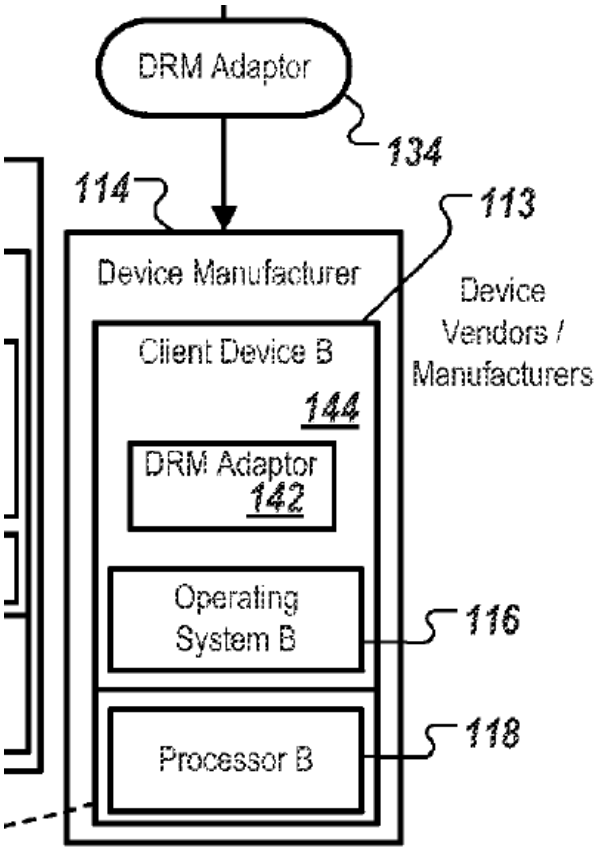


FIG. 1

EX1008, FIG. 1 (annotated).



EX1008, FIG. 1 (excerpt).

150. Device manufacturer 114 provides client devices 110. EX1008, ¶22. Using a "DRM adaptor," device manufacturer 114 may "implement robust, secure DRM solutions on devices." *Id*., ¶25. For example, "DRM adaptor 142 [may be] included in computer readable medium 144 of the client device 113." *Id*., ¶27. In this manner, "device manufacturer 114 may develop both an operating system 116 and a hardware processor 118 for the client device 113" to provide "hardware-based encryption." *Id*., ¶¶22-23, 27, 45-46.

151. In this manner, Vijay discloses the same hardware device manufacturer as described in the '581 patent.

VIII. CLAIM CONSTRUCTION

152. I do not believe that any particular construction of any particular claim term is required for purposes of this proceeding. I have therefore interpreted the claim terms recited in the '581 patent consistent with their plain and customary meaning to a person of ordinary skill in the art, as informed by the specification.

153. I reserve the right to offer claim construction opinions, however, in the event that Patent Owner proposes, or the Board adopts, particular constructions for claim terms.

IX. GROUND 1: CLAIMS 1-21, 23, 25, 27, 29-30, AND 32 OF THE '581 PATENT ARE UNPATENTABLE UNDER 35 U.S.C. § 103 OVER PELED IN VIEW OF POU

154. Peled and Pou disclose each and every limitation of claims 1-21, 23,

25, 27, 29-30, and 32. While Peled teaches the identification and aggregation of user demographic data in response to accepting or declining a media license, Peled may not explicitly describe evaluating whether a user has already acquired the media license. However, Pou expressly discloses such an evaluation and subsequently offering a media license when one has not been previously obtained. EX1005, ¶¶55, 83, FIGS. 1, 4. As I explain in further detail below, a POSA would have found claims 1-21, 23, 25, 27, 29-30, and 32 of the ’581 patent obvious in light of the disclosures of Peled (EX1003) and Pou (EX1005).

A. Overview of the Combination of Peled and Pou

155. A POSA would have been motivated to combine Peled and Pou, would have known how to combine Peled and Pou, and would have had a reasonable expectation of success when combining Peled and Pou.

1. A POSA would have been motivated to combine Peled and Pou.

156. A POSA would have recognized that combining Peled and Pou would have amounted to combining well-known prior art elements to yield predictable results. As I explained in Sections V.A-C., tracking media licenses already obtained by a user and offering media licenses to users were well-known techniques in the art prior to the ’581 patent. With respect to the Peled and Pou combination, a POSA would have applied Pou’s content licensing, tracking of previously obtained media licenses, and offering of new media licenses to consumers to improve Peled’s

management of content purchases and gathering of user data related to media transactions. As I will further explain below, implementing Pou's license management and fingerprinting or UFID checking techniques would improve Peled's ability to track user purchases and to identify another potential reason for a user's refusal to purchase a license (i.e., because the user has already obtained the media content). This would improve Peled's report generation and provide content providers with a fuller picture explaining why a user may have declined to obtain a license for media content.

157. At the outset, Peled already describes tracking user purchases and purchase history. EX1003, ¶¶1-2, 177. Peled explains that such information is useful in the "scientific field of econometrics" to measure market behavior. *Id*., ¶2. Peled additionally describes tracking purchases and purchase refusals "to identify and quantify the demand for specific content." *Id*., ¶7. For example, Peled describes an example of tracking a consumer's purchase history and determining that the consumer "has a history of requesting movies at a given price." *Id*., ¶177. Tracking this information allows Peled to identify consumers who have "shown a willingness to purchase at a given lower price." *Id.* In this manner, Peled already describes tracking the purchase of media content and that such information is useful when performing a market analysis.

158. While Peled describes the tracking of purchased media content, Peled

may not explicitly describe how such tracking is performed. A POSA, however, would have understood that a common way to track purchased media content would be using a unique identifier corresponding to that media content. As I explained in Section V.B., such techniques were well-known in the art prior to the '581 patent. Pou explicitly recites such techniques and describes the use of a "fingerprint" or "'Unique File ID' (UFID)" to identify media files. EX1005, ¶¶51-55, 65, 83, 111. In view of Peled's suggestion of tracking user purchases, a POSA would have been motivated to combine Pou's fingerprint and UFID techniques with Peled to provide an efficient mechanism for tracking user purchases and identifying media content that a user has already obtained. *Id*., ¶¶55-56, 59. For example, a fingerprint is a compact, "reduce-bit representation of content" and therefore provides fast and computationally efficient comparisons. EX1006, ¶142. As I previously explained, such efficiencies and the use of fingerprints was well-known and nearly ubiquitous in the art. *See* Section V.B. A POSA would have also implemented Pou's tracking of media licenses with Peled as well to track user purchases in the form of licenses to reproduce media content.

159. Combining Pou with Peled would provide at least two benefits: (1) reproducing content where a license has already been purchased and (2) identifying an additional rationale when a user refuses to purchase media content. ***First***, Pou describes the process of checking whether a user has already obtained a license to

reproduce content. EX1005, ¶¶55-56, 59. Implementing this process with Peled would improve the efficiency of Peled's content distribution system. Peled's content distribution system would more quickly direct licensed content to a consumer when the content distribution system has determined that the consumer has already purchased a license for the content. EX1003, ¶¶159-60.

160. ***Second***, implementing Pou's fingerprint and UFID techniques with Peled would allow Peled to license content and identify another potential reason for a user's refusal to purchase a license (i.e., because the user has already obtained the media content). *Id*., ¶¶158, 168, 173, 181, 184, 186. This would improve Peled's report generation and provide content providers with a fuller picture explaining why a user may have declined to obtain a license for media content. *Id.* As Peled explains, one problem that arises in the field of media distribution is "illegal content distribution." *Id*., ¶184. Both Pou and the '581 patent also identify this problem as a major issue. EX1005, ¶3; EX1001, 1:26-47. In fact, piracy was a well-known and common problem in the art. *See generally* EX1060; EX1051. Peled explains that "[i]llegal distribution represents lost sales in the same way as request refusals and a thorough understanding of the illegal distribution situation for particular content items may lead to increased sales opportunities." EX1003, ¶184.

161. A POSA would have understood that implementing Pou's license management and fingerprint or UFID techniques with Peled would help to alleviate

this problem. Indeed, Pou explains that its solution helps to monetize media content. EX1005, ¶¶2-4, 110. Combining Pou's licensing and content tracking techniques with Peled would improve Peled by providing a mechanism for detecting illegal distribution or by identifying that a consumer has obtained the media content through another distribution channel. When a consumer has already obtained access to the media content (illegally or otherwise), the consumer may refuse to purchase the content. Using Pou's fingerprint or UFID techniques, Peled would identify that a consumer has already obtained the media content. *Id*., ¶¶51-55, 65, 83, 111. Peled would then package this information as an additional reason for refusal in Peled's reports that are generated and provided to content providers. EX1003, ¶168; *see also Id*., ¶¶54, 69-70, 155, 172, 180. Providing this reason for refusal would provide a fuller picture for content providers or distributors and more accurately capture market behavior. *Id*., ¶¶2-9, 200. Combining Pou with Peled would therefore provide more accurate market analysis. *Id.* Content providers or distributors would then be able to take action to account for the illegal distribution or any other reason why a user may have obtained the media content through an unauthorized channel. *Id*., ¶¶196, 198.

162. Thus, a POSA would have been motivated to combine Pou with Peled to track licenses or content already obtained by a consumer. This would improve Peled's content management and distribution process by being able to efficiently

identify content and corresponding licenses that a user has already purchased. This would also improve Peled's accuracy in performing a market analysis and determining reasons for refusing to purchase media content. *Id*., ¶¶158, 168, 173, 181, 184, 186.

2. A POSA would have known how to combine Peled and Pou and would have had a reasonable expectation of success.

163. A POSA would have known how to combine Peled and Pou and would have had a reasonable expectation of success. For example, a POSA would have known how to implement the purchase and license tracking described in Pou with Peled as well as the distribution of licensed content. EX1005, ¶¶55-56, 59. Similarly, a POSA would have known how to implement the fingerprinting and UFID techniques as well. *Id*., ¶¶51-55, 65, 83, 111. As I previously explained, this would provide a combined system capable of determining whether a user has already obtained a license and potentially identifying that as a reason for refusal. *See* Section IX.A.1.

164. Both Peled and Pou describe conventional server systems for managing digital media files. EX1003, ¶¶164-66; EX1005, ¶¶55, 59. Further, both Peled and Pou simply describe implementing software algorithms on these server platforms. EX1003, ¶¶164-66; EX1005, ¶¶55, 59. In this manner, a POSA would have easily combined the references using well-known computer programming techniques to perform a combined algorithm. This combined algorithm would include Pou's

licensing and digital media content recognition techniques and tracking of user licenses with Peled's gathering of user demographic data and reporting of this data. EX1003, ¶¶168-69. Combining Peled and Pou would have been predictable and would simply amount to updating Peled's software algorithm to include Pou's license management to generate a combined server system. This combination would operate to perform its intended purposes.

165. In this manner, a POSA would have easily combined Peled and Pou because both utilize conventional server systems for managing digital media files. *Id.*, ¶¶164-66; EX1005, ¶¶55, 59. Combining Peled and Pou would amount to nothing more than combining known prior art elements according to known methods to yield predictable results and applying a known technique to a known device ready for improvement to yield predictable results. Thus, in view of the conventional server systems described in Peled and Pou, a POSA would have easily combined the references and would have found it predictable to form such a combination.

B. Independent Claim 1

1. [1P] "A computer implemented method for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, comprising:"

166. To the extent that the preamble language is deemed limiting, Peled and Pou disclose the preamble. In particular, Peled describes facilitating the distribution of media content items to content consumers 14. EX1003, ¶¶166, 173. Peled

distributes digital media files—such as "video files"—to content consumers 14 over the Internet. *Id.*, ¶197. A POSA would have understood that such content would be received by content consumers 14 using "a general purpose computer" to consume the media content. *Id.*, ¶¶121, 159. This "general purpose computer" discloses the claimed "multimedia hardware device." To the extent that this is unclear from Peled, Pou also discloses a "user device, such as a computer" that also discloses the claimed "multimedia hardware device." EX1005, ¶50.

167. As depicted in Figure 6, Peled's "apparatus 20" distributes authorized reproductions of media content items to content consumers 14. EX1003, ¶¶166-68.

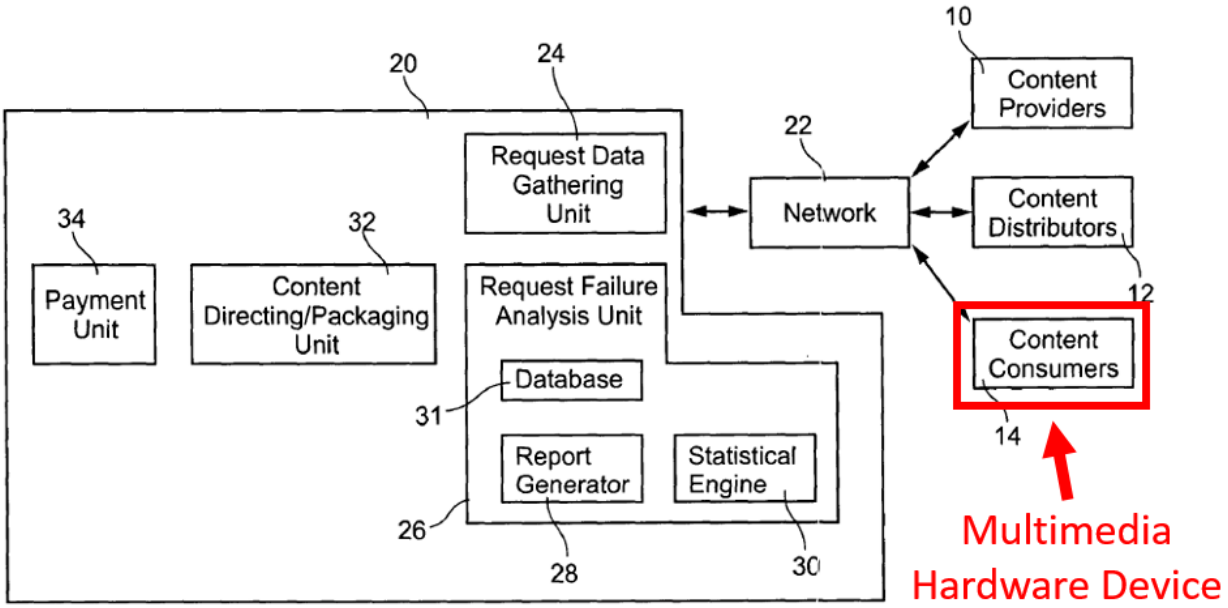


Fig. 6

EX1003, FIG. 6 (annotated).

168. "[A]pparatus 20 is preferably server based" and operates to direct

content to consumers 14. EX1003, ¶166. For example, apparatus 20 includes "content directing/packaging unit 32." *Id*., ¶173. Content directing/packaging unit 32 "knows where content is located around the Internet and is able to instruct such locations to supply content to consumers in accordance with its directions." *Id*., Content directing/packaging unit 32 is "therefore able to supply consumers with packages of content even when different parts of that content are available only at different locations and from different providers." *Id.* In view of this functionality, content directing/packaging unit 32 within apparatus 20 discloses generating an "authorized reproduction of a media content item" as recited in the preamble of claim 1.[2]

169. Peled's providing of content to content consumers discloses the claimed generating of an "authorized reproduction of a media content item" because consumers are able to reproduce and experience the content on their personal devices. For example, Peled describes providing a version of a movie with "Italian subtitles" to an Italian consumer while ensuring that "both the American and Italian

[2] Figures 3-5 also describe server functionality that may be implemented with apparatus 20. EX1003, ¶¶159-65; *see also id*., ¶¶10, 121. This functionality includes providing content to content consumers from content providers or content distributors. *Id*., ¶¶160-61.

content providers are credited for the sale." EX1003, ¶176. Peled also describes repackaging a "movie with commercial advertising" and offering the repackaged movie "at a lower price." *Id.* ¶177. These examples disclose facilitating a payment transaction to allow a consumer to access content and therefore discloses generating an authorized reproduction of a media content item.

170. Peled also teaches that the media content item may be included in a digital media file. For example, Peled explains that content requests may include requests "for online purchase, ***for purchases of video files***/streams over the Internet, or any other product and/or service." *Id*., ¶197 (emphasis added). Therefore, Peled also discloses reproducing media content items in the form of digital media files such as video files. As I previously explained, content consumer 14 would consume these video files received "over the Internet" using a "general purpose computer," which discloses the claimed "multimedia hardware device." *Id*., ¶¶121, 159. Therefore, Peled discloses the preamble of claim 1.

171. To the extent that this is unclear, Pou also describes distributing media files to a "user device, such as a computer," which also discloses the claimed "multimedia hardware device." EX1005, ¶¶50, 64, 108. Pou describes "managing digital rights to a file that is loaded onto a user device, such as a computer." *Id*., ¶50. For example, Pou describes the distribution of data files for songs. *Id*., ¶64. Pou also describes the purchase of licenses for received "media files" to allow "all parties [to]

participate in the revenue stream including users, resellers, distributors, and content managers, such as record companies, publishers, and artists." *Id*., ¶¶108-10. In this manner, Pou also describes authorizing the distribution and reproduction of a media file in response to authorizing a license payment. *Id.* Pou's "user device" is then allowed to "play[] a song or movie contained in the file, storing or otherwise using the file on the user device, or streaming the file to the user device over a wireless or wired connection." *Id.*, ¶55. Therefore, Pou's user device also discloses the claimed "multimedia hardware device." A POSA would have combined Pou with Peled for the reasons that I explained in Section IX.A. In view of both Peled and Pou describing conventional user computer devices communicating with conventional server systems, a POSA would have found that Peled and Pou disclose the claimed "multimedia hardware device." EX1003, ¶¶164-66; EX1005, ¶¶55, 59.

172. Thus, the combination of Peled and Pou discloses the preamble of claim 1.

173. I do not read the preamble as requiring all claim steps to be performed only on the multimedia hardware device. Section VI.B. Rather, as I explained above, the context of claim 1 suggests that at least some of its limitations would be performed by the licensing system on a server. *Id.*

174. Regardless, a POSA would have found it obvious that each of the claim steps could be performed either on Peled's or Pou's server or consumer devices. At

the outset, Peled explains that its system "is not limited in its application to the details of construction and the arrangement of the components set forth" in its disclosure and figures, and that "other embodiments" are possible and the system can be "carried out in various ways." EX1003, ¶¶156, 201.

175. Further, data associated with the consumer already resides on the consumer's client device, and so it would be trivial for the device to extract, aggregate, and analyze such data when the user accepts or declines to stream content. Performing the steps on the client's device, moreover, would advantageously ensure that the consumer's personally identifying information is not sent to Peled's server, thus protecting the consumer's sensitive data. Indeed, Peled itself states that protecting consumer data is important. *See, e.g.*, *id*., ¶¶161 (stating that Peled's activity reports are preferably generated "in such a way as not to interfere with the privacy of individual consumers"), 187 (stating that "the identity and the details of the[] consumer" are subject to "privacy concerns"), 191 (explaining that in some embodiments the interface "is able to protect consumer confidentiality and its use does not give rise to privacy concerns").

176. Likewise, performing the steps on the client's device would advantageously ensure that Peled's statistics can be generated even when the user's device is offline and thus cannot communicate with Peled's server. Indeed, in many different applications, it was common for software installed on a user's computer or

set-top box to collect user data and package the data so that it would be ready for transmission if and when the user reconnects to the Internet. *See, e.g.*, EX1068, 1:19-44 (describing prior art DirecTV set-top box in which the "[t]he set top box captures information with regard to the purchase (i.e., it stores purchase information for billing purposes)" and, "[a]t an appropriate time, (e.g., during a regularly scheduled upstream communication from the set top box to DirecTV, such as a telephone call) the set top box sends this purchase information to the Pay-Per-View service (i.e., it forwards this stored information to DirecTV to allow the subscriber's account to be billed for their purchase of the program which they selected and viewed)." In the television-based commerce context, for example, a "client application" collecting "usage statistics" and sending them "to a database on the application network" facilitates the "purchases of products via interaction with the T.V." *Id*., 2:17-25.

177. Further, performing the claimed step on the client device would be useful for distinguishing between multiple users who use the same device (e.g., a husband and wife). That way, if and when the server receives the user data for a particular device, the data is already separated on a per-user basis for that device. This, too, was common practice. Indeed, Pou explains, for example, that user information can be stored in a "local database specific to the user on a user device [] that may be shared by multiple users." EX1005, ¶88.

178. Finally, performing the claimed steps on the client device would be

useful for Peled's system to make media content recommendations among content items stored locally on the user's client device. For all these reasons, it would have been obvious to perform each claimed step at either the server or the client device.

2. [1A] "loading a digital media file for reproduction, wherein the digital media file includes the media content item;"

179. Peled and Pou disclose loading a digital media file for reproduction, wherein the digital media file includes the media content item. The '581 patent provides an example of this loading when a "unique media content item [is] loaded into the licensing system 16." EX1001, 7:27-29. "[A] rights-holder or content creator may load a catalog of media content items that may include… a song, a movie, a television show, a novel, and/or any other media content item into licensing system 16." *Id*., 7:29-33. Peled teaches this same loading when content holding sites are loaded with media files as depicted in Figure 3.

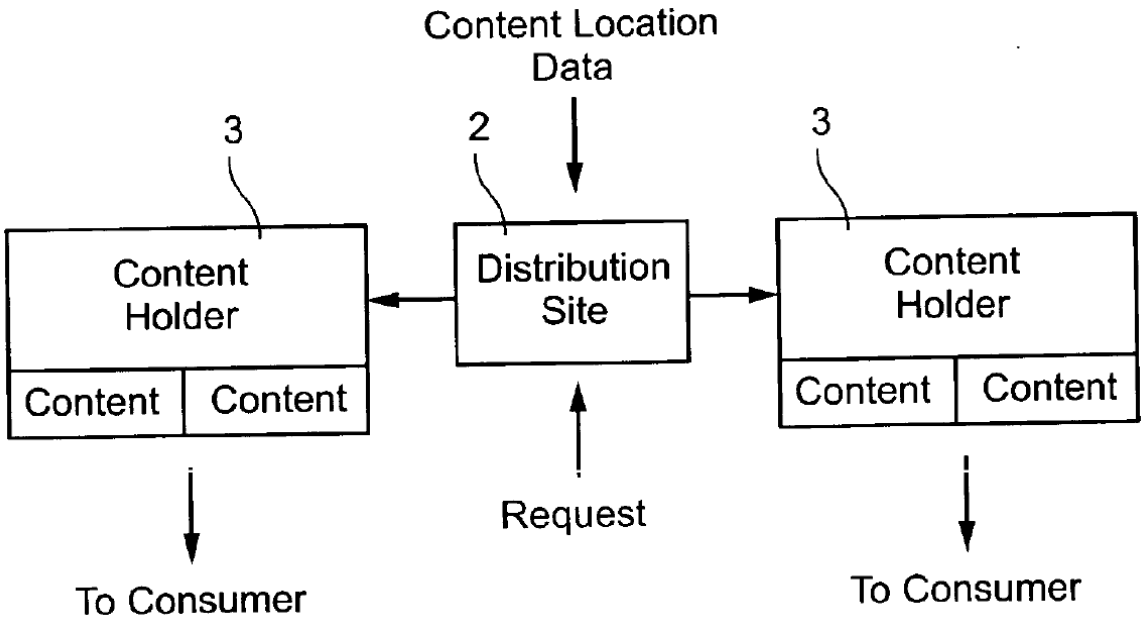


Fig. 3

EX1003, FIG. 3.

180. Specifically, Peled explains that "***content holding site 3 actually stores the content***, at a location on a network, and sends the content to users in response to a request from the distribution site 2." EX1003, ¶159 (emphasis added). "The content distribution site 2 is preferably able to access data indicating a corresponding holding site 3 holding the requested content." *Id.*. "[T]he distribution site 2 preferably comprises functionality to select [] holding sites being most effectively located to provide the content to a given requesting consumer." *Id.*, ¶160. In order to distribute content to users, a POSA would have found it obvious for Peled's content holding sites to have been loaded with media content items in order to store them for later distribution. For Peled's content holding sites to store media content

items, the media content items would have been loaded into the content holding sites. Peled therefore discloses loading the media content in the same manner described in the '581 patent. *See* EX1001, 7:27-33.

181. Peled also teaches that these media content items would be stored as digital media files for reproduction. For example, Peled explains that request for content may include requests "for online purchase, ***for purchases of video files***/streams over the Internet, or any other product and/or service." EX1003, ¶197 (emphasis added). Peled describes distributing the stored media content as "video files" and therefore also discloses storing such video files for distribution when purchased. To the extent that this is unclear, Pou also discloses the organization of media content into digital media files as I explained in Section VII.C. As explained in Pou, storing media content as digital media files was a well-known and commonly implemented concept. EX1005, ¶¶64, 108-10. A POSA would have found it obvious to store media content as digital media files in Peled's content holding sites in the same way to later distribute them to consumers.

182. Peled and Pou also disclose an alternative "loading" process described in the '581 patent, where a user device loads a digital media file rather than licensing system 16. EX1001, 4:2-11. For example, the '581 patent describes a scenario where "the user loads the digital media file for reproduction" on the user's device 10. *Id*., 4:2-11. "Processor 40" of the user device is then "configured to analyze a loaded

digital media file to identify the media content item included in the digital media file." *Id*., 6:47-57. In this manner, the '581 patent describes an alternative "loading" that occurs at a user device rather than at licensing system 16.

183. As I previously explained in Section VI.B., the claims do not explicitly identify a device that performs the steps in the method. While a POSA would have interpreted the claimed "loading" to occur at the licensing system based on the context of the remainder of the claim elements, to the extent that the claimed "loading" is interpreted to occur at a user device, Pou also teaches this type of loading. For example, Pou depicts this "loading" at a user device at step 105 of Figure 1.

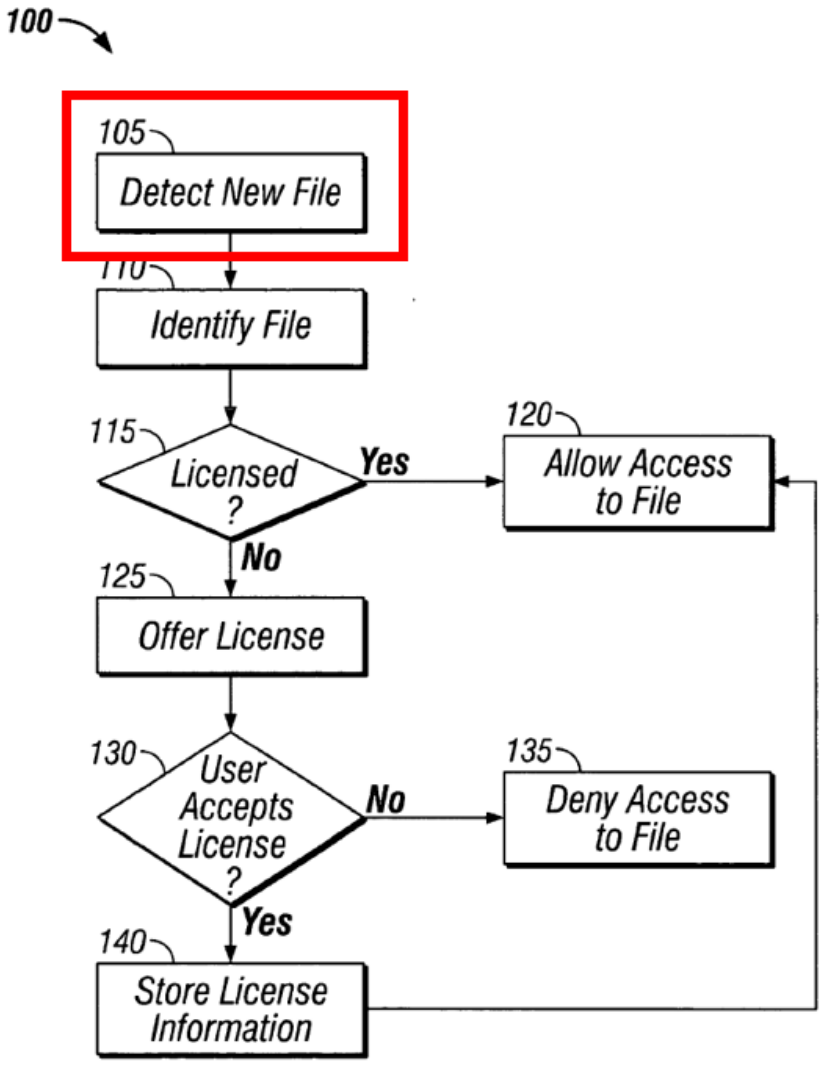


FIG. 1

EX1005, FIG. 1 (annotated).

184. Pou explains:

FIG. 1 is a flow diagram of a process 100 for managing digital rights to ***a file that is loaded onto a user device***, such as a computer.… ***Files may be loaded onto the device using any type of I/O port***, including a floppy drive, an Ethernet or LAN connection, a dial-up connection, a

> CD-ROM or DVD drive, a USB port, an infrared data port, a Bluetooth or other wireless connection, or any other mechanism and/or protocol for transferring data to and from the user device.

EX1005, ¶50 (emphasis added).

185. Pou further explains that "[w]hen the file is loaded onto the user device, the file is detected (step 105)." *Id.*, ¶51. One example of this type of loading is when a song burned onto an audio CD is "ripped." *Id.*, ¶¶107, 111. This ripping process "involves taking a song from a digital source such as a CD or DVD or an analog source and encoding the song into an MP3 file, Windows Media file, Real Player file, or other media format for playback on a computer or music/media player device." *Id.*, ¶64. One example of this ripping occurs when a "user burns a standard audio CD and the content of the CD is subsequently ripped into another computer." *Id.*, ¶111. Pou explains that the file may still be identified when loaded in this manner due to a "'Unique File ID' (UFID)" associated with the media file itself. *Id.*, ¶¶65, 111. Therefore, Pou also describes the claimed "loading" to the extent that the term is interpreted to include loading media at a user device.

186. As I explained in Section IX.A.1, a POSA would have implemented this functionality with Peled to also track potential media purchases or licenses already obtained by a user. For example, using Pou's scanning of a media file loaded onto a user device would provide information indicating why a POSA may not have chosen to purchase media content as described in Peled. For example, the user may

have obtained the media content from another distribution channel, which is a scenario that Peled explicitly describes. EX1003, ¶199. Scanning media files loaded into a user device would also provide Peled with information related to potential "illegal content distribution" or possibly illegitimate distribution channels—information explicitly described in Peled as being useful for increasing sales opportunities. *Id.*, ¶¶184, 199. Having this information would improve Peled's generation of statistical reports and help to explain why a consumer has declined to purchase content. *Id.* In this manner, a POSA would have combined Pou with Peled to further Peled's explicit goal of providing accurate statistical reports to content providers. *Id.*, ¶¶168, 183-84, 199.

187. Thus, Peled in view of Pou renders obvious "loading a digital media file for reproduction, wherein the digital media file includes the media content item."

3. [1B] "analyzing the digital media file to identify digital media information associated with the media content item;"

188. Peled and Pou disclose "analyzing the digital media file to identify digital media information associated with the media content item." The '581 patent describes an example of the claimed analysis with reference to Figure 3. After receiving a media content item, the '581 patent describes analyzing the media content item to determine a corresponding "fingerprint." EX1001, 8:16-45. This fingerprint may "uniquely identify the media content item." *Id.*, 6:47-52, 8:16-26. The '581 patent's analysis relies on well-known and conventional analysis

techniques and describes identifying a "fingerprint, digital watermarking, and/or any other suitable algorithm to identify copyright ownership of the media content item included in the digital media file that will be ***apparent to those skilled in the relevant art(s)***…" *Id*., 4:21-27, 8:59-9:5 (emphasis added). Based on this description, the '581 patent describes the identification of a fingerprint as satisfying the claimed "analyzing [of] the digital media file to identify digital media information associated with the media content item."

189. Peled provides an example of uniquely identifying digital media content. Peled explains that its system receives requests for content by hosting "essentially a typical website for browsing and through which consumers are able to order content." EX1003, ¶159. After a user has selected content, Peled then identifies the content holding site that would most efficiently deliver the requested content: "The content distribution site 2 is preferably able to access data indicating a corresponding holding site 3 holding the requested content." *Id.*; *see also id.*, ¶¶158, 161. To distribute content, Peled describes "linking requests with content at content holding sites." EX1003, ¶158. A POSA would have understood that in order to respond to content requests and perform this linking, Peled would have identified information corresponding to the requested content in order to identify the requested content itself and to direct the distribution of the content to the user. In this manner, Peled's content distribution system would have identified unique digital media

information corresponding to the digital media files stored at the content holding sites to later identify and distribute requested content. Therefore, a POSA would have understood Peled's content distribution system to identify digital media information in order to perform its content distribution functionality.

190. As I explained in Section IX.A, a POSA would have understood that one way for Peled to uniquely identify content items would be to use a "fingerprint," such as the one described by Pou. Using a fingerprint to identify digital media was nearly ubiquitous prior to the '581 patent. *See* Section V.B. Pou describes the same type of analysis described in the '581 patent and identifying a "fingerprint" or "'Unique File ID' (UFID)" associated with a media file. EX1005, ¶¶65, 111. For example, Pou describes applying a "file recognition algorithm [that] can include a digital fingerprinting detection technique. The data file can be a media file." *Id.*, ¶13. Fingerprint data may identify a "specific media file (e.g., the specific song, movie, photo, written work, etc.). Fingerprinting data that allows the specific media file to be identified may be stored at a central server and accessed using an Internet connection." *Id.*, ¶52. "Other file identification techniques may also be used, such as watermarking and fingerprinting techniques, as are known in the field of digital rights management. … Thus, files can be identified using implicit characteristics of the file (e.g., a fingerprint or watermark)…" *Id.*, ¶54. Based on this description, Pou's fingerprint detection techniques disclose analyzing the digital media file to

identify digital media information.

191. In addition to identifying a fingerprint corresponding to the digital media file, Pou also applies "file identification techniques [to] identify an existing UFID associated with the media file." *Id.*, ¶83. The UFID is a unique file identification corresponding to file attribute information such as a "title, author/artist, and volume/collection along with business rules specifying ownership, usage rights, royalty fees, and pass-along payout levels." EX1006, ¶65. The UFID may be embedded in a file wrapper to uniquely identify the media content. *Id.* Thus, Pou explains that "files can be identified using implicit characteristics of the file (e.g., a fingerprint or watermark) or using explicit file characteristics (e.g., a file identifier stored in a file header)." EX1005, ¶54.

192. Notably, the '581 patent describes its claimed "analyzing" occurring ***either*** at the user's device ***or*** the licensing system server. For example '581 patent states that a "media recognition module" within user device 10 "may be configured to analyze a loaded digital media file to identify the media content item included in the digital media file and/or determine an identifying characteristic, such as a fingerprint." EX1001, 6:48-52. Additionally, the '581 patent also describes licensing system 16 "analyz[ing] each media content item in the catalog" and identifying "characteristics associated with the media content item," such as a "fingerprint." *Id.*, 7:33-36, 8:14-26 (steps 104 and 106). The combination of Peled and Pou discloses

this limitation regardless of where the claimed "analyzing" would occur. For example, a POSA would have found it obvious to analyze the content stored by Peled to determine corresponding fingerprints to uniquely identify the content as I described above. This would allow Peled's content distribution system to identify requested content and distribute the requested content from content holding sites. EX1003, ¶¶158-61.

193. To the extent the claimed "analyzing" step is interpreted to occur at the user device, Pou discloses this. As described above, Pou describes analyzing digital files loaded at a user device to determine a fingerprint or unique identification. EX1005, ¶57 (user device 205 "may monitor files and other data that pass through the I/O port 225 for purposes of identifying protected (e.g., copyrighted) music, video, software, or other files."). For example, at steps 105 and 110 of Figure 1, Pou describes detecting a loaded file and then analyzing the file. *Id*., ¶51. Pou's user device "extracts a digital fingerprint from a digital file and compares the extracted fingerprint to a database of known works." *Id.* The extraction of the fingerprint at step 110 discloses the claimed "analyzing" occurring at the user device. *Id.*

194. A POSA would have been motivated to implement Pou's fingerprinting identification algorithm in Peled's consumer devices to permit the devices to easily and efficiently identify media content and ultimately to determine whether the consumer is licensed to stream the content. As I explained above, digital fingerprints

were well known and often used precisely for this purpose in content distribution systems such as Peled's. *See* Section V.B. A POSA would have been motivated to use Pou's fingerprints in particular because they are based on intrinsic properties of digital content and thus "allow for accurate identification of the file even if someone has attempted to disguise the file (e.g., by changing the file name, extensions, or other attributes)." EX1005, ¶¶53-54. This feature would advantageously permit Peled's consumer devices to differentiate among different versions of media content with ease.

195. To the extent the claimed "analyzing" is interpreted to occur at the server, Pou likewise discloses this. For example, Pou describes referring to "one or more license databases, which may be stored locally (e.g., on the user device) ***and/or remotely (e.g., at a central server)***" using the fingerprint to determine whether a file has been licensed. *Id*., ¶55 (emphasis added). This process includes "extracting a digital fingerprint from the media file and comparing the fingerprint with fingerprints of known media files." *Id*., ¶82. From this disclosure, a POSA would have understood that Pou's fingerprint identification algorithm would be performed on Pou's server in order to load Pou's central database with digital fingerprints for subsequent comparison. *Id*., ¶¶43, 52.

196. Nevertheless, even if Pou is found not to disclose the identifying step being performed on the server, a POSA would have found it obvious to implement

Pou's fingerprinting identification algorithm at Peled's server. Doing so would confer all the advantages I described above—i.e., permitting Peled's system to efficiently and uniquely identify media content and distinguish between various versions thereof. And, indeed, Peled's server is ***already*** able to differentiate between various versions of media content (e.g., between a movie in English versus the same movie in Italian). EX1003, ¶176. A POSA would have found it obvious to use Pou's fingerprints to make that differentiation for the reasons I discuss above. Finally, performing Pou's fingerprinting identification algorithm at Peled's server would have the benefit of performing the analysis and processing using the server's resources without having to install specialized software on the consumer's device, thus sparing the resources on consumers' devices. When implementing Pou with Peled, this same analysis and identification of a fingerprint would occur at Peled's server-based "apparatus 20" to identify stored media files. *Id*., ¶¶159-61, 164-66. Peled's apparatus 20 is an example of the "central server" referred to in Pou. *Id*., ¶¶163-66.

197. Thus, the combination of Peled and Pou discloses the analyzing a digital media file to identify digital media information either at a user device or at a licensing system.

4. [1C] "receiving a license request from a user requesting to engage in a license transaction to reproduce the media content item;"

198. Peled and Pou disclose this claim element. The "license request" described in claim 1 refers to a consumer expressing a desire to potentially purchase a license to reproduce a media content item. The '581 patent describes this "receiving" in the following manner:

> At step 162, the system receives a digital media licensing request from an external multimedia hardware device over a network where the licensing request includes ***data indicating a media content item that a user of the device wishes to acquire a license for***. In an embodiment, the licensing request includes a fingerprint of the media content item, information identifying the rights-holder of the media content item, the title of the media content item, and/or other media content item information.

EX1001, 10:19-27 (emphasis added).

199. In view of this explanation, the '581 patent describes the license request as simply including data—such as the title of a media content item—that a user wishes to acquire a license for. *Id.*

200. Peled describes this same type of browsing and receiving of requests to reproduce content. EX1003, ¶¶155, 159, 161, 164, 175-78, 180. For example, Peled describes its "content distribution site 2 [] offering a range of content items to consumers and ***receiving requests from consumers for the content***, essentially

[through] a typical website for browsing and ***through which consumers are able to order content***." *Id*., ¶159 (emphasis added). In addition to receiving requests for content, Peled's "system further provides the ability to study online requests for content…, in particular for ***online requests that do not result in a sale***, for the purpose of providing content providers with information about potential new markets that are currently being excluded." *Id*., ¶155 (emphasis added). To illustrate such received requests, Peled describes four examples where consumers request movies or streaming videos. *Id*., ¶¶175-78. Peled tracks information related to such requests—including "non-completed requests"—to provide statistical reports, as I explain further below. *Id*., ¶180. Thus, Peled describes receiving requests from users to reproduce media content items.

201. A POSA would have understood that Peled's transaction requests would have been requests to engage in a license request to reproduce the content item. As I explained in Section V.A., transactions for the distribution of media content online were commonly structured as license transactions granting different rights for reproduction. While a POSA would have understood that Peled's requests would have also been structured as license transactions, to the extent that this is unclear, Pou explicitly describes such transaction requests as license transaction requests. EX1005, ¶¶55, 59, 83, 100.

202. For example, Pou describes a process of determining "whether [a] file

has been licensed for use on the user device and/or by the particular user (step 115). This determination may be performed by referring to one or more license databases, which may be stored ***locally (e.g., on the user device) and/or remotely (e.g., at a central server)***." EX1005, ¶55 (emphasis added). Pou's "central server 240 may provide access to a central license database 250 that ***stores and identifies licenses held by individual users***… Storage of license information in the central license database 250 … allows for remote access of license information by the user using a device without a volatile memory area (e.g., some types of cell phones), and ***allows streaming of licensed digital files***." *Id*., ¶59 (emphasis added). Similarly, Pou describes checking the central license database using a UFID "to determine if the user has a license for the media file." *Id*., ¶¶83, 100. Based on this description, Pou discloses receiving license requests at a central server from a user requesting to engage in a license transaction to reproduce media content items.

203. A POSA would have been motivated to combine Pou with Peled when receiving licensing requests for the reasons that I explained in Section IX.A.1. A POSA would have also known how to combine Pou with Peled and would have also had a reasonable expectation of success in forming the combination for the reasons that I explained in Section IX.A.2. Thus, the combination of Peled and Pou discloses "receiving a license request from a user requesting to engage in a license transaction to reproduce the media content item."

5. [1D] "evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item;"

204. The combination of Peled and Pou discloses this claim element. For example, Pou's execution of steps 115, 120, and 125 in Figure 1 disclose the claimed "evaluating." Pou discloses this evaluation occurring at a central server as well as at a user device.

