

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

OPENTV, INC.,

Plaintiff,

VS.

NFL ENTERPRISES, LLC

Defendant.

[illegible]

Case No. 2:17-cv-31

Jury Trial Demanded

OPENTV, INC.'S COMPLAINT FOR PATENT INFRINGEMENT

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff OpenTV, Inc. (“OpenTV”), by and through the undersigned counsel, hereby brings this action and makes the following allegations of patent infringement relating to U.S. Patent Nos. 7,996,861, 7,421,729, 7,028,327, 7,950,033, 7,055,169, 7,020,888 and 6,233,736 against Defendant NFL Enterprises, LLC. (“NFLE”), and alleges as follows upon actual knowledge with respect to itself and its own acts, and upon information and belief as to all other matters:

NATURE OF THE ACTION

1. This is an action for patent infringement. OpenTV alleges that NFLE infringes U.S. Patent No. 7,996,861 (“the ’861 Patent”), U.S. Patent No. 7,421,729 (“the ’729 Patent”), U.S. Patent No. 7,028,327 (“the ’327 Patent”), U.S. Patent No. 7,950,033 (“the ’033 Patent”), U.S. Patent No. 7,055,169 (“the ’169 Patent”), U.S. Patent No. 7,020,888 (“the ’888 Patent”) and U.S. Patent No. 6,233,736 (“the ’736 Patent) copies of which are attached as Exhibits A-G, respectively (collectively “the OpenTV Patents”).

2. NFLE has been on notice of its infringement of all of the OpenTV Patents except the ’888 Patent since at least November 30, 2015 by virtue of a letter emailed from Joe Chernesky, Senior Vice President, IP & Innovation of the Kudelski Group to Michael Buchwald, counsel of the National Football League (NFL). NFLE has been on notice of its infringement of the ’888 Patent by no later than the filing date of this Complaint.

3. OpenTV alleges that NFLE directly and indirectly infringes the OpenTV Patents by making, using, offering for sale, and selling its online video services and inducing and contributing to the infringement of others. OpenTV seeks damages and other relief for NFLE’s infringement of the OpenTV Patents.

THE PARTIES

4. Plaintiff OpenTV is a Delaware corporation with its principal place of business at 275 Sacramento St., San Francisco, California, 94111.

5. Upon information and belief, Defendant NFLE is a Delaware limited liability corporation with its principal office at 280 Park Avenue, 15th Floor, New York, NY 10017. NFLE can be served through its registered agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801.

6. According to NFLE's website, NFLE offers infringing products and services for sale and use throughout the United States, including in the Eastern District of Texas. In addition, NFLE advertises its infringing products and services throughout the Eastern District of Texas and claims financial benefits through conducting its business in Texas.

JURISDICTION AND VENUE

7. This action for patent infringement arises under the Patent Laws of the United States, 35 U.S.C. § 1 et. seq. This Court has original jurisdiction under 28 U.S.C. §§ 1331 and 1338.

8. This Court has both general and specific personal jurisdiction over NFLE because NFLE has committed acts within the Eastern District of Texas giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over NFLE would not offend traditional notions of fair play and substantial justice. Defendant NFLE, directly and through subsidiaries and intermediaries (including distributors, retailers, franchisees and others), has committed and continues to commit acts of infringement in this District by, among other things, making, using, testing, selling, licensing, importing, and/or offering for sale/license products and services that infringe the OpenTV Patents.

9. Venue is proper in this district and division under 28 U.S.C. §§1391(b)-(d) and 1400(b) because NFLE has transacted business in the Eastern District of Texas and has committed acts of direct and indirect infringement in the Eastern District of Texas.

BACKGROUND

A. OpenTV

10. OpenTV is a U.S. subsidiary company of Kudelski SA. Kudelski SA and its subsidiaries, including OpenTV, make up the various companies of The Kudelski Group. The history of The Kudelski Group is one highlighted by 60 years of innovation, award winning products, and loyal, long-term customers who entrust The Kudelski Group with their business. Today, The Kudelski Group is a major employer in the United States, Europe, Asia, and elsewhere, providing jobs in manufacturing, engineering, research and development, marketing, sales, and many other specialties, with headquarters in Cheseaux-sur-Lausanne, Switzerland and Phoenix, Arizona.

11. The Kudelski Group was founded in 1951 by Stefan Kudelski successfully launching portable recording devices for cinema, TV and radio recording. The success of its products allowed The Kudelski Group to expand its technology into the digital television domain. In 1989, The Kudelski Group launched its first conditional access systems for pay TV. Over the next 10 years (1990-1999) The Kudelski Group continued to expand its technology development in the digital TV space, providing global, universally compatible solutions to manage, organize, enhance, market, and secure digital content, regardless of whether it was transmitted over managed or unmanaged networks and broadcasted linearly or on demand. Today, The Kudelski Group is led by Stefan's son, Andre Kudelski, and Andre Kudelski has led the company into an era where digital television is The Kudelski Group's core business.

12. Throughout his career, Stefan Kudelski received numerous awards and honors for his technological achievements. For example, Mr. Kudelski received four Oscars from the Academy of Motion Picture Arts and Sciences: three Scientific or Technical Awards in 1965, 1977, 1978, and the Gordon E. Sawyer Award in 1990. Mr. Kudelski also received two Emmy Awards, as well as Gold Medals from L. Warner, Audio Engineering Society, Lyra and Eurotechnica. Mr. Kudelski was also recognized by the FBI for his technology contribution in audio recording.

13. Today, digital television is The Kudelski Group's core business. With that, The Kudelski Group has become a world leader in digital security and convergent media solutions for the delivery of digital and interactive content. The Kudelski Group's innovations are continuously contributing to the evolution of the digital television ecosystem, enabling operators to extend their multimedia offerings across the entire digital ecosystem to numerous client devices through traditional managed networks as well as Internet delivery.

14. The Kudelski Group has also grown as a leader in the digital television domain through acquisitions of pioneering technology companies, including such notable companies as Lysis (2001), Livewire (2001), MediaGuard (2004), SmarDTV (2006), OpenTV (2007), and Conax (2014).

15. OpenTV is headquartered in San Francisco, California, has offices throughout the world, and employs hundreds of people worldwide, including more than 120 in the United States. OpenTV develops software that provides its customers with high quality technology, services, and end-to-end solutions enabling intuitive and personalized viewing experiences for consumers. OpenTV's software solutions enable a variety of advanced and interactive services for television, including advanced user interfaces, video-on-demand ("VOD"), personal video

recording (“PVR”), high-definition (“HD”), interactive and addressable advertising, and a variety of enhanced television applications. OpenTV’s software has been shipped in over 200 million set-top boxes. OpenTV has 80 worldwide customers that run OpenTV solutions, including 40 OEMs.

16. OpenTV’s success as a member of The Kudelski Group is due in large part to its worldwide emphasis on intellectual property. OpenTV benefits from one of the earliest and broadest patent portfolios in the industry. OpenTV’s patented technology has been vital in allowing OpenTV’s customers to accelerate technological progress, enhance market opportunities, and improve profitability. To date, OpenTV owns over 770 issued patents worldwide.

17. OpenTV is the owner of all right title and interest in the OpenTV Patents. The OpenTV Patents cover various key technologies in online digital television services.

B. NFLE

18. Upon information and belief, NFLE was formed in 2002 as a limited liability company in Delaware.

19. Upon information and belief, NFLE offers products and services that are widely used in this District and throughout the United States, including but not limited to, the following applications that provide, among other things, a streaming interactive video content experience to users: NFL.com, Watch NFL Network/NFL Redzone, NFL Now, NFL Game Pass, NFL Mobile, the NFL App, and NFL Fantasy Football. These applications and services are provided to users in various forms on numerous content platforms including, but not limited to, mobile phones and tablets, personal computers, set-top boxes and streaming media connected devices.

COUNT 1: INFRINGEMENT OF THE ’861 PATENT

20. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

21. OpenTV owns by assignment the entire right, title, and interest in the '861 Patent.

22. The '861 Patent was issued by the United States Patent and Trademark Office on August 9, 2011 and is titled "Flexible Interface for Secure Input of Pin Code." A true and correct copy of the '861 Patent is attached hereto as Exhibit A.

23. Pursuant to 35 U.S.C. § 282, the '861 Patent is presumed valid.

24. A person of ordinary skill in the art reading the '861 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software technologies that can be used to overcome the problem of how to authenticate a user's right to access protected (*e.g.*, pay per view) content. By way of example, such complex technology can comprise, among other things, a security manager. Prior to granting access to protected content, an application which provides access to protected content sends a request for a PIN to the user's device prior to granting access to the protected content. However, to avoid compromising the secrecy of the PIN code, the PIN code is supplied to the security manager rather than the application requesting the PIN code. The security manager then verifies to the application that the user is authorized to have access to the protected content without ever disclosing the PIN code to the application, thus protecting the PIN's confidentiality for future use.

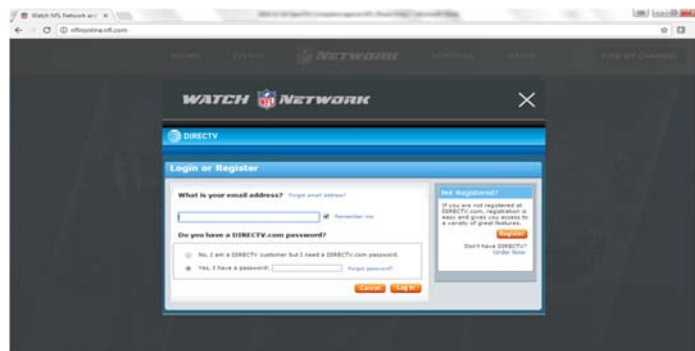
25. Upon information and belief, NFLE has directly infringed at least Claim 9 of the '861 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing, selling, licensing, importing, and/or offering for sale/license without authority its Watch NFL Network/NFL

Redzone applications (the “Watch NFL Network Application”) incorporating authorization functionality (collectively, “the ’861 Infringing Instrumentalities”) in the exemplary manner described below:

- A. The ’861 Infringing Instrumentalities meet all of the elements of Claim 9 of the ’861 Patent in that they provide executable instructions for authenticating a PIN code of a user in order to run an application.
- B. When a subscriber attempts to access the Watch NFL Network Application through, for example, the NFL.com website or Watch NFL Network mobile application, he or she receives a request for user authentication from the application.

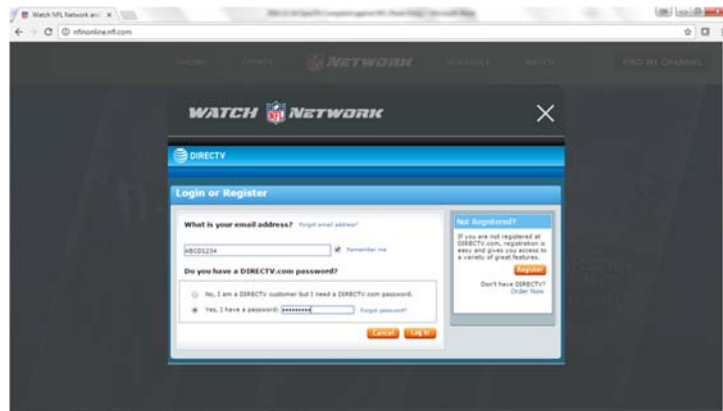


Screenshot of the Watch NFL Network MVPD selection screen for authenticating with a service provider’s TV Everywhere service



Screenshot of an exemplary MVPD login iFrame

- C. Information about the PIN code entering key-pressing operations by the user are supplied to the Watch NFL Network Application and displayed in encrypted (*i.e.*, obfuscated) form, and the '861 Infringing Instrumentalities use an authentication service manager to authenticate the subscribers such that the entered PIN code is not supplied to the application.