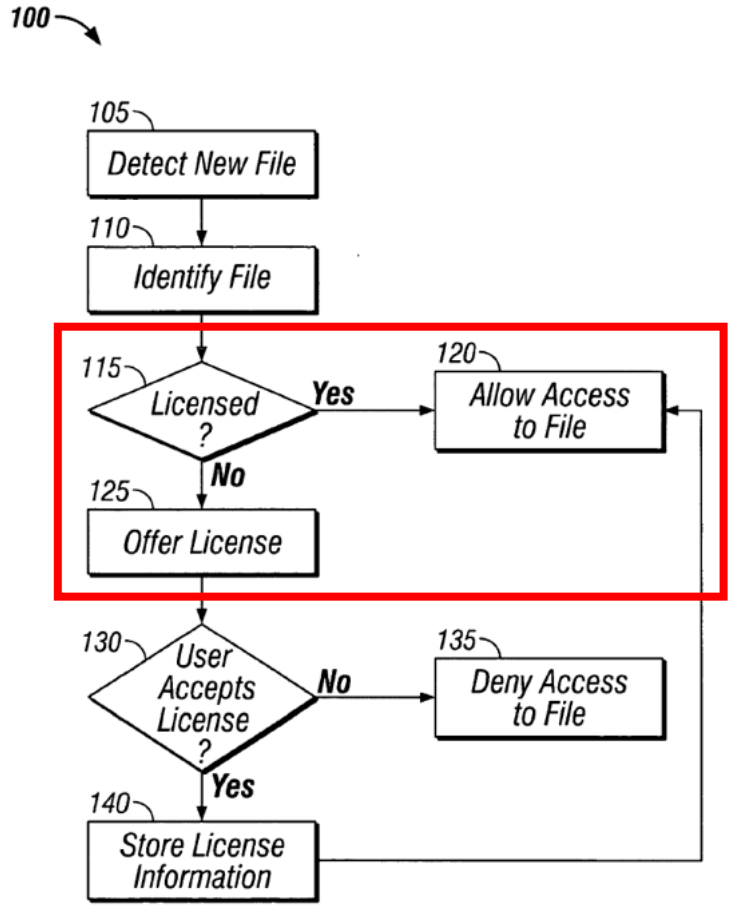


FIG. 1

EX1005, FIG. 1 (annotated).

205. As I explained with reference to claim element [1C], Pou describes a central server that receives a license transaction request. EX1005, ¶¶55-56, 59. After receiving the request, Pou's central server evaluates the request to determine if a user has already obtained a license to reproduce the media file: "a determination is made as to whether the file has been licensed for use on the user device and/or by the particular user (step 115)." *Id*., ¶55. The central server may perform a check of one or more license databases, such as "central license database 250 that stores and identifies licenses held by individual users." *Id*., ¶¶55, 59.

206. Pou also describes this evaluation occurring at the user device. Specifically, Pou describes its user device "referring to one or more license databases, which may be stored ***locally (e.g., on the user device)*** and/or remotely (e.g., at a central server)" to determine whether the user has previously acquired a license. *Id*., ¶55 (emphasis added). For example, user device 205 includes "memory 215 [that] may include a local database 235 that stores license information for files that are licensed to be used on the user device 205." *Id*., ¶¶57-58; *see also id*., ¶52. Pou also describes its user device "search[ing] the local database 615 for a license to the media file (step 675) by trying to locate the UFID for the media file in the local database 615." *Id*., ¶100. In this manner, Pou discloses determining whether a user has already obtained a license by checking a local and/or a remote database at step 115.

207. After checking whether the user has already licensed the media content at step 115, Pou's process proceeds to step 120 if the user has already obtained a license:

> ***If the file is licensed, the user may be allowed to access the file (step 120)***, which may involve, for example, unwrapping the file, playing a song or movie contained in the file, storing or otherwise using the file on the user device, or streaming the file to the user device over a wireless or wired connection. The license may specify what type of access or use of the file is permitted.

EX1005, ¶55 (emphasis added).

208. If Pou determines that the media content is not licensed, Pou's process proceeds to step 125:

> ***If the file is not licensed, a license may be offered to the user for purchase (step 125)***. For example, the user may be directed to a website where a purchase can be made, or a pop-up window may appear on a display screen for the user device asking whether the user wishes to purchase a license to the file or otherwise accept certain license terms and/or the user may be directed to a website where a purchase can be completed.

EX1005, ¶56 (emphasis added).

209. Based on Pou's execution of steps 115, 120, and 125, Pou discloses "evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item" as recited in claim element [1D].

210. A POSA would have been motivated to combine Pou with Peled when evaluating whether a receiving licensing requests for the reasons that I explained in Section IX.A.1. A POSA would have also known how to combine Pou with Peled and would have also had a reasonable expectation of success in forming the combination for the reasons that I explained in Section IX.A.2.

6. [1E] "accessing a license database to determine whether the user is licensed to reproduce the media content item based on the digital media information;"

211. As I explained with reference to claim elements [1C] and [1D], Pou discloses accessing a "central license database 250" to determine whether a user is licensed to reproduce a media content item. *See* Sections IX.B.4-5. Pou depicts central license database 250 in Figure 2.

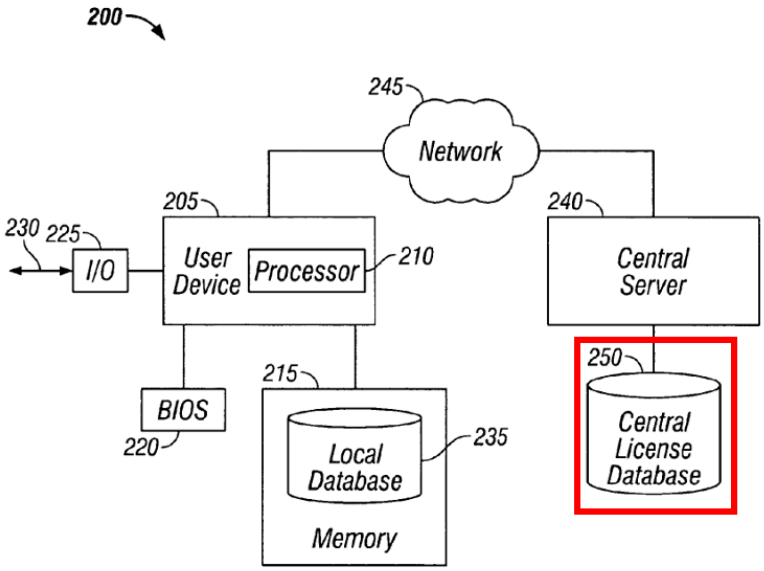


FIG. 2

EX1005, FIG. 2 (annotated).

212. In particular, Pou's "central server 240 may provide access to a ***central license database 250 that stores and identifies licenses held by individual users***… Storage of license information in the central license database 250 … allows for remote access of license information by the user using a device without a volatile memory area (e.g., some types of cell phones), and ***allows streaming of licensed digital files***." EX1005, ¶59 (emphasis added). Pou describes checking the central license database using a UFID "to determine if the user has a license for the media file." *Id*., ¶¶83, 100. When users obtain licenses to reproduce content items, Pou describes updating the central license database "with information indicating that the user has a license to the media file." *Id*., ¶101. In view of this description, Pou discloses accessing a license database to determine whether the user is licensed to reproduce the media content item.

213. Pou also discloses this accessing and checking being "based on the digital media information" as recited in the claim. As I previously explained, Pou describes identifying a "fingerprint" or "'Unique File ID' (UFID)" associated with a media file. *Id*., ¶¶65, 111; Section IX.B.3. Pou explains that "[f]ingerprinting data that allows the specific media file to be identified may be stored at a central server and accessed using an Internet connection." *Id*., ¶52. This generates a "central database of digital fingerprints." *Id.* Pou's system "extracts a digital fingerprint from a digital file and compares the extracted fingerprint to a database of known works"

(i.e., the "central license database"). *Id.*, ¶¶51-52.

214. Similarly, UFIDs are also stored in the central database, which also identify the media file. EX1005, ¶65. Pou describes searching the central database using the UFID and "matching the identified file with its unique file ID stored at the central database." *Id.* ¶¶43, 99. "If the UFID is found in the central database [], the local database is updated [] with the license information. Assuming a license is located, use of the media file is allowed." *Id.*, ¶100. In this manner, Pou describes checking the central license database using a UFID "to determine if the user has a license for the media file." *Id.*, ¶¶83, 100.

215. Pou additionally describes the user device accessing a "local database 235 that stores license information" to determine whether the user has previously acquired a license. *Id.*, ¶¶52, 55, 57-58; Section IX.B.5.

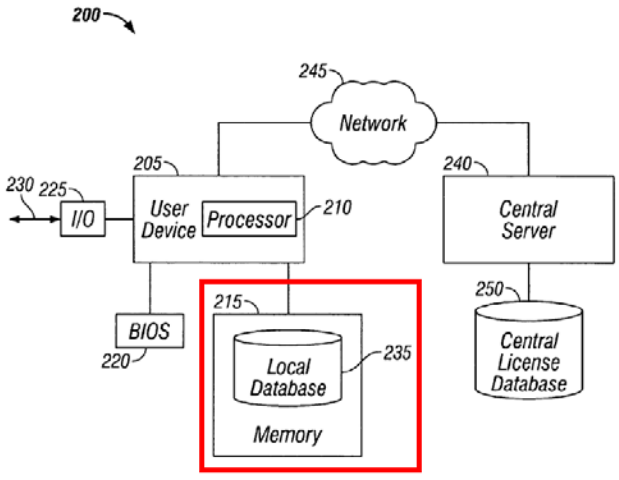


FIG. 2

EX1005, FIG. 2 (annotated).

216. The locally stored license information may be identified using "locally stored fingerprinting data *Id*., ¶52. Pou describes "search[ing] the local database 615 for a license to the media file (step 675) by trying to locate the UFID for the media file in the local database 615." *Id.* ¶100. "To determine if the media file is licensed for use on the user device, the Solution Software may determine if the UFID is stored in a local database that contains UFIDs for licensed media files." *Id*., ¶83.

217. Thus, Pou's description of accessing a license database using a fingerprint or UFID discloses "accessing a license database to determine whether the user is licensed to reproduce the media content item based on the digital media information" as recited in claim element [1E].

218. A POSA would have been motivated to combine Pou with Peled when determining whether a user is licensed to reproduce media content for the reasons that I explained in Section IX.A.1. A POSA would have also known how to combine Pou with Peled and would have also had a reasonable expectation of success in forming the combination for the reasons that I explained in Section IX.A.2. As I will further explain with reference to claim element [1J], a POSA would have found it obvious to combine Peled's database 31 with Pou's central license database 250 as well to store license data as well as user data. Section IX.B.11. Both are conventional memory systems and both store information related to user media purchases. EX1003, ¶169; EX1005, ¶59. Thus, a POSA would have found it obvious to

implement Pou's central license database 250 together with Peled's database 31.

7. [1F] "reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information;"

219. As I explained with reference to claim elements [1C], [1D], and [1E], Pou discloses "reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information." *See* Sections IX.B.4-6. For example, Pou describes allowing a user to reproduce the media content item at step 120 of Figure 1.

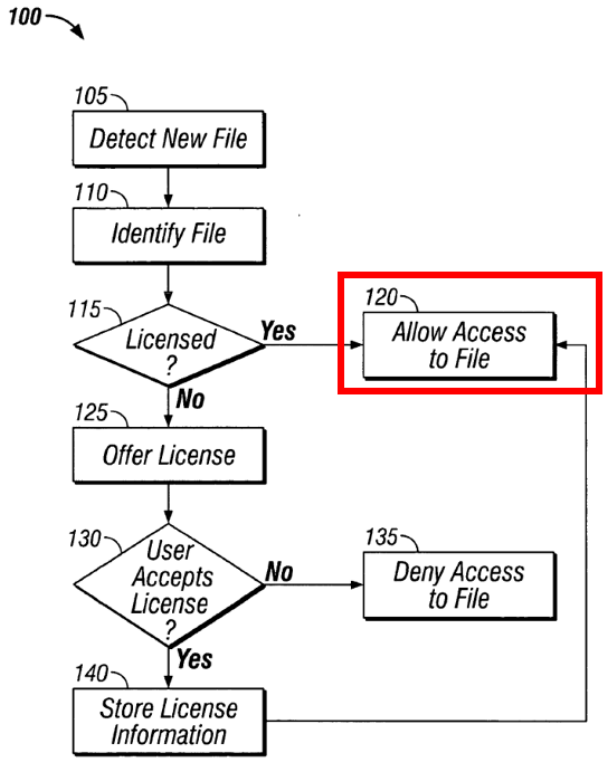


FIG. 1

EX1005, FIG. 1 (annotated).

220. After determining that the user has already licensed the media content, Pou explains that "[i]f the file is licensed, the user may be allowed to access the file (step 120), which may involve, for example, unwrapping the file, playing a song or movie contained in the file, storing or otherwise using the file on the user device, or streaming the file to the user device over a wireless or wired connection. The license may specify what type of access or use of the file is permitted." EX1005, ¶55. Pou also describes this same process with reference to steps 430 and 435 of Figure 4. *Id*., ¶¶83-84 ("If it is determined that the media file is licensed, access to the media file may be allowed (step 425)."). Pou's description of "storing or otherwise using the file on the user device, or streaming the file to the user device" further discloses the claimed "reproducing" of the media content item. *Id*., ¶55. Thus, Pou discloses claim element [1F].

221. A POSA would have been motivated to combine Pou with Peled to reproduce licensed media content for the reasons that I explained in Section IX.A.1. A POSA would have also known how to combine Pou with Peled and would have also had a reasonable expectation of success in forming the combination for the reasons that I explained in Section IX.A.2.

8. [1G] "providing a licensing query to the user when the user is not licensed to reproduce the media content item to prompt the user to select to acquire a license to reproduce the media content item or to decline the license to reproduce the media content item;"

222. Both Peled and Pou disclose providing the claimed licensing query to the user and prompting the user to select to acquire or decline a license to reproduce the media content item.

223. For example, Peled describes its "content distribution site 2 [] offering a range of content items to consumers and receiving requests from consumers for the content, essentially a typical website for browsing and through which consumers are able to order content." EX1003, ¶159; *see also id*., ¶28. The offering of content items to consumers discloses a licensing query prompting the user to either acquire or decline a license to reproduce the media content. Peled explains that "consumers are able to order content," which discloses the acquiring of a license. EX1003, ¶159. Additionally, Peled also describes several scenarios where consumers may refuse to purchase content. *See id*., ¶¶155, 168-69, 172, 176-77, 186. For example, Peled describes offering a movie to an Italian speaking consumer without subtitles. *Id*., ¶176. "The consumer therefore declines to complete the transaction." *Id.* Additionally, Peled describes offering a movie but at too high of a price for the consumer: "A consumer, who has a history of requesting movies at a given price, makes a request for a movie at a higher price, but then does not complete the

transaction. The content directing/packaging unit 32 notes the price difference and ***assumes that to be the reason for the refusal***." *Id*., ¶177 (emphasis added). Based on these examples, Peled also discloses declining a license to reproduce a media content item. *Id*., ¶185 ("a consumer simply looks at a content item but then chooses not to buy it.").

224. Additionally, Peled describes the offering of "alternative content item[s]," which also discloses the claimed licensing query. *Id*., ¶¶32, 162. For example, Peled's content distribution site may "comprise functionality to query a distribution restriction and to ***offer an alternative content item that overcomes the distribution restriction***." *Id*., ¶162 (emphasis added). Referring to the Italian speaking consumer example that I outlined above, Peled "offers a version from an Italian content provider with Italian subtitles." *Id*., ¶176. Similarly, for the price sensitive consumer, Peled "repackages the movie with commercial advertising and offers it at a lower price." *Id*., ¶177. These offers for alternative content items also disclose the claimed "licensing query." These alternatives also indicate that the user has not already obtained a license to reproduce the media content. *Id*., ¶¶181, 185-86, 197.

225. Pou additionally discloses providing a licensing query to a user when the user is not licensed to reproduce the media content item. An example of offering a license to the user as well as an evaluation of the user's response is depicted in

steps 125 and 130 of Figure 1.

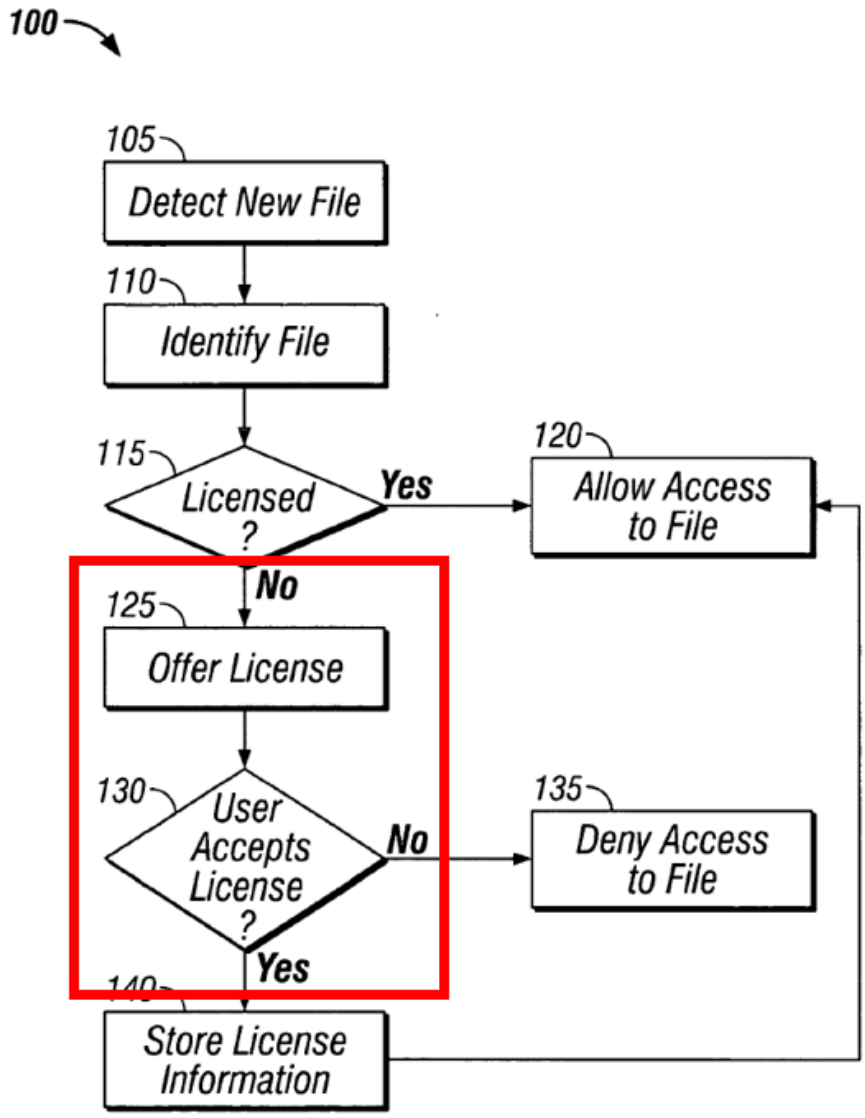


FIG. 1

EX1005, FIG. 1 (annotated).

226. Pou provides the following description for steps 125 and 130:

If the file is not licensed, ***a license may be offered to the user for purchase (step 125)***. For example, the user may be directed to a website

> where a purchase can be made, or ***a pop-up window may appear on a display screen for the user device asking whether the user wishes to purchase a license to the file*** or otherwise accept certain license terms and/or the user may be directed to a website where a purchase can be completed.

EX1005, ¶56 (emphasis added).

> It is then ***determined whether the user accepts the license (step 130) (e.g., by receiving an indication that the user clicked on an accept button or a decline button in the pop-up window)***. If the user does not accept the license, access to the file may be denied (step 135). If the user does accept the license, including complying with any payment terms, the user is allowed to access the file, and license information, indicating that the file has been licensed and any other necessary information, is stored in the license database(s) (step 140).

Id. (emphasis added).

227. As seen from this description, Pou describes providing a licensing query to the user and prompting the user to select to acquire the license or to decline the license. *Id.*; *see also id.*, ¶¶77-79. This may be a user clicking "an accept button or a decline button." *Id.*, ¶56. Further, as seen from Figure 1 of Pou this licensing query is provided after determining that the user is not already licensed to reproduce the media content item. *Id.*, ¶¶55-56 ("If the file is not licensed, a license may be offered to the user for purchase (step 125)."). Thus, Pou also discloses claim element [1G].

228. A POSA would have been motivated to combine Pou with Peled to provide a licensing query after determining that the user has not already obtained a license for the reasons that I explained in Section IX.A.1. As I previously explained, commercial distribution systems such as Peled's commonly implemented licensing or digital rights management protections to prevent illegal distribution or piracy. Section V.A-B. Therefore, a POSA would have combined the licensing elements described in Pou with Peled to provide similar control. *Id.* A POSA would have also known how to combine Pou with Peled and would have also had a reasonable expectation of success in forming the combination for the reasons that I explained in Section IX.A.2.

> **9. [1H] "after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for [] the media content item of the copyright owner;"**

229. Peled discloses this claim element and discloses identifying user demographic data corresponding to users acquiring a license or declining a license. EX1003, ¶¶1-2, 169, 172, 175-77, 186.

a) Peled discloses "after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user"

230. As I explained with reference to claim element [1G], Peled and Pou disclose providing a licensing query that offers a license to a user to reproduce the claimed media content item. *See* Section IX.B.8. Peled describes identifying user data corresponding to the user when the user acquires the license and when the user declines the license. EX1003, ¶¶1-2, 169, 172, 175-77, 186. For example, Peled explains that its system applies to "electronic information analysis in the field of online purchase/usage information analysis in general." *Id*., ¶1. Peled acknowledges that "[e]xisting patents and applications deal with the gathering of ***approved purchase requests, storing them in databases and analyzing personal, organizational and market behavior*** regarding those requests." *Id*., ¶2 (emphasis added). Peled also describes an example of tracking a consumer who has a history of purchasing movies at a particular price and has "shown a willingness to purchase at a given lower price." *Id*., ¶177. Based on these descriptions, Peled describes identifying user data specific to a user that has acquired or purchased a license to reproduce a media content item.

231. Peled builds upon the conventional process of tracking user data

corresponding to user purchases and describes extracting such user data when a user declines a license as well. *Id*., ¶¶155, 169, 175-77, 186. In particular, Peled describes extracting user data when the user ***implicitly*** declines to purchase content—e.g., "where a consumer simply looks at a content item but then chooses not to buy it." *Id*., ¶185-86. Peled also describes extracting user data when the user ***explicitly*** declines to purchase content—e.g., where a user "made a purchase attempt" but then aborted the attempt. *Id.*

232. By recording user data when a user declines to license content, Peled explains that its "system further provides the ability to study online requests for content or for products and services in general, ***in particular for online requests that do not result in a sale***, for the purpose of providing content providers with information about potential new markets that are currently being excluded and also to provide consumers with acceptable alternatives." *Id*., ¶155 (emphasis added). Peled tracks refusal data in a database, which "may include profiles of individual consumers or groups of consumers." *Id*., ¶169.

233. Indeed, Peled describes several examples of extracting user data based on a user declining to stream content. In one example, an Italian-speaking consumer requests a movie from an American-based company only to discover that the movie is in English and does not have subtitles. The consumer thus "declines to complete the transaction." *Id.*, ¶176. Peled's system notes the refusal and extracts from the

consumer's profile his or her "location in Italy." *Id.* In another example, a consumer "makes a request for a movie … but then does not complete the transaction." *Id.*, ¶177. Peled's system again notes the refusal and extracts the user's "history of requesting movies at a given price." *Id.* And, Peled extracts and stores several instances of user data:

> The kind of data that may be taken into account in the analysis typically includes ***geographical factors, temporal market data, pricing factors, personal data of the individual consumers***, personal data of a statistically constructed group of consumers to whom the individual consumer is believed to belong, the state of network infrastructure operability in the vicinity of a requesting party, and content provider distribution factors.

EX1003, ¶169 (emphasis added).

234. By tracking this information, Peled describes determining a reason for refusal based on the extracted user data:

> For example, the consumer may be interested in a content item, but then stops browsing. He may, had he continued, have made a purchase attempt but for some reason he stopped. Possible reasons include his observation that the request would have been refused because of ***his age or because of his geographical location. Likewise he may have stopped because of unacceptable consequences such as high price, revealing of personal information, security restrictions, functional restrictions etc. or simply because he did not have a credit card***.

EX1003, ¶186 (emphasis added).

235. As seen from this description, Peled extracts demographic data—such as geographical location or age—when analyzing whether a user has accepted or declined a license transaction. *See id*., ¶¶169, 186; *see also id*., ¶¶175 (identifying a user's age), 176 (identifying the consumer's geographical location in Italy). While Peled describes the gathering of this information primarily for users who have declined a license, a POSA would have understood that this technique would have been equally applicable to situations where a user has accepted a license. In fact, Peled explicitly describes analyzing "personal" data corresponding to "approved purchase requests." *Id*., ¶¶2, 177. Peled further gathers "information about content that was actually sold." *Id*., ¶199. Tracking user data corresponding to users acquiring a license to media content was a well-known technique as I described in Section V.C. Thus, Peled discloses identifying user demographic data when the user acquires the license and when the user declines the license.

b) Peled discloses "wherein the user data … enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner"

236. A POSA would have understood that Peled's disclosure of "content providers" would disclose the claimed "copyright owner." Peled's "content providers" are capable of distributing content, modifying content, and obtaining payment when consumers purchase content. EX1003, ¶¶175-76, 179. Peled

additionally draws a distinction between "content providers" who "independently provide content" and "retailers" who distribute content provided by the content providers. *Id*., ¶157. Therefore, Peled suggests to a POSA that its "content providers" are in fact copyright owners. To the extent that this is unclear, Pou explicitly describes a "copyright owner" or "copyright holder" receiving payment when digital media is reproduced. EX1005, ¶¶4, 57, 65, 110. Peled similarly describes its content providers receiving payment when digital media is reproduced. EX1003, ¶¶179 ("the payment unit… ensures that payments flow from the consumers and advertisers to the content providers"). Therefore, a POSA would have found it obvious for Peled's "content providers" to disclose the claimed "copyright owner."

237. As I explained in Section VII.A., Peled discloses generating "reports" which are provided to "individual content providers." EX1003, ¶168; *see also id*., ¶¶54, 69-70, 155, 172, 180. The reports include a "statistical analysis of data of non-completed requests taken together to determine why requests are not being completed." *Id*., ¶183. "The data is then provided into reports, either on a per content item basis, or on a content provider basis, or on a per distributor basis and is provided over the network to the party requesting the report." *Id.* These reports are generated by "request failure analysis unit 26" and include the demographic information that I discussed above. *Id*., ¶¶168-69. For example, a content provider may be given age-

related demographic information related to particular content: "the content provider is given the information that numbers of under-age consumers have requested the content." *Id*., ¶175.

238. These reports enable copyright owners to gauge demographics who have acquired or declined a license for media content items. In particular, using Peled's reports, content providers are provided "with information about potential new markets that are currently being excluded." *Id*., ¶155.

> On the content provider level, ***analyzing user profiles*** of users who are refused content ***may reveal user groups who are interested in accessing the content*** but are refused due to usage rules. Such information thus provides content providers with the option to change the rules, or modify the product or service in order ***to enable the newly identified consumers or groups thereof to obtain the product or service***, thus potentially enhancing their revenue streams.

EX1003, ¶172 (emphasis added).

239. For example, a company may change business rules based on "type[s] of buyers and their characteristics," such as the "geographical regions" where the buyers may be located. EX1003, ¶196; *see also id*., ¶¶9,197-98. Similarly, the reports provided by Peled's system may expose price sensitive demographics where "the content provider is provided with statistical information indicating that the content was refused by requesters who had shown a willingness to purchase at a given lower price." *Id*., ¶177. "The gathered information may also be used in order

to evaluate the existing market segmentation criteria and to focus marketing efforts on potential market segments (both for the relevant content and for similar content items)." *Id*., ¶200. Thus, Peled describes providing content providers or copyright owners with user data in the form of reports allowing the content providers to gauge demographic information.

10. [1I] "aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request;"

240. As I explained with reference to claim element [1H], Peled discloses aggregating user data into a statistics record corresponding to the license request. EX1003, ¶¶1-2, 169, 172, 175-77, 186; Section IX.B.9. The claimed "statistics record" refers to a particular user and "summarizes the user data associated with the license request" along with whether the user has acquired or declined the license. As I explained in Section VII.A., Peled aggregates gathered user information including "personal data of the individual consumers." EX1003, ¶¶169, 199. This personal data includes demographic information such as a user's geographical location and age. *Id.* The aggregated information is combined into "profiles," which correspond to the claimed "statistics records." *Id*., ¶¶169, 172, 175-77, 180. Each such profile is specific to the consumer for which it belongs and summarizes the user data belonging to that consumer.

241. For example, Peled describes tracking "profiles of individual

consumers or groups of consumers" along with "refusal information." *Id*., ¶169. Peled additionally describes "analyzing user profiles of users who are refused content [to] reveal user groups who are interested in accessing the content." *Id*., ¶172. Additionally, "[i]ndividual requests may be analyzed in the light of other requests and in the light of ***a personal profile of an individual consumer*** if available." *Id*., ¶180 (emphasis added). In this manner, Peled describes building personal profiles corresponding to consumers, and discloses "aggregating the user data into a statistics record" as claimed.

242. While Peled focuses on the scenario where a user declines a license, Peled also describes tracking user profile information when a user acquires a license as well. *Id*., ¶¶1-2, 176-77. For example, Peled acknowledges that "[e]xisting patents and applications deal with the gathering of ***approved purchase requests***" and storing "personal" data related to approved purchase requests. *Id*., ¶2 (emphasis added). Peled also describes an example of tracking a consumer who has a history of purchasing movies at a particular price and has "shown a willingness to purchase at a given lower price." *Id*., ¶177. Additionally, Peled also describes ensuring that "both the American and Italian content providers are credited for the sale" of a movie with Italian subtitles as well as recording "the consumer's location in Italy." *Id*., ¶176. Based on these examples, Peled also discloses aggregating user data into a statistics record when a user acquires a license as well.

11. [1J] "storing in the license database the statistics record so that the user data is accessible to the copyright owner of the media content item; and"

243. As I explained with reference to claim elements [1H] and [1I], Peled stores user demographic data including user profile data in order to build reports for content providers. *See* Sections IX.B.9-10. Peled further explains that this user profile data (i.e., the claimed "statistics record") is stored in "database 31" as depicted in Figure 6. EX1003, ¶¶169-70.

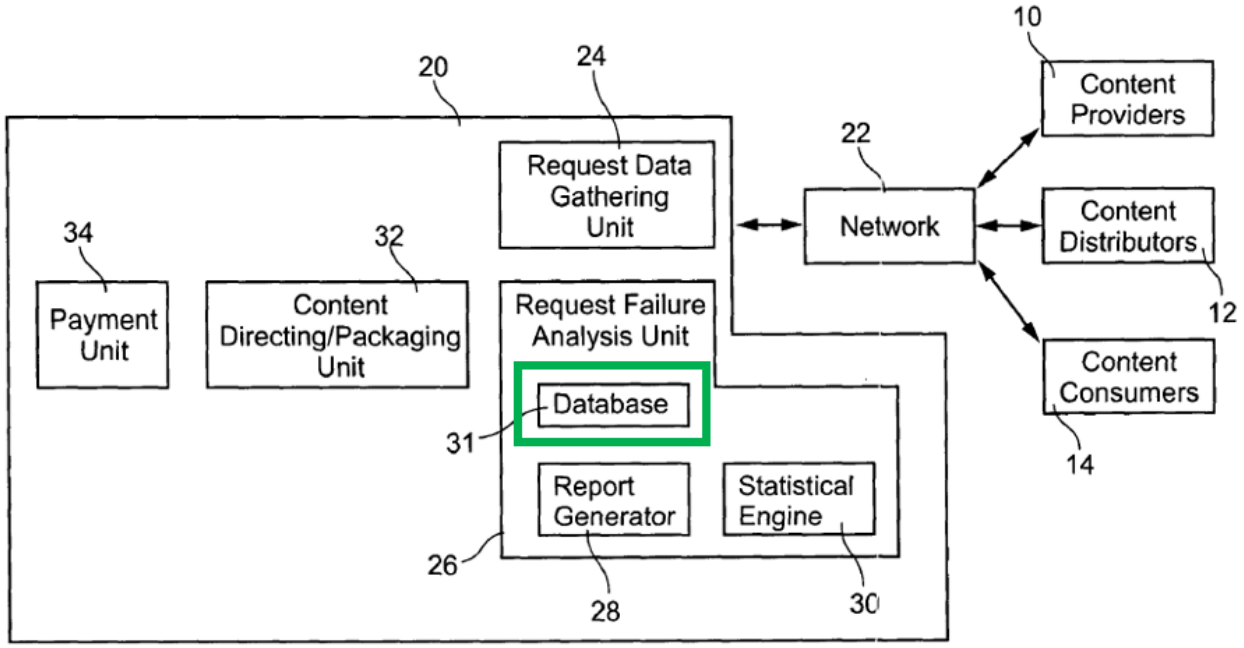


Fig. 6

EX1003, FIG. 6 (annotated).

244. Specifically, Peled explains that:

The refusal analysis unit preferably includes a database 31. The database preferably includes at least data of refusals being considered. In addition it may include profiles of individual consumers or groups

> of consumers and additional data which can be used together with the profiles or with the refusal information. The kind of data that may be taken into account in the analysis typically includes geographical factors, temporal market data, pricing factors, personal data of the individual consumers, personal data of a statistically constructed group of consumers to whom the individual consumer is believed to belong, the state of network infrastructure operability in the vicinity of a requesting party, and content provider distribution factors.

EX1003, ¶169 (emphasis added).

245. In this manner, Peled describes storing a statistics record in a database to generate reports for content providers. As I explained in Section IX.B.9 [1H], these reports are generated by "request failure analysis unit 26" and include the demographic information that I discussed above. EX1003, ¶¶168-69. Content providers may analyze the user profiles of users to identify demographic information for marketing purposes. *Id*., ¶¶155, 172, 196, 199-200. For example, "the content provider is provided with statistical information indicating that the content was refused by requesters who had shown a willingness to purchase at a given lower price." *Id*., ¶177. In another example, a content provider may obtain "consumer details" or "profile" information by providing a query. *Id*., ¶187. An example query may be: "at what price and restrictions if at all a user of profile X can acquire content Y?" *Id*. In view of these examples, the user data that is stored in Peled's database is also accessible to the copyright owner of the media content item.

246. I note that the '581 patent states that both its "license database" and its "licensing statistics database" can be on the central server. *See* EX1001, 4:31-34 ("System 30 may query a ***license database locally and/or remotely located*** to system 30 … ."), 7:15-20 ("Media content licensing and verification system 16 includes … a ***licensing statistics database***."). While the '581 patent specification refers to a "license database" residing on the user's device or on a server, *id*., 4:31-34, 7:1-11, it nowhere describes storing user data in that database. Rather, the '581 patent describes user data being stored in the "licensing statistics database" that resides on the server. *Id*., 7:51-64. Peled and Pou disclose storing the user data in a licensing database in this same way.

247. A POSA would have found it obvious to store Peled's user profile data in a licensing database, such as the "central license database 250" described in Pou. *See* Section IX.B.6. A POSA would have found it obvious to combine Peled's database 31 with Pou's central license database 250. Both are conventional memory systems and both store information related to user media purchases. EX1003, ¶169; EX1005, ¶59. For example, Pou's central license database 250 "stores and identifies licenses held by individual users." EX1005, ¶59. In this manner, both Peled's and Pou's databases organize information based on particular users. Based on this common organizational framework, a POSA would have found it obvious to combine the databases to track licensing information as well as user profile

information. Thus, Peled and Pou discloses storing statistics records in a licensing database.

12. [1K] "analyzing a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user."

248. As I explained with reference to claim elements [1H], [1I], and [1J], Peled analyzes a plurality of statistics records and provides content providers (i.e., the claimed "copyright owners") with aggregated user data corresponding to acquired and declined license requests. *See* Sections IX.B.9-11. As I previously explained, Peled describes building profiles for one or more users:

> Individual requests may be analyzed in the light of other requests and in the light of a personal profile of an individual consumer if available, or of a profile of a group to which the consumer is deemed to belong or to other information that may be available.

EX1003, ¶180 (emphasis added).

249. Peled's database 31 stores the user profile information for one or more consumers: database 31 "***may include profiles of individual consumers or groups of consumers*** and additional data which can be used together with the profiles or with the refusal information." *Id.*, ¶169 (emphasis added). As I previously explained, database 31 stores demographic data including "geographical factors," "personal data of the individual consumers, [or] personal data of a statistically constructed

group of consumers." *Id.* Peled analyzes the stored user data when generating reports for content providers. *Id*., ¶¶169, 183. "[A]nalysis results may be made available on a global basis and may be provided in the form of reports to individual content providers." *Id*., ¶168. These reports provide content providers with "statistical information regarding individual content or different content items from a given content source." *Id.* Peled performs a "statistical analysis" of the user data to generate a report and provides the report to a requesting party. *Id*., ¶183. Peled also allows content providers to query the data for a particular analysis such as "[A]t what price and restrictions if at all a user of profile X can acquire content Y?" *Id*., ¶187. By responding to such queries, generating reports, and providing reports to content providers, Peled discloses analyzing and communicating consumer details and profile information to copyright owners. *Id.* Thus, Peled discloses claim element [1K].

C. Independent Claim 6

250. The combination of Peled and Pou renders claim 6 obvious. Independent claim 6 describes elements similar to claim 1. The combination of Peled and Pou discloses all of the elements of claim 6 for similar reasons to those that I have presented for claim 1. I have provided a table below mapping the claim elements from claim 6 to their corresponding elements from claim 1. Claim 6 additionally describes a "media catalog database" as well as "media content records"

that identify media content items. I have included some additional explanation below to address these elements of claim 6.

[6P] A computer implemented method for providing a media content licensing and verification system to license media content for reproduction, the method comprising:	Corresponds to element [1P] of claim 1. *See* Section IX.B.1. *See also* additional explanation provided below.
[6A] ***receiving a media licensing request from an external device associated with a user***, wherein the media licensing request includes digital media information associated with the media content item included in a digital media file;	Corresponds to Elements [1A]-[1C] of claim 1. *See* Sections IX.B.2-4. *See also* additional explanation provided below.
[6B] accessing a media catalog database that includes a plurality of media content records, wherein a media content record from the plurality of media content records is associated with the media content item;	Corresponds to Elements [1D]-[1E] of claim 1. *See* Section IX.B.5-6. *See also* additional explanation provided below.
[6C] determining whether the media licensing request is to be granted based on the media content record stored in the media catalog database that is associated with the media content item;	Corresponds to Elements [1D]-[1E] of claim 1. *See* Section IX.B.5-6. *See also* additional explanation provided below.
[6D] granting the media licensing request for the external device when the media content record associated with the media content item verifies the granting of the license for the media content item to the external device;	Corresponds to Element [1F] of claim 1. *See* Section IX.B.7. *See also* additional explanation provided below.

[6E] declining the media licensing request for the external device when the media content record associated with the media content item does not verify the granting of the license for the media content to the external device;	Corresponds to Element [1F] of claim 1. *See* Section IX.B.7. *See also* additional explanation provided below.
[6F] after the determination of the media licensing request, extracting from the media licensing request user data that is specific to the user that is attempting to reproduce the media content item when the user is granted the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner;	Corresponds to Element [1H] of claim 1. *See* Section IX.B.9.
[6G] aggregating the user data into a statistics record for the media licensing request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the media licensing request;	Corresponds to Element [1I] of claim 1. *See* Section IX.B.10.
[6H] storing in a license database the statistics record so that the user data is accessible to the copyright owner of the media content item; and	Corresponds to Element [1J] of claim 1. *See* Section IX.B.11.

[6I] analyzing a plurality of statistics records aggregated from each media licensing request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each media licensing request of the media content item when the license is acquired by the user and when the license is declined by the user.	Corresponds to Element [1K] of claim 1. *See* Section IX.B.12.

251. Regarding [6P], to the extent that the preamble is limiting, Peled's apparatus 20 and Pou's central server 240 disclose the claimed "media content licensing and verification system." EX1003, ¶¶61, 159, 80, 94, 111, 158-60, 166, 173, 178, 182; EX1005, ¶¶2, 8, 31, 42-43, 57.

252. Claim element [6A] states that "the media licensing request includes digital media information associated with the media content item." As I explained with reference to claim elements [1A] and [1B], Pou discloses loading a media file at a user device and also analyzing the media file to determine a "fingerprint" or UFID. EX1005, ¶¶13, 51, 57, 64-65, 111. The fingerprint and the UFID disclose the claimed "digital media information." Pou's user device "extracts a digital fingerprint from a digital file and compares the extracted fingerprint to a database of known works." *Id*., ¶51. Pou also describes checking the central license database using a UFID "to determine if the user has a license for the media file." *Id*., ¶¶83, 100. Thus, Pou describes a media licensing request that includes digital media information as

recited in claim element [6A].

253. Pou's "central license database" also discloses the claimed "media catalog database." Pou's central license database includes digital fingerprints and UFIDs identifying different digital files. EX1005, ¶¶43, 51-52, 65, 99; EX1001, 10:28-53. Pou's system "extracts a digital fingerprint from a digital file and compares the extracted fingerprint to a database of known works" (i.e., the "central license database"). *Id*., ¶¶51-52. Additionally, Pou describes searching the central database using the UFID and "matching the identified file with its unique file ID stored at the central database." *Id*., ¶¶43, 99. "If the UFID is found in the central database [], the local database is updated [] with the license information. Assuming a license is located, use of the media file is allowed." *Id*., ¶100. In this manner, Pou describes checking the central license database using a UFID "to determine if the user has a license for the media file." *Id*., ¶¶83, 100. Thus, Pou's comparison of fingerprints or UFIDs to identify media and a corresponding license stored in the central license database discloses claim element [6B].

254. The fingerprints and UFIDs disclose the plurality of "media content records" recited in claim element [6B] as well. Pou's fingerprints and UFIDs are used to uniquely identify media content. *Id*., ¶54 ("files can be identified using implicit characteristics of the file (e.g., a fingerprint or watermark) or using explicit file characteristics (e.g., a file identifier stored in a file header)," such as a UFID).

License information is also stored with and identified using a received fingerprint or UFID. *Id.*, ¶¶83, 100. Therefore, as I previously explained, Pou's central license database discloses the "license database" recited in [6H]. Section IX.B.6. Thus, Pou discloses using a unique file identifier to determine whether a licensing request is to be granted. *Id.*, ¶100. This discloses claim element [6C].

255. When, for example, a UFID is found in the central database with a corresponding license, Pou describes allowing the use of the media file. *Id.*, ¶100. This discloses claim element [6D]. When a license is not found, one may be offered. *Id.*, ¶56. "If the user does not accept the license, access to the file may be denied (step 135)." *Id.* Although Pou additionally provides the option to obtain a license, this still discloses claim element [6E] because the media licensing requests may still be declined when a user does not have and does not accept a license.

D. Independent Claim 11

256. The combination of Peled and Pou renders claim 11 obvious. Independent claim 11 claims a "system" that performs substantially the same method recited in claim 1. The combination of Peled and Pou discloses all of the elements of claim 11 for the same reasons that I have presented for claim 1. I have provided a table below mapping the claim elements from claim 11 to their corresponding elements from claim 1. Claim 11 additionally describes conventional components such as a "processor" and a "user interface," which I address with some additional

explanation below.

[11P] A system for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, ***comprising: a processor configured to***:	Corresponds to element [1P] of claim 1. *See* Section IX.B.1. *See also* additional explanation provided below.
[11A] receive a license request from a user requesting to engage in a license transaction to reproduce the media content item;	Corresponds to Element [1C] of claim 1. *See* Section IX.B.4.
[11B] load a digital media file for reproduction, wherein the digital media file includes the media content item requested by the user to reproduce,	Corresponds to Elements [1A] of claim 1. *See* Section IX.B2.
[11C] analyze the digital media file to identify digital media information associated with the media content item,	Corresponds to Elements [1B] of claim 1. *See* Section IX.B.3.
[11D] evaluate the license transaction to determine whether the user has acquired a license to reproduce the media content item;	Corresponds to Element [1D] of claim 1. *See* Section IX.B.5.
[11E] access a licensing database to determine whether the user is licensed to reproduce the media content item based on the digital media information,	Corresponds to Element [1E] of claim 1. *See* Section IX.B.6.

[11F] after the evaluation of the license transaction, extract from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner,	Corresponds to Element [1H] of claim 1. *See* Section IX.B.9.
[11G] aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request,	Corresponds to Element [1I] of claim 1. *See* Section IX.B.10.
[11H] store in the license database the statistics record so that the user data is accessible to the copyright owner of the media content item, and	Corresponds to Element [1J] of claim 1. *See* Section IX.B.11.
[11I] analyze a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user,	Corresponds to Element [1K] of claim 1. *See* Section IX.B.12.

[11J] ***a user interface configured to provide a licensing query to the user*** when the user is not licensed to reproduce the media content item to prompt the user to select to acquire a license to reproduce the media content item or to decline the license to reproduce the media content item.	Corresponds to Element [1G] of claim 1. *See* Section IX.B.8. *See also* additional explanation provided below.

257. Claim element [11P] recites a system implementing the method of claim 1. This system includes a "processor." Both Peled and Pou disclose processors configured to perform the method steps described in claim 1. EX1003, ¶¶62-63, 69, 74, claims 33-34, 40, 45, 130-31, 137, 142; EX1005, ¶¶26, 57, 112-14, claims 74, 78-80, 82-86, 89, 92, 95-96, 98-101, 104-05, 107-08, 111, 113-16.

258. Claim element [11J] performs the same step as claim element [1G] from claim 1. Claim element [11J] additional recites a "user interface" that prompts the user to acquire or to decline the license to reproduce the media content item. Pou's description of a "pop-up window" with an "accept button" and a "decline button" discloses the claimed "user interface." EX1005, ¶56. Specifically, Pou explains that:

> If the file is not licensed, ***a license may be offered to the user for purchase (step 125)***. For example, the user may be directed to a website where a purchase can be made, or ***a pop-up window may appear on a display screen for the user device asking whether the user wishes to purchase a license to the file*** or otherwise accept certain license terms and/or the user may be directed to a website where a purchase can be completed.

EX1005, ¶56 (emphasis added).

> It is then ***determined whether the user accepts the license (step 130) (e.g., by receiving an indication that the user clicked on an accept button or a decline button in the pop-up window)***. If the user does not accept the license, access to the file may be denied (step 135). If the user does accept the license, including complying with any payment terms, the user is allowed to access the file, and license information, indicating that the file has been licensed and any other necessary information, is stored in the license database(s) (step 140).

Id. (emphasis added).

259. As seen from this description, Pou's "pop-up window" appearing on a display screen is a user interface that prompts the user to select to acquire the license or to decline the license. EX1005, ¶56; *see also id*., ¶¶77-79. To the extent that the "user interface" is interpreted to be a component of a client device, Pou's description of a pop-up window appearing on a display screen also discloses a client device having a user interface that prompts the user for a selection. Thus, Pou discloses claim element [11J].

E. Independent Claim 16

260. The combination of Peled and Pou renders claim 16 obvious. Independent claim 16 claims a "system" that performs substantially the same method recited in claim 6. The combination of Peled and Pou discloses all of the elements of claim 16 for similar reasons to those that I have presented for claims 1 and 6. I

have provided a table below mapping the claim elements from claim 16 to their corresponding elements from claims 1 and 6. Claim 16 additionally describes "a transceiver configured to receive a media licensing request" and "a processor." I have included some additional explanation below to address the "transceiver" of claim 16.

[16P] A system for providing a media content licensing and verification system to license media content for reproduction, comprising:	Corresponds to Element [1P] of claim 1 and Element [6P] of claim 6. *See* Sections IX.B.1, IX.C. *See also* additional explanation provided below.
[16A.1] ***a transceiver configured to receive a media licensing request from an external device associated with a user***, wherein the media licensing request includes digital media information associated with the media content item included in a digital media file; and	Corresponds to elements [1A]-[1C] of claim 1 and Element [6A] of claim 6. *See* Sections IX.B.2-4, IX.C. *See also* additional explanation provided below.
[16A.2] a processor configured to:	*See also* additional explanation provided below.
[16B] access a media catalog database that includes a plurality of media content records, wherein a media content record from the plurality of media content records is associated with the media content item,	Corresponds to Elements [1D]-[1E] of claim 1 and Element [6B] of claim 6. *See* Sections IX.B.5-6, IX.C.
[16C] determine whether the media licensing request is to be granted based on the media content record stored in the media catalog database that is associated with the media content item,	Corresponds to Elements [1D]-[1E] of claim 1 and Element [6C] of claim 6. *See* Section IX.B.5-6, IX.C.

[16D] grant the media licensing request for the external device when the media content record associated with the media content item verifies the granting of the license for the media content item to the external device,	Corresponds to Element [1F] of claim 1 and Element [6D] of claim 6. *See* Section IX.B.7, IX.C.
[16E] decline the media licensing request for the external device when the media content record associated with the media content item does not verify the granting of the license for the media content item to the external device,	Corresponds to Element [1F] of claim 1 and Element [6E] of claim 6. *See* Section IX.B.7, IX.C.
[16F] after the determination of the media licensing request, extracting from the media licensing request user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner,	Corresponds to Element [1H] of claim 1 and Element [6F] of claim 6. *See* Section IX.B.9, IX.C.
[16G] aggregate the user data into a statistics record for the media licensing request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the media licensing request, and	Corresponds to Element [1I] of claim 1 and Element [6G] of claim 6. *See* Section IX.B.10, IX.C.

[16H] store in a license database the statistics record so that the user data is accessible to the copyright owner of the media content item, and	Corresponds to Element [1J] of claim 1 and Element [6H] of claim 6. *See* Section IX.B.11, IX.C.
[16I] analyze a plurality of statistics records aggregated from each media licensing request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user.	Corresponds to Element [1K] of claim 1 and Element [6I] of claim 6. *See* Section IX.B.12, IX.C.

261. Claim element [16A.1] recites a "transceiver configured to receive a media licensing request from an external device associated with a user." Both Peled and Pou disclose such a transceiver as I explain below. At the outset, I note that the '581 patent does not provide specific details on the functionality of a transceiver but simply recites a generic "transceiver." EX1001, 2:5-7, 6:37-41, 7:15-17. Whether implemented on device 10 or on licensing system 16, as depicted in Figure 2, the transceiver merely needs to be capable of communications over network 12. *Id*., 3:15-23, 4:38-42, 5:49-6:8. "Network 12 may include one or more networks, such as the Internet." *Id*., 5:50-51. Both Peled and Pou also disclose transceivers that facilitate communications over the Internet.

262. For example, as seen in Figure 6 from Peled, "network interactive distribution auxiliary apparatus 20" performs bi-directional communications over

"network 22." EX1003, ¶¶166-67. "The apparatus 20 preferably comprises a request data gathering unit 24 for obtaining data of user requests for respective content items that are available over network 22." *Id.*, ¶¶167. "The apparatus 20 is preferably server based" and facilitates Internet communications. *Id.*, ¶¶157-58, 166, 173, 197. Servers commonly facilitate bidirectional communications with transceivers.

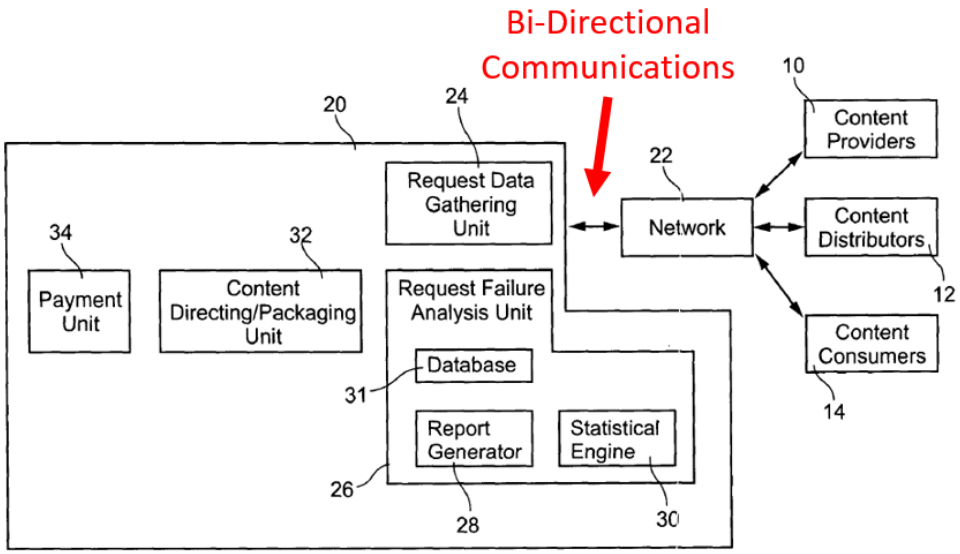


Fig. 6

EX1003, FIG. 6 (annotated).

263. Pou also describes its "central server 240" system facilitating bi-directional communications with "user device 205." EX1003, ¶59.

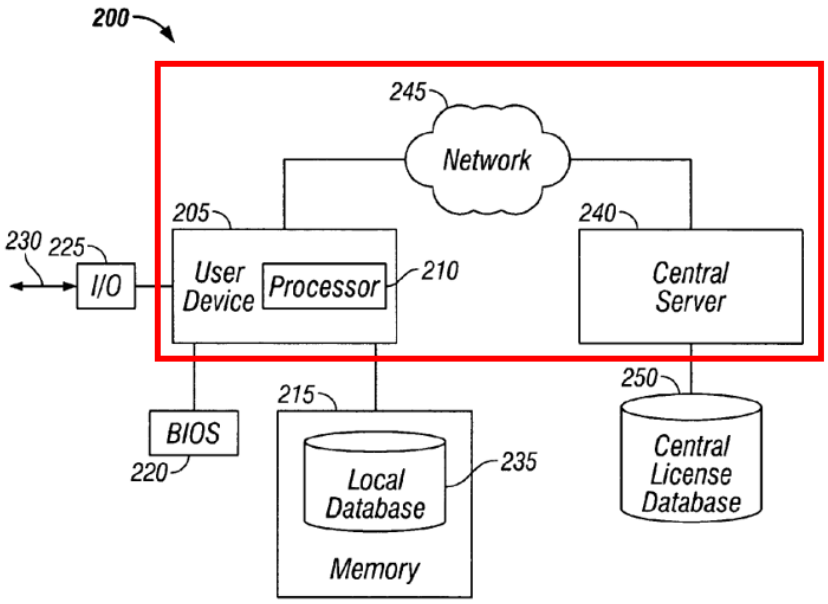


FIG. 2

EX1005, FIG. 2 (annotated).

264. Pou explains:

> The user device 205 may communicate with a central server 240 through a network 245, which may include one or more of a wireless network, a LAN, a WAN, the Internet, a telephone network, and any other network for transferring data. Communications between the user device 205 and the central server 240 may be performed using a secure channel, such as the Secure Sockets Layer (SSL), and/or may use encryption, such as PGP.

EX1003, ¶59.

265. In view of these descriptions, both Peled and Pou describe servers with transceivers to transmit and receive communications from user devices. As I explained with reference to claim elements [1A]-[1C] and [6A], these servers receive

a media licensing request from an external device associated with a user. *See* Sections IX.B.2-4, IX.C. Thus, Peled and Pou disclose the claimed "transceiver."

266. Claim element [16A.2] recites a "processor" implemented in the system of claim 16. Both Peled and Pou disclose processors configured to perform the method steps described in claim 6. *Id.*, ¶¶62-63, 69, 74, claims 33-34, 40, 45, 130-31, 137, 142; EX1005, ¶¶26, 57, 112-14, claims 74, 78-80, 82-86, 89, 92, 95-96, 98-101, 104-05, 107-08, 111, 113-16.

F. Claims 2 and 12

267. Claims 2 and 12 recite:

> Claim 2: The method of claim 1, further comprising: receiving from the user ***a licensing response to the licensing query***, wherein the licensing response indicates whether the user has selected to acquire the license to reproduce the media content item or to decline the license to reproduce the media content item.
>
> Claim 12: The system of claim 11, wherein the user interface is further configured to receive from the user ***a licensing response to the licensing query***, wherein the licensing response indicates whether the user has selected to acquire the license to reproduce the media content item or to decline the license to reproduce the media content item.

268. The combination of Peled and Pou discloses claims 2 and 12. As I explained with reference to claim element [1G] and claim 11, Pou discloses a "pop-up window [that] may appear on a display screen for the user device asking whether

the user wishes to purchase a license to the file." EX1005, ¶56; Sections IX.B.8, IX.D. The user may provide a licensing response by either clicking on "an accept button or a decline button in the pop-up window." EX1005, ¶56. Pou describes receiving this indication and using this indication to determine whether the user has accepted or declined the license to reproduce the media content. *Id.* Thus, Pou discloses claims 2 and 12.

G. Claims 3 and 13

269. Claims 3 and 13 recite:

> Claim 3: The method of claim 2, further comprising: ***providing a licensing request to a licensing system when the user desires to acquire the license*** to reproduce the media content item based on the licensing response from the user; and ***preventing reproduction of the media content item when the user declines the license*** to reproduce the media content item.
>
> Claim 13: The system of claim 12, wherein the processor is further configured to: ***provide a licensing request to a licensing system*** after the user has completed the licensing response; and ***prevent reproduction of the media content item when the user selects to decline the license*** to reproduce the media content item.

270. The combination of Peled and Pou discloses claims 3 and 13. As I explained with reference to claim element [1G], Pou discloses obtaining a license when a user accepts a license at steps 130 and 140. EX1005, ¶56. Pou also discloses preventing reproduction of the media content item when the user declines the license

at step 135. *Id*.

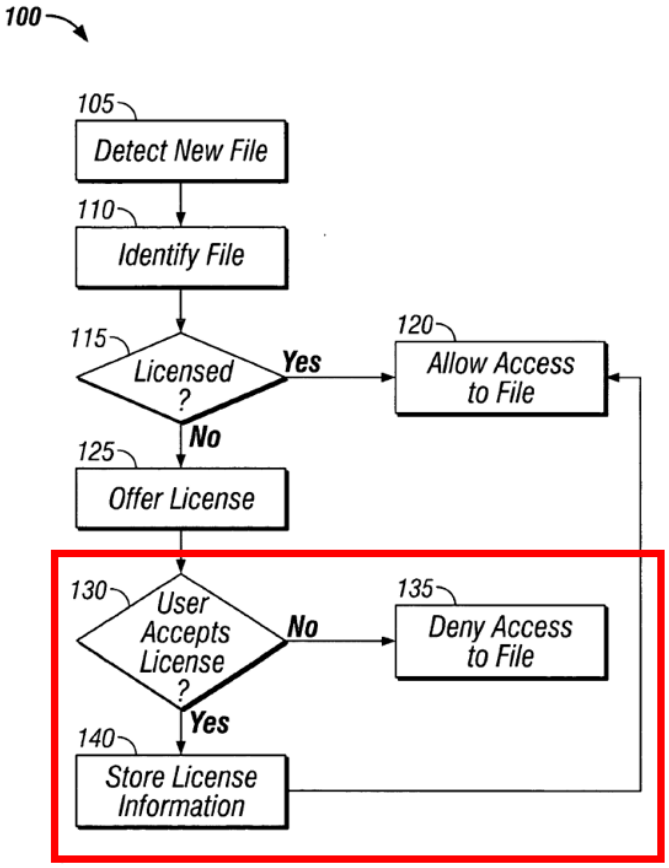


FIG. 1

EX1005, FIG. 1 (annotated).

271. Specifically, Pou states:

It is then determined whether the user accepts the license (step 130) (e.g., by receiving an indication that the user clicked on an accept button or a decline button in the pop-up window). ***If the user does not accept the license, access to the file may be denied (step 135)***. ***If the user does accept the license, including complying with any payment terms***, the user is allowed to access the file, and ***license information, indicating that the file has been licensed and any other necessary information, is stored in the license database(s) (step 140)***.

EX1005, ¶56 (emphasis added).

272. As seen from this description, Pou's central server (i.e., the claimed "licensing system") obtains a license in response to the user accepting the offer to purchase the license: "An authorization to access the data file can be offered for purchase, and an acceptance of the offer to purchase can be received…. The acceptance of the offer can be sent to a central server." *Id.*, ¶11; *see also id.*, ¶¶13, 77-78, 85. "If the user accepts the purchase or license offer, payment information is obtained from the user and sent to the central server (step 355). The central server may include a micro-payment system that tracks the sale of the media file license and also all the parties to be paid for each specific sale…" *Id.*, ¶79. If the user declines the license offer, Pou prevents reproduction of the media content item. *Id.*, ¶¶56, 85.

273. Thus, Pou discloses claims 3 and 13.

H. Claims 4 and 14

274. Claims 4 and 14 recite:

> Claim 4: The method of claim 3, further comprising: ***receiving a license*** to reproduce the media content from the licensing system ***when the licensing request is granted*** by the licensing system; and ***preventing reproduction*** of the media content item ***when the licensing request is declined by the licensing system***.
>
> Claim 14: The system of claim 13, wherein the processor is further configured to: ***receive a license*** to reproduce the media content item

from the licensing system ***when the licensing request is granted by the licensing system***; and ***prevent reproduction*** of the media content item ***when the licensing request is declined by the licensing system***.

275. The combination of Peled and Pou discloses claims 4 and 14. As I explained with reference to claims 3 and 13, Pou also discloses granting a license to reproduce content. EX1005, ¶¶11, 13, 56, 77-79, 85. This license may be granted when the user provides a requisite payment for the license. *Id.* "Assuming payment is successful, license information for the media file may be stored, as appropriate, in a local database and/or a central database." *Id.*, ¶85. "The central database 725 is updated 760 with information indicating that the user has a license to the media file." *Id.*, ¶101. Pou's central server and central database "store information associating the license to use the digital file with the user." *Id.*, ¶27. This storage discloses the receiving of a license to reproduce the media content when the licensing request is granted.

276. Pou explains, moreover, that if the user chooses to purchase a license that is "offered to the user," the license "is ***obtained*** from the remote server" and "stored on the user device" such that "access to the media file on the user device is allowed using the license." *Id.*, ¶¶25-26, 56. This is similar to the '581 patent's own description of the licensing and verification system transmitting a license to the user's "device in response to processing the licensing transaction." EX1001, 10:65-11:1. Thus, Pou's disclosure makes clear that the user device receives a license to

reproduce the media content when the licensing request is granted. The received license is then stored in the user device's "local database." EX1005, ¶¶27, 101. In this manner, Pou's user device also receives the license when it is granted by the licensing system.

277. Pou also discloses preventing reproduction when the licensing request is declined by the licensing system. For example, Pou describes the scenario where a user may attempt to obtain a license but may fail to complete payment for the license. *Id*., ¶80. "If the payment fails, the user can enter a different payment method and try again. If the user chooses not to try again or ***if no payment method offered is validated, the transaction is cancelled and access to the media file is denied***." *Id*., (emphasis added). In this manner, Pou describes a scenario where a licensing system has declined a licensing requests and has prevented reproduction of the media content item.

278. Peled also describes declining a request to obtain a license based on business rules as well as to prevent fraud. EX1003, ¶¶175, 187. For example, Peled describes an example where "a movie [is] suitable only for persons aged 18 and over." *Id*., ¶175. If a user does not meet this criteria, the received "request is simply refused in the normal way." *Id.* Additionally, Peled also describes a purchase experience with "denial or pseudo-denial situations, for example due to background monitoring for suspicious situations." *Id*., ¶187. Peled explains that a purchase may

be denied when "the purchase falls into a pattern of suspected fraud that is currently being investigated by the content provider, or a pattern of money laundering being investigated by the authorities." *Id.* In this manner, Peled describes scenarios where a content distribution system refuses to grant a license and prevents reproduction of content. These refusals are performed by Peled's content distribution system which is analogous to and combinable with Pou's central server. Both systems describe preventing reproduction in the same way. Further, a POSA would have understood that a user's decline of a purchase would be a decline of a license in the combined Peled-Pou system. EX1005, ¶56 ("If the user does not accept the license, access to the file may be denied (step 135).").

279. Thus, Peled and Pou disclose claims 4 and 14.

I. Claims 5 and 15

280. Claims 5 and 15 recite:

> Claim 5: The method of claim 4, further comprising: reproducing the media content item ***based on a plurality of reproduction parameters in the license*** that is received from the licensing system.
>
> Claim 15: The system of claim 14, wherein the processor is further configured to reproduce the media content item ***based on a plurality of reproduction parameters included in the license*** that is received from the licensing system.

281. The combination of Peled and Pou discloses claims 5 and 15. At the outset, I note that the '581 patent specification does not use the term "parameter"

nor does the '581 patent provide a definition for a "plurality of reproduction parameters." As I have explained in Section V.A.2, a POSA would have understood "reproduction parameters" to refer to the terms of a license that provide some type of restriction on the user's ability to stream or reproduce a particular media content item. Peled and Pou both disclose different types of reproduction parameters that would have been used in combination and would have disclosed the claimed "plurality of reproduction parameters."

282. Peled describes different "***business rules***" and "***distribution restrictions***" that "are associated with individual content items," as well as the ability to offer content to users in a manner that "coincides with" those restrictions. EX1003, ¶¶9, 15-17, 24-25, 32, 81-83, 95-97, 112-114, 140-141, 162; *id.*, claims 15, 32, 46, 49, 51, 61-63, 73-75, 98-99, 129, 143, 146-148, 158-160, 170-172. As I described above, such rules and restrictions control the manner in which a user may reproduce content, consistent with DRM's goal of enforcing contractual restrictions on the distribution and consumption of content. *See id.* ¶¶9 (explaining that business rules "enforc[e] restrictions on distribution" of content), 196; *see also id.* ¶¶57, 75 (discussing "contractual restriction[s]" that may control a user's ability to stream or reproduce certain content); Section V.A-B. Peled provides one example in which a movie may be streamed only by "persons aged 18 and over." *Id.* ¶175. Peled explains that, in that scenario, if a requesting user is underage or his age cannot be verified,

Peled's system will "offer[] an edited version of the movie which is suitable for all ages." *Id*. In this manner, Peled describes reproducing content based on user age.

283. As another example, Peled explains that one parameter that may affect the price of the license to stream or reproduce a media content item is whether the item is packaged with "additional advertising content." *Id.* ¶¶158, 177. Packaging advertising content with a movie may "reduce the price to the consumer" and ultimately alter the terms of the license. *Id.* Additionally, Peled describes offering a "lower resolution or edited versions of the movie" to reduce costs. *Id.* ¶158; *see also id*., ¶175. One such version of a movie may include "Italian subtitles." *Id*. ¶176. Additionally, Peled provides another example where a movie may be streamed only by "persons aged 18 and over." *Id.* ¶175. These examples show instances in which Peled's system controls the user's ability to reproduce content based on licensing terms. Thus, these reproduction rules disclose the claimed reproduction parameters, and Peled discloses reproducing content based on those parameters.

284. Likewise, Pou describes several "distribution limitations" set forth in a license that govern a user's ability to reproduce media content items: "The ***license terms, such as duration, use and distribution limitations***, and payment options, may also be displayed as part of the offer of a license for purchase." EX1005, ¶56 (emphasis added). Pou also discloses "temporary licenses" with an "expiration date/time." *Id.* ¶96. And, like Peled, Pou refers to "business rules" for distributing

content. *Id.* ¶44, 65, 83, 103-111. Pou's license terms based on duration, use, and distribution limitations likewise disclose a plurality of reproduction parameters.

285. A POSA would have understood that the reproduction parameters described in Peled and Pou would have been used in combination depending on the terms of the license obtained by the consumer. Thus, the combination of Peled and Pou discloses reproducing a media content item based on a "based on a plurality of reproduction parameters" identified by the license and disclose claims 5 and 15.

J. Claims 7-8 and 17-18

286. Claims 7-8 and 17-18 refer to the process of obtaining payment for the license to reproduce the media content item. Claims 7-8 and 17-18 recite:

> Claim 7: The method of claim 6, wherein the determining comprises: ***requesting payment information*** from the external device when the media content record associated with the media content item ***requires payment of the license for the media content item***.
>
> Claim 8: The method of claim 7, wherein the granting comprises: granting the media licensing request for the external device ***when payment of the license for the media content item is completed***.
>
> Claim 17: The system of claim 16, wherein the processor is further configured to request payment information from the external device when the media content record associated with the media content item ***verifies payment of the license for the media content item***.

> Claim 18: The system of claim 17, wherein the processor is further configured to process the media licensing request for the external device ***when the payment of the license for the media item is received***.

287. The combination of Peled and Pou discloses claims 7-8 and 17-18. In, particular, both Peled and Pou disclose obtaining and verifying payment for licenses to reproduce content. For example, Peled's content distribution system includes a "payment unit 34" that "ensure[s] that the correct content providers are credited when a sale is made. The payment unit keeps track of where content has been taken from and what advertising if any has been added and ensures that payments flow from the consumers and advertisers to the content providers." EX1003, ¶179.

288. Similarly, Pou also explains that "[a]ll transactions may be centrally tracked for payment and analysis. A central tracking database can be used to track payments…" EX1005, ¶48. "If the user decides to purchase a license, payment information is obtained from the user and sent to the central server (step 445)." *Id*., ¶85. Pou's central server transmits a payment request to a user device:

> The central server 720 responds with a ***payment request*** 740, which is displayed on the user device 705 or the user is directed to a website where payment information can be obtained. The user device 705 receives payment information from the user (step 745) and ***sends the payment information to the central server 720***. The payment information is processed (step 755), which may involve determining

> how much of the license fee is allocated to the content owner and/or to one or more users who have distributed the media file.

EX1005, ¶101 (emphasis added).

289. "Assuming payment is successful, license information for the media file may be stored, as appropriate, in a local database and/or a central database (step 450)." *Id*., ¶85. "The central database 725 is updated 760 with information indicating that the user has a license to the media file. … Based on the updated license information, the user may be allowed to use the media file on the user device 705 (step 770)." *Id*., ¶101. "The central server may include a micro-payment system that tracks the sale of the media file license and also all the parties to be paid for each specific sale…" *Id*., ¶¶79-80.

290. In view of the payment processing performed by Peled and Pou to authorize a license to reproduce media content, the combination of Peled and Pou discloses claims 7-8 and 17-18.

K. Claims 9 and 19

291. Claims 9 and 19 recite:

> Claim 9: The method of claim 6, further comprising: ***generating a license record*** that includes license granting information associated with the license granted to the external device; and ***storing the license record in a registered user database*** that is associated with the user.
>
> Claim 19: The system of claim 16, wherein the processor is further configured to: ***generate a license record*** that includes license granting

information associated with the license granted to the external device; and ***store the license record in a registered user database*** that is associated with the user.

292. The combination of Peled and Pou discloses claims 9 and 19. As I previously explained with reference to claim elements [1D] and [1G] and claims 4 and 14, Peled and Pou disclose storing license information corresponding to different users and granting licenses to user devices attempting to reproduce content. *See* Sections IX.B.5, IX.B.8, IX.H. Peled and Pou also disclose generating and storing license records in a registered user database when a license is granted.

293. For example, Pou states: "Assuming payment is successful, license information for the media file may be stored, as appropriate, in a local database and/or a central database." EX1005, ¶85. "The central database 725 is updated 760 ***with information indicating that the user has a license to the media file***." *Id*., ¶101 (emphasis added). Pou's central server and central database "store information associating the license to use the digital file ***with the user***." *Id*., ¶27 (emphasis added). This storage of a license record as well as its association with a particular user discloses the generation and storage of the "license record" record recited in claims 9 and 19.

294. Additionally, as I previously explained with reference to claim element [1D], Pou also tracks licenses corresponding to this user information: "a determination is made as to whether the file has been licensed for use on the user

device and/or by the particular user (step 115)." *Id*., ¶55; Section IX.B.5. The central server may perform a check of one or more license databases, such as "central license database 250 that stores and identifies licenses held by individual users." EX1005, ¶¶55, 59. In this manner, Pou discloses generating license records and storing them with an association to the particular users who have obtained licenses.

295. Peled and Pou also disclose license records that are associated with "registered" users and storing such records in a "registered user database" as recited in the claims. In particular, both Peled and Pou describe the tracking of user credentials. For example, Peled describes that a license purchase experience may be personalized when "the purchaser identifies himself in some way, perhaps by means of a cookie or perhaps by ***logging in***." EX1003, ¶¶187, 194 (emphasis added). Using these user credentials, Peled also is able to identify a user's purchase history and identify when a user "has a history of requesting movies at a given price" or has "shown a willingness to purchase at a given lower price." *Id*., ¶177. In this manner, Peled describes recording user purchases and associating such purchases with registered user credentials.

296. Pou also describes a similar process. For example, Pou describes its central server identifying a user based on user credentials. EX1005, ¶¶91, 96. "Determining if the user is already known may involve a comparison of one or more of the data items of user information to known data items stored in the central

database." *Id.*, ¶¶91. Pou also describes prompting a user to "log in with the correct password." *Id.* In this manner, Pou also describes tracking registered user information.

297. I note that both Peled's and Pou's processes are similar to what the '581 patent itself describes. The '581 patent explains that license records "indicat[ing] a media content item that a user of the device may be licensed to reproduce" are generated and contained within a user record that is stored in a registered user database located on the server. EX1001, 7:11-14, 7:25-26, 7:45-50, 11:1-8, 11:22-25.

298. Additionally, a POSA would have found it obvious to stores license records and use a registered user database in Peled's system. Doing so would have allowed Peled's system to efficiently track consumers' licenses and the content they are licensed to reproduce. *See* Section IX.A.

299. Thus, the combination of Peled and Pou discloses claims 9 and 19.

L. Claims 10 and 20

300. Claims 10 and 20 recite:

> Claim 10: The method of claim 6, wherein the ***digital media information includes a fingerprint*** associated with the media content item.

> Claim 20: The system of claim 16, wherein the ***digital media information includes a fingerprint*** associated with the media content item.

301. The combination of Peled and Pou discloses claims 10 and 20. As I explained with reference to claim elements [1B] and [1E] as well as claim 6, Pou discloses digital media information including a "fingerprint" associated with the media content item. *See* Section IX.B.3, IX.B.6, IX.C; EX1005, ¶¶13, 51-52, 54, 82. Thus, Pou discloses claims 10 and 20.

M. Claims 21, 23, 25, and 27

302. Claims 21, 23, 25, and 27 refer to allowing a "third party online media retailer" to access the user data stored in the license database. Claims 21, 23, 25, and 27 recite:

> Claim 21: The computer implemented method of claim 1, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer that has been selected by the copyright owner to distribute the media content item***.
>
> Claim 23: The computer implemented method of claim 6, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer***

that has been selected by the copyright owner to distribute the media content item.

Claim 25: The system of claim 11, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer that has been selected by the copyright owner to distribute the media content item***.

Claim 27: The system of claim 18, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer that has been selected by the copyright owner to distribute the media content item***.

303. The combination of Peled and Pou discloses claims 21, 23, 25, and 27. Specifically, as depicted in Figure 1, Peled discloses "content retailers RT1 … RTn" (i.e., the claimed "third party online retailer") as distinct entities from "content providers CP1 … CPn" (i.e., the claimed "copyright owner"). EX1003, ¶157.

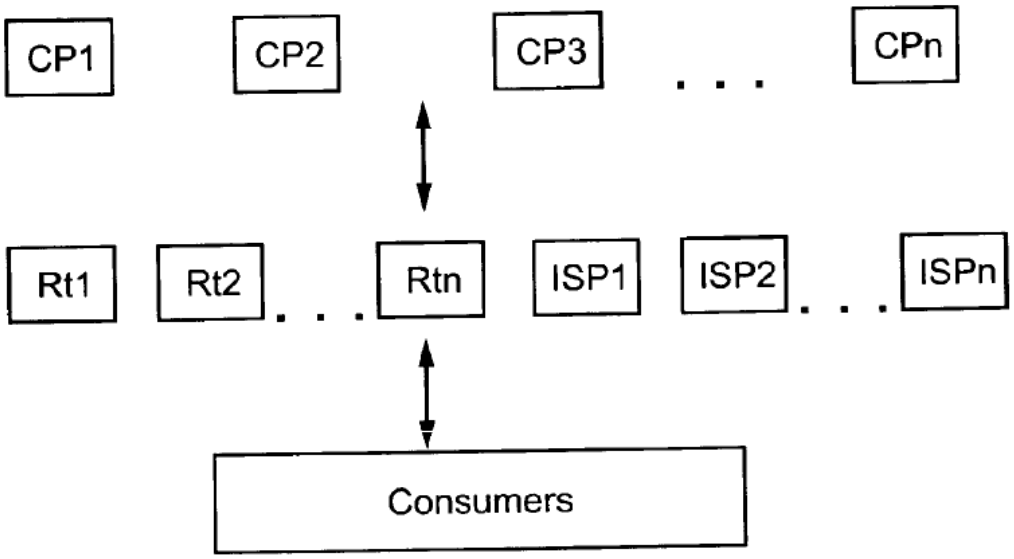


Fig. 1

EX1003, FIG. 1.

304. Peled additionally depicts this distinction in Figure 2, which treats retailers as a unified layer. EX1003, ¶158.

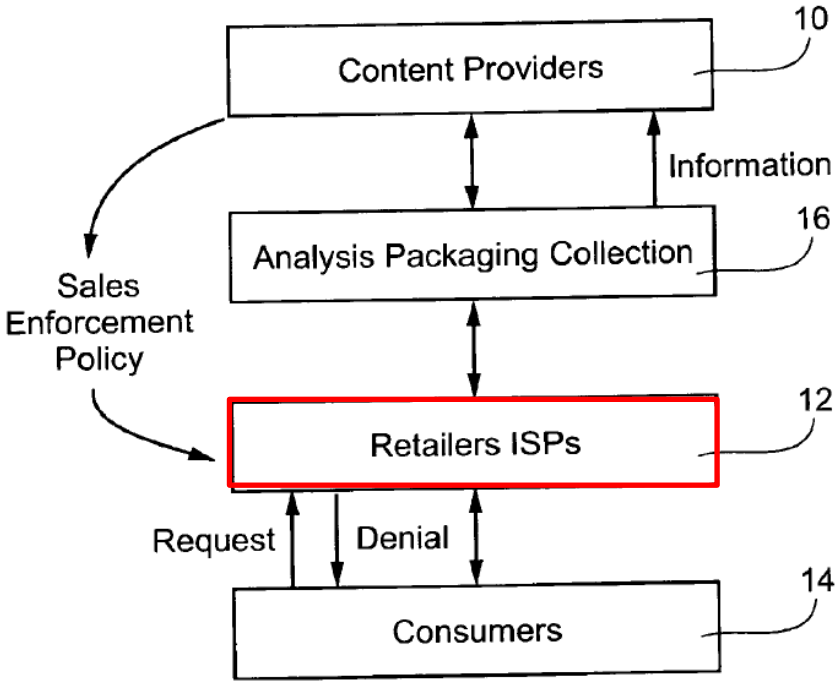


Fig. 2

EX1003, FIG. 2 (annotated).

305. Additionally, Peled uses the term "distributor" or "content distributors 12" as depicted in Figure 6 to refer to retailers as well. EX1003, ¶166. Peled refers to both retailers and content distributors with the same identifier "12." EX1003, ¶¶158, 166. And, in fact, Peled refers specifically to "***content retailers***" who make content available to consumers "via the Internet," *id.* ¶157 (emphasis added).

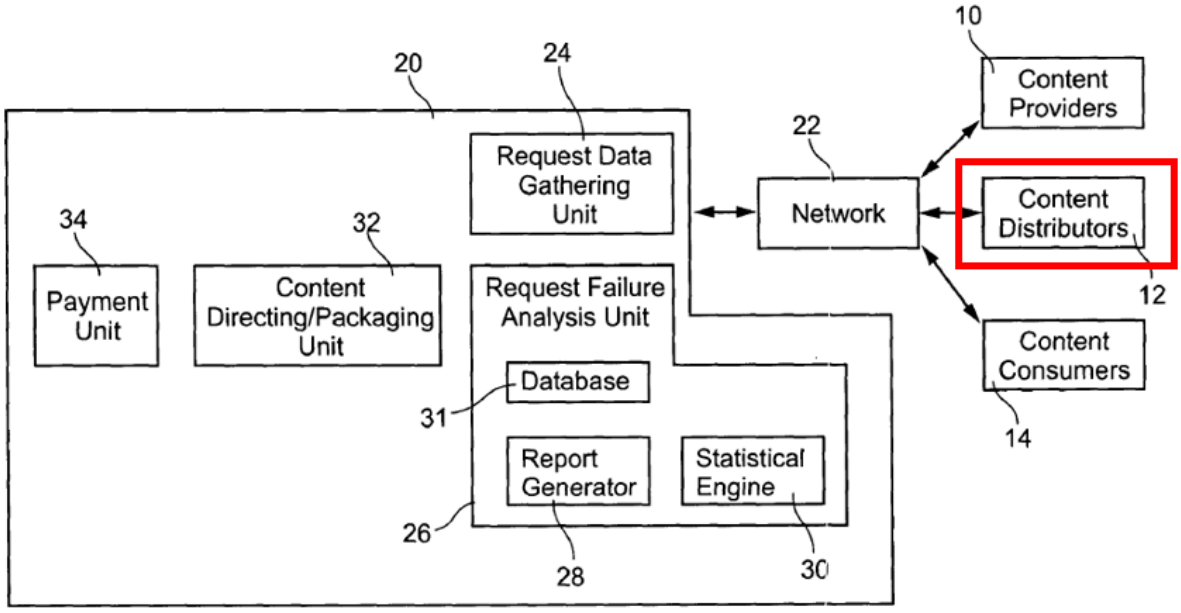


Fig. 6

EX1003, FIG. 6 (annotated).

306. While I explained with reference to claim element [1H] that the demographic user data is provided in the form of reports to content providers (i.e., the claimed "copyright owners"), Peled also explains that such reports are also available for distributors or retailers as well. *See* Section IX.B.9; EX1003, ¶183. Specifically, Peled states:

> In addition, on a global basis, the method carries out a statistical analysis of data of non-completed requests taken together to determine why requests are not being completed. ***The data is then provided into reports***, either on a per content item basis, or on a content provider basis, ***or on a per distributor basis and is provided over the network to the party requesting the report***.

EX1003, ¶183 (emphasis added).

307. In view of this description, Peled discloses providing reports with user data to a content distributor (i.e., the claimed "third party online media retailer") who may request such reports. The user data would be stored in a license database as I described with reference to claim element [1J]. *See* Section IX.B.11. Peled would then make such reports accessible to a third party online media retailer, which also discloses providing access to database data to the retailers as well. EX1003, ¶183. Thus, Peled discloses claims 21, 23, 25, and 27.

N. Claims 29 and 32

308. Claims 29 and 32 recite:

> Claim 29: The computer implemented method of claim 1, wherein ***the user data includes a geographic location of the user*** who is accessing the media content item.
>
> Claim 32: The system of claim 16, wherein the ***user data includes a geographic location of the user*** who is accessing the media content item that enables the copyright owner to gauge geographic locations where the media content item is being accessed.

309. The combination of Peled and Pou discloses claims 29 and 32. As I explained with reference to claim elements [1H], [1J], and [1K], Peled discloses tracking geographic location information as part of the stored demographic user data. *See* Sections IX.B.9, IX.B.11-12; EX1003, ¶¶56, 74, 169, 176, 186, 196. Thus, Peled discloses the user data including the geographic location of a user. Peled also enables a content provider (i.e., "copyright owner") to gauge the geographic location as well for the reasons that I previously explained. *See* Sections IX.B.9, IX.B.11-12.

O. Claim 30

310. Claims 30 recites:

> Claim 30: The computer implemented method of claim 6, wherein the user data includes ***additional media content items that the user has previously accessed***.

311. The combination of Peled and Pou discloses claim 30. Peled discloses tracking additional media content items that a user has previously accessed. In particular, Peled describes tracking a consumer's previous purchase history. EX1003, ¶177; *see also id*., ¶¶162, 169, 181, 200. For example, Peled may identify a consumer with "a history of requesting movies at a given price." *Id*., ¶177. Using this information, a particular movie package may be offered to the consumer because the consumer has "shown a willingness to purchase at a given lower price." *Id.* In this manner, Peled describes recording additional media content items based on a consumer's previous purchases. These previous purchases differ from the current

media content item that is being considered for purchase. Peled explains that such information would also be included in with user data that includes "pricing factors" and "personal data of the individual consumers." *Id*., ¶169. This information would allow for market analysis "both for the relevant content and for similar content items." *Id*., ¶200. Thus, Peled discloses tracking user data that includes additional media content items that the user has previously accessed and discloses claim 30.