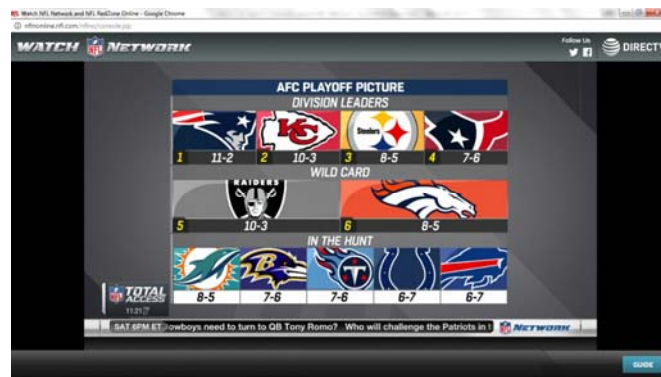
*Screenshot of MVPD login iFrame showing obfuscated PIN entry*

- D. Once it is determined that the PIN code of the user matches the registered PIN code, authorization to run the application is given.

*Screenshot illustrating the Authentication process*



Screenshot illustrating NFL Network authorization by the security manager



Exemplary screenshot illustrating service access to the Watch NFL Network application after successful authentication

26. NFLE has thus infringed, and continues to infringe, at least Claim 9 of the '861 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license the '861 Infringing Instrumentalities, and operating them such that all steps of at least Claim 9 of the '861 Patent are performed, including within this District. Moreover, NFLE fully implements, manages, directs and supports the use of the '861 Infringing Instrumentalities by its customers.

27. NFLE's customers have been and are now infringing, including under 35 U.S.C. §271(a), at least Claim 9 of the '861 Patent by using the '861 Infringing Instrumentalities.

28. NFLE has, since at least November 30, 2015 and by no later than the filing of this Complaint, known or been willfully blind to the fact that such acts by its customers of using '861

Infringing Instrumentalities directly infringe at least Claim 9 of the '861 Patent.

29. NFLE's knowledge of the '861 Patent, which covers operating the '861 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 9 of the '861 Patent are met, made it known to NFLE that its customers' use of the '861 Infringing Instrumentalities would directly infringe the '861 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

30. Having known or been willfully blind to the fact that its customers' use of the '861 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 9 of the '861 Patent are met would directly infringe the '861 Patent, NFLE, upon information and belief, actively encouraged and continues to actively encourage its customers to directly infringe the '861 Patent by using, selling, licensing, offering to sell/license, or importing the said '861 Infringing Instrumentalities, and by, for example, marketing the '861 Infringing Instrumentalities to customers; working with its customers to implement, install and operate the '861 Infringing Instrumentalities and components thereof; fully supporting and managing its customers' continued use of the '861 Infringing Instrumentalities; and providing technical assistance to customers during their continued use of the '861 Infringing Instrumentalities. *See, e.g.,* <http://nflnline.nfl.com/>.

31. NFLE induces its users to infringe at least Claim 9 of the '861 Patent at least by encouraging them to install and operate the '861 Infringing Instrumentalities, which, alone or in combination with the users' devices, satisfy all the limitations of at least Claim 9 of the '861 Patent. For example, NFLE advertises and promotes the features of its Watch NFL Network Application on its websites NFL.com and nflnline.nfl.com, and encourages its users to configure and operate their mobile and computer devices in an infringing manner (*see, e.g.,*

[http:// nflnline.nfl.com/](http://nflnline.nfl.com/)). In response, NFLE's users acquire, configure and operate the Watch NFL Network Application such that all the limitations of at least Claim 9 of the '861 Patent are practiced. NFLE has been aware of the '861 Patent since at least November 30, 2015.

32. Thus, NFLE has specifically intended to induce, and has induced, its customers to infringe at least Claim 9 of the '861 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided its customers to engage in direct infringement, including through its encouragement, advice and assistance to customers to use the '861 Infringing Instrumentalities.

33. Based on, among other things, the foregoing facts, NFLE has induced, and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 9 of the '861 Patent.

34. Further, NFLE sells, provides and/or licenses to its customers '861 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by the '861 Patent. For example, NFLE provides applications and software, which customers configure and use in a manner such that all limitations of at least Claim 9 of the '861 Patent are met, and without which, NFLE's customers would be unable to use and avail of the '861 Infringing Instrumentalities in their intended manner.

35. Upon information and belief, NFLE also knew that the '861 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 9 of the '861 Patent.

36. The authorization functionality in the '861 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 9 of the '861 Patent. Upon information and

belief, the authorization functionality in the '861 Infringing Instrumentalities is not a staple article or commodity of commerce, and, because the functionality is designed to work with the '861 Infringing Instrumentalities solely in a manner that is covered by at least claim 9 of the '861 Patent, it does not have a substantial non-infringing use. At least since November 30, 2015 and by no later than the filing of this Complaint, based on the forgoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—'861 Infringing Instrumentalities in a manner that is covered by the '861 Patent.

37. Based on, among other things, the foregoing facts, NFLE has contributorily infringed, and continues to contributorily infringe, at least Claim 9 of the '861 Patent under 35 U.S.C. § 271(c).

38. NFLE's acts of infringement of the '861 Patent have been willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 30, 2015, NFLE has willfully infringed the '861 Patent by refusing to take a license and continuing to make, use, test, sell, license, import, and/or offer for sale/license the '861 Infringing Instrumentalities. NFLE has been aware that it infringes the '861 Patent since at least November 30, 2015 and instead of taking a license, NFLE has opted to make the business decision to “efficiently infringe” the '861 Patent. In doing so, NFLE willfully infringed the '861 Patent.

39. NFLE's acts of direct and indirect infringement have caused, and continue to cause, damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE's wrongful acts in an amount subject to proof at trial. The infringement of OpenTV's exclusive rights under the '861 Patent has damaged and will continue to damage OpenTV, causing irreparable harm, for which there is no adequate remedy at law, with the balance of

hardships between OpenTV and NFLE, and the public interest, warranting an injunction.

COUNT 2: INFRINGEMENT OF THE '729 PATENT

40. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

41. OpenTV owns by assignment the entire right, title, and interest in the '729 Patent.

42. The '729 Patent was issued by the United States Patent and Trademark Office on September 2, 2008 and is titled "Generation and Insertion of Indicators Using An Address Signal Applied To A Database." A true and correct copy of the '729 Patent is attached hereto as Exhibit B.

43. Pursuant to 35 U.S.C. § 282, the '729 Patent is presumed valid.

44. A person of ordinary skill in the art reading the '729 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software technologies that can be used to overcome the problem of how to insert content (additional information) at the relevant time into a video stream (*e.g.*, a television program) so that the additional information is provided when it directly relates to the current content of the video stream. By way of example, the '729 Patent provides a system and method for inserting content into a video stream by generating video indicators, such as tags and markers, which can be inserted in a video signal provided to a set-top box or viewer's computer. In exemplary embodiments, the content identification tags can provide information regarding upcoming video segments and markers that indicate the beginning/end of video segments and can automatically connect the system to an interactive web page overlay, alternative video source information, or any other information that may be useful in viewing or

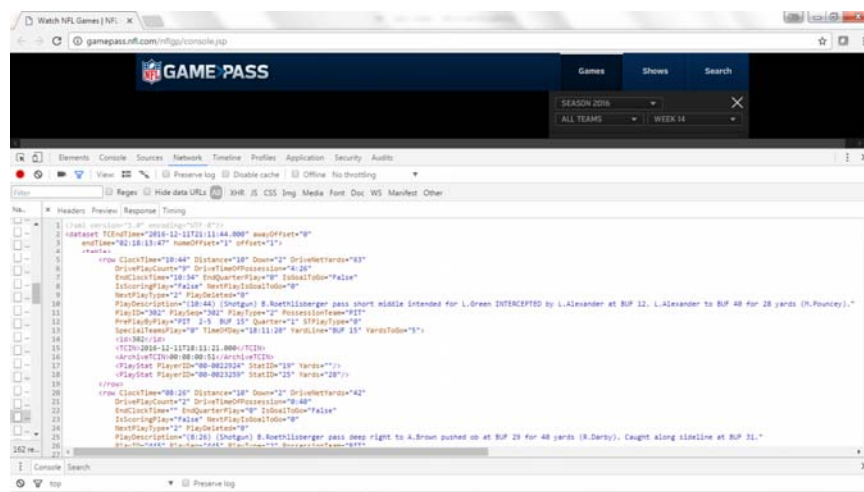
controlling the video signal. In an exemplary embodiment, the video signal also includes video segment markers that indicate the beginning and ending of each video segment. These video segment markers are associated with the tags through a unique ID associated with each marker.

45. Upon information and belief, NFLE, alone or through agents or third parties acting under NFLE's direction and control, has directly infringed at least Claim 1 of the '729 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing, selling, licensing, importing, and/or offering for sale/license in the United States without authority its NFL Game Pass application with Big Play Markers, and further including NFLE functionality for processing and encoding video stream content with Big Play Markers (collectively, "the '729 Infringing Instrumentalities"), in the exemplary manner described below:

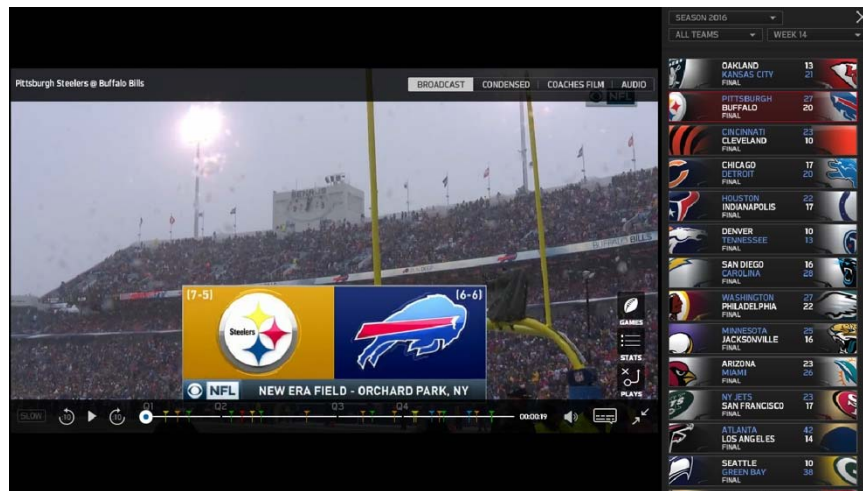
- A. One or more of the '729 Infringing Instrumentalities meet all the elements of at least Claim 1 of the '729 Patent, including generating and inserting indicators into a video stream. In particular, the '729 Infringing Instrumentalities comprise time code signals to synchronize play highlights with the NFL video stream content, *e.g.*, game video content accessed through NFL Game Pass or similar viewer functionality that may display "play highlight" or "Big Play Markers."
- B. One or more of the '729 Infringing Instrumentalities generate a time code signal that is synchronized with the video stream and apply the time code signal to an address generator that decodes the time code signal and generates a corresponding address signal that is applied to a database storing a plurality of indicators. In particular, NFLE generates time code signals with its game video content and those time code signals are decoded and used to index a

database of metadata for play highlights that is correlated to “play highlight” or “Big Play” indicators.