X. GROUND 2: CLAIM 31 OF THE '581 PATENT IS UNPATENTABLE UNDER 35 U.S.C. § 103 OVER PELED IN VIEW OF POU AND BRANDSTETTER

312. The combination of Peled, Pou, and Brandstetter discloses claim 31. Claim 31 recites:

> Claim 31: The system of claim 11, wherein the user data includes ***a quantity of times*** that the user has previously accessed the media content item and ***additional media content items***.

313. Peled discloses tracking user data that includes additional media content items that the user has previously accessed as I explained with reference to claim 30. *See* Section IX.O; EX1003, ¶177; *see also id*., ¶¶162, 169, 181, 200.

314. Brandstetter discloses user data also including a quantity of times that the user has previously accessed the media content item. EX1004, ¶147. For example, in the scenario where a consumer has rented content under a "play n-number of times licensing package," Brandstetter tracks a "number of times" that the user has already played the media content in order to enforce the license terms.

Id. Similar to Peled, Brandstetter also provides this type of information in the form of reports related to user activity. These reports can include "business activity" such as a number of "streams [or] downloads." *Id.*, ¶173. In this manner, Brandstetter discloses user data including a quantity of times that the user has accessed the media content item.

315. A POSA would have been motivated to combine this aspect of Brandstetter with Peled and Pou to provide additional accuracy for Peled's user demographic data as well as to provide a rental option for the combined Peled and Pou. EX1003, ¶169. For example, tracking the number of times a user has previously accessed a content item may aid Peled's system identifying a reason for refusal and when offering alternative content that the consumer may be inclined to accept. *Id.*, ¶177. For example, this information may supplement the purchase history tracked by Peled when determining that a consumer has "shown a willingness to purchase at a given lower price." *Id.* This given lower price may be rental price rather than a purchase price. As Brandstetter explains, a rental price may be lower than a purchase. EX1004, ¶¶75, 120. A POSA would have been motivated to combine Brandstetter with Peled and Pou to provide this rental functionality as well as provide additional accuracy for Peled's user demographic data. Thus, the combination of Peled, Pou, and Brandstetter discloses claim 31.

XI. GROUND 3: CLAIMS 22, 24, 26, AND 28 OF THE '581 PATENT ARE UNPATENTABLE UNDER 35 U.S.C. § 103 OVER PELED IN VIEW OF POU AND VIJAY

316. The combination of Peled, Pou, and Vijay discloses claims 22, 24, 26, and 28. Claims 22, 24, 26, and 28 refer to allowing a "hardware device manufacturer that manufactures hardware that is implemented by the multimedia hardware device" to access the user data stored in the license database. Claims 22, 24, 26, and 28 recite:

> Claim 22: The computer implemented method of claim 1, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.
>
> Claim 24: The computer implemented method of claim 6, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.
>
> Claim 26: The system of claim 11, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.

> Claim 28: The system of claim 18, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.

317. When discussing a "hardware device manufacturer," the '581 patent states that "hardware device manufacturers [] manufacture the hardware that may be implemented in device 10 that provides device 10 with the capabilities to limit reproduction of the media content item to when the user has a license to reproduce the media content item." EX1001, 5:38-44. Vijay discloses this same type of device manufacturer.

318. Similar to the '581 patent, Vijay discloses protecting electronic content using a "digital rights management ('DRM') system." EX1008, ¶¶2-3. This content may include "documents, e-books, video, music, computer applications, or games." *Id.*, ¶2. To provide this DRM protection, Vijay describes "device manufacturer 114" depicted in Figure 1. *Id.*, ¶22.

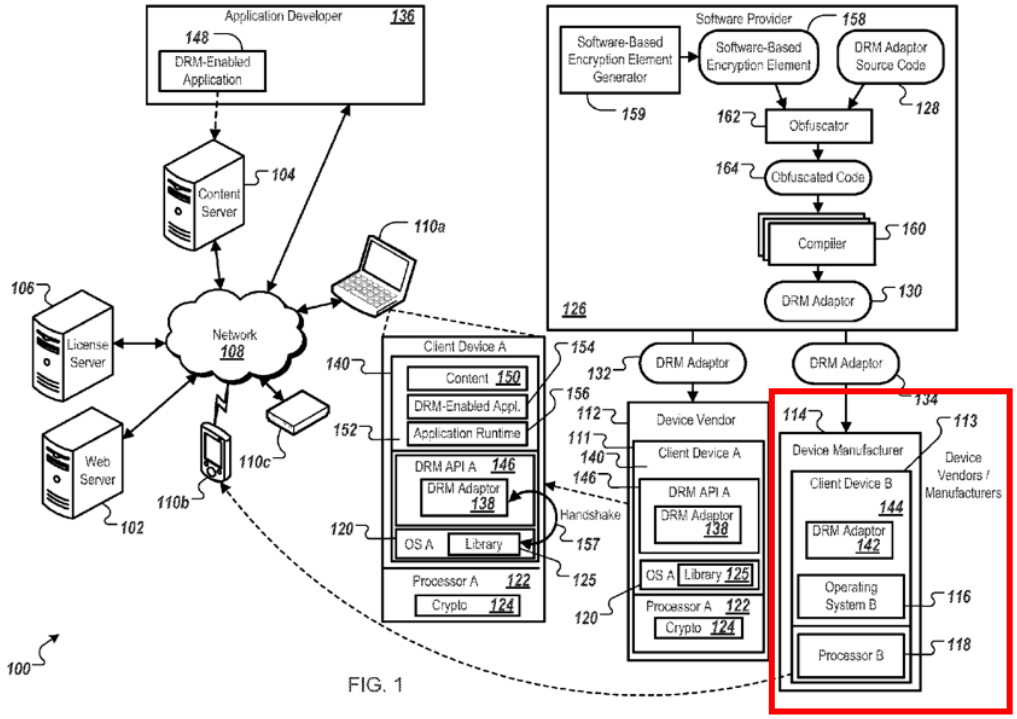
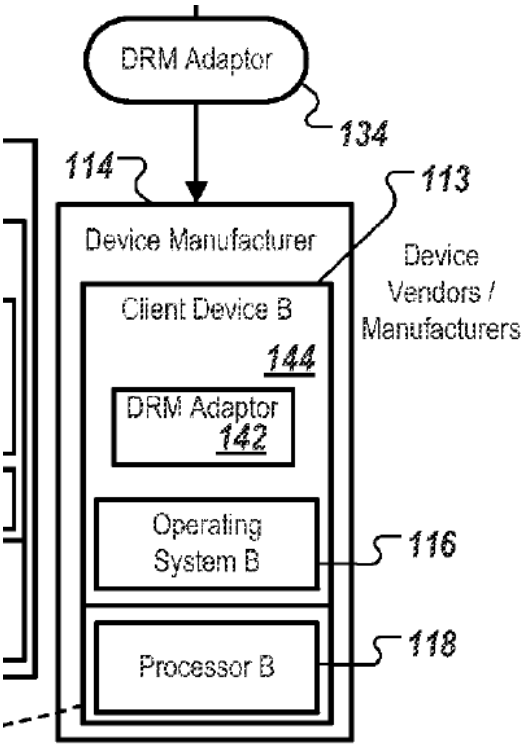


FIG. 1

EX1008, FIG. 1 (annotated).



EX1008, FIG. 1 (excerpt).

319. Device manufacturer 114 provides client devices 110. EX1008, ¶22.

Using a "DRM adaptor," device manufacturer 114 may "implement robust, secure DRM solutions on devices." *Id*., ¶25. For example, "DRM adaptor 142 [may be] included in computer readable medium 144 of the client device 113." *Id*., ¶27. In this manner, "device manufacturer 114 may develop both an operating system 116 and a hardware processor 118 for the client device 113" to provide "hardware-based encryption." *Id*., ¶¶23, 27, 45-46. In this manner, Vijay discloses the same hardware device manufacturer as described in the '581 patent.

320. Vijay, in combination with Peled and Pou, discloses providing user data to a "hardware device manufacturer." As I explained with reference to claims 21, 23, 25, and 27, Peled does not provide a limitation on systems that may access user data. *See* Section IX.M. Specifically, Peled states that the reports with user data may be provided to any "party requesting the report." EX1003, ¶183. A POSA would have found it obvious to allow a DRM device manufacturer to access this information as well to provide for platforms that can "implement robust, secure DRM solutions on devices." EX1008, ¶¶25, 34, 39, 60, 75. As Vijay explains, this would help to "restrict access to content to authorized users only and the retailer may encrypt a respective content item so that the content item can only be consumed by a user who has obtained a license for the content item." EX1003, ¶29.

321. Providing user data associated with users that engage the media content through licensing transactions allows Vijay's device manufacturer 114 to develop

improved DRM management systems on its devices (e.g., DRM adaptors). For example, the combination of Peled, Pou, and Vijay could use a user's data associated with a license transaction that includes encryption keys to enable DRM system to authenticate a DRM application running on the user device. *Id*., ¶¶37, 56, 74, 169, 176, 186, 196. This would provide "secure, dynamic device profiling" as described in Vijay. EX1008, ¶56. Vijay even discloses this type of check and comparing encrypted messages with an "expected digital signature" to verify a DRM adaptor. *Id.*, ¶¶73-76. As Vijay explains, this would provide additional security. *Id*., ¶¶34, 39, 60, 75. A POSA would have been motivated to combine Vijay with Peled and Pou to provide this additional security. Vijay also describes the same licensing and media content reproduction described in Peled and Pou, so a POSA would have easily formed the combination and had a reasonable expectation of success in combining the references. *See id*., ¶¶35-39. And, like the '581 patent, the combination of Peled, Pou, and Vijay can enable device manufacturers to provide a device "with the capabilities to limit reproduction of the media content item to when the user has a license to reproduce the media content item." EX1001, 5:39-44. The user data would be stored in a license database, as I described with reference to claim element [1J]. *See* Section IX.B.11. Peled would then make such reports accessible to a hardware device manufacturer, which also discloses providing access to database data to the manufacturers as well. EX1003, ¶183. Thus, the combination of Peled, Pou, and

Vijay discloses claims 22, 24, 26, and 28.

XII. GROUND 4: CLAIMS 1-21, 23, 25, 27, AND 29-32 OF THE '581 PATENT ARE UNPATENTABLE UNDER 35 U.S.C. § 103 OVER BRANDSTETTER IN VIEW OF LEVY

322. Brandstetter and Levy disclose each and every limitation of claims 1-21, 23, 25, 27, and 29-32. Brandstetter teaches the identification and aggregation of user demographic data in response to accepting or declining a media license. While Brandstetter describes facilitating license purchases, Brandstetter may not explicitly describe a process for managing user licenses or digital rights. However, Levy expressly discloses digital rights management and subsequently offering a media license when one has not been previously obtained. EX1006, Abstract, ¶¶3, 11-12, 17, 80, 110-15, FIGS. 17a, 17d. As I explain in further detail below, a POSA would have found claims 1-21, 23, 25, 27, and 29-32 of the '581 patent obvious in light of the disclosures of Brandstetter (EX1004) and Levy (EX1006).

A. Overview of the Combination of Brandstetter and Levy

323. A POSA would have been motivated to combine Brandstetter and Levy, would have known how to combine Brandstetter and Levy, and would have had a reasonable expectation of success when combining Brandstetter and Levy.

1. A POSA would have been motivated to combine Brandstetter and Levy.

324. A POSA would have been motivated to combine Levy with Brandstetter to provide an efficient mechanism for tracking licenses purchased using

Brandstetter's platform and to provide additional control of downloaded purchases to ensure license adherence.

325. A POSA would have recognized that combining Brandstetter and Levy would have amounted to combining well-known prior art elements to yield predictable results. As I explained in Section V.A, V.C, offering media licenses and tracking purchased media licenses were well-known techniques in the art prior to the '581 patent. With respect to the Brandstetter and Levy combination, a POSA would have applied Levy's tracking of previously purchased media licenses (i.e., "Usage Rights") with a corresponding "Content ID" or "fingerprint" to provide an efficient mechanism for tracking purchased licenses. EX1006, ¶¶85, 87, 97, 112-13, 140-42. For example, a fingerprint is a compact, "reduce-bit representation of content" and therefore provides fast and computationally efficient comparisons. EX1006, ¶142. As I previously explained, such efficiencies and the use of fingerprints was well-known and nearly ubiquitous in the art. *See* Section V.B. Implementing Levy's fingerprint tracking and checking with Brandstetter would have improved Brandstetter's ability to manage previous user purchases, to control downloaded media, and to confirm adherence to license terms. This would improve Brandstetter's media distribution platform and provide content creators and content providers with finer license control, tracking of purchases, and an ability to monetize the unauthorized distribution of digital media content (e.g., media that is illegally

obtained, or media with expired usage rights).

326. At the outset, Brandstetter already describes tracking user purchases and purchase history. EX1004, ¶¶5-9, 130, FIGS. 27-44. Brandstetter explains that such information is useful for "empowering content creators to market and distribute their own content without entering into onerous one-sided agreements" that limit their distribution capabilities. *Id*., ¶5. Brandstetter is not limited to tracking user purchases and purchase histories. *Id*., ¶130 ("Thus, even if a purchase is not made, data related to audience interaction with content on the website can be indexed and used for later analysis."). Rather, in order to further "empower[] content creators," Brandstetter describes tracking and indexing all "audience interaction" with the platform. *Id*., ¶¶5, 130. This, Brandstetter explains, can "facilitate creation, execution, and revision of marketing and distribution strategies for media content by the content creator." *Id*., ¶7. With such enhanced marketing and distribution capabilities, Brandstetter allows content creators to identify a "specific demographic" of consumers and to "adapt the marketing strategy to more efficiently market the content" to that demographic of consumers. *Id*., ¶66. In this manner, Brandstetter already describes tracking the purchase of media content and that such information is useful when performing a market analysis.

327. Brandstetter describes tracking all user interaction on its systems, including purchased media content. For example, as I explain further below,

Brandstetter's catalog relies on "static elements corresponding to aspects of multimedia content… [that] can include certain video attributes (e.g., title, plot, genre, ratings, credits, artwork, etc.)." *Id*., ¶118. A POSA, however, would have understood that a common way to track purchased media content would be using a unique identifier corresponding to that media content. As I explained in Section V.B, such techniques were well-known in the art prior to the '581 patent. Levy explicitly recites such techniques and describes using watermarks and digital fingerprints to identify media files. EX1006, ¶¶10, 14, 58-66. In view of Brandstetter's suggestion of tracking user purchases, a POSA would have been motivated to combine Levy's fingerprint techniques with Brandstetter to provide a mechanism for tracking user purchases and identifying media content that a user has already obtained. *Id*., ¶¶58-66. This would provide a mechanism for tracking purchases on Brandstetter's server platform as well as media files downloaded locally to local client devices. EX1004, ¶¶77, 125, 145, 166, 169, 173. Thus, a POSA would have implemented Levy's tracking of media licenses with Brandstetter to track license purchases and to ensure adherence to license rules.

328. Combining Brandstetter with Levy would provide at least two benefits: (1) providing an efficient mechanism for tracking purchased licenses for a user and (2) confirming adherence to license terms for downloaded media files.

329. Regarding the first benefit, Brandstetter describes tracking user license

purchases as well as active rentals and a download history. *See id.*, FIGs. 26-29, ¶166. For example, Figure 28 depicts the tracking of purchased licenses for a particular user:

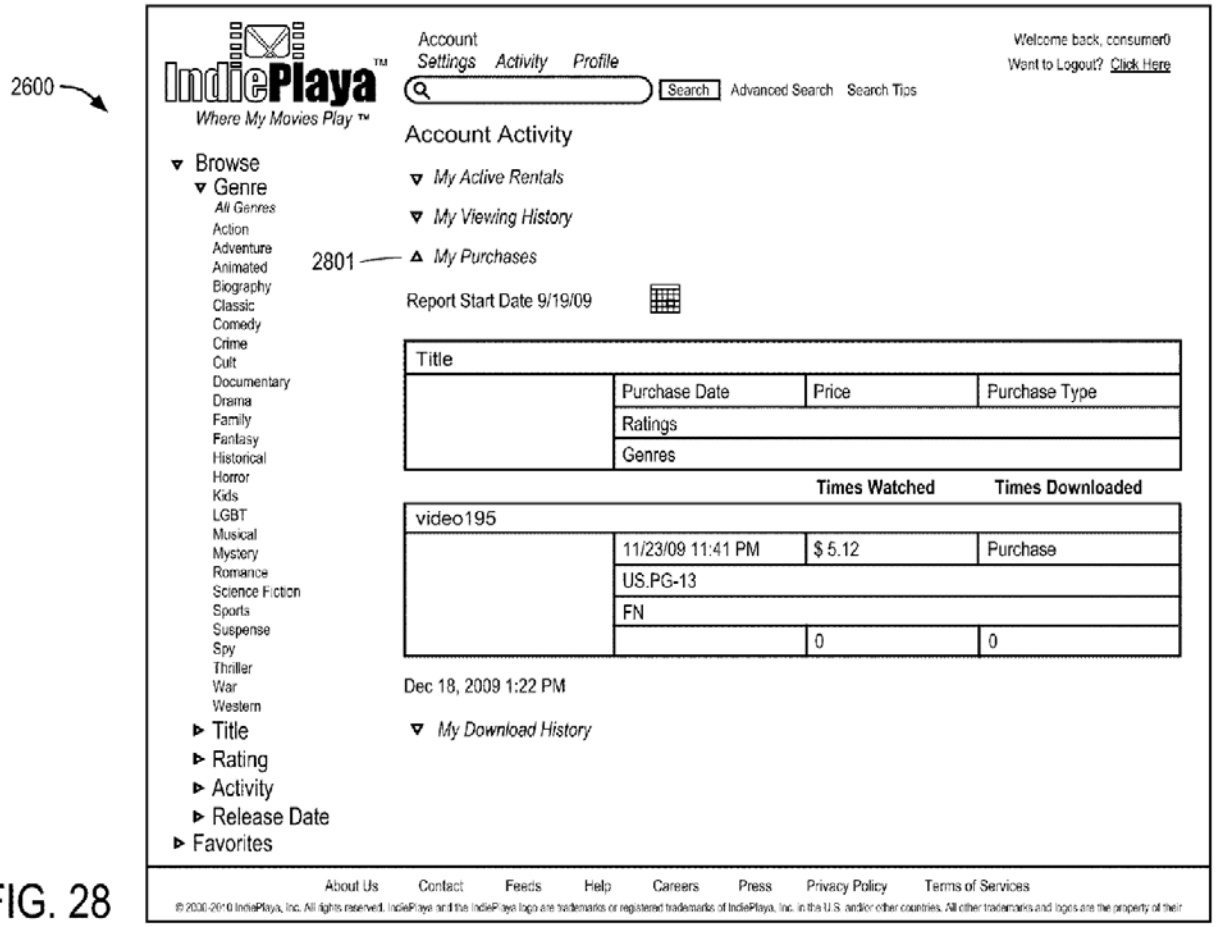


FIG. 28

EX1004, FIG. 28.

330. Brandstetter uniquely identifies the content corresponding to these purchases using "static elements" such as catalog data. EX1004, ¶118. This catalog data includes "a ***globally constant description*** (e.g., of defined structured data fields), that includes individual references corresponding to the content of each object (e.g., a video) individually." *Id.*, (emphasis added). A POSA would have

understood that a "Content ID" or fingerprint—such as the one described in Levy—would be an example of such a "globally constant description." Specifically, Levy explains that a "Content ID is a numerical (or alphanumerical) identifier that is uniquely associated with each piece of content." EX1006, ¶85. A fingerprint is a "hash, derived signature or reduce-bit representation of content" and is capable of "uniquely identify[ing] versions" of media content such as songs. *Id*., ¶140. A POSA would have understood that implementing such unique identifications with Brandstetter would have provided a mechanism for uniquely identifying content that has been licensed by a user using Brandstetter's media platform. This would even allow Brandstetter's platform to distinguish between different versions of content. *See id*., ¶142 (describing a "first version (v1)" of a Song A having "fingerprint (f1)" and "second version (v2)" of a Song A having "fingerprint (f2)"); EX1004, ¶6 (describing Brandstetter's platform also distributing "music"). Thus, implementing the unique content ID or fingerprinting described in Levy would provide an efficient mechanism for organizing license purchases as described and tracked in Brandstetter.

331. Regarding the second benefit, combining Levy with Brandstetter would aid in confirming adherence to license terms for downloaded media files. At the outset, Brandstetter describes licenses allowing a user to download media files. EX1004, ¶¶77, 125, 145, 166. For example, "users can purchase an item or a license

to an item, and can download the item over the network (e.g., onto a computer for viewing and/or listening)." *Id*., ¶77. While a user may download content item, a POSA would have recognized that content creators may not want those users to distribute downloaded files to other users. *See* Section V.A. This would harm potential revenue streams for the content creators. For example, as Levy explains, a POSA would have sought ways to prevent illegal distribution and to restrict or prohibit additional distribution. EX1006, ¶¶13, 66. Preventing unauthorized distribution would further Brandstetter's goals of "empowering content creators" and to secure revenue streams. EX1004, ¶¶4-5. Combining Levy's process of checking a Content ID to determine a user's Usage Rights would provide this control and would help to prevent unauthorized or unlicensed access to media content.

332. Levy describes a process where a content ID is detected, extracted, and used by content stores to determine a user's Usage Rights corresponding to a license. *See generally*, EX1006, ¶¶106-109, 114. For example, a "user selects raw content for playing." *Id*., ¶108. According to Levy, raw content may be "digital, base band or compressed content that is not encrypted or DRM-packaged." *Id*., ¶106. A digital watermark ("DWM") Content ID—such as a fingerprint—is then extracted from the raw content. *Id*., ¶109. Levy then describes determining whether "Usage Rights" (i.e., a license) exists for the user attempting to access the raw content. *Id*., ¶110. "If the Usage Rights do not exist, the Media Server preferably prevents access to the

content." *Id*. Alternatively, the user may be offered the option to purchase Usage Rights via an on-line media store. *Id.*, ¶¶110, 112. In this manner, Levy describes a mechanism for controlling digital files that may have been obtained through an unauthorized distribution. *Id.*, ¶¶13, 66, 107, 110. Levy's Content IDs and fingerprints "help publishers or content owners prevent unauthorized copying, replication, usage or distribution of their software products, either via CD-ROM, via the Internet, transfer, etc." *Id.*, ¶13. A POSA would have therefore been motivated to implement such control with Brandstetter to prevent the unauthorized distribution of downloaded media content items. This would further Brandstetter's goals of empowering content creators and securing revenue streams. EX1004, ¶¶4-5.

333. To implement Levy with Brandstetter, a POSA would have utilized Levy's identification of a Content ID or fingerprint when a user attempts to access a media file. EX1006, ¶¶108-10, 140-42. A check would be performed—such as checking the tracked purchases described in Brandstetter—to determine whether the user has purchased a license to that content. *Id.*; EX1004, FIGs. 26-29, ¶166. If so, the user would be permitted to access the media content. If not, the user would be prompted with an option to purchase a license as described in both Brandstetter and Levy. EX1004, FIGS. 35, 35A; EX1006, FIG. 17d, ¶110. A POSA would have understood that combining Brandstetter with Levy in this manner would therefore allow control over downloaded content and help to prevent the unauthorized

distribution of content downloaded from Brandstetter's platform.

334. Thus, a POSA would have been motivated to combine Levy with Brandstetter to provide a mechanism for tracking licenses or content already purchased by a consumer as well as to control downloaded content. This would improve Brandstetter's content management and distribution process by being able to efficiently manage licenses that a user has purchased or may need to purchase (despite having the raw content). This would therefore further Brandstetter's goal of empowering content creators using Brandstetter's platform to obtain licensing revenue and to distribute content. EX1004, ¶¶4-5.

2. A POSA would have known how to combine Brandstetter and Levy and would have had a reasonable expectation of success.

335. A POSA would have known how to combine Brandstetter and Levy and would have had a reasonable expectation of success. For example, a POSA would have known how to implement the purchase and license tracking described in Levy with Brandstetter as well as the distribution of licensed content. EX1005, ¶¶68-73, 76-79. Similarly, a POSA would have known how to implement the fingerprinting and DWM techniques as well. EX1006, ¶¶56-66, 68-73. As I previously explained, this would provide a combined system capable of managing different rentals and/or purchases as well as corresponding content versions as described in Brandstetter. *See* Section XII.A.1. Combining Levy and Brandstetter

would also aid in controlling downloaded content, which is also offered by Brandstetter's platform. EX1004, ¶¶77, 125, 145, 166, 169, 173.

336. Regarding combinability, both Brandstetter and Levy describe conventional server systems for managing digital media files. *Id.*, ¶¶90-101; EX1006, ¶¶17, 49-57. Further, both Brandstetter and Levy simply describe implementing software algorithms on these server platforms. EX1004, ¶¶90-101; EX1006, ¶¶17, 49-57. In this manner, a POSA would have easily combined the references using well-known computer programming techniques to perform a combined algorithm. This combined algorithm would include Levy's digital media content recognition techniques and tracking of user licenses with Brandstetter's gathering of user demographic data and reporting of this data. EX1006, ¶¶114. Combining Brandstetter and Levy would have been predictable and would have simply amounted to updating Brandstetter's license management software algorithm to include Levy's Content ID or fingerprint management to generate a combined server system. This combination would operate to perform its intended purposes.

337. In this manner, a POSA would have easily combined Brandstetter and Levy because both use conventional server systems for managing digital media files. EX1004, ¶¶90-101; EX1006, ¶¶17, 49-57. Combining Brandstetter and Levy would amount to nothing more than combining known prior art elements according to known methods to yield predictable results and applying a known technique to a

known device ready for improvement to yield predictable results. Thus, in view of the conventional server systems described in Brandstetter and Levy, a POSA would have easily combined the references and would have found it predictable to form such a combination.

B. Independent Claim 1

1. [1P]: "A computer implemented method for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, comprising:"

338. To the extent that the preamble language is deemed limiting, both Brandstetter and Levy disclose the preamble. In particular, Brandstetter and Levy describe the claimed "multimedia hardware device" operating to "generate an authorized reproduction of a media content item included in a digital media file."

339. Initially, Brandstetter describes "systems and methods for marketing and distributing media content, including motion pictures, television programming, online games, music, and other media content." EX1004, Abstract, ¶1. To enable such marketing and distribution, Brandstetter provides a "platform… by which a plurality of content providers can market and distribute media content to users." *Id.* ¶¶8-9, 6, 10.

340. Brandstetter's "client device 111" as depicted in Figure 1C is an example device in Brandstetter that discloses the claimed "multimedia hardware device." *Id.*, ¶¶91, 92, 102-110.

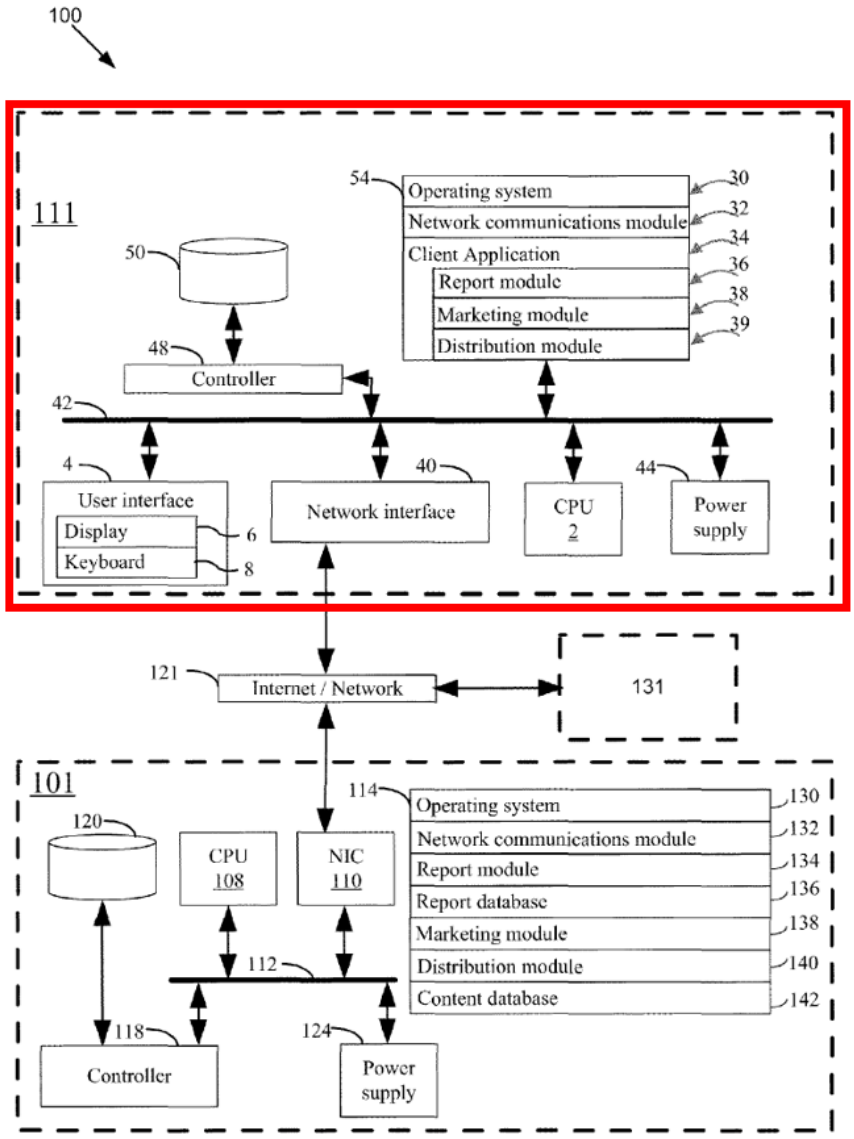


FIG. 1C

EX1004, FIG. 1C (annotated).

341. The architecture illustrated in FIG. 1C above "includes a server 101 and client device 111 that are configured to communicate with one another via the Internet or other network 121." EX1004, ¶¶90-101. In one example, Brandstetter explains that an item of media content is distributed to "a user's computer over a

network," and the user can experience the media content through the user's computer (green). *Id.*, ¶69.

342. Brandstetter also discloses reproduction of a media content item included in a digital media file. The '581 patent describes a digital media file and a media content item as:

> A digital media file may represent a MPEG Layer 3 (MP3) file, a RealAudio (RA) file, a raw sample (RAW) file, a Microsoft wave (WAV) file, a Windows Media Audio (WMA) file, and/or any other suitable digital media file that will be apparent to those skilled in the relevant art(s) without departing from the spirit and scope of the disclosure. The media content item may include any portion of data included in the digital media file.

EX1001, 3:45-52.

343. Brandstetter expressly discloses a digital media file containing digital media content that is distributed for reproduction. For example, Brandstetter discloses a system for "facilitating the marketing and distribution of a particular item of media content." EX1004, ¶67. According to Brandstetter, such an item of media content may include:

> digital work of authorship, embodied in a computer-readable medium, that can be distributed to a user's computer over a network, and that can be experienced by the user via one or more output devices connected to the user's computer. For example, the digital work of authorship can be ***a motion picture or other audiovisual work*** stored on a remote server,

> that can be distributed to the user's computer via a network, and that can be displayed on a display device connected to the user's computer and/or audibly projected with audio speakers connected to the user's computer. ***Or, for example, the digital work of authorship can be a sound recording*** that similarly can be distributed to the user's computer via a network, and that can be audibly projected with audio speakers connected to the user's computer. ***Other types of digital works of authorship that can be distributed include literary works (e.g., "digital books") and pictorial or graphic works (e.g., digital images)***. However, it should be understood that the systems and methods described herein can be used to facilitate marketing and distribution of any original work of authorship, including those fixed in a tangible medium of expression other than a computer-readable memory. As used herein, an item of media content is fixed in any tangible medium of expression when a copy of the media content is made that is sufficiently permanent or stable to permit the media content to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.

EX1004, ¶69 (emphasis added).

344. Brandstetter's providing of content items to content consumers discloses the claimed generating of an "authorized reproduction of a media content item" because consumers are able to reproduce and experience the content on their personal devices. For example, Brandstetter describes providing a digital work of authorship such as "a motion picture or other audiovisual work stored on a remote

server" and distributed to the users. *Id*. Brandstetter recognizes that "other types of digital works of authorship that can be distributed include literary works (e.g., 'digital books') and pictorial or graphic works (e.g., digital images)." *Id.* Brandstetter also discloses facilitating a payment transaction to allow a consumer to "purchase[] a license to the media content" and therefore discloses generating an authorized reproduction of a media content item. *Id*., ¶¶71, 93-99.

345. As I illustrate herein above, Brandstetter's reproduction of "digital works of authorship" that may also be "streamed" over a network also constitutes reproducing media content items in the form of digital media files such as video and audio files such as "digital books" or "digital images". *Id*., ¶¶69, 173. This is also clearly illustrated in annotated Figure 2 below:

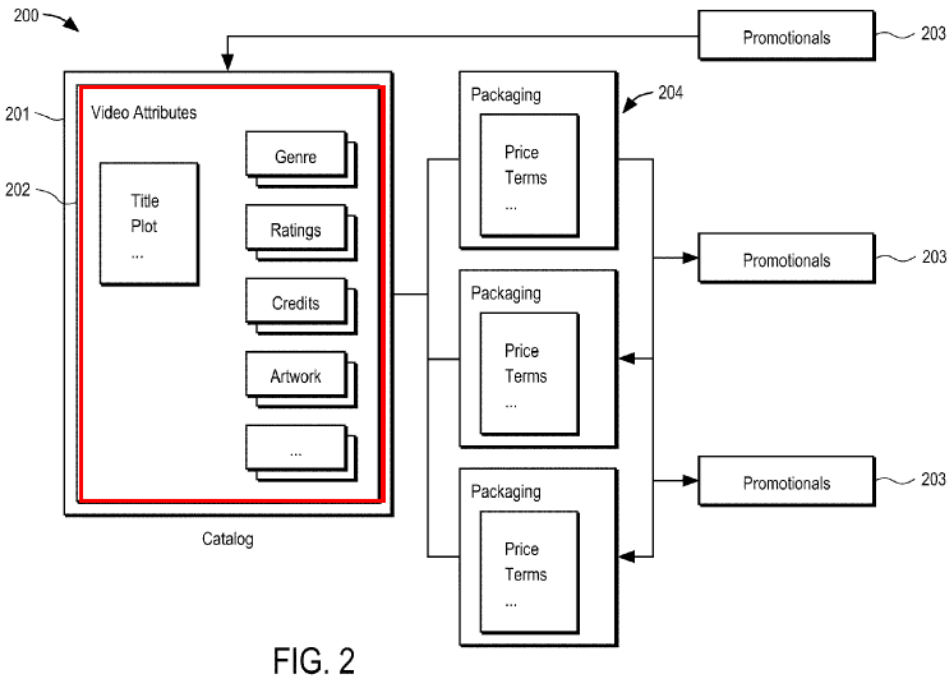


FIG. 2

EX1004, FIG. 2 (annotated).

346. The example in Figure 2 illustrates that the item of media content (e.g., video, audio works, etc.) may be provided within a digital media file structure (e.g., 202) that includes (title, genre, ratings, credits, artwork, etc.) that are distributed via streaming and other techniques. EX1004, ¶¶118, 173.

347. Brandstetter discloses another example of having an item of media content be included in a digital media file. Annotated Figure 34 below is illustrative:

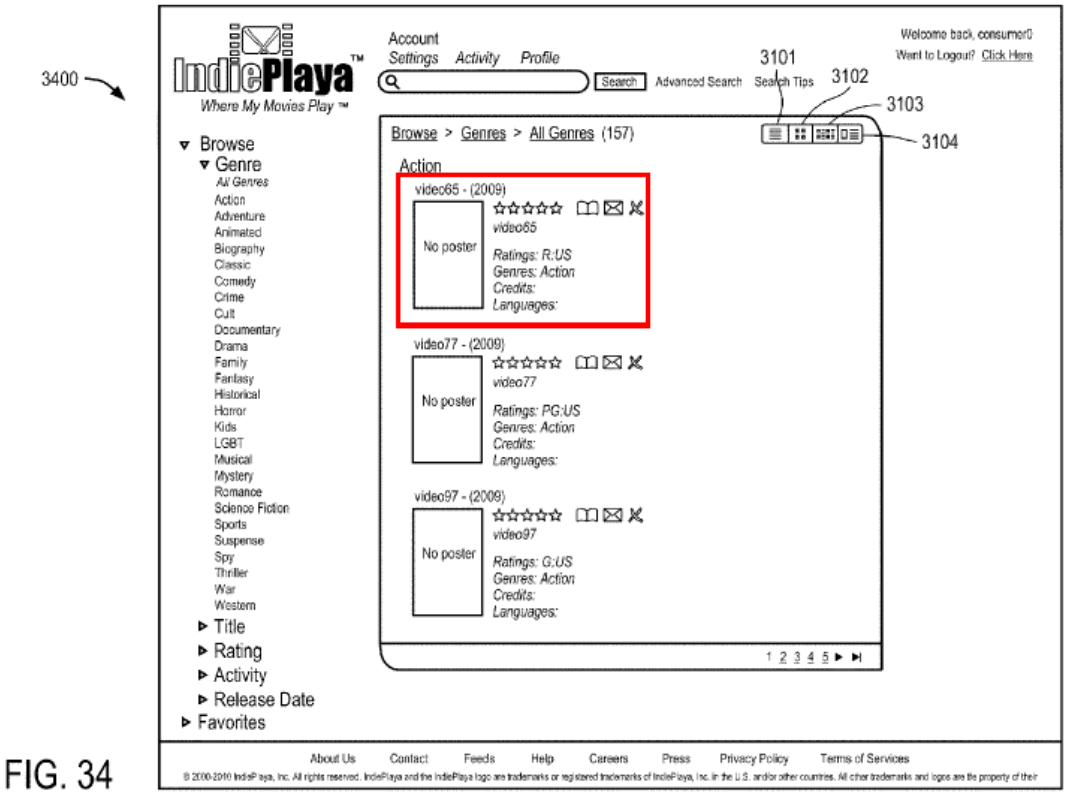


FIG. 34

EX1004, FIG. 34 (annotated).

348. As shown in Figure 34, a user may view an item of digital media content

that may be included as a file (to be streamed, downloaded, etc.). EX1004, ¶¶77, 125, 145, 169, 173; *see also id*., FIG. 29, ¶166 ("Interface 2600 can also include an expandable 'my download' history area 2901 for viewing information corresponding to a user download history").

349. Brandstetter also discloses that users can view, license or purchase media content. *Id*., ¶¶71, 75. Accordingly, Brandstetter discloses authorized reproduction of a media content item included in a digital media file.

350. Levy also describes distributing media files. EX1006, ¶¶54, 70, 81-92. For example, Levy expressly describes extracting identifying information from a "file header" associated with media content. *Id*., ¶12. Levy also discloses that its digital media content may be in the form of an "audio file," and that each "copy (or file) of the piece of content" may have a content ID. *Id*., ¶¶70, 85; *see also id.* ¶¶93 (describing digital media files), 98 (describing digital content files), 109 (describing media exchange through file sharing networks), 112 (describing a "database associating DWM Content IDs with respective content files").

351. A POSA would have recognized that Brandstetter and Levy solve very similar problems (access to digital content and upgrades/cross-sells, etc., based on digital media rights/licenses).

352. Thus, both Brandstetter and Levy explicitly disclose the preamble of claim 1.

353. I do not read the preamble as requiring all claim steps to be performed only on the multimedia hardware device. Section VI.B. Rather, as I explained above, the context of claim 1 suggests that at least some of its limitations would be performed by the licensing system on a server. *Id.*

354. Regardless, a POSA would have found it obvious that each of the claim steps could be performed either on Brandstetter's server or its client devices. At the outset, Brandstetter itself notes that the distinction between its client devices and its central server is not absolute. It explains, for example, that "there may be little or no difference between the architecture of the serving devices and the client devices," and that "other embodiments that do not make use of a client-server architecture are possible and all such implementations are within the scope of the present disclosure." EX1004, ¶72.

355. Further, data associated with the user already resides on the user's client device, and so it would be trivial for the device to extract, aggregate, and analyze such data when the user accepts or declines to stream content. Levy itself describes its client device extracting user-related data. *See* EX1006, ¶¶77-78 (explaining that a user's client device can extract a "unique ID" from media content, as well as data linking the particular user to the content).

356. Performing the steps on the client's device, moreover, would advantageously ensure that the user's personally identifying information is not sent

to Brandstetter's server, thus protecting the user's sensitive data. Likewise, performing the steps on the client's device would advantageously ensure that Brandstetter's statistics can be generated even when the user's device is offline and thus cannot communicate with Brandstetter's server. Indeed, in many different applications, it was common for software installed on a user's computer or set-top box to collect user data and package the data so that it would be ready for transmission if and when the user reconnects to the Internet. *See, e.g.*, EX1068, 1:19-44 (describing prior art DirecTV set-top box in which the "[t]he set top box captures information with regard to the purchase (i.e., it stores purchase information for billing purposes)" and, "[a]t an appropriate time, (e.g., during a regularly scheduled upstream communication from the set top box to DirecTV, such as a telephone call) the set top box sends this purchase information to the Pay-Per-View service (i.e., it forwards this stored information to DirecTV to allow the subscriber's account to be billed for their purchase of the program which they selected and viewed)." In the television-based commerce context, for example, a "client application" collecting "usage statistics" and sending them "to a database on the application network" facilitates the "purchases of products via interaction with the T.V." *Id.*, 2:17-25.

357. Further, performing the steps on the client device would be useful for distinguishing between multiple users who use the same device (e.g., a husband and wife). That way, if and when the server receives the user data for a particular device,

the data is already separated on a per-user basis for that device. This, too, was common practice. Indeed, the prior art explains, for example, that user information can be stored in a "local database specific to the user on a user device [ ] that may be shared by multiple users." EX1005, ¶88.

358. Finally, performing the claimed steps on the client device would be useful for Brandstetter's system to make media content recommendations among content items stored locally on the user's client device. For all these reasons, it would have been obvious to perform each claimed step at either the server or the client device.

2. [1A]: "loading a digital media file for reproduction, wherein the digital media file includes the media content item;"

359. Brandstetter and Levy disclose loading a digital media file for reproduction, wherein the digital media file includes the media content item.

360. As I previously explained, the '581 patent does not limit how or where the loading is carried out. *See* Sections VI.B, XII.B.1. In one example, the '581 patent describes that the loading takes place when a "unique media content item [is] loaded into the licensing system 16." EX1001, 7:27-29. "[A] rights-holder or content creator may load a catalog of media content items that may include… a song, a movie, a television show, a novel, and/or any other media content item into licensing system 16." *Id*., 7:29-33.

361. In an alternative example, described in the '581 patent, a user device

loads a digital media file rather than licensing system 16. *Id*., 4:2-11. For example, the ’581 patent describes a scenario where “the user loads the digital media file for reproduction” on the user’s device 10. *Id*. “Processor 40” of the user device is then “configured to analyze a loaded digital media file to identify the media content item included in the digital media file.” *Id*., 6:47-57. In this manner, the ’581 patent describes an alternative “loading” that occurs at a user device rather than at licensing system 16.

362. As I will illustrate herein below, Brandstetter and Levy disclose both embodiments of the loading operation.

363. With regard to the loading being performed at the licensing system, Brandstetter and Levy expressly disclose this feature. Brandstetter discloses a system whereby a content creator can load media content onto a catalog to be made available for users. *See generally* EX1004, FIGS. 5-20. Figure 5 of Brandstetter shows an exemplary “interface for a catalog control 402,” whereby “activating catalog control 402 can cause the system to generate catalog interface 500.” *Id*., ¶136. Annotated Figure 5 is illustrative:

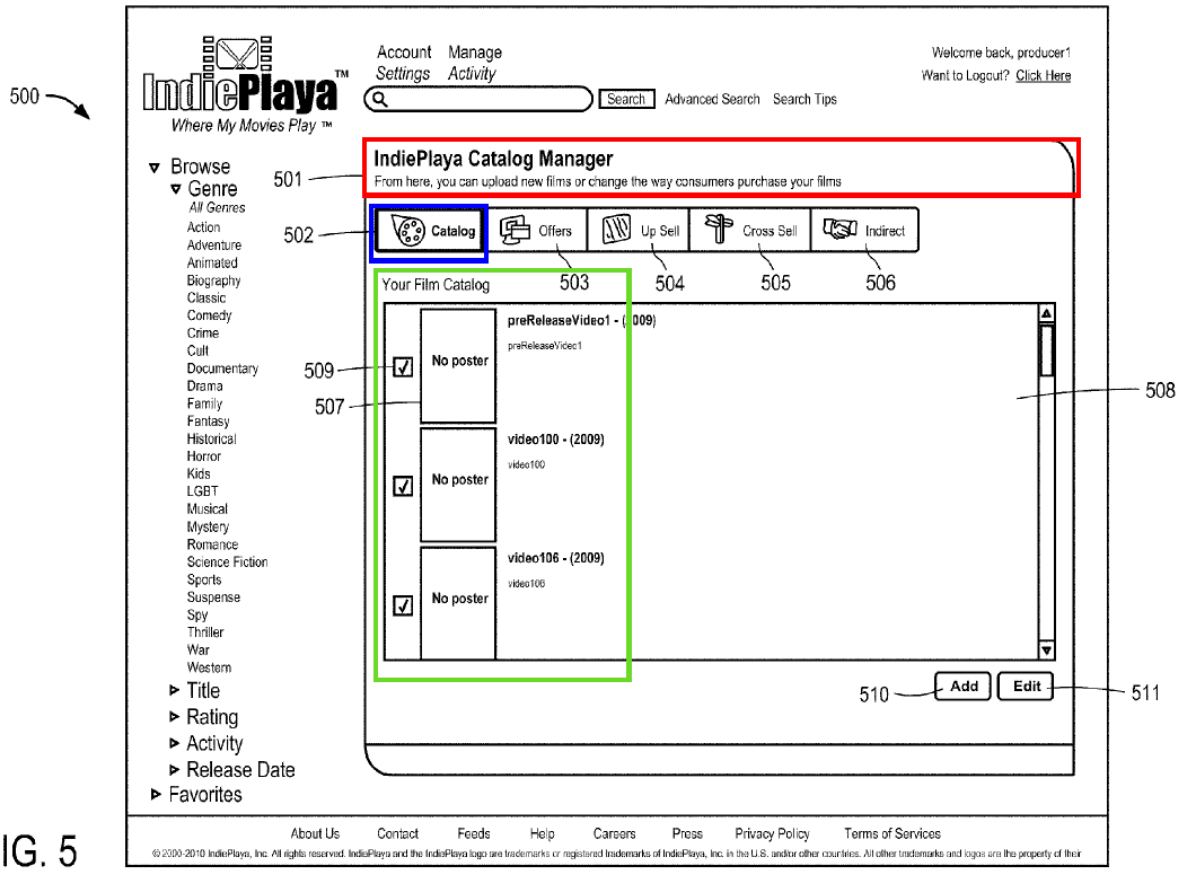


FIG. 5

EX1004, FIG. 5 (annotated)

364. Brandstetter enables content creators to load content. For example, Brandstetter discloses that

> In some implementations, catalog interface 500 can include catalog manager 501. In these implementations, ***catalog manager 501 can include one or more controls that can be used to interact with content in catalog 201***. Exemplary controls can include any combination of film catalog control 502, offers control 503, up-sell control 504, cross-sell control 505, and indirect control 506. ***Activating the film catalog control 502 can cause the system to generate a list of content (e.g., film content) created by the content creator using the system*** (e.g., as

> recognized by a unique challenge such as a log-in username and password). The list can include any combination of a visual representation of the content 507, a textual description of the content 508, and a visual indication 509 (e.g., a checkbox) indicative of whether the content is active or inactive (e.g., a checked box can indicate active content and an unchecked box can indicate inactive content). In some implementations, using an add control 510, ***the content creator can add content to the system, and using the edit control 511, the content creator can edit content in the system***.

EX1004, ¶136 (emphasis added).

365. As shown in annotated FIG. 5, catalog manager 501 (red) enables content creators to "***upload new films*** or change the way consumers purchase your films." *Id*., FIG. 5 (emphasis added). As expressly noted in Brandstetter, content creators can add more content to the system. *Id*., ¶136, FIG. 5 (green).

366. Therefore, to the extent that the loading is performed at a distribution server, Brandstetter describes content creators using client devices to upload digital media files to load Brandstetter's distribution platform with content. *Id*., ¶¶91, 136, FIG. 5. This uploading of content illustrates loading a digital media file for reproduction, wherein the digital media file includes the media content item.

367. To the extent that the loading is interpreted to occur at a client device, Brandstetter and Levy both disclose this feature. I will discuss Brandstetter first. When a user accesses Brandstetter's platform, the user interacts with the catalog to

view available media content. *Id.*, ¶169, FIGS. 34 (interface 3400), 35 (interface 3500). This interaction in and of itself reads on the claimed loading feature. I will illustrate this with regard to annotated Figure 34 below:

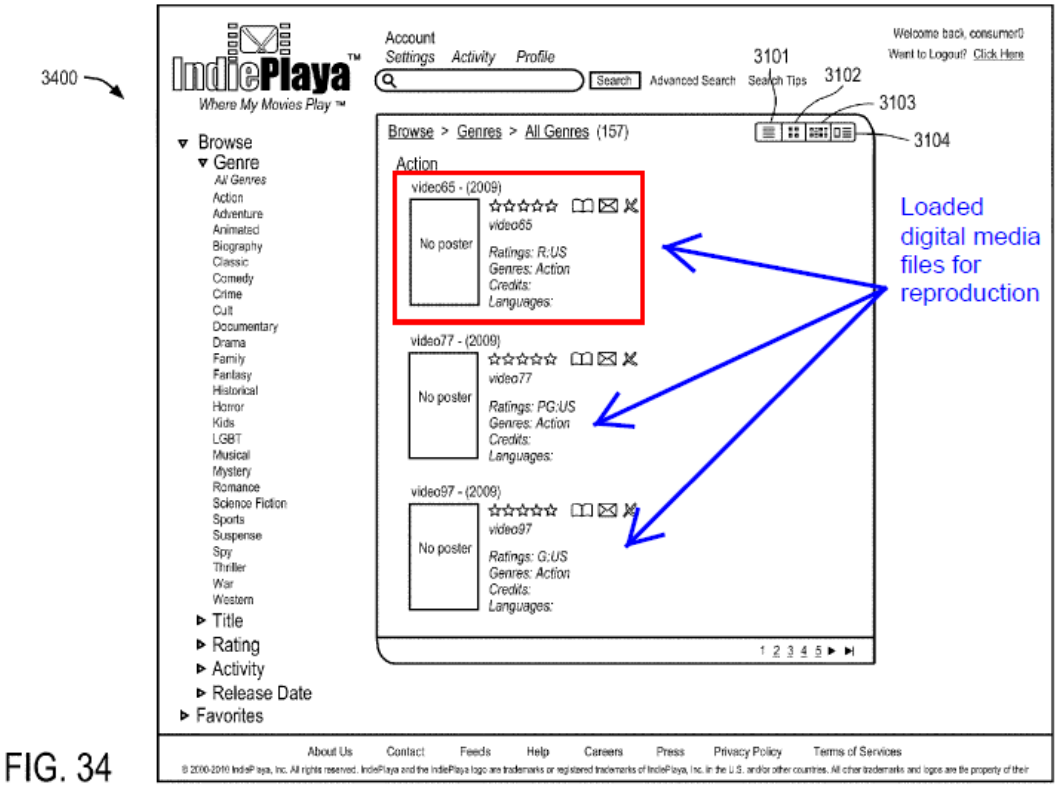


FIG. 34

EX1004, FIG. 34 (annotated)

368. Figure 34 illustrates a user's interaction with catalog 201 and can load media files (red) for reproduction on user computer. EX1004, ¶¶93, 118, FIGS. 2, 34. Thus, Brandstetter also expressly discloses loading (on a client device) a digital media file for reproduction.

369. To the extent that a loaded digital media file is loaded from a memory associated with the user device (e.g., user computer), Brandstetter also discloses this feature.

370. Brandstetter expressly discloses that users can load previously licensed digital media files that are stored on a user device (e.g., user computer 111). For example, Brandstetter discloses that a user (through user computer 111) can log into Brandstetter's system and interact with content through the platform provided by server 101. *See generally id.*, ¶¶78, 89-93. Moreover, Brandstetter discloses that "users can purchase an item or a license to an item, and can download the item over the network (e.g., onto a computer for viewing and/or listening)." *Id.*, ¶78. After download, a user may load the media content item. Figure 28 is illustrative:

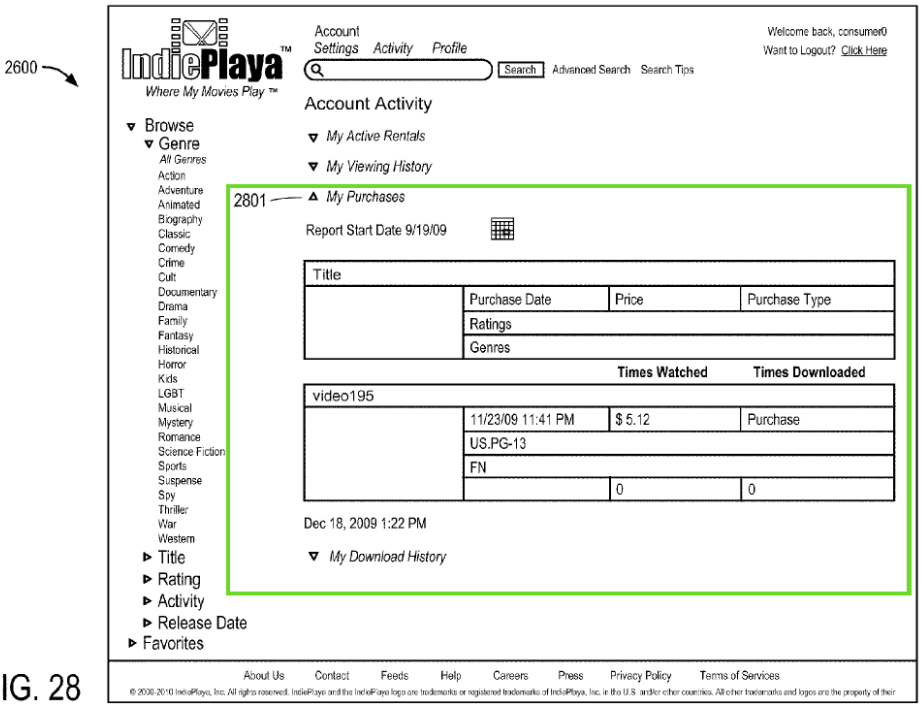


FIG. 28

EX1004, FIG. 28 (annotated).

371. As shown in Figure 28, Brandstetter's interface can also include "an expandable my purchases area 2801 for viewing information corresponding to the

user purchases." EX1004, ¶166. For example, Brandstetter shows that the user can *load* at least one video that was previously purchased (i.e., video195).

372. Brandstetter thus expressly discloses loading a digital media file for reproduction (whether the digital media file is loaded at a user computer or a distribution platform.

373. Levy also discloses loading at a client device. For example, Levy discloses a "Media Server" that may be a "consumer or portable device" that includes a "Client Player Applicantion" used to play or render content. EX1006, ¶83. "Example Media Severs include a cell phone, MP3 player, iPod® and personal computers (e.g., desktop, laptop or handheld)." *Id*.

374. Levy's Media Server loads "raw content" (i.e., the claimed "digital media file") for reproduction. *Id*., ¶107. In particular, Levy depicts this loading in Figure 17d when describing the selection and request to play raw content:

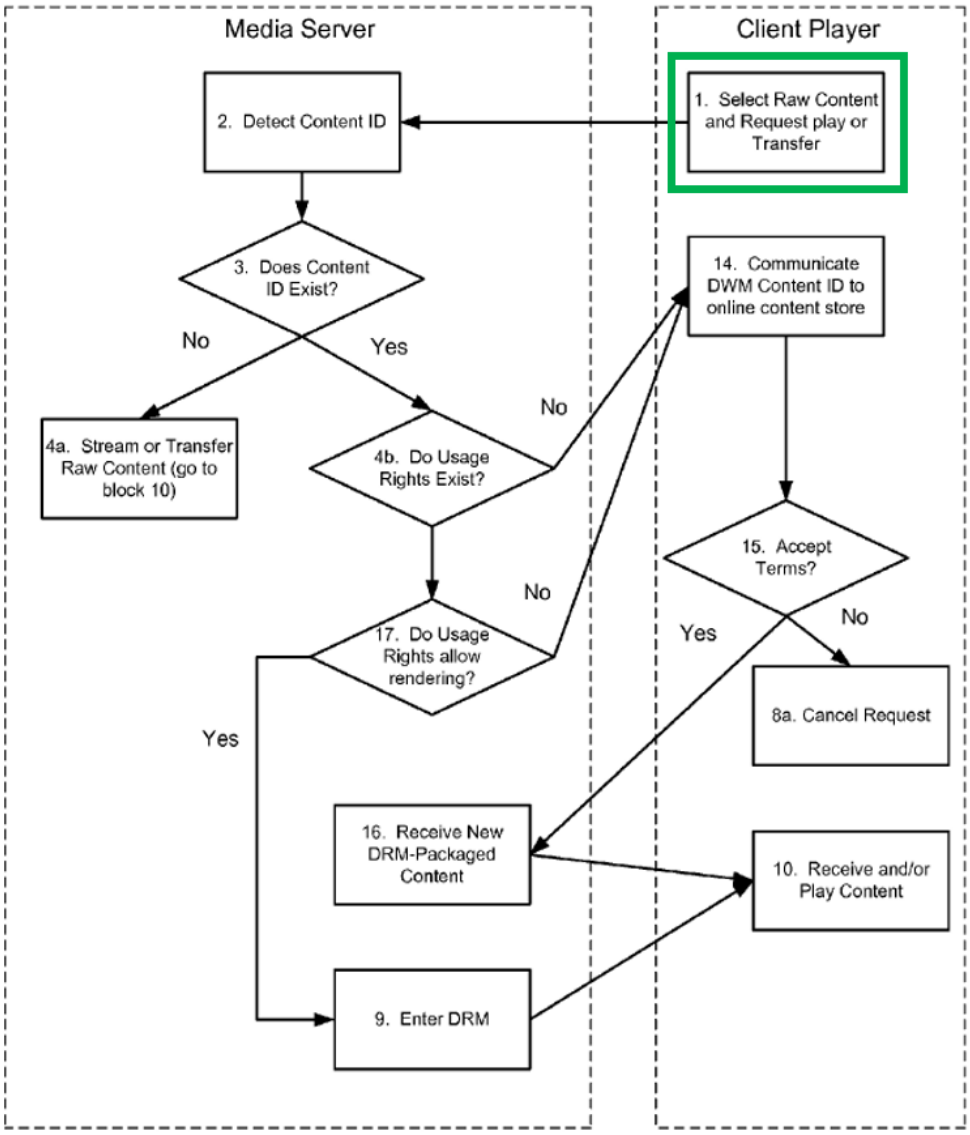


Fig. 17d

EX1006, FIG. 17d (annotated).

375. Levy discloses that a user may load a raw content item and request to play the content item or transfer it. EX1006, FIG. 17d (green). Levy explains that:

> Raw content is defined as digital, base band or compressed content that is not encrypted or DRM-packaged. ***Raw content can be found on a Media Server*** from capturing a digital buffer, hacking a link encryption,

> hacking DRM encryption, re-digitizing an analog output, downloading files from a Peer-to-Peer (P2P) network, ripping CDs, and using DeCSS to rip DVDs, etc.

EX1004, ¶106.

376. Levy recognizes that raw content may be content that has been previously downloaded or stored on the Media Server. *Id*., ¶106. Levy discloses the claimed "loading" when the raw content is "accessed." EX1006, ¶¶106-07. Levy defines this accessing as including "encountering, rendering, playing or transferring control of [the] raw content" that is "stored on [the] Media Server." *Id.* At step 1 of Figure 17d, when a user selects raw content for play or transfer, the user is loading the raw content. Moreover, as Levy defines raw content to be at least "digital, base band or compressed content," a POSA would have understood Levy's digital content to constitute a digital media file including the media content item (e.g. a file including base band reproduction media content item).

377. Thus, Brandstetter and Levy expressly disclose loading a digital media file for reproduction whether the digital media file is loaded at a user computer or at a distribution server.

3. [1B] "analyzing the digital media file to identify digital media information associated with the media content item;"

378. The combination of Brandstetter and Levy discloses "analyzing the digital media file to identify digital media information associated with the media

content item."

379. The '581 patent describes an example of this analysis with reference to Figure 3. The '581 patent describes analyzing the media content item to determine a corresponding "fingerprint." EX1001, 8:16-45. This fingerprint may "uniquely identify the media content item." EX1001, 6:47-52, 8:16-26. The '581 patent's analysis relies on well-known and conventional analysis techniques and describes identifying a "fingerprint, digital watermarking, and/or any other suitable algorithm to identify copyright ownership of the media content item included in the digital media file that will be ***apparent to those skilled in the relevant art(s)***…" EX1001, 4:21-27 (emphasis added), 8:59-9:5. Based on this description, the '581 patent describes the identification of a fingerprint as satisfying the claimed "analyzing [of] the digital media file to identify digital media information associated with the media content item."

380. Although Brandstetter may not explicitly disclose "fingerprint" data, Brandstetter nonetheless recognizes the importance of unique data identifying digital media content. For example, Brandstetter discloses attributes of digital media content that are analyzed for distribution. Brandstetter explains that its platform can include a media "catalog 201." EX1004, ¶118.

> The catalog can include static elements corresponding to aspects of the content that remain constant (e.g., or unchanging) in the platform. For example, a catalog can include static elements corresponding to aspects

> of multimedia content, such as video (e.g., film) content 202. In this example, video content 202 can include certain video attributes (e.g., title, plot, genre, ratings, credits, artwork, etc.). In other examples, a catalog can include static elements corresponding to other types of multimedia content such as game content, audio content, e-books, software, electronic photos, and electronic artwork. Content can be added or deleted from the catalog, thus the catalog can be dynamic. The content within the catalog (e.g., the plot of a movie within the catalog), is editable but does not generally change and thus the content can be static. Thus, catalog data can be a globally constant description (e.g., of defined structured data fields), that includes individual references corresponding to the content of each object (e.g., a video) individually. The catalog 201 can be stored, for example, in content database 142 of server 101 illustrated in FIG. 1C.

EX1004, ¶118.

381. The "static" and "dynamic" elements described above disclose the claimed "digital media information." *Id*. The static and dynamic elements are information associated with the media content item and are identified based on an analysis of the digital media files loaded in to the catalog. Thus, Brandstetter discloses this claim element.

382. To the extent the term "digital media information" is limited to a unique file identification or fingerprint, the combination of Brandstetter and Levy also discloses analyzing a digital media file to extract a unique identification. For

example, Brandstetter's catalog data is a "globally constant description" that individually identifies content. *Id*. Additionally, Brandstetter's static information also uniquely identifies content. *Id.* Thus, Brandstetter describes identifying unique digital media information corresponding to media content items.

383. Levy also discloses identifying unique digital media information based on an identification of a "Content ID" or fingerprint. Levy discloses a rights management system that utilizes digital watermarking (DWM). EX1006, ¶7. Levy defines DWM as "the science of encoding physical and electronic objects with plural-bit digital data, in such a manner that the data is essentially hidden from human perception, yet can be recovered by computer analysis." *Id.* To this end, Levy explains that "there is a need to enable digital rights management systems to reliably link content with additional, related data–including related content." *Id.* ¶6. A POSA would have been motivated to implement these elements from Levy with Brandstetter for the reasons that I explained in Section XII.A. In particular, a POSA would know that in order to access something reliably, it needs a reliable identifier in a file system or database.

384. As I illustrated earlier, with regard to Figure 17d, a user may select a content item for playing. In this regard, Levy explains that the "Client Player Application prompts the Media server to detect a DWM Content ID." EX1006, ¶108. Levy defines a Content ID as:

> a numerical (or alphanumerical) identifier that is ***uniquely associated with each piece of content***, e.g., unique to a specific song or movie title. A Content ID is not necessarily unique for each copy (or file) of the piece of content. For example, two copies of the same song may include the same Content ID. A Content ID may be represented as a plural-bit identifier.

EX1006, ¶85.

385. Content IDs were well-known and conventional identifiers used to organize content and link content to other information such as usage rights and billing. This is expressly recognized by Levy. *See* EX1006, ¶34. For example, Levy discloses that "[c]ontent identifiers can be used to organize a database that is maintained locally or remotely (e.g., a central usage system." *Id.*, ¶43. Moreover, Levy explains that "[o]nce extracted from content, an identifier can be then used to interrogate the database to retrieve the usage rules" where "content usage is regulated based on its corresponding usage rules." *Id.*

386. Levy also explains that Content IDs may be implemented using a "fingerprint." *Id.*, Abstract, ¶¶140-42. "A fingerprint (e.g., a hash, derived signature or reduce-bit representation of content) is generated during content creation" and is stored along with corresponding Usage Rights. *Id.*, ¶140. "A Media Server includes a fingerprint reader, instead of or in addition to, a digital watermark detector. The fingerprint reader calculates or derives a fingerprint of content, which is used as a

Fingerprint Content ID." *Id*. Based on this discussion, Levy also discloses a Media Server analyzing a digital media file to extract a fingerprint—just like the '581 patent.

387. Levy describes the analysis of a digital media file to identify a Content ID or fingerprint with reference to Figure 17d below.

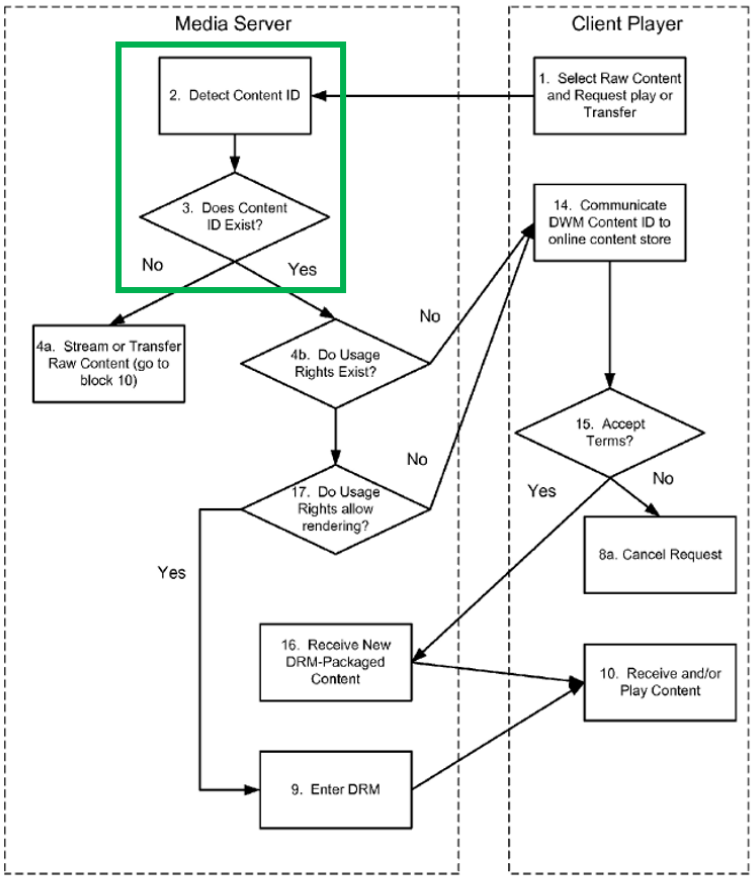


Fig. 17d

EX1006, FIG. 17d (annotated).

388. With regard to steps 2 and 3 above, Levy describes operations performed by the digital watermark detector of its Media Server. For example, Levy explains that the "digital watermark detector searches raw content for a DWM

Content ID embedded therein." EX1006, ¶109. Levy then identifies the DWM to determine associated usage rights as I will explain further below with regard to Element 1C. Thus, Levy discloses a Media Server that analyzes a digital media file to identify a DWM Content ID or fingerprint (i.e., the claimed "digital media information").

389. The combination of Brandstetter and Levy renders obvious the claimed "analyzing" occurring at either a user device or a distribution server. For example, Levy explicitly discloses the Media Server (i.e., a user device) performing an extraction of the Content ID or fingerprint from Raw Content. *Id*., ¶¶108-09, 140-41.

390. A POSA would have found it obvious to implement this same extraction with Brandstetter's server platform to provide a process to organize content that has been uploaded by content creators and track user purchases. *See* Sections XII.A, XII.B.2. For example, the combination of Brandstetter and Levy would identify corresponding Content IDs for uploaded videos and store such information in a "DWM database" or "Rights Registry" database as described in Levy. EX1006, ¶¶17, 112-13, 140, FIG. 18. Levy describes an "online content store"—such as Brandstetter's—that would utilize such databases to organize "content files" and to determine Usage Rights for users. *Id*., ¶112. Combining Levy with Brandstetter would provide a mechanism to organize licenses corresponding to

the user purchases that Brandstetter already tracks. EX1004, ¶¶99, 166, FIGS. 26, 28. Further, as I explained in Section XII.A, this would allow for control of downloaded content and determining whether a user has previously obtained a license to access content to control and monetize the distribution of unauthorized content (e.g., illegally obtained or expired). Therefore, a POSA would have been motivated to combine Levy and Brandstetter to facilitate the same management of loaded media content and purchased user licenses. Additionally, a POSA would have been motivated to rely on Levy's DWM Content Identification within Brandstetter to analyze the digital media information associated with the media content item in order to improve downstream operations relating to capture of interactions, building a more robust searchable index 302 and provide for promotions and license packages to the users. *Id*., ¶¶129-30.

4. [1C] "receiving a license request from a user requesting to engage in a license transaction to reproduce the media content item;"

391. Brandstetter and Levy both disclose this claim element. The "license request" described in claim 1 refers to a consumer expressing a desire to potentially purchase a license to reproduce a media content item. The '581 patent describes this "receiving" in the following manner:

> At step 162, the system receives a digital media licensing request from an external multimedia hardware device over a network where the licensing request includes ***data indicating a media content item that a***

> ***user of the device wishes to acquire a license for***. In an embodiment, the licensing request includes a fingerprint of the media content item, information identifying the rights-holder of the media content item, the title of the media content item, and/or other media content item information.

EX1001, 10:19-27.

392. In view of this explanation, the '581 patent describes the license request as simply including data—such as the title of a media content item—that a user wishes to acquire a license for. *Id*., 10:19-27.

393. Brandstetter describes this same type of browsing and receiving of requests to reproduce content. EX1004, ¶¶66, 71, 75, 77, 141-147. Initially, Brandstetter explicitly discloses an interface where a user can request content from a content creator. *See generally id*., FIGS. 25-36, ¶¶120-127 (describing scenarios where "a user exhibits an interest in licensing content"). I will now discuss how users exhibit an interest in licensing content by interacting with Brandstetter's platform to view and license the content. Although Figure 18 illustrates a user interface of a content creator, Figure 18 expressly illustrates how system 100 enables a content creator to set up the user browsing environment and navigation options to engage with and license content that is uploaded by the content creator. And, a POSA would have understood that the user interface of Figure 18 illustrates the options that content creators want displayed for users. In other words, a POSA would have

understood that if a content creator activates a "purchase" or "rent" option, that such option will be displayed to the user when the user engages the platform. In this regard, Brandstetter's platform generates options for the user to select. When a user selects a license option, Brandstetter's system receives a license request from the user requesting to engage in a license transaction to reproduce the media content item. Annotated Figure 18 below is illustrative:

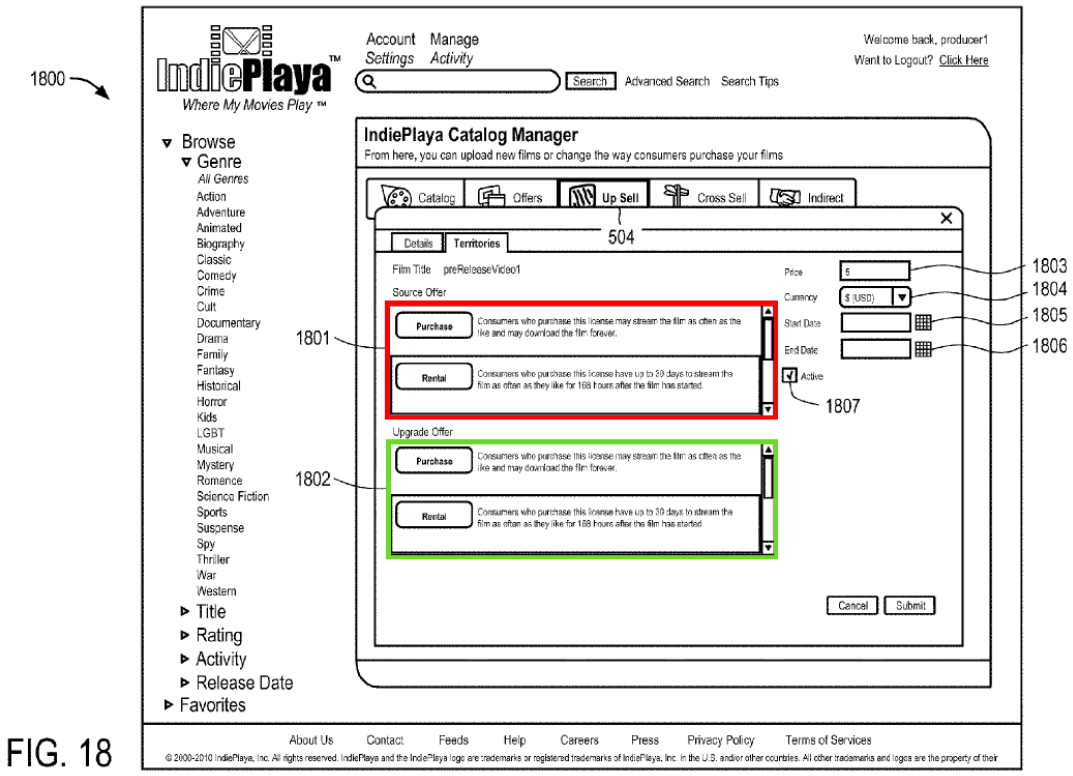


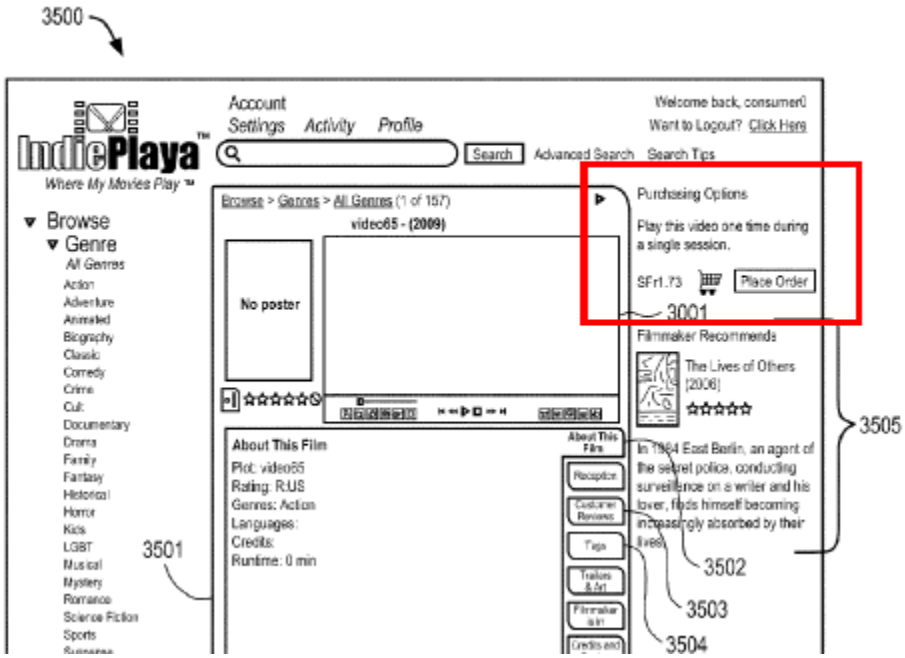
FIG. 18

EX1004, FIG. 18 (annotated).

394. As I will illustrate herein, a content creator may login into the platform and manage a catalog 201 associated with the content creator. EX1004, FIG. 18. This may be, for example, content that the content creator previously uploaded onto server 101. *Id*. In one example, content creator may provide an initial offer that a

user can engage with by requesting to purchase or rent the associated item of media content. For example, a user may make a request for a purchase license and/or a rental license. *Id*. Brandstetter explains that consumers who purchase the "purchase license" may "stream the film as often as they like and may download the film forever." *Id*. Additionally, Brandstetter also explains that consumers who purchase a "rental license" may "have up to 30 days to stream the film as often as they like for 168 hours after the film has started." *See id*. In this manner, Brandstetter's server platform receives a license request when a user interacts with various user interfaces when attempting to purchase a license or access previously licensed content.

395. As I noted herein above, options set by content creators for users may be displayed to the users to engage with. In other words, licensing options set by the content creator are available for the users to engage with. For example, when a user selects a "purchase" license, the platform receives a licensing request from the user requesting to engage in a license transaction to reproduce the media content item. Figure 35 is illustrative:



EX1004, FIG. 35 (excerpt, annotated)

396. As I have noted before, Brandstetter expressly discloses that users may interact with the platform to "purchase" content. EX1004, ¶130, FIGS. 35, 36. In other words, when a user selects a "purchase" option, a user is generating a request to engage in a license transaction to reproduce the media content item (e.g., rent, purchase, etc.). When a user interacts with system 100, the user can see these set options for requesting licenses from content creators. For example, Brandstetter also explains that setting options as active (e.g., an up-sell option as active as shown in Figure 18 above) indicates that the active option is available for user selection. *Id*., ¶137.

397. Thus, Brandstetter expressly discloses receiving a license request from

a user requesting to engage in a license transaction to reproduce the media content item.

398. While claim element [1C] does not require that the license request include digital media information, to the extent that the claim is interpreted in such a manner, both Brandstetter and Levy also disclose this feature.

399. With regard to Brandstetter, a POSA would have understood that in order for Brandstetter's platform to process a received license request, the license request would include information identifying the content that the user is trying to license. Such information may include the static and dynamic elements that I previously discussed. *See* Section XII.B.3. For example, Brandstetter explains that based on audience interaction "with the index 302, static data from the catalog 201 and one or more licensing packages 204 can be presented to the audience 306." EX1004, ¶130; *see also id.*, ¶118. By that same token, in order for the audience to transmit a license request, the license request received at the platform would also need to identify the content.

400. Levy also explicitly discloses receiving a license request from a user requesting to engage in a license transaction to reproduce the media content item.

401. As I explained with reference to claim elements [1A] and [1B], Levy discloses loading a media file at a user device (i.e., "Media Server") and also analyzing the media file to determine a "Content ID" or "fingerprint." EX1006,

¶¶16-17, 85, 107, 140-42, 145-46. The process that I described for claim elements [1A] and [1B] also discloses the claimed "receiving" of a license request because the user is selecting media content to play. *See id*., FIGS. 17a, 17d (Step 1). The Content ID or fingerprint discloses the claimed "digital media information." Levy's Media Server, which executes the Client Player Application, detects the loading of raw content and determines a corresponding Content ID. *Id*., ¶¶35, 83-84, 89, 108-09. "The Media Server includes a digital watermark detector … [that] searches raw content for a DWM Content ID embedded therein." *Id*., ¶109. When the Media Server does not identify corresponding Usage Rights (i.e., a license) or when identified Usage Rights do not allow rendering, the Media Server transmits the Content ID to an "online content store." *Id*., ¶¶109, 112-14, 117, FIG. 17d.

> The Media Server (e.g., the Client Player Application) initiates communication with an online content store (e.g., think iTunes®) and ***provides the DWM Content ID to the online store. The online store uses the DWM Content ID to interrogate a DWM database (e.g., a database associating DWM Content IDs with respective content files and/or options).*** The online store presents the Media Server with options, e.g., would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate.

EX1006, ¶112 (emphasis added).

402. In this case, Levy's description of an online content store—such as Brandstetter's—also receives a license request containing a Content ID or

fingerprint. *See* Sections XII.A.1-2, XII.B.3. By receiving the Content ID or fingerprint, Levy determines whether a user has already obtain a license for content or whether the user should be offered a license for purchase. EX1006, ¶¶110, 112. As I explained in Section XII.A, this would provide a mechanism for determining whether access to digital media content is authorized based on a previously purchased license. Thus, to the extent that the claim element [1C] require that the license request include digital media information, then Levy describes an online content store receiving a media licensing request that includes digital media information (*e.g.*, DWM Content IDs). A POSA would have been motivated to combine Brandstetter and Levy for the reasons that I previously discussed. *See* Sections XII.A.1-2, XII.B.3.

5. [1D] "evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item;"

403. Brandstetter and Levy disclose "evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item."

404. Brandstetter discloses multiple scenarios where users interact with license packages that are evaluated to determine usage rights. Brandstetter evaluates usage rights to further determine reproduction capabilities and/or provide users with alternative (e.g., upgraded) license packages. For example, Brandstetter describes

that when a user "exhibits an interest" to license content, Brandstetter's media server evaluates existing user rights and provides the requisite authorization to reproduce the requested media. *See* EX1004, ¶¶77, 120-124 (describing the ability to grant licenses to content requested by users and/or expansion of the terms of the license to the content, expansion of the quality, resolution or other property of the content). In other words, Brandstetter expressly describes scenarios where users exhibit an interest to license content (e.g., the license transaction to reproduce, rent, purchase, learn more about, etc.). *Id.* And, in-turn, Brandstetter's system 100 evaluates such license requests within the framework of a license transaction (e.g., a user agreeing to a license to purchase, rent, download, etc., the content). Brandstetter also evaluates the license transaction to also provide dynamic offers (e.g., up-sell, cross-sell, etc.) to the user. *Id.* I will illustrate these scenarios in greater detail below.

405. Initially, as I have explained in Section VII.B, Brandstetter tracks and captures all user interaction with the platform. *Id*., ¶130. Such interaction, according to Brandstetter, can "include all activity up to and including a purchase… [and] all activity following a purchase." *Id.* Brandstetter provides an example where (a) user interaction is tracked, (b) a first license option is provided to the user, (c) user interaction with the first license option is tracked, and (d) a second license option may be provided to the user based on the second user interaction. *Id*., ¶¶75, 87, 130. For example, Brandstetter explains that:

> Audience 306 can interact with the index 302 (e.g., to search and locate data). In some implementations, ***based upon audience 306 interaction with the index 302, static data from the catalog 201 and one or more licensing packages 204 can be presented to audience 306***. In some implementations, site activity 304 (e.g., audience interaction with a website), can be indexed 302 and stored for later analysis. ***In these implementations, audience interaction can include all activity up to and including a purchase.*** Thus, even if a purchase is not made, data related to audience interaction with content on the website can be indexed and used for later analysis. ***In these implementations, audience interaction can include all activity following a purchase. Thus, post purchase data related to audience interaction with content on the website can also be indexed and used for later analysis***.

EX1004, ¶130 (emphasis added).

406. As I have laid out above, Brandstetter captures user interaction before and after purchase of a license, and that such pre and post purchase data related to the audience interaction with content on the website can be "indexed and used for later analysis." *Id.* As I will further explain with regard to element [1H], Brandstetter indexes all audience interaction (e.g., including received license request, subsequent reproduction and/or subsequent licensing queries). A POSA would therefore understand that such evaluation includes evaluating user interaction with media content and *user requests for license transactions*.

407. Brandstetter describes multiple scenarios where a user's exhibited

interest to license content (e.g., request to license) is evaluated by system 100. *See generally id.*, ¶¶120-126. These may include options to acquire a license to purchase or rent content, acquire a license to download content, and acquire a license to upgrade content (e.g., quality of content, versions, etc.). *Id.*

408. In one example, Brandstetter's system enables content creators to have "up-sell" opportunities where users are offered a first license and subsequently offered a second license (based on the users' interaction with the first license). *Id.*, ¶¶75, 87, 119, 120. For example, Brandstetter explains that

> In some implementations, a promotional functionality 203 can include an ***ability to up-sell content*** or properties of such content (e.g., ***the grant of a license to the content, the expansion of the terms of the license to the content, an expansion of the quality, resolution or other property of the content***). In an example of such implementations, ***when a user exhibits an interest in paying a first amount for a limited use license*** to use content for a predefined time period, the content creator can dynamically create and offer the user another license option to use the same content at a second amount and for a greater period of time. ***For example, when a user selects a content rental option or rents content (e.g., a video) for $5.00, the content creator (e.g., the filmmaker), is notified or otherwise made aware (e.g., by requesting a report). Once aware, the content creator can dynamically create and offer a content purchase option*** (e.g., reduce a purchase price from $15.00 to $11.00) to that user. This aspect will be discussed in greater detail with respect to FIGS. 18-19, below.