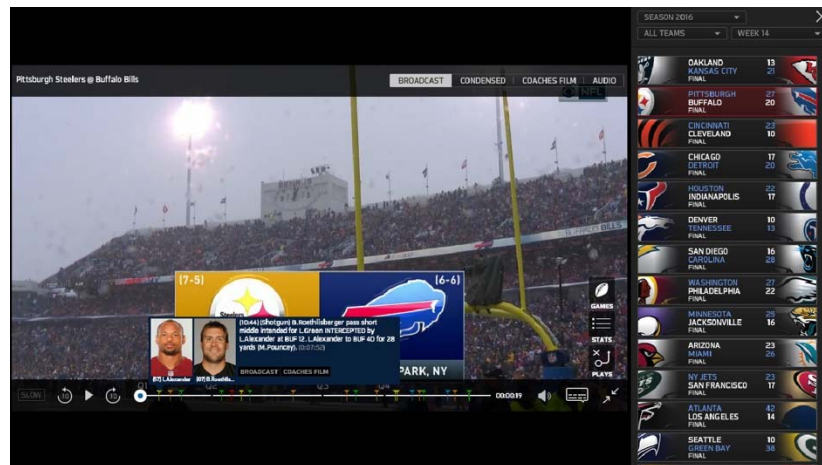
C. One or more of the '729 Infringing Instrumentalities accesses a set of indicators that are stored in said database using said address signal as an address into said database and encodes said video stream with said set of indicators accessed from said database using said address signal. In particular, the '729 Infringing Instrumentalities comprise time code signals to synchronize play highlights with the NFL video stream content, *e.g.*, game video content accessed through NFL Game Pass or similar viewer functionality that may display “play highlight” or “Big Play Markers.” The time code signals are used to index a play highlights database maintained by or on behalf of NFLE via corresponding address signals. This allows a set of indicators for the “play highlights” or “Big Play” feature to be encoded in the video stream supplied by or on behalf of NFLE, for example as XML-encoded data indicating availability of a play highlight.



Exemplary source for the Big Play metadata in the NFL Game Pass application



Exemplary UI view of the NFL Game Pass application showing time encoded Big Play Markers



Exemplary screenshot of the NFL Game Pass UI showing a Big Play highlight summary dialog window

46. NFLE has thus infringed, and continues to infringe, at least Claim 1 of the '729 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license '729 Infringing Instrumentalities, and operating them such that all steps of at least Claim 1 of the '729 Patent are performed, including within this District. In addition, NFLE directs its agents or third parties to perform acts of infringement under NFLE direction and control. Moreover,

NFLE and/or agents thereof fully implement, manage, and support the '729 Infringing Instrumentalities by its customers.

47. NFLE's users, customers, agents or other third parties (collectively, "third party infringers") have been and are now infringing, including under 35 U.S.C. § 271(a), at least Claim 1 of the '729 Patent by using the '729 Infringing Instrumentalities.

48. NFLE has, since at least November 30, 2015 and by no later than the filing of this Complaint, known or been willfully blind to the fact that the third party infringers' use of the '729 Infringing Instrumentalities directly infringe at least Claim 1 of the '729 Patent.

49. NFLE's knowledge of the '729 Patent, which covers operating the '729 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 1 of the '729 Patent are met, made it known to NFLE that the third party infringers' use of the '729 Infringing Instrumentalities would directly infringe the '729 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

50. Having known or been willfully blind to the fact that the third party infringers' use of the '729 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 1 of the '729 Patent are met would directly infringe the '729 Patent, NFLE, upon information and belief, actively encouraged and continues to actively encourage the third party infringers to directly infringe the '729 Patent by using, selling, licensing, offering to sell/license, or importing said '729 Infringing Instrumentalities, and by, for example, marketing the '729 Infringing Instrumentalities to the third party infringers; working with the third party infringers to implement, install and operate the '729 Infringing Instrumentalities and components thereof; fully supporting and managing the third party infringers' continued use of the '729 Infringing Instrumentalities; and providing technical assistance to the third party infringers

during their continued use of the '729 Infringing Instrumentalities. *See, e.g.*, <https://gamepass.nfl.com/nflgp/secure/schedule>; <http://gamepass.nfl.com/nflgp/console.jsp>; <https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass>.

51. NFLE induces the third party infringers to infringe at least Claim 1 of the '729 Patent at least by directing or encouraging them to install and operate the '729 Infringing Instrumentalities, which, alone or in combination with the third party infringers' devices, satisfy all the limitations of at least Claim 1 of the '729 Patent. For example, NFLE advertises and promotes the features of the '729 Infringing Instrumentalities on its websites nfl.com and <https://gamepass.nfl.com/nflgp/secure/schedule>, and encourages the third party infringers to configure and operate their mobile and computer devices in an infringing manner (*see, e.g.*, <https://gamepass.nfl.com/nflgp/secure/schedule>; <http://gamepass.nfl.com/nflgp/console.jsp>; <https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass>). In response, the third party infringers acquire, configure and operate the '729 Infringing Instrumentalities such that all the limitations of at least Claim 1 of the '729 Patent are practiced. NFLE has been aware of the '729 Patent since at least November 30, 2015.

52. Thus, NFLE has specifically intended to induce, and has induced, the third party infringers to infringe at least Claim 1 of the '729 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided the third party infringers to engage in direct infringement, including through its encouragement, advice, and assistance to the third party infringers to set up and use the '729 Infringing Instrumentalities.

53. Based on, among other things, the foregoing facts, NFLE has induced, and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 1 of the '729 Patent.

54. Further, NFLE sells, provides and/or licenses to the third party infringers the '729 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by at least claim 1 of the '729 Patent. For example, NFLE provides content, applications and software, which the third party infringers configure and use in a manner that all limitations of at least Claim 1 of the '729 Patent are met, and without which the third party infringers would be unable to use and avail of the '729 Infringing Instrumentalities in their intended manner.

55. Upon information and belief, NFLE also knew that the '729 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 1 of the '729 Patent.

56. The indicator generation and insertion functionality in the '729 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 1 of the '729 Patent. Upon information and belief, such functionality in the '729 Infringing Instrumentalities is not a staple article or commodity of commerce, and because the functionality is designed to work with the '729 Infringing Instrumentalities solely in a manner that is covered by the '729 Patent, it does not have a substantial non-infringing use. At least since November 30, 2015 and by no later than the filing of this Complaint, based on the forgoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—the '729 Infringing Instrumentalities in a manner that is covered by the '729 Patent.

57. Based on, among other things, the forgoing facts, NFLE has contributorily infringed, and continues to contributorily infringe, at least Claim 1 of the '729 Patent under 35 U.S.C. § 271(c).

58. NFLE's acts of infringement of the '729 Patent have been willful and intentional

under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 30, 2015, NFLE has willfully infringed the '729 Patent by refusing to take a license and continuing to make, use, test, sell, license, import, and/or offer for sale/license the '729 Infringing Instrumentalities. NFLE has been aware that it infringes the '729 Patent since at least November 30, 2015 and instead of taking a license, NFLE has opted to make the business decision to “efficiently infringe” the '729 Patent. In doing so, NFLE willfully infringed the '729 Patent.

59. NFLE’s acts of direct and indirect infringement have caused, and continue to cause, damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE’s wrongful acts in an amount subject to proof at trial. The infringement of OpenTV’s exclusive rights under the '729 Patent has damaged and will continue to damage OpenTV, causing irreparable harm, for which there is no adequate remedy at law, with the balance of hardships between OpenTV and NFLE, and the public interest, warranting an injunction.

COUNT 3: INFRINGEMENT OF THE '327 PATENT

60. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

61. OpenTV owns by assignment the entire right, title, and interest in the '327 Patent.

62. The '327 Patent was issued by the United States Patent and Trademark Office on April 11, 2006 and is titled “Using The Electronic Program Guide To Synchronize Interactivity With Broadcast Programs.” A true and correct copy of the '327 Patent is attached hereto as Exhibit C.

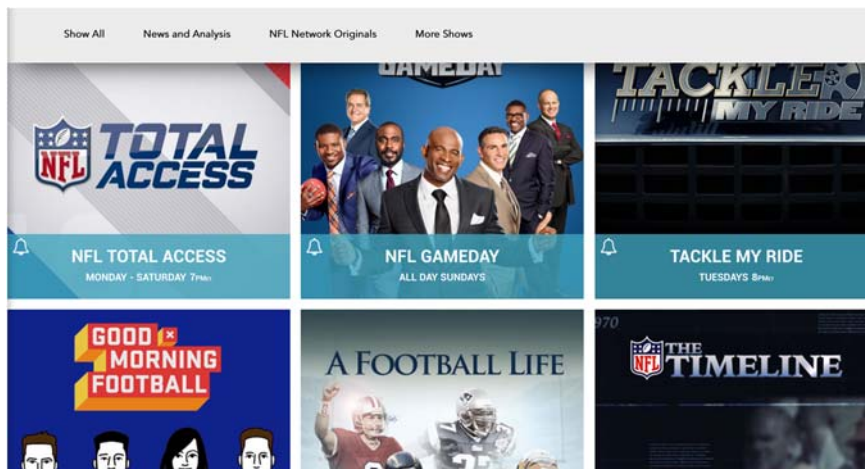
63. Pursuant to 35 U.S.C. § 282, the '327 Patent is presumed valid.

64. A person of ordinary skill in the art reading the '327 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software technologies that can be used to overcome the problem of how to synchronize a user's interaction with the video content experience. By way of example, such complex technology can be used to synchronize an interactive software application with a video program when a video content provider uses specialized computer hardware and software to provide timing offset information that correlates a video program with the appropriate timing offsets. Timing offset information may contain a list of trigger times in addition to indicators or other instructions that indicate elements of the interactive software application that are to be executed, terminated, run for a duration, suspended, resumed, or triggered by a processor at a time of the presentation of the video content. Such data is then received by a customer electronic device (*e.g.*, a personal computer) to control execution of the interactive application. The customer electronic device interprets the timing offset information, for example, to suspend/resume execution of the interactive application at appropriate times. As reflected in exemplary Claim 13, a computer can control the operation of an interactive application by determining with an electronic program guide an interactive application associated with a video program, controlling the interactive application to maintain synchrony with a display of the video program using timing offsets, using the timing offsets to determine breaks in the program content, and suspending the interactive application at the start of a break and resuming the interactive application at the end of the break.

65. Upon information and belief, NFLE, alone or through agents or third parties under NFLE's direction and control, has directly infringed at least Claim 13 of the '327 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing, selling, licensing, importing,

and/or offering for sale/license in the United States without authority online video delivery services, such as those available at least by and through its NFL.com website, including but not limited to NFL Now, that incorporate the aforementioned electronic program guide and synchronization features (collectively, “the ’327 Infringing Instrumentalities”) in an exemplary manner as described below:

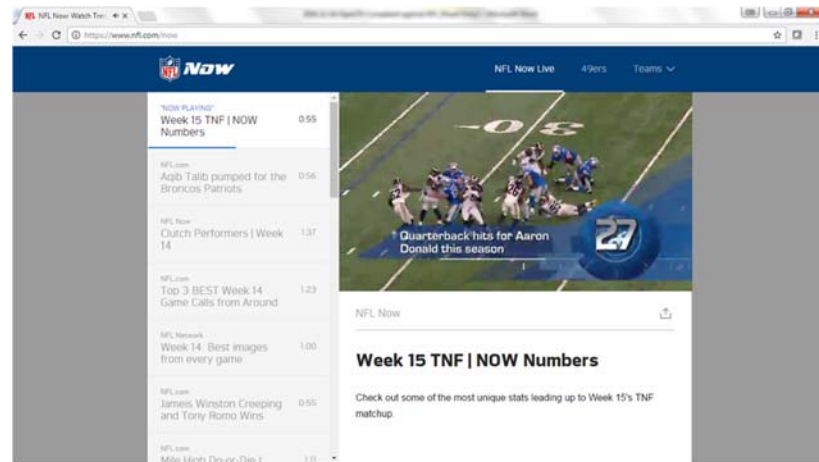
- A. One or more of the ’327 Infringing Instrumentalities meet all the elements of at least claim 13 of the ’327 Patent. In particular, the ’327 Infringing Instrumentalities comprise an electronic program guide of available multimedia content, including broadcast TV programs, *e.g.*, NFL content shows.



Exemplary screenshot of the electronic program guide of available content for NFL Now

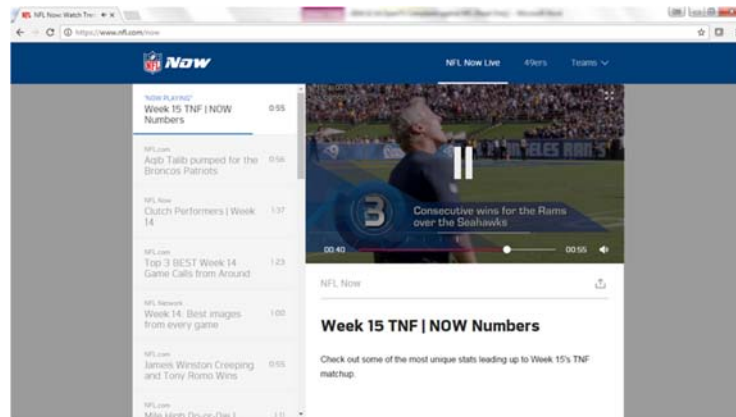
- B. The ’327 Infringing Instrumentalities determine, using an electronic program guide, an interactive application associated with a broadcast program. In particular, as one example, the ’327 Infringing Instrumentalities provide functionality for selection and instantiation of one or more interactive

applications from the available electronic program guide affording a synchronized interactive content experience.



Exemplary screenshot of NFL Now which includes an instantiated interactive player application

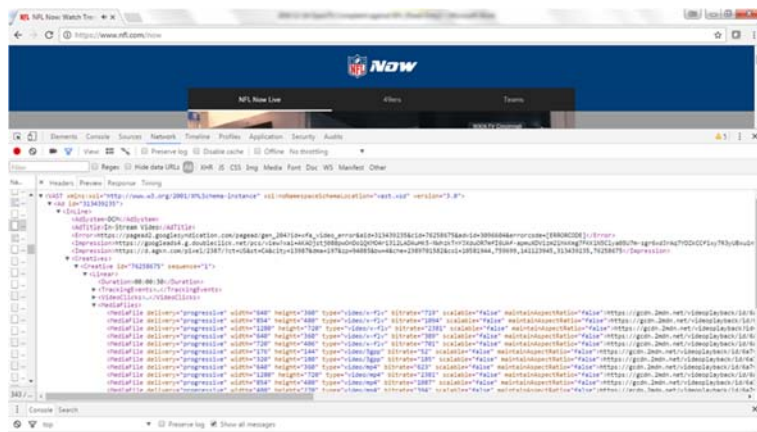
- C. One or more of the '327 Infringing Instrumentalities controls the interactive application to maintain synchrony with a display of the broadcast program. In particular, the '327 Infringing Instrumentalities include functionality, *e.g.*, an interactive slider bar in an NFL content player application, that controls the interactive application to maintain synchrony with NFL content being displayed through the player. For example, the interactive slider bar allows navigation to different parts of the content corresponding to a time bar index location.



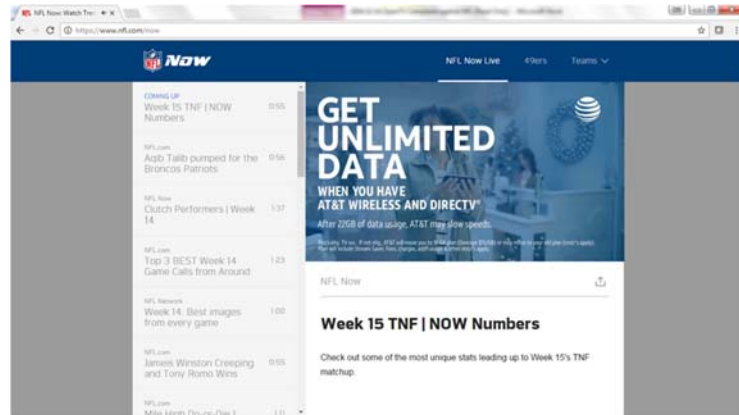
Exemplary screenshot of NFL Now illustrating interactive controls associated with the player application

- D. One or more of the '327 Infringing Instrumentalities determines timing offsets associated with the broadcast program. In particular, the '327 Infringing Instrumentalities include timing offset functionality, *e.g.*, coded “duration” markers that determine breaks in the programming to support dynamic ad insertion.
- E. One or more of the '327 Infringing Instrumentalities controls the interactive application to maintain synchrony with the display of the broadcast program in accordance with the timing offsets wherein the broadcast program is a television show. In particular, the '327 Infringing Instrumentalities include timing offset functionality, *e.g.*, coded “duration” markers that determine breaks in the programming to support dynamic ad insertion. Synchrony with the NFL video content displayed through the NFL content player application is maintained in accordance with the timing offset functionality associated with dynamic ad insertion.

F. One or more of the '327 Infringing Instrumentalities, responsive to determining from the timing offsets that there is a break in the television show, generate a command to suspend execution of the interactive application associated with the television show. In particular, the '327 Infringing Instrumentalities, for example, include controls that maintain the user's ability to interact, allowing a user to navigate to different segments of video content. When a coded "duration" marker is processed, an advertisement is dynamically called and rendered in the NFL interactive player application. At that time the interactive controls are suspended such that the user is no longer able to interact and navigate to different segments of video content while ad content is rendered.

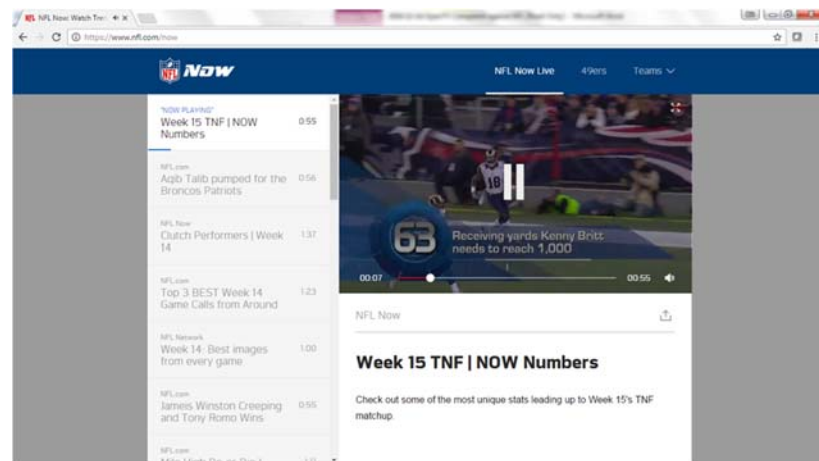


Exemplary XML source of a VAST ad insertion response that controls ad position and duration for the NFL Now video service



Exemplary screenshot of NFL Now illustrating a rendered advertisement demonstrating the suspension of interactive player controls

G. One or more of the '327 Infringing Instrumentalities, responsive to determining from the timing offsets that the break in the television show has ended, generate a command to resume execution of the interactive application associated with the television show. In particular, the '327 Infringing Instrumentalities, for example, suspend user interactivity during a commercial break based on coded "duration" markers, and resume user interactivity at the expiration of said commercial break.



Exemplary screenshot of NFL Now demonstrating the resumption of the interactive player controls after the conclusion of the advertisement

66. NFLE has thus infringed, and continues to infringe, at least Claim 13 of the '327 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license '327 Infringing Instrumentalities, and operating them such that all steps of at least Claim 13 of the '327 Patent are performed, including within this District. In addition, NFLE directs its agents or third parties to perform acts of infringement under NFLE direction and control. Moreover, NFLE fully implements, manages, directs and supports the use of the '327 Infringing Instrumentalities by its customers.

67. NFLE's users, customers, agents or other third parties (collectively, "third party infringers") have been and are now infringing, including under 35 U.S.C. § 271(a), at least Claim 13 of the '327 Patent by using the '327 Infringing Instrumentalities.

68. NFLE has, since at least November 30, 2015 and by no later than the filing of this Complaint, known or been willfully blind to the fact that the third party infringers' use of the '327 Infringing Instrumentalities directly infringe the '327 Patent.

69. NFLE's knowledge of the '327 Patent, which covers operating the '327 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 13 of the '327 Patent are met, made it known to NFLE that the third party infringers' use of the '327 Infringing Instrumentalities would directly infringe the '327 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

70. Having known or been willfully blind to the fact that the third party infringers' use of the '327 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 13 of the '327 Patent are met would directly infringe the '327 Patent, NFLE, upon information and belief, actively encouraged and continues to actively encourage the third party infringers to directly infringe the '327 Patent by using, selling, licensing, offering to

sell/license, or importing the said '327 Infringing Instrumentalities, and by, for example, marketing the '327 Infringing Instrumentalities to the third party infringers; working with the third party infringers to implement, install and operate the '327 Infringing Instrumentalities and components thereof; fully supporting and managing the third party infringers' continued use of the '327 Infringing Instrumentalities; and providing technical assistance to the third party infringers during their continued use of the '327 Infringing Instrumentalities. *See, e.g.,* <http://nflnline.nfl.com/>; <https://digitalcare.nfl.com/hc/en-us>.

71. NFLE induces the third party infringers to infringe at least Claim 13 of the '327 Patent at least by directing or encouraging them to install and operate the '327 Infringing Instrumentalities, which, alone or in combination with the users' devices, satisfy all the limitations of at least Claim 13 of the '327 Patent. For example, NFLE advertises and promotes the features of the '327 Infringing Instrumentalities on its website NFL.com, and encourages the third party infringers to configure and operate their mobile and computer devices in an infringing manner (*see, e.g.,* <http://nflnline.nfl.com/>; <https://digitalcare.nfl.com/hc/en-us>). In response, the third party infringers acquire, configure and operate the '327 Infringing Instrumentalities such that all the limitations of at least Claim 13 of the '327 Patent are practiced. NFLE has been aware of the '327 Patent since at least November 30, 2015.

72. Thus, NFLE has specifically intended to induce, and has induced, the third party infringers to infringe at least Claim 13 of the '327 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided the third party infringers to engage in direct infringement, including through its encouragement, advice, and assistance to the third party infringers to use the '327 Infringing Instrumentalities.

73. Based on, among other things, the foregoing facts, NFLE has induced, and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 13 of the '327 Patent.

74. Further, NFLE sells, provides and/or licenses to the third party infringers the '327 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by the '327 Patent. For example, NFLE provides content, applications and software, which the third party infringers configure and use in a manner that all limitations of at least Claim 13 of the '327 Patent are met, and without which the third party infringers would be unable to use and avail of the '327 Infringing Instrumentalities in their intended manner.

75. Upon information and belief, NFLE also knew that '327 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 13 of the '327 Patent.

76. The program guide, synchrony and ad break suspend/resume functionality in the '327 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 13 of the '327 Patent. Upon information and belief, the program guide, synchrony and ad break suspend/resume functionality in the '327 Infringing Instrumentalities is not a staple article or commodity of commerce, and, because the functionality is designed to work with the '327 Infringing Instrumentalities solely in a manner that is covered by the '327 Patent, it does not have a substantial non-infringing use. At least since November 30, 2015 and by no later than the filing of this Complaint, based on the foregoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—the '327 Infringing Instrumentalities in a manner that is covered by the '327 Patent.

77. Based on, among other things, the forgoing facts, NFLE has contributorily infringed, and continues to contributorily infringe, at least Claim 13 of the '327 Patent under 35 U.S.C. § 271(c).

78. NFLE's acts of infringement of the '327 Patent have been willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 30, 2015, NFLE has willfully infringed the '327 Patent by refusing to take a license and continuing to make, use, test, sell, license, import, and/or offer for sale/license the '327 Infringing Instrumentalities. NFLE has been aware that it infringes the '327 Patent since at least November 30, 2015 and instead of taking a license, NFLE has opted to make the business decision to "efficiently infringe" the '327 Patent. In doing so, NFLE willfully infringed the '327 Patent.

79. NFLE's acts of direct and indirect infringement have caused, and continue to cause, damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE's wrongful acts in an amount subject to proof at trial. The infringement of OpenTV's exclusive rights under the '327 Patent has damaged and will continue to damage OpenTV, causing irreparable harm, for which there is no adequate remedy at law, with the balance of hardships between OpenTV and NFLE, and the public interest, warranting an injunction.