EX1004, ¶120 (emphasis added).

409. In the above example, Brandstetter discloses an example where a content creator is "notified or otherwise made aware" of a user interest in a first license and subsequently, the content creator "can dynamically create and offer a content purchase option." *Id*. In other words, a content owner "evaluates" the license transaction in order to create and offer content and other purchase options.

410. Brandstetter's evaluation of the license transaction also extends to determining whether the user has acquired a license to reproduce the media content item. For example, in the up-sell scenario I discuss above, a content creator can evaluate whether the user has acquired a license to reproduce the media content (e.g., first limited use license) and whether to provide the user additional access through a second license (e.g., second broader use license). *Id*., ¶¶120, 126.

411. In yet another example, Brandstetter describes users engaging different "rental licensing packages." *Id*., ¶147. For example, in an unlimited rental package, "a recipient of the content can play the content any number of times desired within a period of time defined by the license." *Id.* In another "play n-number of times licensing package," the user "can only play the content n number of times (e.g., once, twice, three times, etc.)." *Id*. In order to track whether a rental time period is active or to determine a number of times a user has played the content, a POSA would have understood that Brandstetter would have evaluated the license transaction to

determine a user's usage rights (e.g., has user exceeded the n number of play times?). This would occur in both the rental and the purchase contexts, such as when determining whether a user is permitted to download content. *Id.*, ¶¶71, 77, 125, 145, 166, 169, 173, FIG. 28. For example, Brandstetter tracks whether a user has purchased a license for an "unlimited content download" and permitting multiple downloads in this case. *Id.*, ¶169. In this manner, Brandstetter evaluates whether a user has previously acquired a license to reproduce media content.

412. While the examples I laid out herein discuss interaction with respect to content creators, Brandstetter discloses that all such interactions are provided through the system 100 and its associated platform. For example, Brandstetter explains that such interaction may be "based upon a server-client computer architecture in which the user interfaces with the platform (e.g., the server) using a client computer over a network." *Id.*, ¶87.

413. Therefore, Brandstetter's system expressly evaluates the license transaction to determine whether the user has acquired a license to reproduce the media content item.

414. Levy also evaluates the license transaction to determine whether the user has acquired a license to produce the media content item. As I explained with reference to claim element [1C], Levy expressly discloses this step. For example, Levy discloses loading a media file at a user device (*i.e.*, "Media Server") and also

analyzing the media file to determine a "Content ID" or "fingerprint." EX1006, ¶¶16-17, 85, 107, 140-42, 145-46. The Content ID or fingerprint discloses the claimed "digital media information." Levy's Media Server, which executes the Client Player Application, detects the loading of raw content and determines a corresponding Content ID. *Id*., ¶¶35, 83-84, 89, 108-109. "The Media Server includes a digital watermark detector … [that] searches raw content for a DWM Content ID embedded therein." *Id*., ¶109. The Media Server then uses the DWM Content ID and "checks for associated Usage Rights." *Id*., ¶110. As previously explained, Levy uses the term "Usage Rights" interchangeably with the term "license." *Id*., ¶87. To perform the check, "the Media Server interrogates a DWM or re-linking Rights Registry with the DWM Content ID to determine whether there are any associated Usage Rights." *Id*., ¶110. Levy's checking identifies whether any associated Usage Rights (i.e., license) exists and therefore also teaches the claimed "evaluating."

415. When the Media Server does not identify corresponding Usage Rights (*i.e.*, a license) or when identified Usage Rights do not allow rendering, the Media Server transmits the Content ID to an "online content store." *Id*., ¶¶109, 112-14, 117, FIG. 17d.

> The Media Server (e.g., the Client Player Application) initiates communication with an online content store (e.g., think iTunes®) and ***provides the DWM Content ID to the online store. The online store***

> ***uses the DWM Content ID to interrogate a DWM database (e.g., a database associating DWM Content IDs with respective content files and/or options).*** The online store presents the Media Server with options, e.g., would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate.

EX1006, ¶112.

416. The online store therefore additionally performs another check for the existence of a DWM Content ID and therefore discloses another instance of the claimed "evaluating." Thus, Levy also discloses evaluating a license transaction to determine whether the user has acquired a license to reproduce the media content item. A POSA would have been motivated to combine Brandstetter and Levy for the reasons that I previously discussed. *See* Sections XII.A.1-2, XII.B.3.

6. [1E] "accessing a license database to determine whether the user is licensed to reproduce the media content item based on the digital media information;"

417. Brandstetter and Levy both disclose "accessing a license database to determine whether the user is licensed to reproduce the media content item based on the digital media information."

418. Brandstetter discloses accessing a database to determine all aspects relating to ***indexed*** user interaction, including, but not limited to, whether the user is licensed to reproduce the media content item based on the digital media information. *See generally* EX1004, ¶¶74, 85, 93, 130, FIG. 1C. For example, Brandstetter

discloses "memory 114" within server 101 that includes "distribution module 140." *Id*., ¶¶92-93, 98. This memory 114 discloses the claimed "license database." Memory 114 stores:

> a distribution module 140 that receives user requests for distribution of items of media content via network 121, that distributes such items of media content to user computers via network 121 responsive to such requests and ***in accordance with digital rights management constraints defined by the content creator***, and that receives payment from users in exchange for such distribution via network 121[.]

EX1004, ¶98.

419. As seen from this description, memory 114 stores digital rights (i.e., licensing) information and distributes media content according to these rights. To further illustrate the tracking of licenses, Brandstetter also describes several user interfaces depicting the tracking of purchase or rental licenses. *See id*., FIG. 26-29.

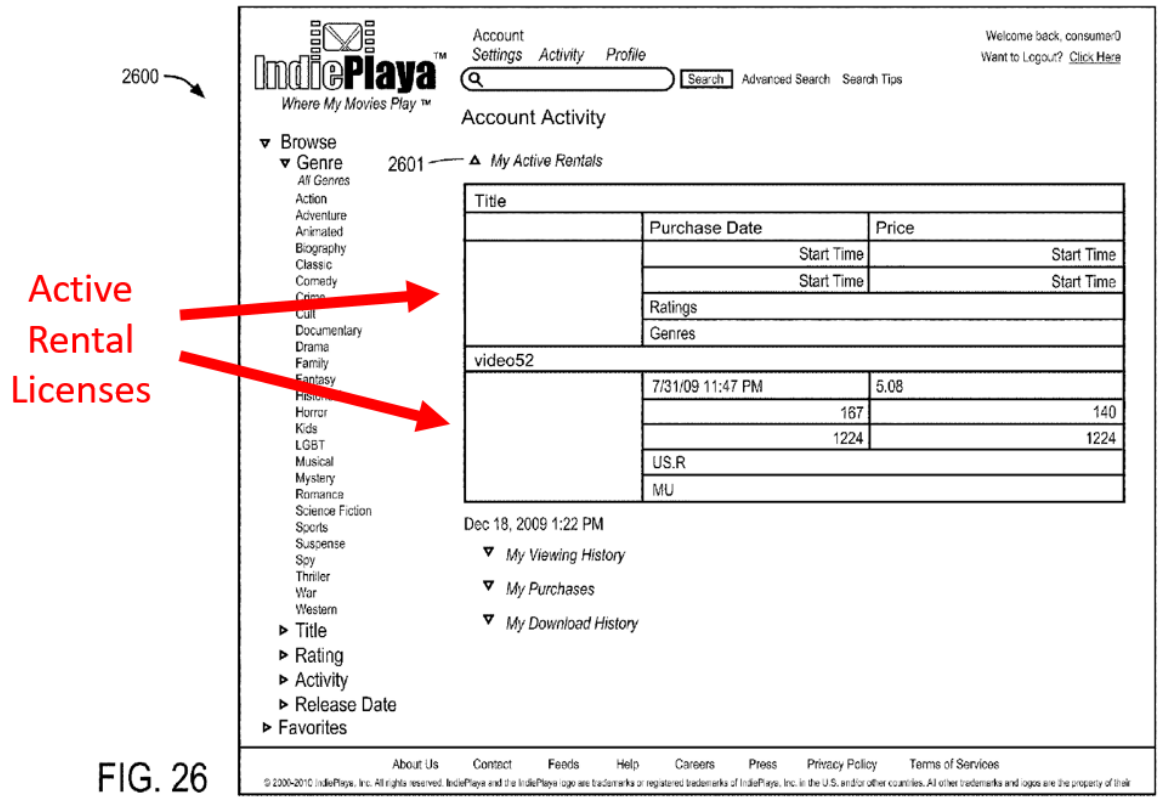


FIG. 26

EX1004, FIG. 26 (annotated).

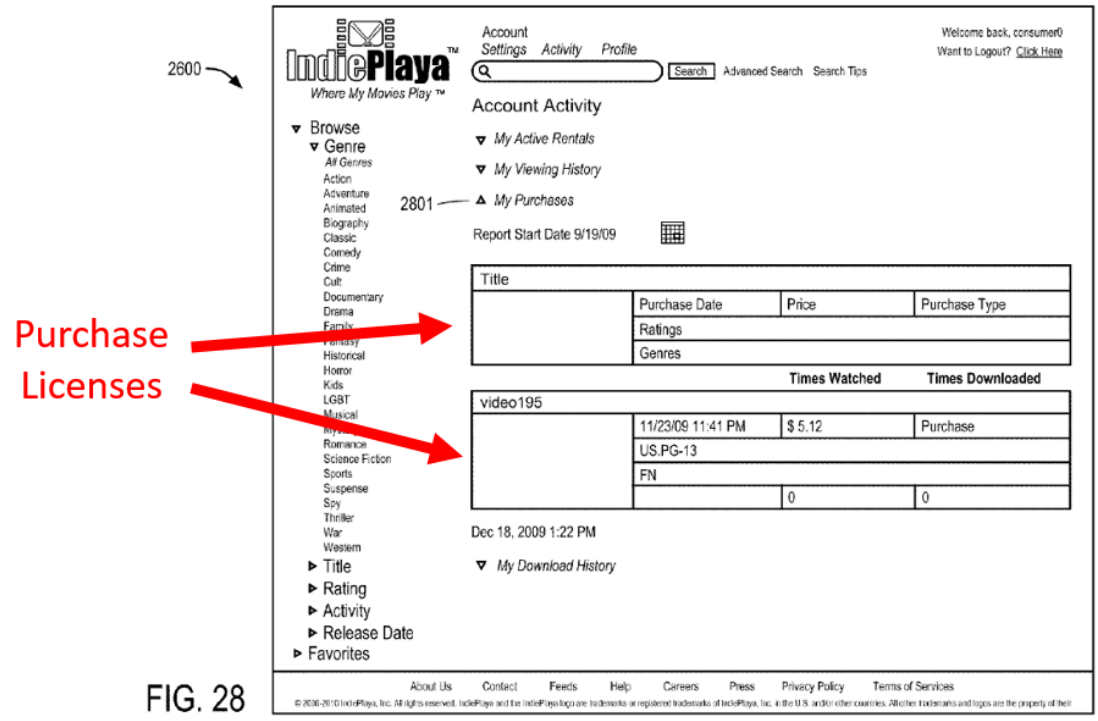


FIG. 28

EX1004, FIG. 28 (annotated).

420. "FIG. 26 shows an exemplary interface 2600 for viewing account activity (e.g., active rentals, viewing history, purchases, or download history). Interface 2600 can include expandable active rental area 2601 for viewing information corresponding to currently active rentals." EX1004, ¶166. Brandstetter describes offering "rental licensing package[s], in which a recipient of the content can play the content any number of times desired within a period of time defined by the license, and a play n-number of times licensing package, in which a recipient of the content can only play the content n number of times (e.g., once, twice, three times, etc.)." *Id*., ¶147. In order to track whether a rental time period is active or to determine a number of times a user has played the content, a POSA would have understood that Brandstetter would have tracked user license rights. Brandstetter's platform would have consulted license data in a license database to determine whether to provide content to a user based on the license package purchased by the user. *Id*., ¶¶98, 147. This would occur in both the rental and the purchase contexts, such as when determining whether a user is permitted to download content. *Id*., ¶¶71, 77, 125, 145, 166, 169, 173, FIG. 28. For example, Brandstetter tracks whether a user has purchased a license for an "unlimited content download" and permitting multiple downloads in this case. *Id*., ¶169. Thus, Brandstetter discloses accessing a license database to determine whether a user is licensed to reproduce a media content item.

421. Levy also discloses this feature. As I have explained for claim elements [1C] and [1D], Levy's Media Server "includes a digital watermark detector … [that] searches raw content for a DWM Content ID embedded therein." EX1006, ¶109. The Media Server then uses the DWM Content ID and "checks for associated Usage Rights" by "interrogat[ing] a DWM or re-linking Rights Registry with the DWM Content ID to determine whether there are any associated Usage Rights." *Id*., ¶110, 140. These registries are databases and additionally disclose the claimed "license database." *Id*., ¶¶17, 112-13, 140. Levy's checking identifies whether any associated Usage Rights (i.e., license) exists and therefore also teaches the claimed "accessing."

422. When the Media Server does not identify corresponding Usage Rights (*i.e.*, a license) or when identified Usage Rights do not allow rendering, the Media Server transmits the Content ID to an "online content store." *Id*., ¶¶109, 112-14, 117, FIG. 17d.

> The Media Server (e.g., the Client Player Application) initiates communication with an online content store (e.g., think iTunes®) and ***provides the DWM Content ID to the online store. The online store uses the DWM Content ID to interrogate a DWM database (e.g., a database associating DWM Content IDs with respective content files and/or options).*** The online store presents the Media Server with options, e.g., would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate.

EX1006, ¶112.

423. As I previously explained, the "DWM database" checked by the online content store discloses the claimed "license database."

424. Additionally, Levy's description of a "Rights Registry" database or "Fingerprint Rights Registry" also discloses the claimed "licensing database." *Id*., ¶¶17, 113, 140, FIG. 18. "A Fingerprint Content ID is communicated to the Fingerprint Rights Registry to obtain corresponding Usage Rights." EX1006, ¶140. "Usage Rights associated with a DRM-protected version are indexed within a DRM Rights Registry via the DRM Content ID." *Id*., ¶97. This description therefore also discloses the claim element.

425. In this manner, Levy's description of interactions with the Rights Registry to determine whether to grant or decline a media licensing request also discloses claim elements [1E] (and [1F] as I will explain further below). A POSA would have been motivated to combine Brandstetter and Levy for the reasons that I previously discussed. *See* Sections XII.A.1-2, XII.B.3.

7. [1F] "reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information;"

426. As I explained with reference to claim elements [1C], [1D], and [1E], Brandstetter discloses "reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information." *See* Sections XII.B.4-6.

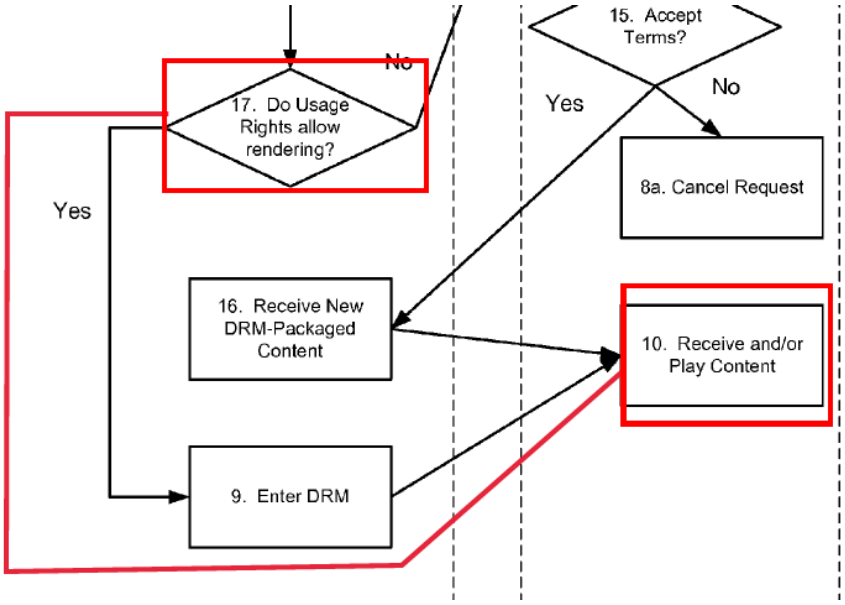
427. Brandstetter explicitly discloses examples where media content items are reproduced when the user is licensed to reproduce the media content item. For example, with regard to Figures 26-29, Brandstetter explains that:

> FIG. 26 shows an exemplary interface 2600 for viewing account activity (e.g., ***active rentals, viewing history, purchases, or download history***). Interface 2600 can include expandable active rental area 2601 for viewing information corresponding to currently active rentals. FIG. 27 also shows exemplary interface 2600 for viewing account activity. Interface 2600 can also include an expandable viewing history area 2701 for viewing information corresponding to a user viewing history. FIG. 28 also shows exemplary interface 2600 for viewing account activity. Interface 2600 can also include an ***expandable my purchases area 2801 for viewing information corresponding to the user purchases.*** FIG. 29 also shows exemplary interface 2600 for viewing account activity. Interface 2600 can also include an expandable "my download" history area 2901 for viewing information corresponding to a user download history.

EX1004, ¶166.

428. Brandstetter explains that when a user has purchased a license to a content item, the user can "play the content any number of times desired within a period of time defined by the license." *Id*., ¶¶147, 169. Thus, Brandstetter discloses reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information.

429. Levy also discloses this feature. As I have explained with regard to claim element [1E], Levy discloses reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media rights information. Levy depicts the identification of existing Usage Rights (i.e., a license) and then reproducing the media content in Figure 17d:



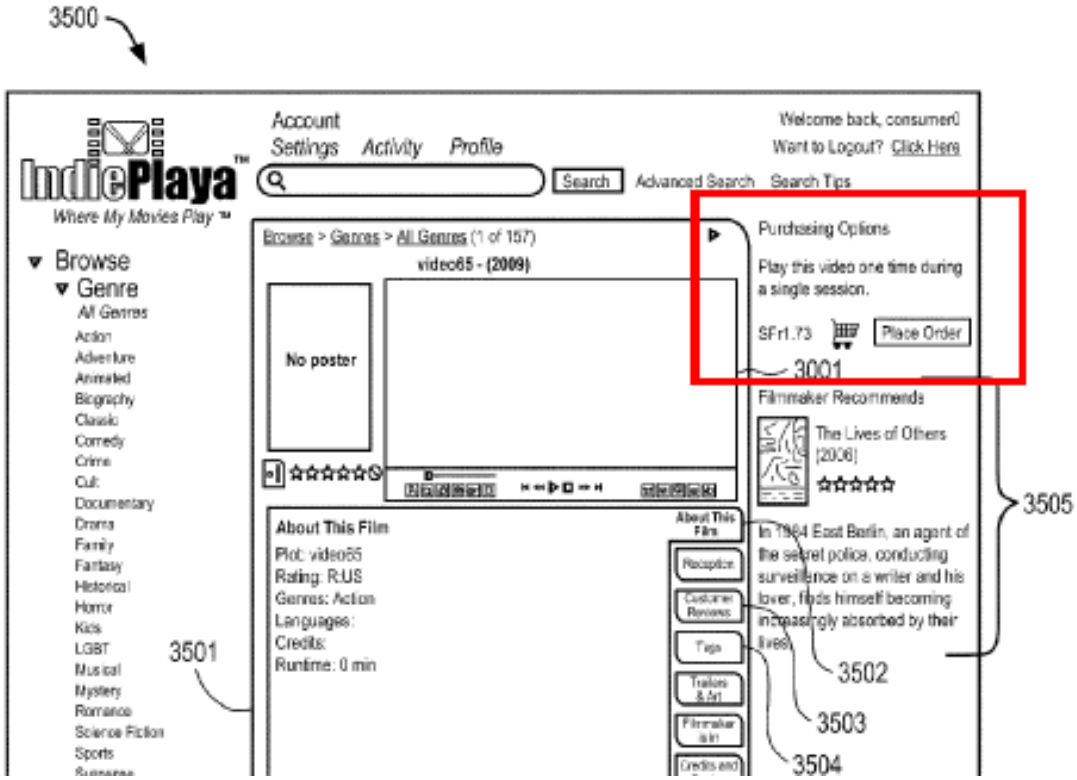
EX1004, FIG. 17d (excerpt, annotated)

430. As expressly illustrated in Step 17 of FIG. 17d, when Usage Rights are retrieved and allow rendering, Levy permits the Client Player Application to receive and/or play the requested content. EX1006, ¶115. In this manner, Levy discloses "reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information." A POSA would have been motivated to combine Brandstetter and Levy for the reasons that I previously discussed. *See* Sections XII.A.1-2, XII.B.3.

8. [1G] "providing a licensing query to the user when the user is not licensed to reproduce the media content item to prompt the user to select to acquire a license to reproduce the media content item or to decline the license to reproduce the media content item;"

431. Brandstetter and Levy discloses this claim element.

432. As I have illustrated herein, Brandstetter also provides a user the ability to purchase or license content that the user does not have a license for. Section XII.B.4; EX1004, ¶¶130, 137, FIGs. 18, 35, 36. FIG. 35 provides an example interface presenting the user with "one or more licensing packages" for the user to acquire, which provides a licensing query to the user. EX1004, ¶¶130, 137, 169.



EX1004, FIG. 35 (excerpt, annotated)

433. Thus, Brandstetter discloses "providing a licensing query to the user when the user is not licensed to reproduce the media content item to prompt the user to select to acquire a license to reproduce the media content item or to decline the license to reproduce the media content item."

434. Additionally, as I have explained with regard to element [1D] Brandstetter's up-sell query also discloses this feature. Section XII.B.5. For example, Brandstetter discloses examples where a user is provided with an up-sell opportunity to upgrade to a license with increased privileged (e.g., extended duration, etc.). *See* EX1004, ¶¶119-126. Such opportunities, according to Brandstetter, are explicitly displayed on a user interface as illustrated in annotated Figure 35A below:

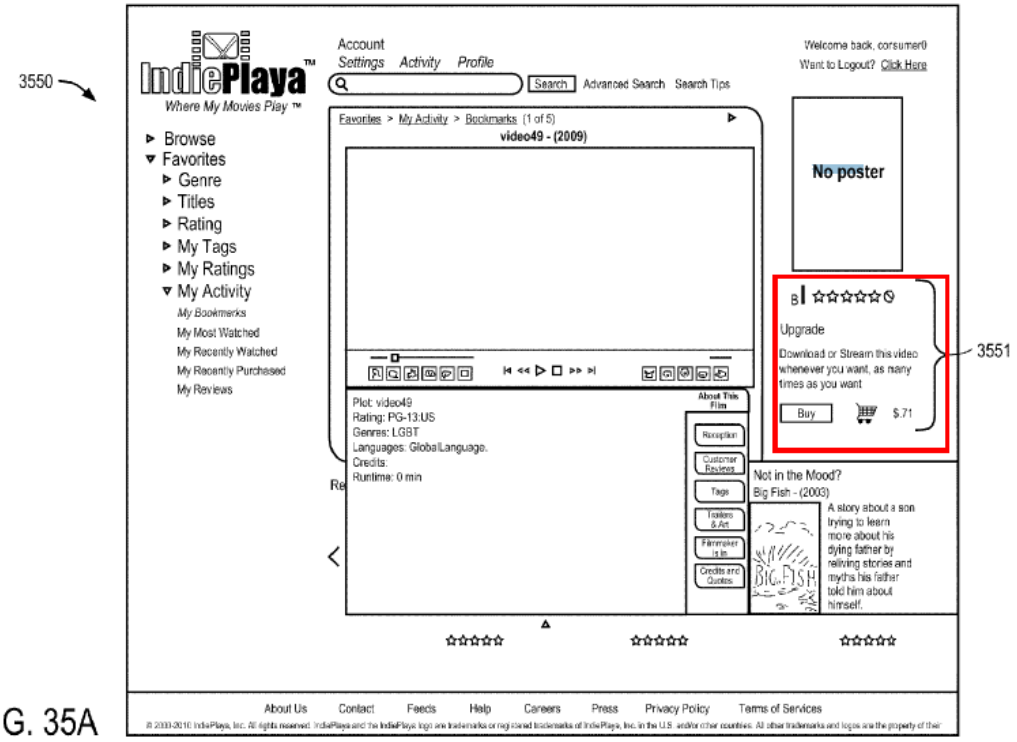


FIG. 35A

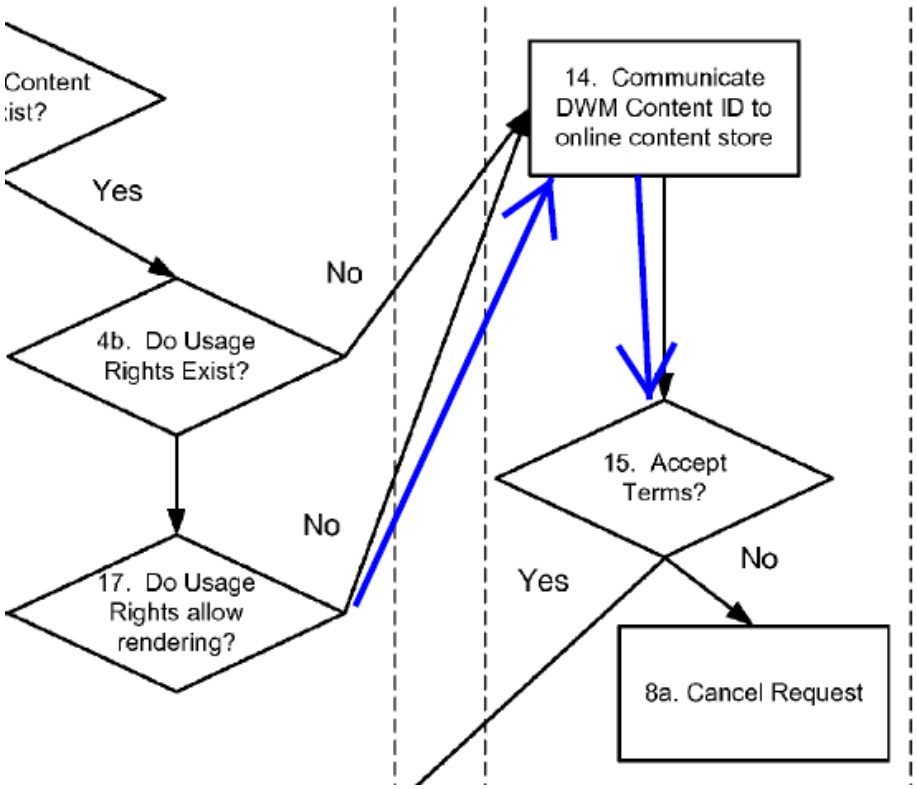
EX1004, FIG. 35A (annotated).

435. Similarly, Levy discloses providing a licensing query when the user is not licensed to reproduce the media content to prompt the user to acquire or decline a license. In particular, when Levy determines that a user has not previously obtained Usage Rights or that Usage Rights do not allow rendering, Levy's Media Server "receives the usage rights from the rights registry; presents the usage rights for user acceptance; and upon acceptance of the usage rights, provides the usage rights and raw content to a resident digital rights management (DRM) system to control access of the content." EX1006, ¶17, FIG. 17d. As part of presenting the usage rights, the Media Server displays the Usage Rights information on the Client Player Application. EX1006, ¶110.

> ***The user can accept or reject the Usage Rights***. Acceptance may require a license, payment or negotiation with a Rights Registry or an on-line media store. If the user does not accept the Usage Rights, the Client Player Application preferably prohibits access and notifies the user. If the user accepts the Usage Rights, the content is played or transferred under the direction of a public DRM system (e.g., a client DRM system) residing on the Media Server.

EX1006, ¶110.

436. Levy illustrates providing the claimed licensing query when the user is not licensed to reproduce the media content in Figure 17d:



EX1006, FIG. 17d (excerpt, annotated).

437. As shown in the above figure, Levy discloses that when the user is not licensed to reproduce the media content item, the Media server communicates DWM Content ID to the online content store and the user is prompted to either accept or decline usage rights. EX1006, FIG. 17d, ¶110. The user may then accept or decline the license. *Id*.

438. Thus, Levy expressly discloses claim element [1G]. A POSA would have been motivated to combine Brandstetter and Levy for the reasons that I previously discussed. *See* Sections XII.A.1-2, XII.B.3. Specifically, implementing Levy's Content ID or fingerprinting checking would provide an efficient way for Brandstetter to organize license information and to control downloaded media

content. A POSA would have also implemented Levy's Content ID to determine that a license had not been previously acquired. The combined Brandstetter-Levy system would then provide the claimed licensing query and offer a license to the user as described in both references.

9. [1H] "after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for [] the media content item of the copyright owner;"

439. Brandstetter discloses this claim element and discloses identifying user demographic data corresponding to users acquiring a license or declining a license. EX1004, ¶¶65, 71, 83, 93, 130.

a) Brandstetter discloses "after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user"

440. As I explained with reference to claim element [1G], Brandstetter discloses providing a licensing query that offers a license to a user to reproduce the claimed media content item. *See* Section XII.B.8. Brandstetter describes identifying user data corresponding to the user when the user acquires the license and when the

user declines the license. EX1004, ¶¶65, 71, 83, 93, 130. For example, Brandstetter's system acquires such user data to enable operations of "marketing and distributing media content, including motion pictures, television programming, online games, music, and other media content." *Id*., ¶¶1-7.

441. To facilitate the marketing capabilities I described above, Brandstetter extracts from any user activity (including a license transaction) user data that is specific to the user that is attempting to reproduce the media content item. Brandstetter explains that as "the users use such a platform, the platform can ***collect information about the users (e.g., their demographics)*** and user activity (e.g., with respect to each item of content marketed or distributed on the platform." *Id*., ¶¶65, 83. For example, Brandstetter describes "obtaining information about user activity on the platform (12)," including "***user demographics (e.g., ages, geographical locations, ethnicities, [and] genders)***." *Id*., ¶71.

442. Brandstetter does not limit the types of information collected by the platform. For example, in addition to user demographic information, Brandstetter describes collecting other information, such as:

> the characteristics of the media content with which each of the users interact, such as the type of media content (e.g., video, audio, graphic, or literary work), the quality of the media content (e.g., high definition, low definition), the rating of the media content (e.g., "PG" or "R"), the genre of the media content (e.g., horror, drama), ***the way in which the***

> ***user interacted with the media content (e.g., clicked on an advertisement for the media content, purchased a license to the media content, or purchased the media content outright), and/or the price, if any, that the user paid for the particular interaction with the media content.***

EX1004, ¶71 (emphasis added).

443. Brandstetter also does not limit when to extract user data. For example, Brandstetter describes that all audience interaction with its platform is "indexed 302 and stored for later analysis." *Id*., ¶130. Brandstetter recognizes that such interaction includes "all activity up to and including a purchase. Thus, even if a purchase is not made, data related to audience interaction with content on the website can be indexed and used for later analysis." *Id.* Brandstetter also recognizes that "audience interaction can include all activity following a purchase. Thus, post purchase data related to audience interaction with content on the website can also be indexed and used for later analysis." *Id*. Based on Brandstetter's express teachings, a POSA would have understood that all user data associated with user interactions (e.g., a first license request, a subsequent license request, a decline of a license offer, etc.) are indexed (i.e. extracted).

444. Moreover, in line with Brandstetter's objective to "empower[] content creators to market and distribute their own content" and to facilitate the "creation, execution, and revision of marketing and distribution strategies for media content by

the content creator," Brandstetter also extracts user data when the user acquires the license and when the user declines the license. *Id*., ¶¶4-5. This, as I have explained, allows content creators to manage marketing and distribution strategies, including, "revision" of such strategies. *Id*., ¶7. For example, Brandstetter describes user interaction can be "indexed 302 and stored for later analysis" (e.g., for a copyright owner to device a marketing strategy). *Id*., ¶130. Brandstetter explains that such audience interaction "can include all activity up to and including a purchase." *Id*., ¶¶71, 130. In other words, Brandstetter extracts user data for all activity including when the user acquires the license (e.g., purchase).

445. Brandstetter also extracts user data when a user declines a license. As I have explained herein above, a user may implicitly decline to purchase a license by viewing a media content item and then navigating away. Brandstetter captures this behavior when capturing "all activity up to and including a purchase" and "even if a purchase is not made." *Id*., ¶130. Alternatively a user may explicitly decline to purchase a license by declining a particular offer provided by Brandstetter's system. For example, as shown in Figure 16, a user may be prompted to "purchase" media content or "rent" media content. The "purchase" in this context refers to a consumer's purchase of a license to "stream the film as often as [they] like and may download the film forever." EX1004, Figure 16. Alternatively, the rental refers to a license to "have up to 30 days to stream the film as often as they like for 168 hours

after the film has started." *Id.* A user selecting the "rental" license rather than the "purchase" license affirmatively declines the "purchase" license. Similarly, a user acquiring the "purchase" license would affirmatively decline the "rental" license. *See id.*, ¶¶75, 77, 87, 119, 120, 123, 124, 126 (describing different license options provided for and selected by a user).

446. Further, Brandstetter explains that selecting a license package over another package "can cause the system to end any other licensing package (e.g., a limited rental) corresponding to the same content." *Id.*, ¶169. In other words, the selection of a first license package over a second license package indicates the explicit decline to purchase the second license package. Such "site activity" is explicitly disclosed in Brandstetter. For example, Brandstetter expressly tracks and indexes all "site activity 304 (e.g., audience interaction with a website)." *Id.*, ¶130, *see also id.*, ¶173 (providing additional examples of site activity such as purchases, impressions, revenues, logins, downloads, bookmarks, searches, etc.).

447. Thus, Brandstetter discloses identifying user demographic data when the user acquires the license and when the user declines the license.

b) Brandstetter discloses "wherein the user data … enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner"

448. As I have explained above, to "enable a copyright owner of the media

content item to gauge a demographic" of users, Brandstetter indexes the user data to be "used for later analysis."

449. As I have explained, Brandstetter's solution empowers content creators to market and distribute their own content by providing the content creators with captured user data. Brandstetter explicitly recognizes that content creators can encompass a wide array of entities, including, copyright owners. For example, Brandstetter describes that:

> the item of media content is the subject matter of a copyright, and the content creator is a human who is the ***initial (original) owner of that copyright*** by virtue of having created the work. It should be understood that some original works of authorship may have been jointly created, in which case ***each joint creator is an initial (original) owner of the copyright of the work***, and is considered to be a content creator. In other circumstances, an original work may have been "made for hire," e.g., made under the direction of another human or of an employer; ***the human or employer who directed the work is considered to be the author of the work for the purposes of copyright law, and is considered to be the initial (original) owner of the copyright for the purposes of this application***. In either circumstance, if a content creator has the right to market and distribute the item of media content, he may do so using the systems and methods described herein.

EX1004, ¶67.

450. Therefore, Brandstetter expressly describes that content creators

include copyright owners.

451. Once Brandstetter obtains information about user activity on its platform, including user demographics, media content characteristics and purchases (*see, e.g.*, EX1004, FIGS. 1A, 12), Brandstetter discloses generating "activity reports" that reflect the obtained information about the user activity. For example, Brandstetter discloses a report module 134 that "collects information about user activity with respect to media content on the platform for use in generating activity reports." *Id.*, ¶93.

452. Brandstetter's activity reports reflect any and all user activity on the platform. As I have explained in Section VII.B, the captured user activity includes "information about the users (e.g., their demographics) and user activity (e.g., with respect to each item of content marketed or distributed on the platform." *Id.*, ¶65.

453. Brandstetter's Figures 40-49 illustrate examples of such reports. Figure 48 below is illustrative:

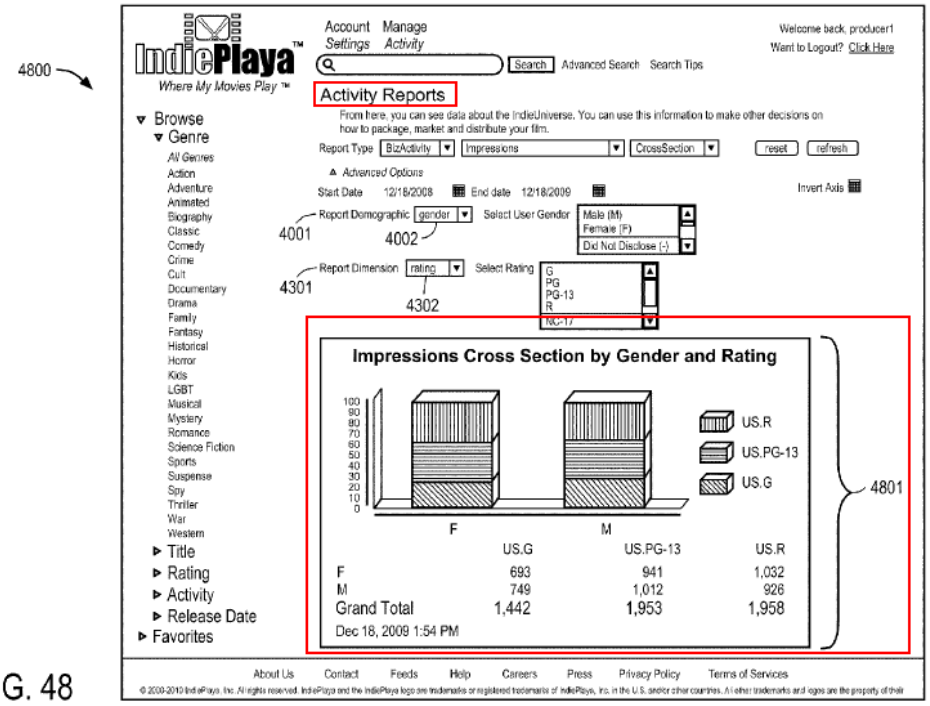


FIG. 48

EX1004, FIG. 48 (annotated).

454. As Brandstetter explains, "FIGS. 40-49 show exemplary interfaces for interacting with content to generate and display reports." EX1004, ¶174. In one example, the reports may provide "graphic interpretations (e.g., scatter plot, pie chart, bar chart, etc.) of the selected content." *Id*. For example, Figure 48 illustrates a "bar chart graphic interpretation 4801" of content reflective of "collect[ed] information about the users…compiled into reports for use by content creators." *Id*., ¶¶179; *see also id*., 174, 65. Brandstetter further explains that the use by content creators is to empower content creators in "developing and executing one or more strategies for marketing and distributing their own content." *Id*., ¶65.

455. Thus, Brandstetter describes providing content providers or copyright owners with user data in the form of reports allowing the content providers to gauge demographic information.

10. [1I] "aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request;"

456. As I explained with reference to claim element [1H], Brandstetter discloses "aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request." EX1004, ¶¶65, 74, 85, 86, 93, 130; Section XII.B.9.

457. Brandstetter describes aggregating data that its platform gathers, including the data I described above with reference to claim element [1C]—i.e., user age, geographical location, gender, and ethnicity. EX1004, ¶71; Section XII.B.4. Such data is used to generate "intelligence," which "can include raw (e.g., unprocessed) and/or derived (e.g., processed) data." EX1004, ¶¶132-133. The intelligence is then used to generate "***statistics***" for particular users based in part on "audience interaction" with the platform, as described above. *Id.*, ¶¶133, 172; Section XII.B.9. The intelligence and/or statistics are aggregated from, and thus summarize, the user data for particular users. Indeed, Brandstetter makes clear that each set of statistics summarizes data for a particular user. *See* EX1004, ¶¶128

(noting that collected data can be used to "offer one or more licensing packages 204 to ***an audience member 306 (e.g., a audience)***") (emphasis added), 133 (noting that "reports can be used to examine account histories and make recommendations (e.g., ***for a single account*** or for a group of related accounts)") (emphasis added). These sets of intelligence and/or statistics thus disclose the claimed "statistics records." As I further explain below, Brandstetter later uses these "statistics" to "generate one or more reports" that describe user interactions. *Id.*; *see* Section XII.B.12.

458. And, as I explained above with respect to element [1H], Brandstetter tracks user data when a user both accepts ***and*** declines to license content. *See* Sections XII.B.9. In particular, Brandstetter states that its platform collects user-specific data "up to and including a purchase" so that, "even if a purchase is not made, data related to audience interaction with content on the website can be indexed and ***used for later analysis***" (i.e., in Brandstetter's activity reports). EX1004, ¶130. A POSA would have understood, therefore, that Brandstetter aggregates data in both instances.