COUNT 4: INFRINGEMENT OF THE '033 PATENT

80. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

81. OpenTV owns by assignment the entire right, title, and interest in the '033 Patent.

82. The '033 Patent was issued by the United States Patent and Trademark Office on May 24, 2011 and is titled "Utilization of Relational Metadata In A Television System." A true and correct copy of the '033 Patent is attached hereto as Exhibit D.

83. Pursuant to 35 U.S.C. § 282, the '033 Patent is presumed valid.

84. A person of ordinary skill in the art reading the '033 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software technologies that can be used to overcome problems encountered when inserting digital data into a digital broadcast signal to be transmitted using computers and/or other electronic devices. The '033 Patent uses computer hardware and software technologies to parse digital signals to identify relational metadata and related video signals such that the technology uses the relational metadata to define relationships between a first dataset (*e.g.*, a video stream) and a second dataset (*e.g.*, additional information relating to that video stream) to initiate actions based on the relationship. The actions to be triggered are specific to computer hardware and software technologies and include presenting more detailed content (*e.g.*, a summary or a highlight) in a separately displayed display window.

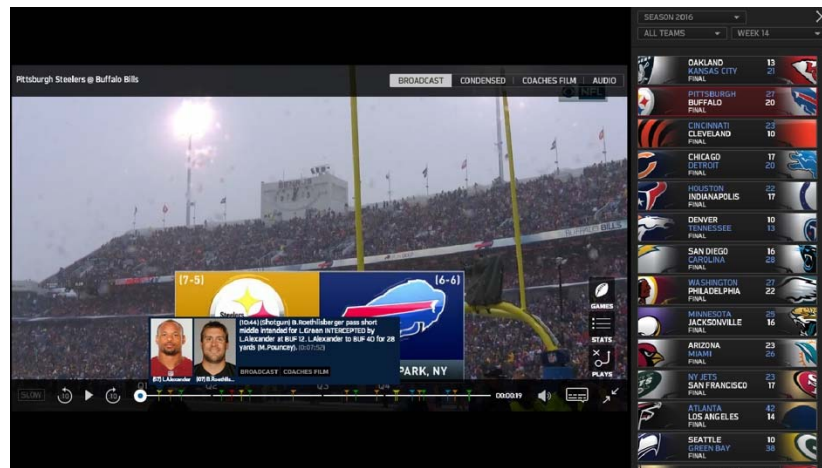
85. Upon information and belief, NFLE, alone or through agents under NFLE's direction and control, has directly infringed at least Claim 27 of the '033 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing, selling, licensing, importing, and/or offering for sale/license in the United States without authority its NFL Mobile and NFL Game Pass applications ("the '033 Infringing Instrumentalities") in an exemplary manner as described below:

- A. One or more of the '033 Infringing Instrumentalities meet all the elements of Claim 27 of the '033 Patent. In particular, the '033 Infringing

Instrumentalities comprise program instructions that are executable to receive relational metadata because the '033 Infringing Instrumentalities parse relational metadata corresponding to a broadcast signal to present the play highlights in the application user interface.

- B. One or more of the '033 Infringing Instrumentalities use relational metadata that includes a relational metadata instruction, (for example, the Game Pass application utilizes the public function showTIP (param1: Object, param2: Point) : void), with at least a relationship identifier (for example, this. Data = param1;) and a dataset element (for example, Source: 56503.xml) wherein the relationship identifier specifies a type of relationship between a first data (for example, param1.players) and a second data (for example, information about the player and the play highlight) such that the play highlight metadata is identified by the dataset element.
- C. One or more of the '033 Infringing Instrumentalities include an action corresponding to the relational metadata instruction (for example, public function showTIP (param1: Object, param2: Point) : void) and the action (such as instantiating a view window for displaying relational metadata) is initiated in response to the identification.
- D. One or more of the '033 Infringing Instrumentalities include a relationship of the second data to the first data that is selected from a group consisting of a summary, a correction, a repeat, a highlight, more detailed content, related text and a related icon such that the play highlight metadata provides a

summary of the selected play in the pop-up view window when the user selects a particular Big Play Marker from the time line.



Exemplary screenshot of the NFL Game Pass UI showing a Big Play highlight summary dialog window

86. NFLE has thus infringed, and continues to infringe, at least Claim 27 of the '033 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license the '033 Infringing Instrumentalities, and operating them such that all elements of at least Claim 27 of the '033 Patent are performed, including within this District. In addition, NFLE directs its agents to perform acts of infringement under NFLE direction and control. Moreover, NFLE and/or agents thereof fully implement, manage, and support the '033 Infringing Instrumentalities by its customers.

87. NFLE's users, customers, agents or other third parties (collectively, "third party infringers") have been and are now infringing, including under 35 U.S.C. § 271(a), at least Claim 27 of the '033 Patent by using the '033 Infringing Instrumentalities.

88. NFLE has, since at least November 30, 2015 and by no later than the filing of this Complaint, known or been willfully blind to the fact that the third party infringers' use of the '033 Infringing Instrumentalities directly infringe the '033 Patent.

89. NFLE's knowledge of the '033 Patent, which covers operating the '033 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 27 of the '033 Patent are met, made it known to NFLE that the third party infringers' use of the '033 Infringing Instrumentalities would directly infringe the '033 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

90. Having known or been willfully blind to the fact that the third party infringers' use of the '033 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 27 of the '033 Patent are met would directly infringe the '033 Patent, NFLE, upon information and belief, actively encouraged and continues to actively encourage the third party infringers to directly infringe the '033 Patent by using, selling, licensing, offering to sell/license, or importing the '033 Infringing Instrumentalities, and by, for example, marketing the '033 Infringing Instrumentalities to the third party infringers; working with the third party infringers to implement, install and operate the '033 Infringing Instrumentalities and components thereof; fully supporting and managing the third party infringers' continued use of the '033 Infringing Instrumentalities; and providing technical assistance to the third party infringers during their continued use of the '033 Infringing Instrumentalities. *See, e.g.,* <https://gamepass.nfl.com/nflgp/secure/schedule>; <http://gamepass.nfl.com/nflgp/console.jsp>; <https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass>.

91. NFLE induces the third party infringers to infringe at least Claim 27 of the '033 Patent at least by directing or encouraging them to install and operate the '033 Infringing Instrumentalities, which, alone or in combination with the users' devices, satisfy all the limitations of at least Claim 27 of the '033 Patent. For example, NFLE advertises and promotes the features of the '033 Infringing Instrumentalities on its websites NFL.com and

<https://gamepass.nfl.com/nflgp/secure/schedule>, as well as through its NFL Mobile application, and encourages the third party infringers to configure and operate their mobile and computer devices in an infringing manner (*see, e.g.*, <https://gamepass.nfl.com/nflgp/secure/schedule>; <http://gamepass.nfl.com/nflgp/console.jsp>;

<https://digitalcare.nfl.com/hc/enus/categories/200275708-Game-Pass>). In response, the third party infringers acquire, configure and operate the '033 Infringing Instrumentalities such that all the limitations of at least Claim 27 of the '033 Patent are practiced. NFLE has been aware of the '033 Patent since at least November 30, 2015.

92. Thus, NFLE has specifically intended to induce, and has induced, the third party infringers to infringe at least Claim 27 of the '033 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided the third party infringers to engage in direct infringement, including through its encouragement, advice, and assistance to the third party infringers to use the '033 Infringing Instrumentalities.

93. Based on, among other things, the foregoing facts, NFLE has induced, and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 27 of the '033 Patent.

94. Further, NFLE sells, provides and/or licenses to the third party infringers the '033 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by the '033 Patent. For example, NFLE provides content, applications and software, which the third party infringers configure and use in a manner that all limitations of at least Claim 27 of the '033 Patent are met, and without which the third party infringers would be unable to use and avail of the '033 Infringing Instrumentalities in their intended manner.

95. Upon information and belief, NFLE also knew that '033 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 27 of the '033 Patent.

96. The relational metadata functionality in the '033 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 27 of the '033 Patent. Upon information and belief, the relational metadata functionality in the '033 Infringing Instrumentalities is not a staple article or commodity of commerce, and, because the functionality is designed solely to work with the '033 Infringing Instrumentalities in a manner that is covered by the '033 Patent, it does not have a substantial non-infringing use. At least since the filing of this Complaint, based on the forgoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—the '033 Infringing Instrumentalities in a manner that is covered by the '033 Patent.

97. Based on, among other things, the forgoing facts, NFLE has contributorily infringed, and continues to contributorily infringe, at least Claim 27 of the '033 Patent under 35 U.S.C. § 271(c).

98. NFLE's acts of infringement of the '033 Patent have been willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 30, 2015, NFLE has willfully infringed the '033 Patent by refusing to take a license and continuing to make, use, test, sell, license, import, and/or offer for sale/license the '033 Infringing Instrumentalities. NFLE has been aware that it infringes the '033 Patent since at least November 30, 2015 and instead of taking a license, NFLE has opted to make the business decision to “efficiently infringe” the '033 Patent. In doing so, NFLE willfully infringed the '033 Patent.

99. NFLE's acts of direct and indirect infringement have caused, and continue to cause, damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE's wrongful acts in an amount subject to proof at trial. The infringement of OpenTV's exclusive rights under the '033 Patent has damaged and will continue to damage OpenTV, causing irreparable harm, for which there is no adequate remedy at law, with the balance of hardships between OpenTV and NFLE, and the public interest, warranting an injunction.

COUNT 5: INFRINGEMENT OF THE '169 PATENT

100. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

101. OpenTV owns by assignment the entire right, title, and interest in the '169 Patent.

102. The '169 Patent was issued by the United States Patent and Trademark Office on May 30, 2006 and is titled "Supporting Common Interactive Television Functionality Through Presentation Engine Syntax." A true and correct copy of the '169 Patent is attached hereto as Exhibit E.

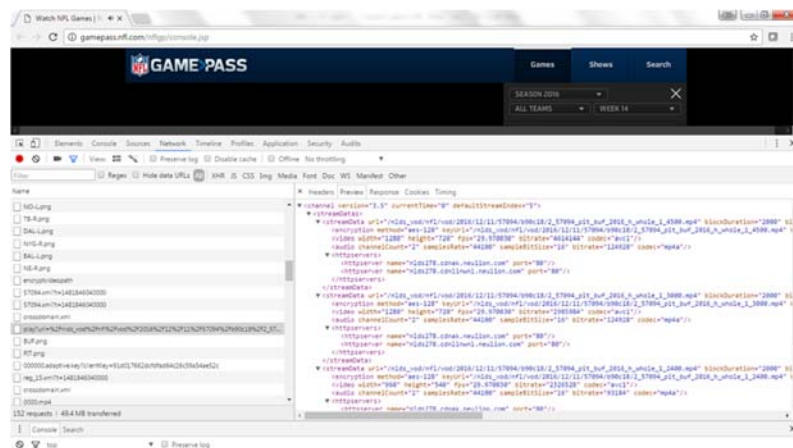
103. Pursuant to 35 U.S.C. § 282, the '169 Patent is presumed valid.

104. A person of ordinary skill the art reading the '169 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software to overcome the problem encountered when digital audio, video and/or graphic presentation initiates without the computer-implemented resources necessary for the presentation being present. This problem prevents the proper (or any) presentation of digital audio, video and/or graphic information. In particular, the '169 Patent uses an innovative, specially programmed computer system to determine whether a digital

audio, video and/or graphic presentation requires other computer-implemented resources for its presentation. If the innovative, specially programmed computer system determines that the digital audio, video and/or graphic presentation does not require other resources, it permits the presentation to be initiated. If, on the other hand, the innovative specially programmed computer system determines that additional resources are required by the digital audio, video and/or graphic presentation, it prohibits initiation of the presentation until the additional computer-implemented resources are present.

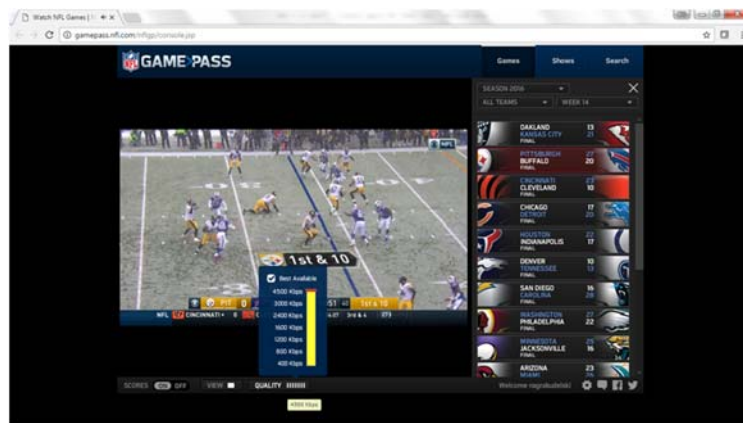
105. Upon information and belief, NFLE has directly infringed at least Claim 1 of the '169 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing, selling, licensing, importing, and/or offering for sale/license in the United States without authority online streaming video services at a minimum through its websites www.nfl.com and nflonline.nfl.com, its NFL Game Pass application, and its NFL Mobile application and their related networked functionality (“the '169 Infringing Instrumentalities”) in an exemplary manner as described below:

A. The '169 Infringing Instrumentalities meet all the elements of Claim 1 of the '169 Patent in that they support adaptive bitrate streaming through a set of adaptive streaming directives specified in the Manifest File for the video program.



Exemplary received XML manifest to support adaptive bit rate streaming in the NFL Game Pass application

- B. The '169 Infringing Instrumentalities determine the user's bandwidth and CPU capacity in real time to determine whether a high definition bitstream can be initiated. For example, each directive includes a prerequisite directive for high definition streams (for example, "bitrate = 4608000") and the defined bitrate for a high definition encoded stream is defined as a prerequisite directive in the Manifest File for the video program.
- C. In the '169 Infringing Instrumentalities, the presentation is shown in response to determining the one or more directives do not include the prerequisite directive and a low bitrate stream is initiated by default.
- D. In the '169 Infringing Instrumentalities, the presentation is not shown until a subset of resources are acquired and in response to determining that one or more directives includes the prerequisite directive. A high definition bitrate stream is prohibited until required CPU and bandwidth resources are available.



Exemplary screenshot of the NFL Game Pass UI demonstrating the bit rate(s) supported by the application at a given point in time

106. NFLE has thus infringed, and continues to infringe, at least Claim 1 of the '169 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license the '169 Infringing Instrumentalities, and operating them such that all steps of at least Claim 1 of the '169 Patent are performed, including within this District. Moreover, NFLE fully implements, manages, directs and supports the use of the '169 Infringing Instrumentalities by its customers.

107. NFLE's customers have been and are now infringing, including under 35 U.S.C. § 271(a), at least Claim 1 of the '169 Patent by using the '169 Infringing Instrumentalities.

108. NFLE has, since at least November 30, 2015 and by no later than the filing of this Complaint, known or been willfully blind to the fact that its customers' use of the '169 Infringing Instrumentalities directly infringe the '169 Patent.

109. NFLE's knowledge of the '169 Patent, which covers operating the '169 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 1 of the '169 Patent are met, made it known to NFLE that its customers' use of the '169 Infringing Instrumentalities would directly infringe the '169 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

110. Having known or been willfully blind to the fact that its customers' use of the '169 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 1 of the '169 Patent are met would directly infringe the '169 Patent, NFLE, upon information and belief, actively encouraged and continues to actively encourage its customers to directly infringe the '169 Patent by using, selling, licensing, offering to sell/license, or importing the said '169 Infringing Instrumentalities, and by, for example, marketing the '169 Infringing Instrumentalities to customers; working with its customers to implement, install and operate the '169 Infringing Instrumentalities and components thereof; fully supporting and managing its

customers' continued use of the '169 Infringing Instrumentalities; and providing technical assistance to customers during their continued use of the '169 Infringing Instrumentalities. *See, e.g.,* <https://digitalcare.nfl.com/hc/en-us/articles/214751028-Video-Choppy-Lagging>; <https://digitalcare.nfl.com/hc/en-us/articles/215465157-Video-Quality>.

111. NFLE induces its users to infringe at least Claim 1 of the '169 Patent at least by encouraging them to install and operate the '169 Infringing Instrumentalities, which, alone or in combination with the users' devices, satisfy all the limitations of at least Claim 1 of the '169 Patent. For example, NFLE advertises and promotes the features of its online streaming video services and its NFL Game Pass Application on its websites NFL.com and <https://gamepass.nfl.com/nflgp/secure/schedule>, and encourages its users to configure and operate their mobile and computer devices in an infringing manner (*see, e.g.,* <https://digitalcare.nfl.com/hc/en-us/articles/214751028-Video-Choppy-Lagging>; <https://digitalcare.nfl.com/hc/en-us/articles/215465157-Video-Quality>). In response, NFLE's users acquire, configure and operate the online streaming video service content and applications, the NFL Game Pass Application and/or the NFL Mobile application such that all the limitations of at least Claim 1 of the '169 Patent are practiced. NFLE has been aware of the '169 Patent since at least November 30, 2015.

112. Thus, NFLE has specifically intended to induce, and has induced, its customers to infringe at least Claim 1 of the '169 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided its customers to engage in direct infringement, including through its encouragement, advice, and assistance to customers to use the '169 Infringing Instrumentalities.

113. Based on, among other things, the foregoing facts, NFLE has induced, and

continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 1 of the '169 Patent.

114. Further, NFLE sells, provides and/or licenses to its customers the '169 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by the '169 Patent. For example, NFLE provides applications and software, which customers configure and use in a manner that all limitations of at least Claim 1 of the '169 Patent are met, and without which customers would be unable to use and avail of the '169 Infringing Instrumentalities in their intended manner.

115. Upon information and belief, NFLE also knew that the '169 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 1 of the '169 Patent.

116. The adaptive streaming functionality in the '169 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 1 of the '169 Patent. Upon information and belief, the adaptive streaming functionality in the '169 Infringing Instrumentalities is not a staple article or commodity of commerce, and, because the functionality is designed solely to work with the '169 Infringing Instrumentalities in a manner that is covered by the '169 Patent, it does not have a substantial non-infringing use. At least since November 30, 2015 and by no later than the filing of this Complaint, based on the forgoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—the '169 Infringing Instrumentalities in a manner that is covered by the '169 Patent.

117. Based on, among other things, the forgoing facts, NFLE has contributorily infringed, and continues to contributorily infringe, at least Claim 1 of the '169 Patent under 35

U.S.C. § 271(c).

118. NFLE's acts of infringement of the '169 Patent have been willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 30, 2015, NFLE has willfully infringed the '169 Patent by refusing to take a license and continuing to make, use, test, sell, license, import, and/or offer for sale/license the '169 Infringing Instrumentalities. NFLE has been aware that it infringes the '169 Patent since at least November 30, 2015 and instead of taking a license, NFLE has opted to make the business decision to "efficiently infringe" the '169 Patent. In doing so, NFLE willfully infringed the '169 Patent.

119. NFLE's acts of direct and indirect infringement have caused, and continue to cause, damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE's wrongful acts in an amount subject to proof at trial. The infringement of OpenTV's exclusive rights under the '169 Patent has damaged and will continue to damage OpenTV, causing irreparable harm, for which there is no adequate remedy at law, with the balance of hardships between OpenTV and NFLE, and the public interest, warranting an injunction.

COUNT 6: INFRINGEMENT OF THE '888 PATENT

120. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

121. OpenTV owns by assignment the entire right, title, and interest in the '888 Patent.

122. The '888 Patent was issued by the United States Patent and Trademark Office on March 28, 2006 and is titled "System And Method For Providing An Omnimedia Package." A true and correct copy of the '888 Patent is attached hereto as Exhibit F.

123. Pursuant to 35 U.S.C. § 282, the '888 Patent is presumed valid.

124. A person of ordinary skill the art reading the '888 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software that can be used to combine audio, video and metadata data streams into a broadcast stream by, in exemplary embodiments, transcoding the streams by specialized preprocessor, packager and multiplexor systems into broadcast data formats based on a framework definition specifying data formats, combining the streams into a broadcast stream, and transmitting said stream to users in a form which can be decoded and displayed by a user's set top box or other receiver device.

125. Upon information and belief, NFLE, alone or through agents acting under NFLE's direction and control, has directly infringed at least Claim 1 of the '888 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing, selling, licensing, importing, and/or offering for sale/license without authority its NFL Game Pass application together with its related video, audio and metadata content generation, transcoding, stream packaging and content delivery functionalities (collectively, "the '888 Infringing Instrumentalities") in the exemplary manner described below:

A. One or more of the '888 Infringing Instrumentalities meet all of the elements of Claim 1 of the '888 Patent in that they provide a method for producing a broadcast stream that contains various stream types of audio content, video content and metadata content. In particular, NFLE generates omnimedia content for its Game Pass application, including at a minimum, NFL game video, audio and metadata such as text features, game statistics, Big Play Markers and other identifiers.

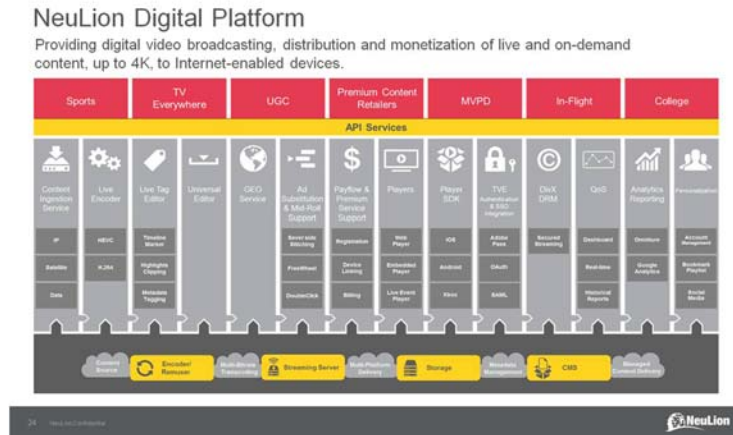
- B. One or more of the '888 Infringing Instrumentalities create a framework definition that identifies various stream types in the audio content, the video content and the metadata content associated with a broadcast and attributes of said stream types including the format of said various stream types. In particular, as an example, NFLE captures football game footage in certain high-quality video and audio formats. Before this footage may be transmitted to Game Pass clients, these formats are transcoded to transmission-friendly stream types and various metadata stream types are added and transcoded. A transcoder apparatus (e.g., as provided by NeuLion acting under NFLE's direction and control) may be used for this purpose and provides multi-bitrate encoding functions. A transcoder comprises a framework definition that specifies type, format and attributes of input and output streams.

The NFL selected NeuLion as its technology partner for all of its premium digital products. NeuLion has delivered a stunning global HD streaming service that includes many interactive components for NFL fans to engage with the game. Since its launch in 2008, the NFL's digital media products empowered by NeuLion have seen significant growth in subscriptions, renewal rate, client satisfaction and overall revenue.