11. [1J] "storing in the license database the statistics record so that the user data is accessible to the copyright owner of the media content item; and"

459. As I explained with reference to claim elements [1H] and [1I], Brandstetter stores user activity data including user demographic data in order to build intelligence and/or statistics to be used in reports for content providers. *See*

Sections XII.B.9-10. Brandstetter further explains that these statistics (i.e., the claimed "statistics record") are stored for subsequent retrieval. EX1004, ¶¶74, 85, 93, 96, FIG. 1C. For example, Brandstetter uses the stored statistics to generate "activity reports," which are provided to content owners (i.e., the claimed "copyright owner"). *Id*., ¶¶8-9, 172. In this manner, Brandstetter discloses storing statistics records and providing the statistics records to copyright owners in the form of activity reports. *Id.*

460. Brandstetter discloses that its activity reports can be "dynamically constructed based upon a particular request" or "prepared ahead of time (e.g., on a predetermined basis), stored, and subsequently retrieved from persistent storage." *Id*., ¶74. Annotated Figure 1C is illustrative:

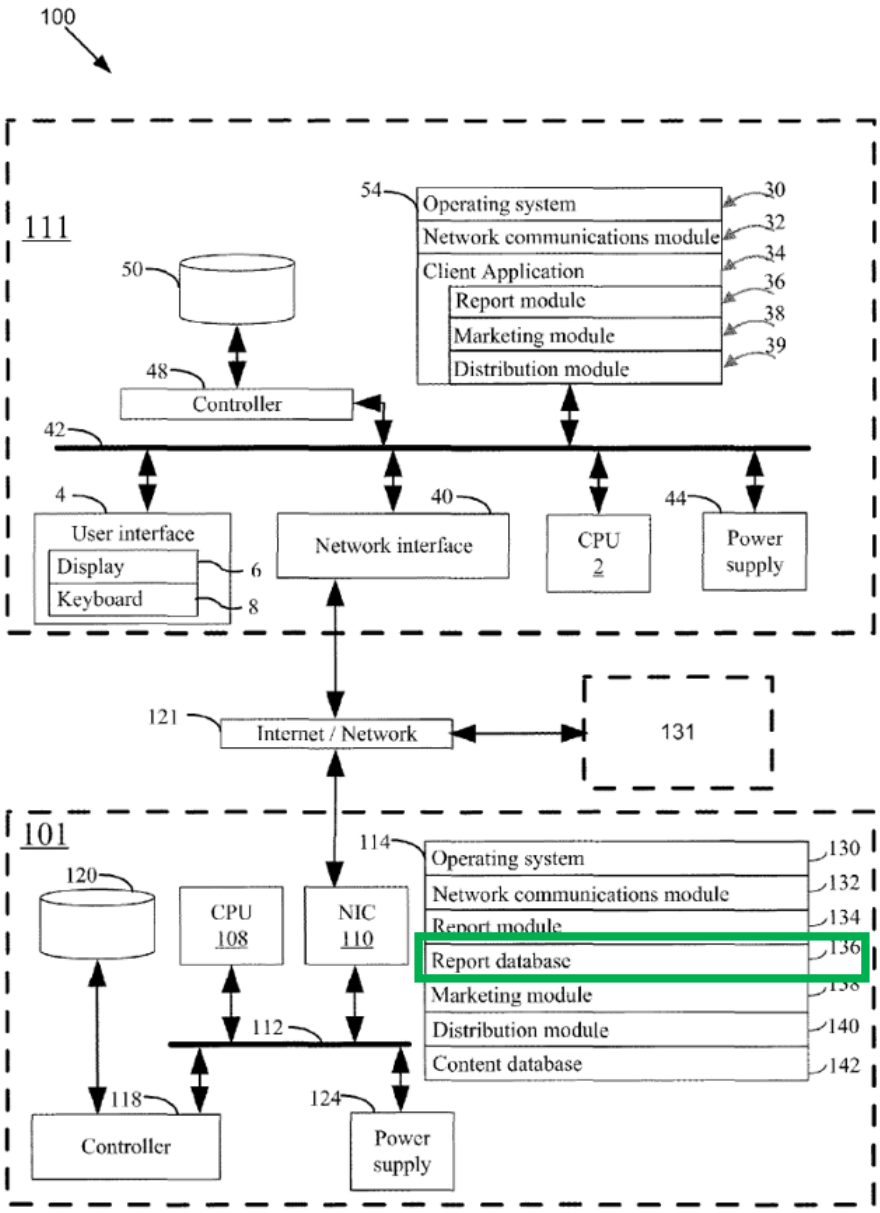


FIG. 1C
EX1004, FIG. 1C (annotated).

461. Specifically, Brandstetter explains that:

The Memory 114 preferably stores: … a report module 134 that collects information about user activity with respect to media content on the platform for use in ***generating activity reports, that stores such***

> ***information in report database 136***, that receives requests from client device 111 for activity reports via network 121 and appropriate hardware there between, and generates activity reports responsive to such requests, and that transmits such activity reports to client device 111 via network 121 and appropriate hardware there between….

EX1004, ¶93-96 FIG. 1C (element 136) (emphasis added).

462. As seen from this description, Brandstetter uses the same memory 114 to store report information and to generate reports. As I previously described, memory 114 also stores licensing information in a distribution module 140. See Section XII.B.6; EX1004, ¶98. For this reason, memory 114 discloses the claimed "license database." Memory 114 also includes report module 134, which "collects information about user activity with respect to media content on the platform" and that the report module 134 then "stores such information in report database 136." EX1004, ¶¶93, 96. Brandstetter explains that user activity information collected by the platform can include "user demographics" as well as whether a user "purchased a license to the media content" or "purchased the media content outright." *Id*., ¶71. In this manner, Brandstetter discloses storing the statistics record and user information in the same memory 114 that stores the licensing information managed by distribution module 140. *Id*., ¶¶92-93, 96, 98. Therefore, Brandstetter discloses storing the statistics record in a "license database" as recited in the claim.

463. Additionally, Brandstetter does not limit the storage of the reports in a

database associated with server 101. Brandstetter recognizes that other storage may also be possible, including storage on client devices. For example, Brandstetter explains that:

> Method 20 further includes receiving and displaying the activity report from the platform, (23). For example, if the content creator is using a client computer, the client computer may receive the activity report using a network, ***store*** ***the activity report in a computer-readable medium in the computer (e.g., a hard drive or a cache memory)***, and display the activity report to the content creator via an appropriate interface device, such as a display screen connected to the client computer.

EX1004, ¶85 (emphasis added).

464. Accordingly, Brandstetter explicitly discloses storing the statistical record in the license database. When combining Levy with Brandstetter, a POSA would have also found it obvious to store the user data with the licensing information described in Levy for the reasons I explained with reference to claim element [1E]. That is, Brandstetter already suggests the storage of user data using memory 114 that includes license information. EX1004, ¶¶92-93, 96, 98. A POSA would have therefore found it obvious to store the license information described in Levy in the same license database with the user data described in Brandstetter.

12. [1K] "analyzing a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user."

465. As I explained with reference to claim elements [1H], [1I], and [1J], Brandstetter discloses analyzing a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user." *See* Sections XII.B.9-11. Brandstetter's process of generating "activity reports" discloses the analysis of a plurality of statistics records.

466. In particular, Brandstetter makes clear that the retrieved aggregated data is analyzed for purposes of targeted marketing—i.e., to determine a "targeted demographic" for media content items. EX1004, ¶¶6, 77. This is accomplished when Brandstetter's "report module 134" analyzes the aggregated data to "generat[e] activity reports," which "enable content creators to efficiently market and distribute their content to a target audience based upon reports." *Id.* ¶6. As I previously explained, Brandstetter tracks and indexes all "site activity 304 (e.g., audience interaction with a website)" including "all activity up to and including a purchase." *Id.*, ¶130. Brandstetter then analyzes the indexed site activity to generate "intelligence" including raw user interaction data. *Id.*, ¶¶132-133. The intelligence

is then used to generate "***statistics***" for particular users, which discloses the claimed "statistics records." *Id*., ¶¶133, 172 (emphasis added).

467. Subsequently, Brandstetter describes using these statistics to generate activity reports. *Id*., ¶¶6, 8-10, 132-133, 172. The process of generating an activity report and providing the activity report to a content creator discloses "analyzing a plurality of statistics records… to provide the copyright owner with the aggregated user data" as claimed. *Id.*

468. To analyze the statistics and generate reports, Brandstetter explains:

> intelligence 305 can be processed and statistics can be automatically generated (e.g., in real-time) based upon website activity (e.g., audience 306 interaction). ***Generated statistics can be used (e.g., by the system) to generate one or more reports (e.g., based upon audience 306 interaction)***. For example, reports can be used by a content creator to examine account histories and to make one or more content recommendations or offers (e.g., licensing packages). Additionally, content recommendations or offers can be made available for a single account or for a group of related accounts.

EX1004, ¶172 (emphasis added).

469. Brandstetter explains that the reports contain "historical information regarding purchases (e.g., of similar media content produced by other content creators) ***by one or more demographic groups***." *Id.* An example of such a report is shown in Figure 48 below:

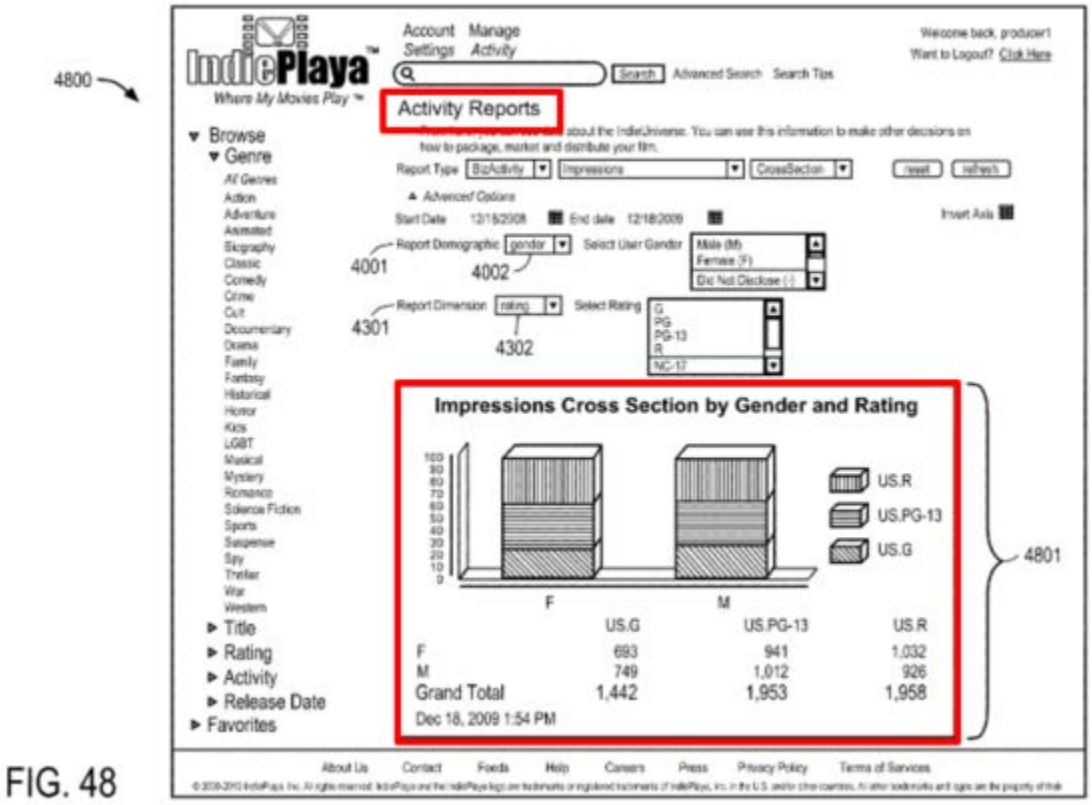


FIG. 48

EX1004, FIG. 48 (annotated).

470. The report illustrated in Figure 48 breaks down user impressions of a media content item by gender, but Brandstetter makes clear that reports can be generated according to other user data, such as "purchases, impressions, streams, downloads, bookmarks, ratings, reviews, tags, insider interactions, video search click throughs" and the like. EX1004, ¶¶173-74, 179.

471. Importantly, Brandstetter describes not only a demographic of individuals who accept to stream content, but also a demographic of individuals who decline to do so. In particular, Brandstetter states that "***even if a purchase is not made***, data related to audience interaction with content … can be indexed and ***used***

for later analysis." *Id*., ¶130 (emphasis added). A POSA would have understood from this disclosure that Brandstetter analyzes aggregated user data when generating reports to "provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user."

472. Thus, Brandstetter discloses this element of claim 1.

C. Independent Claim 6

473. The combination of Brandstetter and Levy renders claim 6 obvious. Independent claim 6 describes elements similar to claim 1. The combination of Brandstetter and Levy discloses all of the elements of claim 6 for similar reasons to those that I have presented for claim 1. I have provided a table below mapping the claim elements from claim 6 to their corresponding elements from claim 1. Claim 6 additionally describes a "media catalog database" as well as "media content records" that identify media content items. I have included some additional explanation below to address these elements of claim 6.

[6P] A computer implemented method for providing a media content licensing and verification system to license media content for reproduction, the method comprising:	Corresponds to element [1P] of claim 1. See Section XII.B.1. *See also* additional explanation provided below.

[6A] ***receiving a media licensing request from an external device associated with a user***, wherein the media licensing request includes digital media information associated with the media content item included in a digital media file;	Corresponds to Elements [1A]-[1C] of claim 1. *See* Section XII.B.2-4. *See also* additional explanation provided below.
[6B] accessing a media catalog database that includes a plurality of media content records, wherein a media content record from the plurality of media content records is associated with the media content item;	Corresponds to Elements [1D]-[1E] of claim 1. *See* Section XII.B.5-6. *See also* additional explanation provided below.
[6C] determining whether the media licensing request is to be granted based on the media content record stored in the media catalog database that is associated with the media content item;	Corresponds to Elements [1D]-[1E] of claim 1. *See* Section XII.B.5-6. *See also* additional explanation provided below.
[6D] granting the media licensing request for the external device when the media content record associated with the media content item verifies the granting of the license for the media content item to the external device;	Corresponds to Element [1F] of claim 1. *See* Section XII.B.7. *See also* additional explanation provided below.
[6E] declining the media licensing request for the external device when the media content record associated with the media content item does not verify the granting of the license for the media content to the external device;	Corresponds to Element [1F] of claim 1. *See* Section XII.B.7. *See also* additional explanation provided below.

[6F] after the determination of the media licensing request, extracting from the media licensing request user data that is specific to the user that is attempting to reproduce the media content item when the user is granted the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner;	Corresponds to Element [1H] of claim 1. *See* Section XII.B.9.
[6G] aggregating the user data into a statistics record for the media licensing request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the media licensing request;	Corresponds to Element [1I] of claim 1. *See* Section XII.B.10.
[6H] storing in a license database the statistics record so that the user data is accessible to the copyright owner of the media content item; and	Corresponds to Element [1J] of claim 1. *See* Section XII.B.11.
[6I] analyzing a plurality of statistics records aggregated from each media licensing request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each media licensing request of the media content item when the license is acquired by the user and when the license is declined by the user.	Corresponds to Element [1K] of claim 1. *See* Section XII.B.12.

474. Regarding [6P], Brandstetter's server 101 discloses the claimed "media content licensing and verification system." EX1004, ¶¶67, 69, 90-101 118, 173, FIG. 1C.

475. Brandstetter and Levy also disclose accessing a "media catalog database" to identify a "media content record" to identify requested media content for the reasons I explained with respect to claim elements [1D] and [1E]. Section XII.B.5-6. Specifically, both Brandstetter and Levy track and identify media content items corresponding to user licensing rights. Brandstetter's and Levy's identification of licensing rights for specific media discloses this same content identification described in claim 6 and the '581 patent. EX1001, 10:28-53.

476. Levy also discloses the use of fingerprints when accessing a media catalog database and media content records. Claim element [6A] states that "the media licensing request includes digital media information associated with the media content item." As I explained with reference to claim elements [1A] and [1B], Levy discloses loading a media file at a user device (*i.e.*, "Media Server") and also analyzing the media file to determine a "Content ID" or "fingerprint." EX1006, ¶¶16-17, 85, 107, 140-42, 145-46. The Content ID or fingerprint disclose the claimed "digital media information." Levy's Media Server, which executes the Client Player Application, detects the loading of raw content and determines a corresponding Content ID. *Id.*, ¶¶35, 83-84, 89, 108-09. "The Media Server includes a digital

watermark detector … [that] searches raw content for a DWM Content ID embedded therein." *Id.*, ¶109. When the Media Server does not identify corresponding Usage Rights (*i.e.*, a license) or when identified Usage Rights do not allow rendering, the Media Server transmits the Content ID to an "online content store." *Id.*, ¶¶109, 112-14, 117, FIG. 17d.

> The Media Server (e.g., the Client Player Application) initiates communication with an online content store (e.g., think iTunes®) and ***provides the DWM Content ID to the online store. The online store uses the DWM Content ID to interrogate a DWM database*** (e.g., ***a database associating DWM Content IDs with respective content files and/or options***). The online store presents the Media Server with options, e.g., would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate.

EX1006, ¶112 (emphasis added).

477. Thus, Levy describes an online content store receiving a media licensing request that includes digital media information as recited in claim element [6A].

478. Levy's "DWM database" also discloses the claimed "media catalog database." Levy's "DWM database" is "a database associating DWM Content IDs with respective content files and/or options)." EX1006, ¶112. Levy's "online store uses the DWM Content ID to interrogate [the] DWM database" to determine purchase options. *Id.* "The online store presents the Media Server with options, e.g.,

would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate." *Id*. When a user purchases the content, a "new DRM packaged version is rendered or played according to its Usage Rights." *Id*. Otherwise, if the user declines to accept the terms, the request is canceled. *Id*., FIGS. 17c, 17d. In this manner, Levy describes checking the DWM database using the Content ID to determine options for licensing content. *Id.* Thus, Levy's comparison of Content IDs or fingerprints stored in the DWM database discloses claim element [6B].

479. This same interrogating of the DWM database to determine purchase options also discloses the "determining" recited in claim element [6C]. In particular, Levy uses the determined options to offer a purchase option to the user. The user's decision of whether to accept the terms of the licenses then causes the "granting" recited in claim element [6D] or the "declining" recited in claim element [6E].

480. Additionally, Levy's description of a "Rights Registry" database or "Fingerprint Rights Registry" also discloses the claimed "media catalog database." *Id*., ¶¶17, 113, 140, FIG. 18. "A Fingerprint Content ID is communicated to the Fingerprint Rights Registry to obtain corresponding Usage Rights." *Id*., ¶140. "Usage Rights associated with a DRM-protected version are indexed within a DRM Rights Registry via the DRM Content ID." *Id*., ¶97. This description therefore also discloses claim elements [6A] and [6B]. The storage of Usage Rights with

corresponding Content IDs or fingerprints also discloses the claimed "media content records." EX1006, ¶¶109, 112-14. 117, FIG. 17d.

481. Levy further describes offering corresponding "Usage Rights" to a user to accept or decline, which also discloses claim elements [6C], [6D], and [6E]. "Usage Rights are provided from a Rights Registry to the Media Server." *Id*., ¶121. In particular, the Media Server "receives the usage rights from the rights registry; presents the usage rights for user acceptance; and upon acceptance of the usage rights, provides the usage rights and raw content to a resident digital rights management (DRM) system to control access of the content." *Id*., ¶17. As part of presenting the usage rights, the Media Server displays the Usage Rights information on the Client Player Application. *Id*., ¶110.

> ***The user can accept or reject the Usage Rights***. Acceptance may require a license, payment or negotiation with a Rights Registry or an on-line media store. If the user does not accept the Usage Rights, the Client Player Application preferably prohibits access and notifies the user. If the user accepts the Usage Rights, the content is played or transferred under the direction of a public DRM system (e.g., a client DRM system) residing on the Media Server.

EX1006, ¶110 (emphasis added).

482. The user's decision of whether to accept the terms of the licenses then causes the "granting" recited in claim element [6D] or the "declining" recited in claim element [6E]. In this manner, Levy's description of interactions with the

Rights Registry to determine whether to grant or decline a media licensing request also discloses claim elements [6C], [6D], and [6E].

D. Independent Claim 11

483. The combination of Brandstetter and Levy renders claim 11 obvious. Independent claim 11 claims a "system" that performs substantially the same method recited in claim 1. The combination of Brandstetter and Levy discloses all of the elements of claim 11 for the same reasons that I have presented for claim 1. I have provided a table below mapping the claim elements from claim 11 to their corresponding elements from claim 1. Claim 11 additionally describes conventional components such as a "processor" and a "user interface," which I address with some additional explanation below.

[11P] A system for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, ***comprising: a processor configured to***:	Corresponds to element [1P] of claim 1. *See* Section XII.B.1. *See also* additional explanation provided below.
[11A] receive a license request from a user requesting to engage in a license transaction to reproduce the media content item;	Corresponds to Element [1C] of claim 1. *See* Section XII.B.4.
[11B] load a digital media file for reproduction, wherein the digital media file includes the media content item requested by the user to reproduce,	Corresponds to Elements [1A] of claim 1. *See* Section XII.B.2.

[11C] analyze the digital media file to identify digital media information associated with the media content item,	Corresponds to Elements [1B] of claim 1. *See* Section XII.B.3.
[11D] evaluate the license transaction to determine whether the user has acquired a license to reproduce the media content item;	Corresponds to Element [1D] of claim 1. *See* Section XII.B.5.
[11E] access a licensing database to determine whether the user is licensed to reproduce the media content item based on the digital media information,	Corresponds to Element [1E] of claim 1. *See* Section XII.B.6.
[11F] after the evaluation of the license transaction, extract from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner,	Corresponds to Element [1H] of claim 1. *See* Section XII.B.9.
[11G] aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request,	Corresponds to Element [1I] of claim 1. *See* Section XII.B.10.
[11H] store in the license database the statistics record so that the user data is accessible to the copyright owner of the media content item, and	Corresponds to Element [1J] of claim 1. *See* Section XII.B.11.

[11I] analyze a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user,	Corresponds to Element [1K] of claim 1. *See* Section XII.B.12.
[11J] ***a user interface configured to provide a licensing query to the user*** when the user is not licensed to reproduce the media content item to prompt the user to select to acquire a license to reproduce the media content item or to decline the license to reproduce the media content item.	Corresponds to Element [1G] of claim 1. *See* Section XII.B.8. *See also* additional explanation provided below.

484. Claim element [11P] recites a system implementing the method of claim 1. This system includes a "processor." Both Brandstetter and Levy disclose processors configured to perform the method steps described in claim 1. EX1004, ¶¶92, 180-83; EX1006, ¶¶9, 83-84, 114, 150.

485. Claim element [11J] performs the same step as claim element [1G] from claim 1. Claim element [11J] additionally recites a "user interface" that prompts the user to acquire or to decline the license to reproduce the media content item. Brandstetter teaches this based on the numerous example interfaces depicted in its Figures. *See, e.g.*, EX1004, FIGS. 35, 35A, 36-39. Brandstetter's server offers a user interface that allows client computers to access the server, view content via a web browser, and rent or purchase content. EX1004, ¶¶147, 165-66, 169, 185, FIGS. 15,

26, 35, 35A. This occurs via a "network interface 110" which provides a user interface to client device 111. *Id.*, ¶92. In this manner, Brandstetter discloses a "server-client computer architecture in which the user interfaces with the platform (e.g., the server) using a client computer over a network." *Id.*, ¶87.

486. Brandstetter also depicts client device 111 in Figure 1C with a "user interface 4" as well. *Id.*, ¶¶101-02, 107.

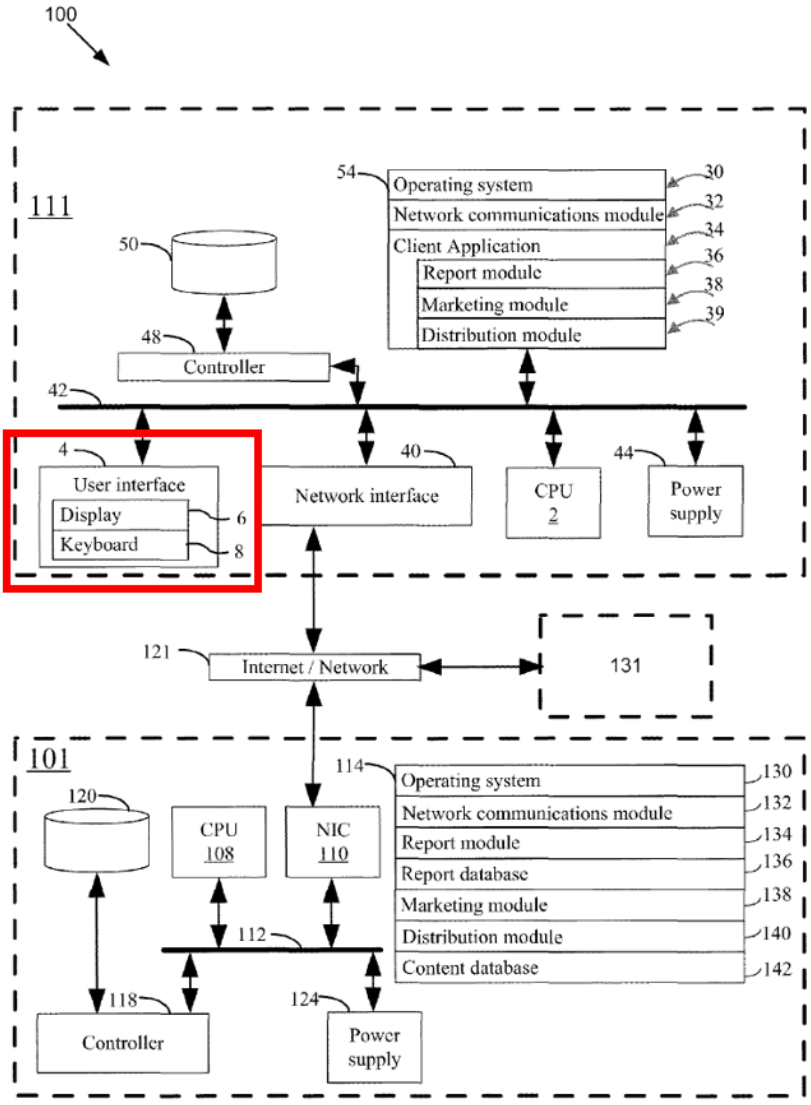


FIG. 1C

EX1004, FIG. 1C (annotated).

487. Brandstetter states that its client device 111 includes "a user interface 4, the user interface 4 including a display 6 and a keyboard or keypad 8." EX1004, ¶107. A user would use this user interface to acquire or to decline a license and provide a response to server 101. *Id.*, ¶¶92, 101.

488. Levy also describes this process when providing users with the option

to accept or decline license terms. As part of presenting the usage rights, the Media Server displays the Usage Rights information on the Client Player Application. EX1006, ¶110.

> ***The user can accept or reject the Usage Rights***. Acceptance may require a license, payment or negotiation with a Rights Registry or an on-line media store. If the user does not accept the Usage Rights, the Client Player Application preferably prohibits access and notifies the user. If the user accepts the Usage Rights, the content is played or transferred under the direction of a public DRM system (e.g., a client DRM system) residing on the Media Server.

Id., (emphasis added).

489. As seen from this description, Levy's display of Usage Rights information using the Client Player Application and allowing a user to accept or reject the Usage Rights (i.e., a license) discloses claim element [11J]. *Id*., ¶¶83-84, 87, 110. Levy's "graphical user interface (GUI)" as displayed on the Media Server discloses the claimed "user interface." *Id*., ¶¶83-84.

E. Independent Claim 16

490. The combination of Brandstetter and Levy renders claim 16 obvious. Independent claim 16 claims a "system" that performs substantially the same method recited in claim 6. The combination of Brandstetter and Levy discloses all of the elements of claim 16 for similar reasons to those that I have presented for claims 1 and 6. I have provided a table below mapping the claim elements from claim 16 to

their corresponding elements from claims 1 and 6. Claim 16 additionally describes "a transceiver configured to receive a media licensing request" and "a processor." I have included some additional explanation below to address the "transceiver" of claim 16.

[16P] A system for providing a media content licensing and verification system to license media content for reproduction, comprising:	Corresponds to Element [1P] of claim 1 and Element [6P] of claim 6. *See* Sections XII.B.1, XII.C. *See also* additional explanation provided below.
[16A.1] ***a transceiver configured to receive a media licensing request from an external device associated with a user***, wherein the media licensing request includes digital media information associated with the media content item included in a digital media file; and	Corresponds to elements [1A]-[1C] of claim 1 and Element [6A] of claim 6. *See* Sections XII.B.2-4, XII.C. *See also* additional explanation provided below.
[16A.2] a processor configured to:	*See also* additional explanation provided below.
[16B] access a media catalog database that includes a plurality of media content records, wherein a media content record from the plurality of media content records is associated with the media content item,	Corresponds to Elements [1D]-[1E] of claim 1 and Element [6B] of claim 6. *See* Sections XII.B.5-6, XII.C.
[16C] determine whether the media licensing request is to be granted based on the media content record stored in the media catalog database that is associated with the media content item,	Corresponds to Elements [1D]-[1E] of claim 1 and Element [6C] of claim 6. *See* Sections XII.B.5-6, XII.C.

[16D] grant the media licensing request for the external device when the media content record associated with the media content item verifies the granting of the license for the media content item to the external device,	Corresponds to Element [1F] of claim 1 and Element [6D] of claim 6. *See* Sections XII.B.7, XII.C.
[16E] decline the media licensing request for the external device when the media content record associated with the media content item does not verify the granting of the license for the media content item to the external device,	Corresponds to Element [1F] of claim 1 and Element [6E] of claim 6. *See* Sections XII.B.7, XII.C.
[16F] after the determination of the media licensing request, extracting from the media licensing request user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner,	Corresponds to Element [1H] of claim 1 and Element [6F] of claim 6. *See* Section XII.B.8, XII.C.
[16G] aggregate the user data into a statistics record for the media licensing request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the media licensing request, and	Corresponds to Element [1I] of claim 1 and Element [6G] of claim 6. *See* Sections XII.B.10, XII.C.

[16H] store in a license database the statistics record so that the user data is accessible to the copyright owner of the media content item, and	Corresponds to Element [1J] of claim 1 and Element [6H] of claim 6. *See* Sections XII.B.11, XII.C.
[16I] analyze a plurality of statistics records aggregated from each media licensing request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user.	Corresponds to Element [1K] of claim 1 and Element [6I] of claim 6. *See* Section XII.B.12, XII.C.

491. Claim element [16A.1] recites a "transceiver configured to receive a media licensing request from an external device associated with a user." Both Brandstetter and Levy disclose such a transceiver as I explain below. At the outset, I note that the '581 patent does not provide specific details on the functionality of a transceiver but simply recites a generic "transceiver." EX1001, 2:5-7, 6:37-41, 7:15-17. Whether implemented on device 10 or on licensing system 16, as depicted in Figure 2, the transceiver merely needs to be capable of communications over network 12. *Id.*, 3:15-23, 4:38-42, 5:49-6:8. "Network 12 may include one or more networks, such as the Internet." *Id.*, 5:50-51. Both Brandstetter and Levy also disclose transceivers that facilitate communications over the Internet.

492. For example, Brandstetter teaches this bi-directional communication over a network such as the Internet. This communication is depicted in Figure 1C.

As seen from this figure, the "network or other communications interface (NIC) 110" discloses the claimed "transceiver." EX1004, ¶92.

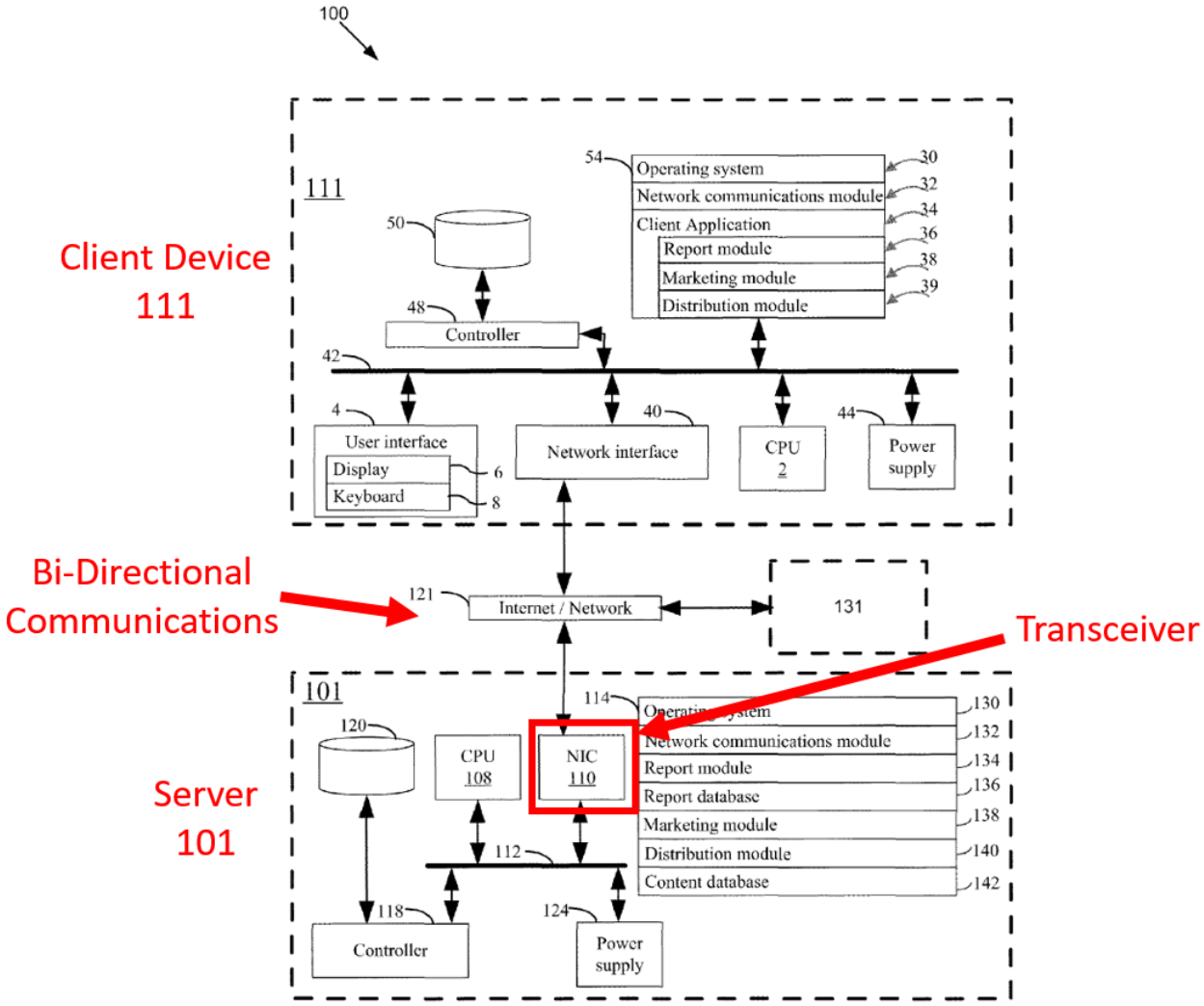


FIG. 1C

EX1004, FIG. 1C (annotated).

493. As seen from Figure 1C, "a server 101 and a client device 111 [] are configured to communicate with one another via the Internet or other network 121." EX1004, ¶91. Server 101 interfaces with the Internet using "network interface 110." *Id.*, ¶¶92-93. Thus, Brandstetter's "network interface 110" discloses the claimed

transceiver.

494. Levy also describes bi-directional communications between a media server and an online content store. For example, Levy describes the Media Server transmitting an identified Content ID to the online content store. EX1006, ¶¶109, 112-14, 117, FIG. 17d. Subsequently, the "online store presents the Media Server with options, e.g., would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate." *Id*., ¶112. This demonstrates bi-directional communications between the media server and the online content store. The term "online" further suggests that the communications occur over the Internet as Levy discusses as well. *Id*., ¶¶50-51, 64, 97, 121, FIG. 18.

495. In view of these descriptions, both Brandstetter and Levy describe online content stores with transceivers to transmit and receive communications from user devices. As I explained with reference to claim elements [1A]-[1C] and [6A], these online content stores receive a media licensing request from an external device associated with a user. *See* Sections XII.B.2-4, XII.C. Thus, Brandstetter and Levy disclose the claimed "transceiver."

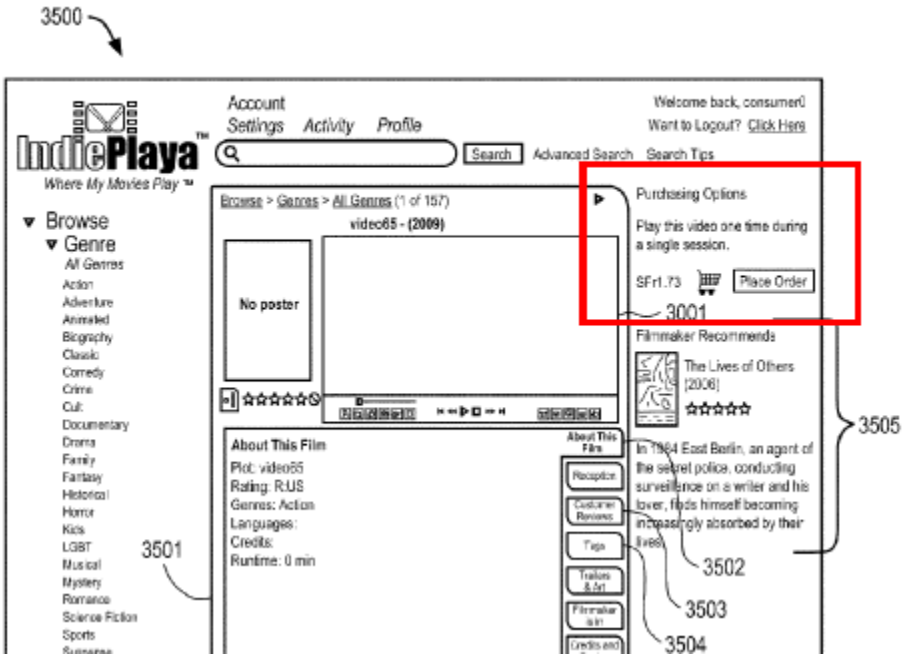
496. Claim element [16A.2] recites a "processor" implemented in the system of claim 16. Both Brandstetter and Levy disclose processors configured to perform the method steps described in claim 6. EX1004, ¶¶92, 180-83; EX1006, ¶¶9, 83-84, 114, 150.

F. Claims 2 and 12

497. Claims 2 and 12 recite:

> Claim 2: The method of claim 1, further comprising: receiving from the user ***a licensing response to the licensing query***, wherein the licensing response indicates whether the user has selected to acquire the license to reproduce the media content item or to decline the license to reproduce the media content item.
>
> Claim 12: The system of claim 11, wherein the user interface is further configured to receive from the user ***a licensing response to the licensing query***, wherein the licensing response indicates whether the user has selected to acquire the license to reproduce the media content item or to decline the license to reproduce the media content item.

498. The combination of Brandstetter and Levy discloses claims 2 and 12. As I explained with reference to claim element [1G] and claim 11, Brandstetter and Levy disclose user interfaces that allow a user to provide a licensing response to a licensing query. *See* Sections XII.B.8, XII.D. For example, for Brandstetter, a user may select a "Place Order" or "Buy" button as depicted in Figures 35 and 35A respectively to provide a licensing response. EX1004, ¶169.



EX1004, FIG. 35 (excerpt, annotated).

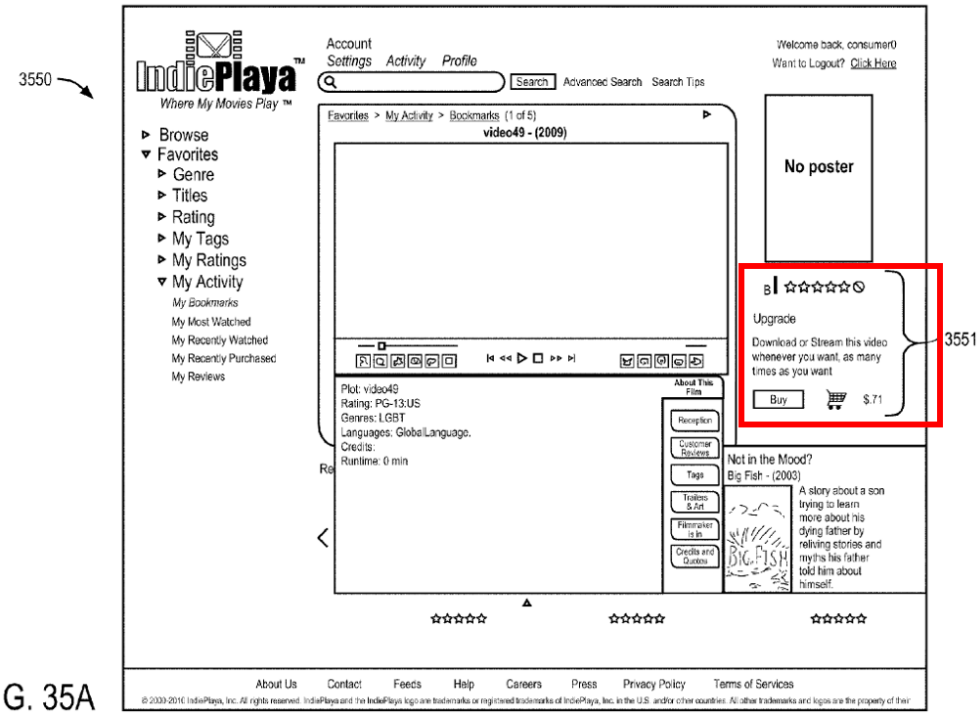


FIG. 35A

EX1004, FIG. 35A (annotated).

499. Brandstetter also tracks audience interaction including "all activity up to and including a purchase." "[E]ven if a purchase is not made, data related to audience interaction with content on the website can be indexed and used for later analysis." EX1004. ¶130. In this manner, Brandstetter tracks licensing responses for users acquiring and declining licenses offered in licensing queries.

500. Similarly, Levy also describes providing Usage Rights to a user via a Media Server that displays the Usage Rights information on a Client Player Application. EX1006, ¶¶17, 77, 110.

> ***The user can accept or reject the Usage Rights***. Acceptance may require a license, payment or negotiation with a Rights Registry or an on-line media store. If the user does not accept the Usage Rights, the Client Player Application preferably prohibits access and notifies the user. If the user accepts the Usage Rights, the content is played or transferred under the direction of a public DRM system (e.g., a client DRM system) residing on the Media Server.

Id., ¶110 (emphasis added).

501. "The consumer can signal acceptance via the player, or viewing the video D can be deemed acceptance of the terms." *Id*., ¶77. In this manner, Levy also discloses licensing responses for users acquiring and declining licenses offered in licensing queries.

502. Thus, the combination of Brandstetter and Levy discloses claims 2 and 12.

G. Claims 3 and 13

503. Claims 3 and 13 recite:

> Claim 3: The method of claim 2, further comprising: ***providing a licensing request to a licensing system when the user desires to acquire the license*** to reproduce the media content item based on the licensing response from the user; and ***preventing reproduction of the media content item when the user declines the license*** to reproduce the media content item.
>
> Claim 13: The system of claim 12, wherein the processor is further configured to: ***provide a licensing request to a licensing system after the user has completed the licensing response***; and ***prevent reproduction of the media content item when the user selects to decline the license*** to reproduce the media content item.