Live HD games | Snap to whistle | Highlight touch points | Extensive stats | Coaches Film | Telestrator



Source: Neulion Form 8-K presentation (May 27, 2015) available at <http://www.streetinsider.com/SEC+Filings/Form+8-K+NEULION,+INC.+For%3A+May+27/10601214.html>



Source: Neulion Form 8-K presentation (May 27, 2015) available at <http://www.streetinsider.com/SEC+Filings/Form+8-K+NEULION,+INC.+For%3A+May+27/10601214.html>

INPUT

- SDI capturing
- IP streams: UDP (MPEG-2/H.264 in MPEG TS), HTTP, RTMP
- Optimized low-latency streaming for NeuLion OTT platform
- Video Codecs: AVC/H.264, HEVC/H.265, MPEG-2, VC-1
- Audio: Codecs: AAC, MPEG Audio Layer 1/2, MP3

Source: Neulion MC Encoder Datasheet available at
http://www.mainconcept.com/fileadmin/user_upload/datasheets/NeuLion_MCEncoder_DATASHEET.pdf

C. One or more of the '888 Infringing Instrumentalities compare audio, video and metadata content formats with corresponding transmission formats and convert the audio, video and metadata content to the transmission format if the formats differ. In particular, the '888 Infringing Instrumentalities transcode each content type to formats suitable for transmission to Game Pass clients. As an example, the content may be transcoded to a lower

bitrate suitable for Internet transmission, and/or to a different format, *e.g.*, an MPEG2 format to an H.264 format.

ENCODING

- Live encoding to HLS (AVC/AAC) up to 1080p (8-bit), incl. playlist and packaging
- Live encoding to DASH-264 (AVC/AAC) up to 1080p (8-bit), incl. MPD and packaging
- Live encoding to DASH-265 (HEVC/AAC) up to 4K (8-bit), incl. MPD and packaging
- Parallel packaging of DASH and HLS
- Simultaneous encoding of 8 DASH or HLS quality layers

OUTPUT

- Archive live streams to disk as MP4
- Amazon S3 file storage
- IP streams: RTMP, UDP, RTP, HTTP
- CDN Support: Akamai, Amazon CloudFront

Common Input & Output Options

Support for SDI and IP network streams input via UDP (MPEG-2/H.264 in MPEG TS), RTMP and HTTP. Encoding to IP streams using RTMP (in MP4), RTP, HTTP and UDP (in TS) for OTT delivery. Live streams can also be saved in AVC/H.264 and HEVC/H.265 as MP4 files for archiving.

Source: Neulion MC Encoder Datasheet available at http://www.mainconcept.com/fileadmin/user_upload/datasheets/NeuLion_MCEncoder_DATASHEET.pdf

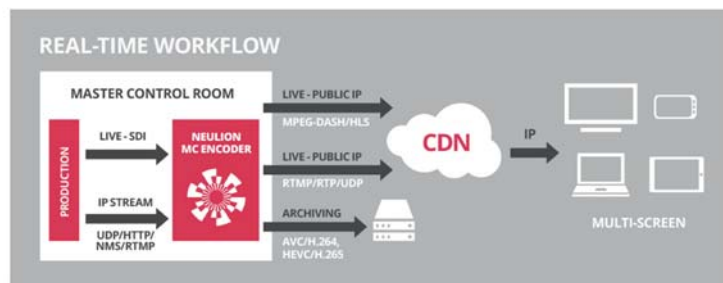
- D. One or more of the '888 Infringing Instrumentalities create a menu describing said audio content, said video content, and said metadata content. In particular, as one example, a content manifest is created which includes descriptions of the transmitted audio, video and metadata available to a Game Pass client.

The screenshot shows a web browser with the URL `gamespass.com/api/games/1234567890`. The page title is "GAME PASS". The browser's developer tools are open, showing the Network tab. A list of requests is displayed, with the selected request being a GET request to the API endpoint. The response body is visible in the right pane, showing a JSON object with game details. The console shows no errors.

The screenshot shows a web browser window with the Game Pass website. The browser's address bar shows the URL `gamepass.nf.com/#gamepass`. The website has a dark theme with a 'GAME PASS' logo and navigation links for 'Games', 'Shows', and 'Search'. Below these links are filters for 'SEASON 2019', 'ALL YEARS', and 'WEEK 14'. The browser's developer console is open, displaying a list of JavaScript code snippets. The code includes comments and function calls related to Game Pass, such as `checkUserStatus`, `getUserStatus`, `getUserStatus2`, `getUserStatus3`, `getUserStatus4`, `getUserStatus5`, `getUserStatus6`, `getUserStatus7`, `getUserStatus8`, `getUserStatus9`, `getUserStatus10`, `getUserStatus11`, `getUserStatus12`, `getUserStatus13`, `getUserStatus14`, `getUserStatus15`, `getUserStatus16`, `getUserStatus17`, `getUserStatus18`, `getUserStatus19`, `getUserStatus20`, `getUserStatus21`, `getUserStatus22`, `getUserStatus23`, `getUserStatus24`, `getUserStatus25`, `getUserStatus26`, `getUserStatus27`, `getUserStatus28`, `getUserStatus29`, `getUserStatus30`, `getUserStatus31`, `getUserStatus32`, `getUserStatus33`, `getUserStatus34`, `getUserStatus35`, `getUserStatus36`, `getUserStatus37`, `getUserStatus38`, `getUserStatus39`, `getUserStatus40`, `getUserStatus41`, `getUserStatus42`, `getUserStatus43`, `getUserStatus44`, `getUserStatus45`, `getUserStatus46`, `getUserStatus47`, `getUserStatus48`, `getUserStatus49`, `getUserStatus50`, `getUserStatus51`, `getUserStatus52`, `getUserStatus53`, `getUserStatus54`, `getUserStatus55`, `getUserStatus56`, `getUserStatus57`, `getUserStatus58`, `getUserStatus59`, `getUserStatus60`, `getUserStatus61`, `getUserStatus62`, `getUserStatus63`, `getUserStatus64`, `getUserStatus65`, `getUserStatus66`, `getUserStatus67`, `getUserStatus68`, `getUserStatus69`, `getUserStatus70`, `getUserStatus71`, `getUserStatus72`, `getUserStatus73`, `getUserStatus74`, `getUserStatus75`, `getUserStatus76`, `getUserStatus77`, `getUserStatus78`, `getUserStatus79`, `getUserStatus80`, `getUserStatus81`, `getUserStatus82`, `getUserStatus83`, `getUserStatus84`, `getUserStatus85`, `getUserStatus86`, `getUserStatus87`, `getUserStatus88`, `getUserStatus89`, `getUserStatus90`, `getUserStatus91`, `getUserStatus92`, `getUserStatus93`, `getUserStatus94`, `getUserStatus95`, `getUserStatus96`, `getUserStatus97`, `getUserStatus98`, `getUserStatus99`, `getUserStatus100`, `getUserStatus101`, `getUserStatus102`, `getUserStatus103`, `getUserStatus104`, `getUserStatus105`, `getUserStatus106`, `getUserStatus107`, `getUserStatus108`, `getUserStatus109`, `getUserStatus110`, `getUserStatus111`, `getUserStatus112`, `getUserStatus113`, `getUserStatus114`, `getUserStatus115`, `getUserStatus116`, `getUserStatus117`, `getUserStatus118`, `getUserStatus119`, `getUserStatus120`, `getUserStatus121`, `getUserStatus122`, `getUserStatus123`, `getUserStatus124`, `getUserStatus125`, `getUserStatus126`, `getUserStatus127`, `getUserStatus128`, `getUserStatus129`, `getUserStatus130`, `getUserStatus131`, `getUserStatus132`, `getUserStatus133`, `getUserStatus134`, `getUserStatus135`, `getUserStatus136`, `getUserStatus137`, `getUserStatus138`, `getUserStatus139`, `getUserStatus140`, `getUserStatus141`, `getUserStatus142`, `getUserStatus143`, `getUserStatus144`, `getUserStatus145`, `getUserStatus146`, `getUserStatus147`, `getUserStatus148`, `getUserStatus149`, `getUserStatus150`, `getUserStatus151`, `getUserStatus152`, `getUserStatus153`, `getUserStatus154`, `getUserStatus155`, `getUserStatus156`, `getUserStatus157`, `getUserStatus158`, `getUserStatus159`, `getUserStatus160`, `getUserStatus161`, `getUserStatus162`, `getUserStatus163`, `getUserStatus164`, `getUserStatus165`, `getUserStatus166`, `getUserStatus167`, `getUserStatus168`, `getUserStatus169`, `getUserStatus170`, `getUserStatus171`, `getUserStatus172`, `getUserStatus173`, `getUserStatus174`, `getUserStatus175`, `getUserStatus176`, `getUserStatus177`, `getUserStatus178`, `getUserStatus179`, `getUserStatus180`, `getUserStatus181`, `getUserStatus182`, `getUserStatus183`, `getUserStatus184`, `getUserStatus185`, `getUserStatus186`, `getUserStatus187`, `getUserStatus188`, `getUserStatus189`, `getUserStatus190`, `getUserStatus191`, `getUserStatus192`, `getUserStatus193`, `getUserStatus194`, `getUserStatus195`, `getUserStatus196`, `getUserStatus197`, `getUserStatus198`, `getUserStatus199`, `getUserStatus200`, `getUserStatus201`, `getUserStatus202`, `getUserStatus203`, `getUserStatus204`, `getUserStatus205`, `getUserStatus206`, `getUserStatus207`, `getUserStatus208`, `getUserStatus209`, `getUserStatus210`, `getUserStatus211`, `getUserStatus212`, `getUserStatus213`, `getUserStatus214`, `getUserStatus215`, `getUserStatus216`, `getUserStatus217`, `getUserStatus218`, `getUserStatus219`, `getUserStatus220`, `getUserStatus221`, `getUserStatus222`, `getUserStatus223`, `getUserStatus224`, `getUserStatus225`, `getUserStatus226`, `getUserStatus227`, `getUserStatus228`, `getUserStatus229`, `getUserStatus230`, `getUserStatus231`, `getUserStatus232`, `getUserStatus233`, `getUserStatus234`, `getUserStatus235`, `getUserStatus236`, `getUserStatus237`, `getUserStatus238`, `getUserStatus239`, `getUserStatus240`, `getUserStatus241`, `getUserStatus242`, `getUserStatus243`, `getUserStatus244`, `getUserStatus245`, `getUserStatus246`, `getUserStatus247`, `getUserStatus248`, `getUserStatus249`, `getUserStatus250`, `getUserStatus251`, `getUserStatus252`, `getUserStatus253`, `getUserStatus254`, `getUserStatus255`, `getUserStatus256`, `getUserStatus257`, `getUserStatus258`, `getUserStatus259`, `getUserStatus260`, `getUserStatus261`, `getUserStatus262`, `getUserStatus263`, `getUserStatus264`, `getUserStatus265`, `getUserStatus266`, `getUserStatus267`, `getUserStatus268`, `getUserStatus269`, `getUserStatus270`, `getUserStatus271`, `getUserStatus272`, `getUserStatus273`, `getUserStatus274`, `getUserStatus275`, `getUserStatus276`, `getUserStatus277`, `getUserStatus278`, `getUserStatus279`, `getUserStatus280`, `getUserStatus281`, `getUserStatus282`, `getUserStatus283`, `getUserStatus284`, `getUserStatus285`, `getUserStatus286`, `getUserStatus287`, `getUserStatus288`, `getUserStatus289`, `getUserStatus290`, `getUserStatus291`, `getUserStatus292`, `getUserStatus293`, `getUserStatus294`, `getUserStatus295`, `getUserStatus296`, `getUserStatus297`, `getUserStatus298`, `getUserStatus299`, `getUserStatus300`, `getUserStatus301`, `getUserStatus302`, `getUserStatus303`, `getUserStatus304`, `getUserStatus305`, `getUserStatus306`, `getUserStatus307`, `getUserStatus308`, `getUserStatus309`, `getUserStatus310`, `getUserStatus311`, `getUserStatus312`, `getUserStatus313`, `getUserStatus314`, `getUserStatus315`, `getUserStatus316`, `getUserStatus317`, `getUserStatus318`, `getUserStatus319`, `getUserStatus320`, `getUserStatus321`, `getUserStatus322`, `getUserStatus323`, `getUserStatus324`, `getUserStatus325`, `getUserStatus326`, `getUserStatus327`, `getUserStatus328`, `getUserStatus329`, `getUserStatus330`, `getUserStatus331`, `getUserStatus332`, `getUserStatus333`, `getUserStatus334`, `getUserStatus335`, `getUserStatus336`, `getUserStatus337`, `getUserStatus338`, `getUserStatus339`, `getUserStatus340`, `getUserStatus341`, `getUserStatus342`, `getUserStatus343`, `getUserStatus344`, `getUserStatus345`, `getUserStatus346`, `getUserStatus347`, `getUserStatus348`, `getUserStatus349`, `getUserStatus350`, `getUserStatus351`, `getUserStatus352`, `getUserStatus353`, `getUserStatus354`, `getUserStatus355`, `getUserStatus356`, `getUserStatus357`, `getUserStatus358`, `getUserStatus359`, `getUserStatus360`, `getUserStatus361`, `getUserStatus362`, `getUserStatus363`, `getUserStatus364`, `getUserStatus365`, `getUserStatus366`, `getUserStatus367`, `getUserStatus368`, `getUserStatus`

Exemplary received XML menu containing the metadata references for a selected game in the NFL Game Pass application

- E. One or more of the '888 Infringing Instrumentalities combine said audio content, said video content, and said metadata content into a broadcast stream for transmission to a plurality of receivers that are capable of checking said various stream types to determine which streams of said various stream types may be used by said receivers. In particular, the '888 Infringing Instrumentalities combine the transcoded content streams into a broadcast stream that is transmitted to the Game Pass clients. The Game Pass clients running in, for example, an Internet browser application, are capable of checking stream type, format and bitrate compatibility.