504. The combination of Brandstetter and Levy discloses claims 3 and 13. As I explained with reference to claim element [1G], Levy discloses requesting a license from an online content store when a user has expressed a desire to accept a license or Usage Rights offered by the online content store. *See* EX1006, FIG. 17d, ¶112. In particular, the "online store presents the Media Server with options, e.g., would a user like to purchase music or video associated with the DWM Content ID, perhaps at a discounted rate." *Id*., ¶112. A user can select the content corresponding to the DWM Content ID or related content for purchase. *Id*. Specifically, Levy explains that:

> The user can accept or reject the Usage Rights. Acceptance may require a license, payment or negotiation with a Rights Registry or an on-line media store. If the user does not accept the Usage Rights, the Client Player Application preferably prohibits access and notifies the user. If the user accepts the Usage Rights, the content is played or transferred under the direction of a public DRM system (e.g., a client DRM system) residing on the Media Server.

EX1006, ¶110.

505. In this manner, Levy discloses providing a licensing request to an online store (i.e., the claimed "licensing system") when the user desires to acquire a license. Similarly, Levy discloses preventing reproduction when the user declines the license. *Id*.

506. Thus, the combination of Brandstetter and Levy discloses claims 3 and 13.

H. Claims 4 and 14

507. Claims 4 and 14 recite:

> Claim 4: The method of claim 3, further comprising: ***receiving a license*** to reproduce the media content from the licensing system ***when the licensing request is granted*** by the licensing system; and ***preventing reproduction*** of the media content item ***when the licensing request is declined by the licensing system***.
>
> Claim 14: The system of claim 13, wherein the processor is further configured to: ***receive a license*** to reproduce the media content item

from the licensing system ***when the licensing request is granted by the licensing system***; and ***prevent reproduction*** of the media content item ***when the licensing request is declined by the licensing system***.

508. The combination of Brandstetter and Levy discloses claims 4 and 14. Brandstetter and Levy disclose receiving a license when a licensing request is granted. For example, as I previously explained, Brandstetter tracks license purchases obtained by a user. EX1004, ¶¶99, 166, FIGS. 26, 28. When a user purchases a license (i.e., when the licensing request is granted), the user account receives a license, which is tracked by Brandstetter's platform. *Id.* The user may then view the licenses that were granted. For example, Figures 26 and 28 allow a user to view active rentals and purchases respectively. *Id.*, ¶166. A user may have obtained "a license to experience the media content for a limited amount of time or a limited number of viewings/listenings, or a 'purchase' of the media content enabling them to experience the content for an unlimited amount of time." *Id.*, ¶87. Brandstetter facilitates this type of license management and therefore discloses the receipt of a license and tracking granted licensing requests to facilitate later viewings or listenings of content. *Id.* Thus, Brandstetter discloses the claimed receiving of a license when the license request is granted.

509. Brandstetter also suggests the claimed "preventing reproduction of the media content item when the licensing request is declined by the licensing system." A POSA would have understood that Brandstetter's platform would not allow access

to content when a license request is declined. For example, one of Brandstetter's main motivations is to secure revenue streams for content creators. *Id*., ¶¶4-5. A POSA would have found it obvious to prevent reproduction of media content when a license has been declined to avoid providing content free of charge. Therefore, a POSA would have found it obvious for Brandstetter's platform to prevent reproduction of media when a license has not been granted.

510. Levy also discloses these claim elements. To the extent that the "receiving" is interpreted to occur at a client device, Levy discloses its "Media Server" receiving a license after a purchase has been made. EX1006, ¶¶98, 110, 112. For example, Levy transmits a "DRM-packaged" version of raw content to the Media Server, which is "rendered or played according to its Usage Rights." *Id*., ¶112. "Usage Rights are often packaged within a DRM-protected version, e.g., as metadata associated with a content file or DRM container." *Id*., ¶98. As previously explained, these "Usage Rights" are a license. *Id*., ¶87. Additionally, Levy also describes a Media Server storing the Usage Rights in a "DWM or re-linking Rights Registry," which is "stored locally on the Media Server." *Id*., ¶¶90, 97, 110. Therefore, Levy's Media Server also receives a license.

511. Levy also discloses preventing reproduction of media content when the licensing request is declined for the reasons that I explained with reference to claims 3 and 13. *See* Section XII.G. Levy states that "[i]f the user does not accept the Usage

Rights, the Client Player Application ***preferably prohibits access***." EX1006, ¶110. A POSA would have been motivated to use this feature of Levy's system in Brandstetter's platform. Doing so would ensure that Brandstetter's content is not distributed in contravention of the content's "licensing packages," thus ensuring that content creators are compensated for the distribution of their copyrighted content, which is Brandstetter's ultimate goal. *See* EX1004, ¶¶2-5. Levy's licensing features—which prevent unlicensed users from streaming content—would further that goal for the reasons I explained in Section XII.A.

512. Thus, the combination of Brandstetter and Levy discloses claims 4 and 14.

I. Claims 5 and 15

513. Claims 5 and 15 recite:

> Claim 5: The method of claim 4, further comprising: reproducing the media content item ***based on a plurality of reproduction parameters in the license*** that is received from the licensing system.
>
> Claim 15: The system of claim 14, wherein the processor is further configured to reproduce the media content item ***based on a plurality of reproduction parameters included in the license*** that is received from the licensing system.

514. The combination of Brandstetter and Levy discloses claims 5 and 15. At the outset, I note that the '581 patent specification does not use the term "parameter" nor does the '581 patent provide a definition for a "plurality of

reproduction parameters." As I have explained in Section VI.A.2, a POSA would have understood "reproduction parameters" to refer to the terms of a license that provide some type of restriction on the user's ability to stream or reproduce a particular media content item. Brandstetter discloses different types of reproduction parameters that would have been used in combination and would have disclosed the claimed "plurality of reproduction parameters."

515. Brandstetter describes several parameters corresponding to a license. For example, Brandstetter describes tracking a "number of times" a content may be played as defined in a license. EX1004, ¶147. A license may indicate that the content may be played "any number of times desired within a period of time defined by the license." *Id*. Similarly, the license could be a "play n-number of times licensing package" where "a recipient of the content can only play the content n number of times (e.g., once, twice, three times, etc.)." *Id*. These licenses may correspond to different prices offered by the content providers. EX1004, ¶¶75, 120.

516. Additionally, Brandstetter also provides licenses and license options based on other factors, such as video quality, bonus content, or whether the user may download the item:

> In exemplary instances in which the content is a film, licensing options can include, but are not limited to, a ***"high definition" ("HD") option (e.g., a "Blu-Ray" quality option)***, an option that defines the terms of a rental agreement, an option that defines the terms of a purchase

> agreement, an option indicating ***whether the content is downloadable, or an option indicating whether the user has access to bonus content***.

EX1004, ¶125 (emphasis added); *see also id*., ¶141.

517. These license terms based on duration, use, and distribution limitations disclose a plurality of reproduction parameters. A POSA would have understood that the reproduction parameters described in Brandstetter would have been used in combination depending on the terms of the license obtained by the consumer.

518. Further, Levy discloses "content including both copy control information (CCI) and embedded DWM Content Identifiers (ID)." EX1006, ¶¶37, 86, 122-23. Levy discloses that, when communicating content, "Media Server looks for CCI bits [and] if the CCI bits and DWM Content ID do not exist, the Media Server can perform the requested action." *Id*. ¶123. Levy discloses that "if the CCI bits do not exist, but the Content ID exists (with no Usage Rights), the action is preferably canceled." *Id*. Levy's Media Server "respects any copy control state" when communicating content." *Id*. For example, Levy discloses that based on the copy control state, content "is neither be streamed nor transferred," "can be streamed, and, if transferred, one or both copies should be marked as copy," or "can be streamed or transferred." *Id*. Thus, Levy discloses that copy control information (CCI) and embedded DWM Content Identifiers (ID) control how content is streamed or transferred. A POSA would have understood that copy control information (CCI)

and embedded DWM Content Identifiers (ID) that control how content is streamed or transferred discloses the claimed "plurality of reproduction parameters."

519. Thus, the combination of Brandstetter and Levy discloses reproducing a media content item based on a "based on a plurality of reproduction parameters" identified by the license and disclose claims 5 and 15.

J. Claims 7-8 and 17-18

520. Claims 7-8 and 17-18 refer to the process of obtaining payment for the license to reproduce the media content item. Claims 7-8 and 17-18 recite:

> Claim 7: The method of claim 6, wherein the determining comprises: ***requesting payment information*** from the external device when the media content record associated with the media content item ***requires payment of the license for the media content item***.
>
> Claim 8: The method of claim 7, wherein the granting comprises: granting the media licensing request for the external device ***when payment of the license for the media content item is completed***.
>
> Claim 17: The system of claim 16, wherein the processor is further configured to request payment information from the external device when the media content record associated with the media content item ***verifies payment of the license for the media content item***.
>
> Claim 18: "The system of claim 17, wherein the processor is further configured to process the media licensing request for the external device ***when the payment of the license for the media item is received***.

521. The combination of Brandstetter and Levy discloses claims 7-8 and 17-

18. Both Brandstetter and Levy disclose obtaining and verifying payment for licenses to reproduce content. For example, Brandstetter facilitates the payment of a license for purchase or rental of a media content item as seen in Figure 14. EX1004, ¶¶146-47.

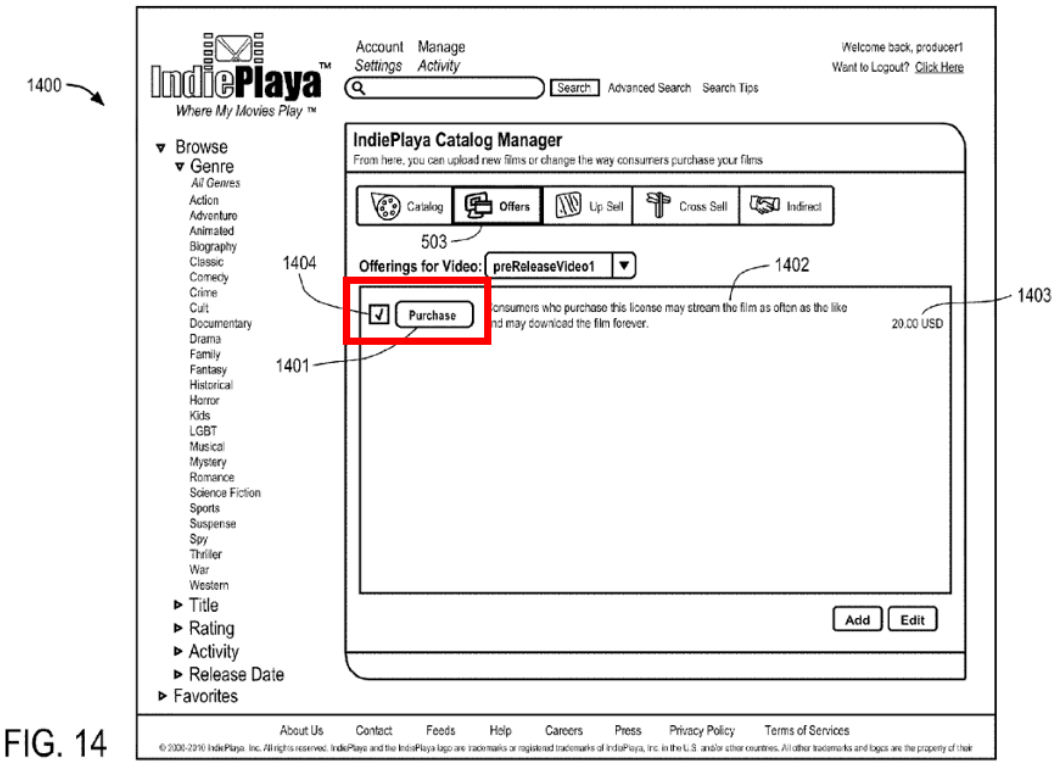


FIG. 14

EX1004, FIG. 14.

522. Figure 14 depicts licensing packages: "the display for a purchase licensing package can include purchase button 1401. Activating purchase button 1401 allows the user (e.g., an audience), to purchase content associated with a purchase licensing package." EX1004, ¶146. Users can interface with the platform and "pay money in exchange for a distribution of the media content (e.g., a license to experience the media content for a limited amount of time or a limited number of

viewings/listenings, or a 'purchase' of the media content enabling them to experience the content for an unlimited amount of time)." *Id*., ¶87. "[U]sers can purchase an item or a license to an item, and can download the item over the network (e.g., onto a computer for viewing and/or listening)." *Id*., ¶77. "[T]he users pay for instances of distribution of the content." *Id*., ¶83. Subsequently, a distribution module 140 on the server "receives payment from users in exchange for such distribution via network 121." *Id*., ¶98. Thus, Brandstetter discloses the payment processing recited in claims 7-8 and 17-18.

523. Levy also similarly facilitates payments to provide "proper billing to the consumer and payment to content owners and providers." EX1006, ¶44. This may occur when a user is considering whether to "accept or reject the Usage Rights." *Id*., ¶110. "Acceptance may require a license, payment or negotiation with a Rights Registry or an on-line media store." *Id*. In this manner, Levy facilitates payments when users "purchase content." *Id*., ¶¶11, 112, 117.

524. In view of the payment processing performed by Brandstetter and Levy to authorize a license to reproduce media content, the combination of Brandstetter and Levy discloses claims 7-8 and 17-18.

K. Claims 9 and 19

525. Claims 9 and 19 recite:

> Claim 9: The method of claim 6, further comprising: ***generating a license record*** that includes license granting information associated

with the license granted to the external device; and ***storing the license record in a registered user database*** that is associated with the user.

Claim 19: The system of claim 16, wherein the processor is further configured to: ***generate a license record*** that includes license granting information associated with the license granted to the external device; and ***store the license record in a registered user database*** that is associated with the user.

526. The combination of Brandstetter and Levy discloses claims 9 and 19. As I previously explained with reference to claim elements [1D] and [1G] and claims 4 and 14, Brandstetter and Levy disclose storing license information corresponding to different users and granting licenses to user devices attempting to reproduce content. *See* Sections XII.B.5, XII.B.8, XII.H. Brandstetter and Levy also disclose generating and storing license records in a registered user database when a license is granted for the reasons that I explained with reference to claims 4 and 14.

527. For example, Brandstetter generates a license record and associates license records with user profiles. EX1004, ¶98, FIG. 25. Users may then view the licenses (e.g., "My Active Rentals" or "My Purchases") that they have purchased in the form of generated license records that are stored in memory 114. *Id.*, ¶166, FIGS. 26, 28.

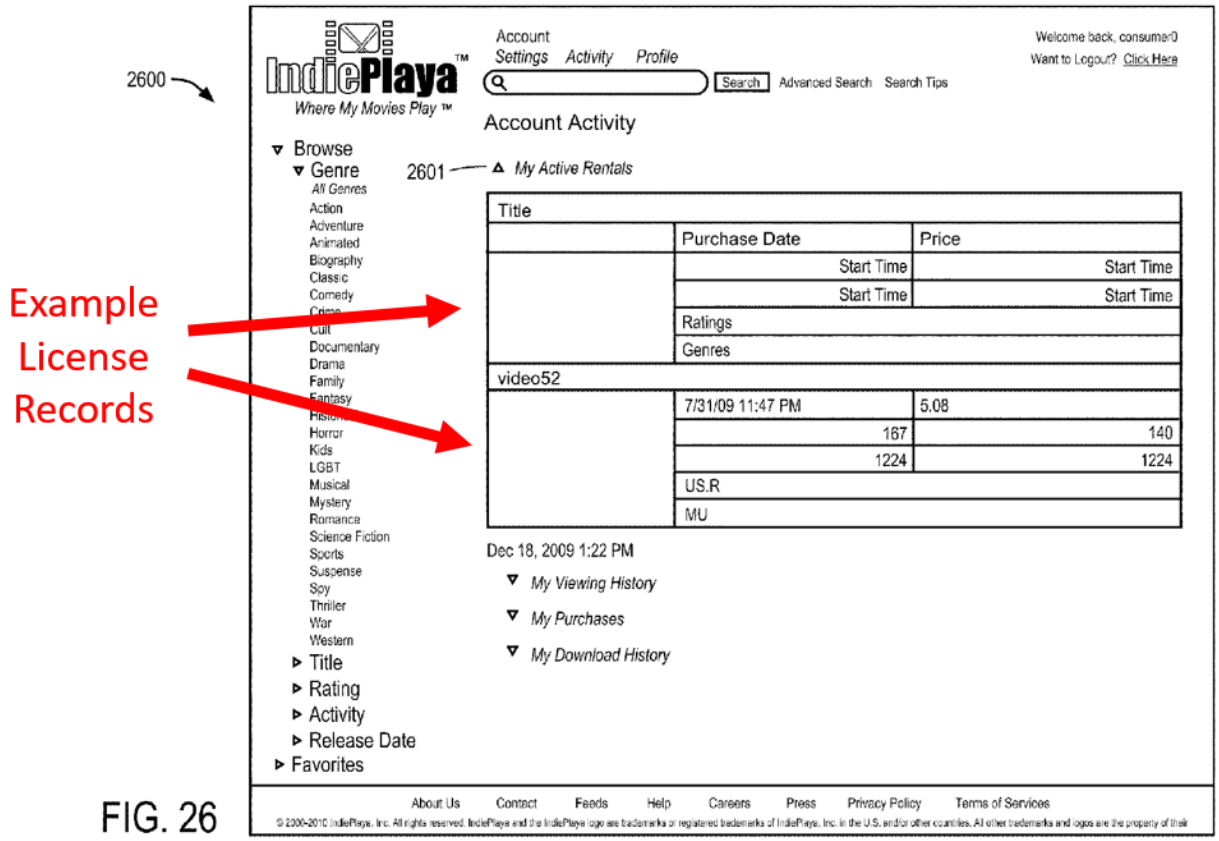


FIG. 26

EX1004, FIG. 26 (annotated).

528. Additionally, Brandstetter explains that the license records are stored in a registered user database and associated with user accounts. *See, e.g.*, EX1004, FIGS. 26, 28. For example, Figure 25 depicts an interface for "setting and editing user (e.g., audience member) account settings." EX1004, ¶98. This interface allows for profile creation and registering as a user with a "user name and a password." *Id.*

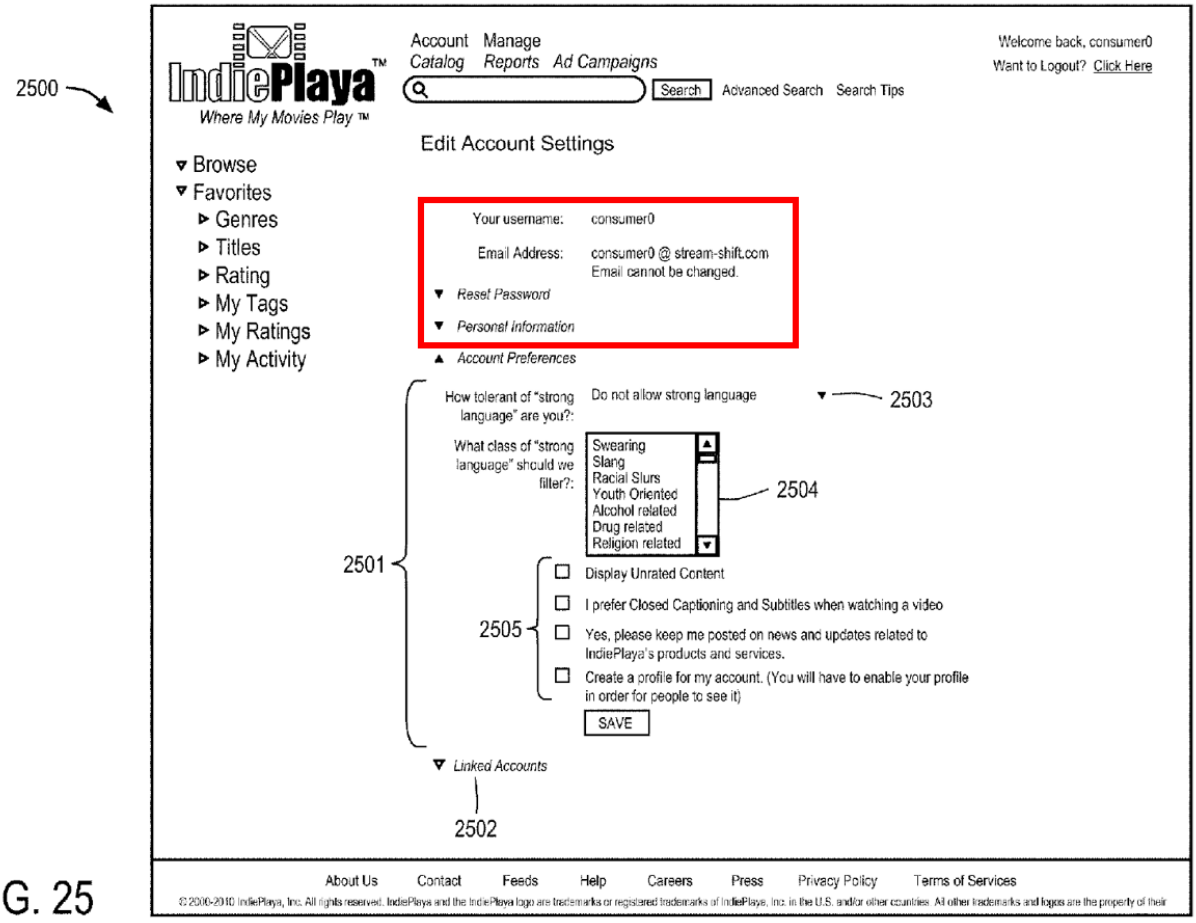


FIG. 25

EX1004, FIG. 25 (annotated).

529. Brandstetter further tracks content that has been licensed by a registered user via license records. EX1004, ¶¶99, 166, FIGS. 26, 28. For example, Figures 26 and 28 allow a user to view active rentals and purchases respectively. *Id.*, ¶166. In this manner, to provide this data to a user, Brandstetter discloses tracking and storing license information in a registered user database. Brandstetter would store such information in memory 120 and/or memory 114, which are also formatted to store databases. *Id.*, ¶¶92, 99-100.

530. Levy also describes updating a registered user database when a user

purchases a license via an online content store. EX1006, ¶¶52, 101. "The Media Server/User will typically maintain an account with the online store to allow a one click purchase." *Id*., ¶112. Online content stores may register users and "offer to catalog content (e.g., music) on a user's computer or media server. They do so in hopes of identifying other content that might be appealing to a user (e.g., songs by the same artist or popular songs in a preferred genre, etc.)." *Id*., ¶114. In this manner, Levy describes storing registered user data. Levy also stores purchased license information, such as when a "DRM Rights Registry is updated" and corresponding "rights are copied and/or mirrored into the DWM Rights Registry." *Id*., ¶101.

531. Thus, the combination of Brandstetter and Levy discloses claims 9 and 19.

L. Claims 10 and 20

532. Claims 10 and 20 recite:

> Claim 10: The method of claim 6, wherein the ***digital media information includes a fingerprint*** associated with the media content item.
>
> Claim 20: The system of claim 16, wherein the ***digital media information includes a fingerprint*** associated with the media content item.

533. The combination of Brandstetter and Levy discloses claims 10 and 20. As I explained with reference to claim elements [1B] and [1E] and claim 6, Levy

discloses digital media information including a "fingerprint" associated with the media content item. *See* Sections XII.B.3, XII.B.6, XII.C; EX1006, Abstract, ¶¶140-42. Thus, Levy discloses claims 10 and 20.

M. Claims 21, 23, 25, and 27

534. Claims 21, 23, 25, and 27 refer to allowing a "third party online media retailer" to access the user data stored in the license database. Claims 21, 23, 25, and 27 recite:

> Claim 21: The computer implemented method of claim 1, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer that has been selected by the copyright owner to distribute the media content item***.
>
> Claim 23: The computer implemented method of claim 6, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer that has been selected by the copyright owner to distribute the media content item***.
>
> Claim 25: The system of claim 11, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer***

that has been selected by the copyright owner to distribute the media content item.

Claim 27: The system of claim 18, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a third party online media retailer that has been selected by the copyright owner to distribute the media content item***.

535. The combination of Brandstetter and Levy discloses claims 21, 23, 25, and 27. In particular, Brandstetter discloses "content creators," which disclose the claimed "copyright owner" as I explained with reference to claim element [1H]. *See* Section XII.B.9; EX1004, ¶¶2-5, 7. Brandstetter additionally discloses "content provider[s]" which disclose the claimed "third party online media retailer that has been selected by the copyright owner to distribute the media content item." EX1004, ¶159. In particular, a "***content provider is any third party granted the right to market or distribute*** (including, without limitation, subdistribution, syndication, and licensing of) ***a content creator's content*** or content-related data. A content provider can include, but is not limited to, a distributor, subdistributor, producer's representative, ***sales agent***, buyer, aggregator, publisher, network, broadcaster, syndicator, assignee, and licensee of content or content-related data." *Id*., (emphasis added).

536. Notably, Brandstetter explains that a "content provider can perform any

and all functions associated with the systems and methods provided herein." *Id*. "It should be understood that any and all functions performed by a content creator can also be performed by a content provider." *Id*., ¶160. This functionality includes accessing the user data and reports that I discussed with reference to claim elements [1I], [1J], and [1K]. In particular, Brandstetter states:

> A request is received for an activity report comprising information related to a user demographic or a media content characteristic. ***Responsive to the activity report request, the activity report is provided to the content provider***.

EX1004, Abstract.

> Under one aspect, systems and methods enabling marketing and distribution of motion pictures and other media content by content creators may include ***providing a platform by which a plurality of content providers can market and distribute media content to users***. Information about activity of the users on the platform may be obtained in relation to the item of media content or in relation to media content related to the item of media content. A request may be received for an activity report comprising information related to a user demographic or a media content characteristic. ***Responsive to the activity report request, the activity report may be provided to the content provider***.

Id., ¶8; *see also id*., ¶9.

537. As seen from these passages, Brandstetter discloses providing user data and activity reports to a content provider. These reports include the user data that

has been previously stored. *See* Section XII.B.9-12; EX1004, ¶¶6, 65, 71, 74, 85, 86, 93, 130, 174-79, FIGS. 40-49.

538. In view of this description, Brandstetter discloses providing reports with user data to a content provider (i.e., the claimed "third party online media retailer") who may request such reports. The user data would be stored in a license database as I described with reference to claim element [1J]. *See* Section XII.B.11. Brandstetter would then make such reports accessible to a third party online media retailer, which also discloses providing access to database data to the retailers as well. EX1004, Abstract, ¶¶8-9, 159. Thus, Brandstetter discloses claims 21, 23, 25, and 27.

N. Claims 29 and 32

539. Claims 29 and 32 recite:

> Claim 29: The computer implemented method of claim 1, wherein ***the user data includes a geographic location of the user*** who is accessing the media content item.
>
> Claim 32: The system of claim 16, wherein the ***user data includes a geographic location of the user*** who is accessing the media content item that enables the copyright owner to gauge geographic locations where the media content item is being accessed.

540. The combination of Brandstetter and Levy discloses claims 29 and 32. As I explained with reference to claim elements [1H], [1J], and [1K], Brandstetter discloses tracking geographic location information as part of the stored demographic

user data. *See* Sections XII.B.9, XII.B.11-12; EX1004, ¶¶71, 142-43, 174, FIG. 40. Figure 40 also depicts an example of sorting the user data based on geographic location.

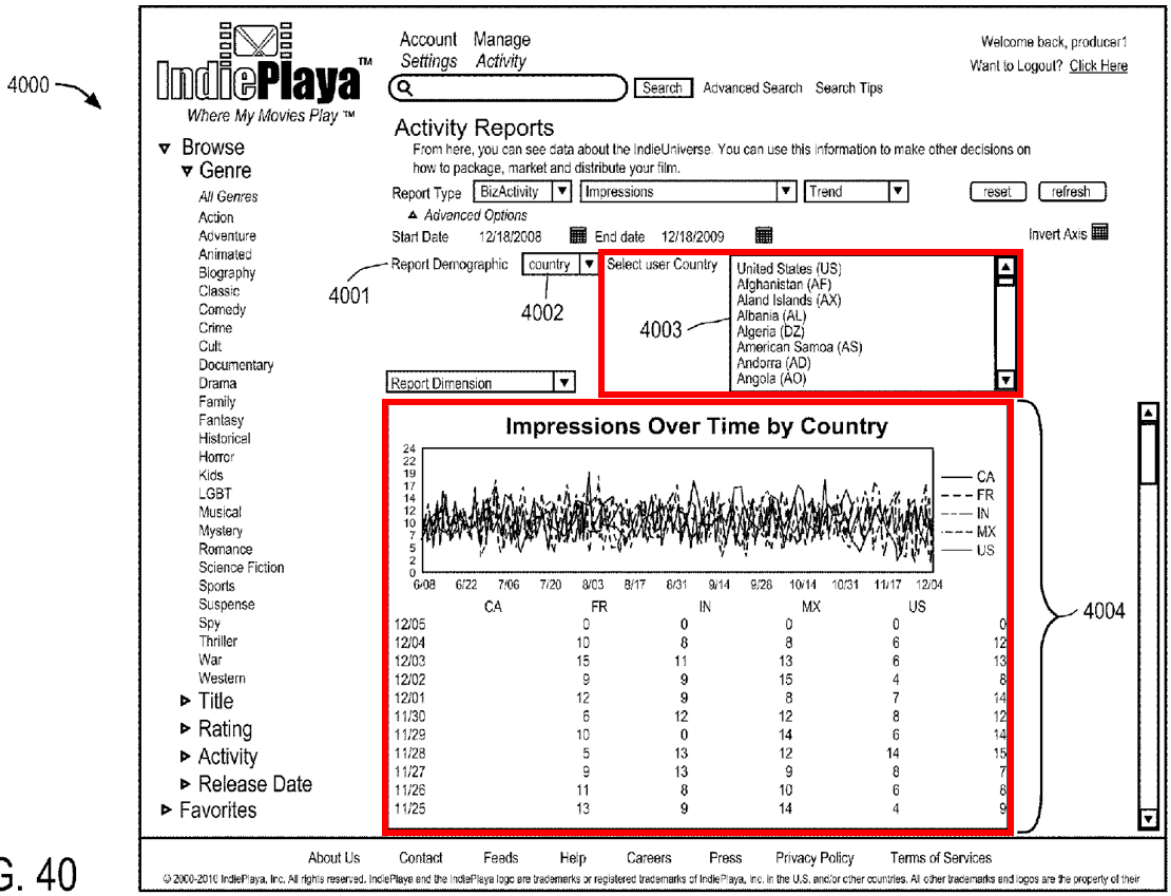


FIG. 40

EX1004, FIG. 40 (annotated).

541. Thus, Brandstetter discloses the user data including the geographic location of a user.

O. Claims 30 and 31

542. Claims 30 and 31 recite:

> Claim 30: The computer implemented method of claim 6, wherein the user data includes ***additional media content items that the user has previously accessed***.
>
> Claim 31: The system of claim 11, wherein the user data includes ***a quantity of times*** that the user has previously accessed the media content item and ***additional media content items***.

543. The combination of Brandstetter and Levy discloses claims 30 and 31. Brandstetter discloses identifying "additional media content items" that a user has previously accessed. For example, Brandstetter describes identifying accessed content items as well as characteristics of those accessed content items:

> Such information can include, for example, user demographics (e.g., ages, geographical locations, ethnicities, genders). Such information can also include, for example, ***the characteristics of the media content with which each of the users interact, such as the type of media content (e.g., video, audio, graphic, or literary work), the quality of the media content (e.g., high definition, low definition), the rating of the media content (e.g., "PG" or "R"), the genre of the media content (e.g., horror, drama),*** the way in which the user interacted with the media content (e.g., clicked on an advertisement for the media content, purchased a license to the media content, or purchased the media content outright), and/or the price, if any, that the user paid for the particular interaction with the media content.

EX1004, ¶71 (emphasis added).

> In another example, when a user exhibits an interest in licensing content, the content creator can dynamically create and offer the user another license option for similar content. In this example, ***when a user selects a content rental or purchase option corresponding to first content (e.g., a video),*** the content creator is notified or otherwise made aware. Once aware, the content creator can dynamically ***create and offer a content purchase option for similar second content*** (e.g., if you like A, you can buy B for $3.00).

Id., ¶123 (emphasis added).

544. Brandstetter's description of "cross-selling" and offering secondary content also discloses a tracking of additional media content that a user has previously accessed, "(e.g., if you like A, you can buy A and B together for $10.00)." *Id.*, ¶¶150-53. Thus, Brandstetter discloses tracking user data corresponding to additional media content items that the user has previously accessed.

545. Brandstetter discloses user data also including a quantity of times that the user has previously accessed the media content item. *Id.*, ¶147. For example, in the scenario where a consumer has rented content under a "play n-number of times licensing package," Brandstetter tracks a "number of times" that the user has already played the media content in order to enforce the license terms. *Id.* Brandstetter also provides this type of information in the form of reports related to user activity. These reports can include "business activity" such as a number of "streams [or] downloads." *Id.*, ¶173. In this manner, Brandstetter discloses user data including a

quantity of times that the user has accessed the media content item.

XIII. GROUND 5: CLAIMS 22, 24, 26, AND 28 OF THE '581 PATENT ARE UNPATENTABLE UNDER 35 U.S.C. § 103 OVER BRANDSTETTER IN VIEW OF LEVY AND VIJAY

546. The combination of Brandstetter, Levy, and Vijay discloses claims 22, 24, 26, and 28. Claims 22, 24, 26, and 28 refer to allowing a "hardware device manufacturer that manufactures hardware that is implemented by the multimedia hardware device" to access the user data stored in the license database. Claims 22, 24, 26, and 28 recite:

> Claim 22: The computer implemented method of claim 1, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.
>
> Claim 24: The computer implemented method of claim 6, further comprising: ***storing in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.
>
> Claim 26: The system of claim 11, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that

manufactures hardware that is implemented by the multimedia hardware device.

Claim 28: The system of claim 18, wherein the processor is further configured to ***store in the license database the user data*** that is associated with the user that is attempting to reproduce the media content item that is ***accessible to a hardware device manufacturer*** that manufactures hardware that is implemented by the multimedia hardware device.

547. When discussing a "hardware device manufacturer," the '581 patent states that "hardware device manufacturers [] manufacture the hardware that may be implemented in device 10 that provides device 10 with the capabilities to limit reproduction of the media content item to when the user has a license to reproduce the media content item." EX1001, 5:38-44. Vijay discloses this same type of device manufacturer.

548. Similar to the '581 patent, Vijay discloses protecting electronic content using a "digital rights management ('DRM') system." EX1008, ¶¶2-3. This content may include "documents, e-books, video, music, computer applications, or games." *Id*. To provide this DRM protection, Vijay describes "device manufacturer 114" depicted in Figure 1. *Id*., ¶22.

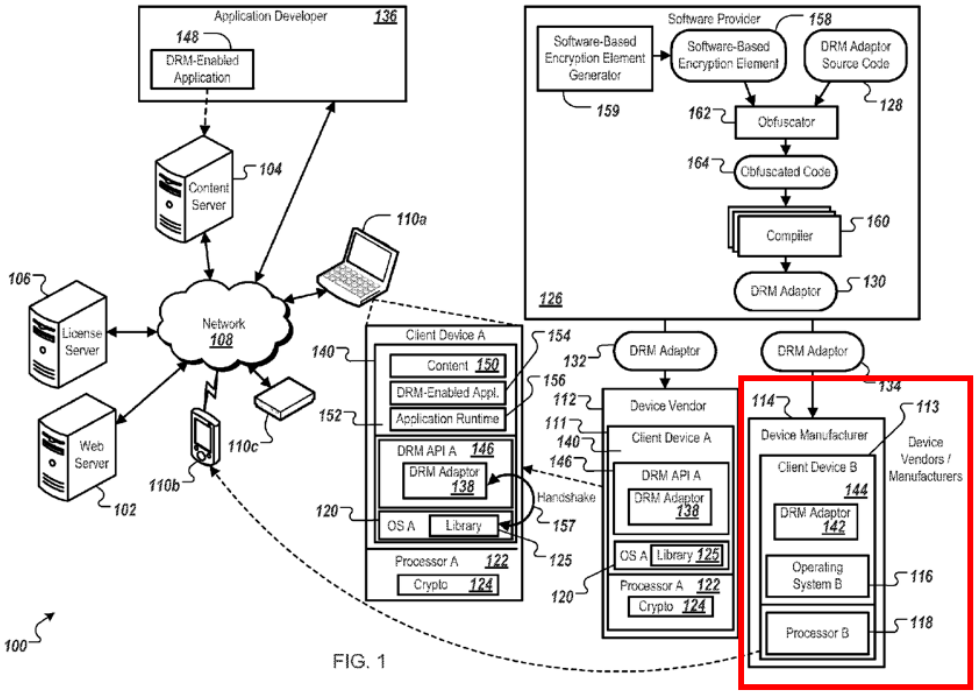
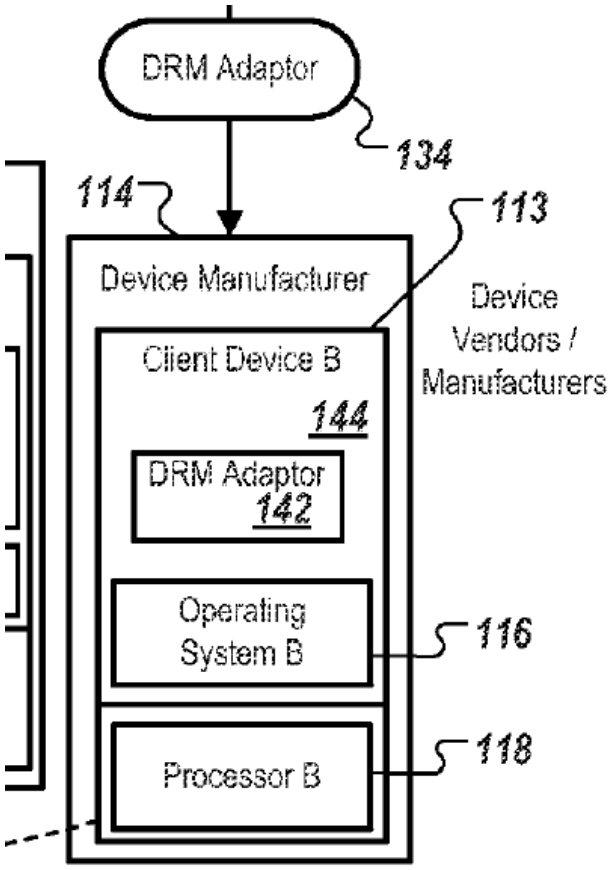


FIG. 1

EX1008, FIG. 1 (annotated).



EX1008, FIG. 1 (excerpt).

549. Device manufacturer 114 provides client devices 110. EX1008, ¶22. Using a "DRM adaptor," device manufacturer 114 may "implement robust, secure DRM solutions on devices." *Id*., ¶25. For example, "DRM adaptor 142 [may be] included in computer readable medium 144 of the client device 113." *Id*., ¶27. In this manner, "device manufacturer 114 may develop both an operating system 116 and a hardware processor 118 for the client device 113" to provide "hardware-based encryption." *Id*., ¶¶23, 27, 45-46. In this manner, Vijay discloses the same hardware device manufacturer as described in the '581 patent.

550. Vijay, in combination with Brandstetter and Levy, discloses providing user data to a "hardware device manufacturer." As I explained with reference to claims 21, 23, 25, and 27, Brandstetter does not provide a limitation on systems that may access user data. *See* Section XII.M. Specifically, Brandstetter expansively provides reports to content providers including distributors or subdistributors. EX1004, ¶159.

551. A POSA would have found it obvious to allow a DRM device manufacturer to access this information as well to provide platforms that can "implement robust, secure DRM solutions on devices." EX1008, ¶¶25, 34, 39, 60, 75. As Vijay explains, this would help to "restrict access to content to authorized users only and the retailer may encrypt a respective content item so that the content

item can only be consumed by a user who has obtained a license for the content item." *Id.*, ¶29.

552. Providing user data associated with users that engage the media content through licensing transactions allows Vijay's device manufacturer 114 to develop improved DRM management systems on its devices (e.g., DRM adaptors). For example, the combination of Brandstetter, Levy, and Vijay could use a user's data associated with a license transaction that includes encryption keys to enable a DRM system to authenticate a DRM application running on the user device prior to decrypting content for reproduction. This would provide "secure, dynamic device profiling" as described in Vijay. EX1008, ¶56. Vijay even discloses this type of check and comparing encrypted messages with an "expected digital signature" to verify a DRM adaptor. *Id.*, ¶¶73-76. As Vijay explains, this would provide additional security. *Id.*, ¶¶34, 39, 60, 75. A POSA would have been motivated to combine Vijay with Brandstetter and Levy to provide this additional security. Vijay also describes the same licensing and media content reproduction described in Brandstetter and Levy, so a POSA would have easily formed the combination and had a reasonable expectation of success in combining the references. *See id.*, ¶¶35-39. And, like the '581 patent, the combination of Brandstetter, Levy, and Vijay can enable device manufacturers to provide a device "with the capabilities to limit reproduction of the media content item to when the user has a license to reproduce the media content

item." EX1001, 5:38-44. The user data would be stored in a license database as I described with reference to claim element [1J]. *See* Section XII.B.11. Brandstetter would then make such reports accessible to a hardware device manufacturer, which also discloses providing access to database data to the manufacturers as well. EX1004, Abstract, ¶¶8-9, 159.

553. Thus, the combination of Brandstetter, Levy, and Vijay discloses claims 22, 24, 26, and 28.

XIV. OTHER EVIDENCE RELEVANT TO OBVIOUSNESS

554. As I noted above in Section IV, the obviousness inquiry requires me to consider whether there are any "objective indicia of non-obviousness." Roku's counsel has informed me that this type of evidence helps guard against what the courts have called "hindsight bias" when looking backwards in time at a purported invention. Counsel has informed me that the types of evidence that fall into this category are commercial success, long-felt but unmet need, failure by others to solve similar problems facing a POSA, and the like. Counsel also has informed me that for any such evidence to be applicable, the evidence must also bear some "nexus" to a claim, and in particular, to what is purportedly novel about the claim.

555. I am not currently aware of any objective indicia of nonobviousness that could apply to the purported invention set forth in the '581 patent and that would also meet the nexus requirement. I reserve the right to reconsider my opinions, as set

forth above, if any such evidence is brought to my attention.

In signing this Declaration, I recognize that the Declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the allotted time.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed this 10th day of January, 2022, in Crans-Montana, Switzerland.

Respectfully submitted,



_____

John Tinsman