Source: Neulion MC Encoder Datasheet available at http://www.mainconcept.com/fileadmin/user_upload/datasheets/NeuLion_MCEncoder_DATASHEET.pdf

- F. One or more of the '888 Infringing Instrumentalities transmit said menu to a plurality of receivers that are capable of checking said stream type to determine which streams may be used by said receivers. In particular, as one example, the content manifest file is transmitted to Game Pass clients that are capable of checking stream type, format and bitrate compatibility.

G. One or more of the '888 Infringing Instrumentalities transmit said broadcast stream. In particular, the '888 Infringing Instrumentalities transmit transcoded and combined omnimedia streams containing, for example, football game video, audio and metadata streams to Game Pass clients.

126. NFLE has thus infringed, and continues to infringe, at least Claim 1 of the '888 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license the '888 Infringing Instrumentalities, and operating them such that all steps of at least Claim 1 of the '888 Patent are performed, including within this District. In addition, NFLE directs its agents to perform acts of infringement under NFLE direction and control. Moreover, NFLE fully implements, manages, directs and supports the use of the '888 Infringing Instrumentalities by its agents and/or customers.

127. NFLE's users, customers, agents or other third parties (collectively, "third party infringers") have been and are now infringing, including under 35 U.S.C. § 271(a), at least Claim 1 of the '888 Patent by using the '888 Infringing Instrumentalities.

128. NFLE has, since at least by no later than the filing of this Complaint, known or been willfully blind to the fact that the third party infringers' use of the '888 Infringing Instrumentalities directly infringe the '888 Patent.

129. NFLE's knowledge of the '888 Patent, which covers operating the '888 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 1 of the '888 Patent are met, made it known to NFLE that the third party infringers' use of the '888 Infringing Instrumentalities would directly infringe the '888 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

130. Having known or been willfully blind to the fact that the third party infringers' use of the '888 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 1 of the '888 Patent are met would directly infringe the '888 Patent, NFLE, upon information and belief, actively encouraged and continues to actively encourage the third party infringers to directly infringe the '888 Patent by using, selling, licensing, offering to sell/license, or importing the said '888 Infringing Instrumentalities, and by, for example, marketing the '888 Infringing Instrumentalities to the third party infringers; working with the third party infringers to implement, install and operate the '888 Infringing Instrumentalities and components thereof; fully supporting and managing the third party infringers' continued use of the '888 Infringing Instrumentalities; and providing technical assistance to the third party infringers during their continued use of the '888 Infringing Instrumentalities. *See, e.g.,* <http://nflnline.nfl.com/>; <https://digitalcare.nfl.com/hc/en-us>.

131. NFLE induces the third party infringers to infringe at least Claim 1 of the '888 Patent at least by directing or encouraging them to install and operate the '888 Infringing Instrumentalities, which, alone or in combination with the third party infringers' devices, satisfy all the limitations of at least Claim 1 of the '888 Patent. For example, NFLE advertises and promotes the features of the '888 Infringing Instrumentalities on its website NFL.com, and encourages the third party infringers to configure and operate their mobile and computer devices in an infringing manner; NFLE further provides technical requirements and specifications as to how the '888 Infringing Functionalities should be implemented. (*see, e.g.,* <http://nflnline.nfl.com/>; <https://digitalcare.nfl.com/hc/en-us>). In response, the third party infringers acquire, configure and operate the '888 Infringing Instrumentalities such that all the limitations of at least Claim 1 of the '888 Patent are practiced.

132. Thus, NFLE has specifically intended to induce, and has induced, the third party infringers to infringe at least Claim 1 of the '888 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided the third party infringers to engage in direct infringement, including through its encouragement, advice, and assistance to the third party infringers to use the '888 Infringing Instrumentalities.

133. Based on, among other things, the foregoing facts, NFLE has induced, and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 1 of the '888 Patent.

134. Further, NFLE sells, provides and/or licenses to the third party infringers the '888 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by the '888 Patent. For example, NFLE provides content, specifications, applications and software, which the third party infringers configure and use in a manner that all limitations of at least Claim 1 of the '888 Patent are met, and without which the third party infringers would be unable to use and avail of the '888 Infringing Instrumentalities in their intended manner.

135. Upon information and belief, NFLE also knew that the '888 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 1 of the '888 Patent.

136. The broadcast stream production technology in the '888 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 1 of the '888 Patent. Upon information and belief, broadcast stream production technology in the '888 Infringing Instrumentalities is not a staple article or commodity of commerce, and, because the functionality is designed to work with the '888 Infringing Instrumentalities solely in a manner

that is covered by the '888 Patent, it does not have a substantial non-infringing use. At least by no later than the filing of this Complaint, based on the forgoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—the '888 Infringing Instrumentalities in a manner that is covered by the '888 Patent.

137. Based on, among other things, the forgoing facts, NFLE has contributorily infringed, and continues to contributorily infringe, at least Claim 1 of the '888 Patent under 35 U.S.C. § 271(c).

138. NFLE's acts of direct and indirect infringement have caused, and continue to cause, damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE's wrongful acts in an amount subject to proof at trial. The infringement of OpenTV's exclusive rights under the '888 Patent has damaged and will continue to damage OpenTV, causing irreparable harm, for which there is no adequate remedy at law, with the balance of hardships between OpenTV and NFLE, and the public interest, warranting an injunction.

COUNT 7: INFRINGEMENT OF THE '736 PATENT

139. The allegations of paragraphs 1-20 of this Complaint are incorporated by reference as though fully set forth herein.

140. OpenTV owns by assignment the entire right, title, and interest in the '736 Patent.

141. The '736 Patent was issued by the United States Patent and Trademark Office on May 15, 2001 and is titled "Media Online Service Access System and Method." The '736 patent expired on February 8, 2016. A true and correct copy of the '736 Patent is attached hereto as Exhibit G.

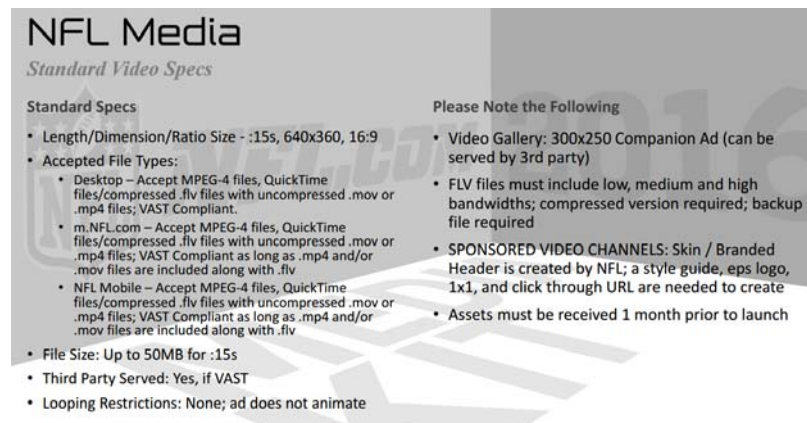
142. Pursuant to 35 U.S.C. § 282, the '736 Patent is presumed valid.

143. The technologies claimed in the '736 Patent were aimed at solving problems specific to interactive electronic content delivery systems, such as the Internet, and in particular, the problem of coupling content distribution with interactivity, *i.e.*, responsive to user-specific characteristics, or user-specific interactions with the electronic content delivery system. For example, the '736 Patent teaches and claims a method for allowing users viewing video content to directly access online information associated with that video content via a web link. A person of ordinary skill in the art reading the '736 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented methods that require complex hardware and software technologies that can be used to overcome the problem described above. At the time of the invention, the technology of providing a link to web-based information in or with a video program was not a conventional business practice. The '736 Patent explains that "[h]eretofore, media receiving and display systems such as television and radio receivers have been linked to interactive information providers in only very limited ways." '736 Patent. At 1:16-18. But "[t]he viewer of a video program . . . may often seek to discover more information which relates to a topic presented in the video program." *Id.*, at 1:38-43. The invention disclosed by the '736 Patent thus solved the problem of allowing video viewers to directly access web-based information associated with a video program.

144. Upon information and belief, NFLE has directly infringed at least Claim 8 of the '736 Patent in violation of 35 U.S.C. § 271 *et seq.*, by having made, used, tested, sold, licensed, imported and/or offered for sale/license without authority its online streaming video functionalities that incorporate links to advertising or other online information content and services from within the video program content, including such streaming video functionalities

available at least on NFL.com, NFL Now, NFL Mobile, the NFL App, and the NFL Fantasy Football application (collectively, “the ’736 Infringing Instrumentalities”) in the exemplary manner described below:

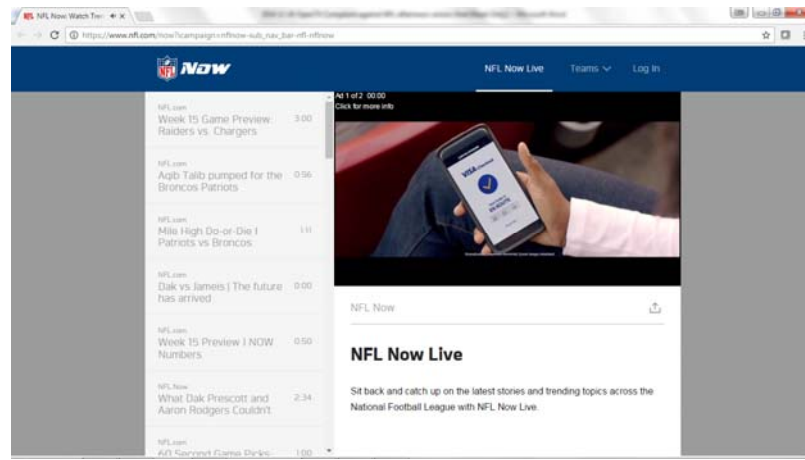
- A. One or more of the ’736 Infringing Instrumentalities meet all of the elements of Claim 8 of the ’736 Patent in that they provide to a user of online services automatic and direct access to online information through a link provided in a video program. In particular, the ’736 Infringing Instrumentalities comprise a video program player that renders video program content (*e.g.*, VAST or VPAID compliant video advertising content) including links to additional online information associated with the advertiser.



Source: NFL Media Kit available at <http://www.nfl.com/static/content/public/photo/2016/08/09/0ap3000000682159.pdf>

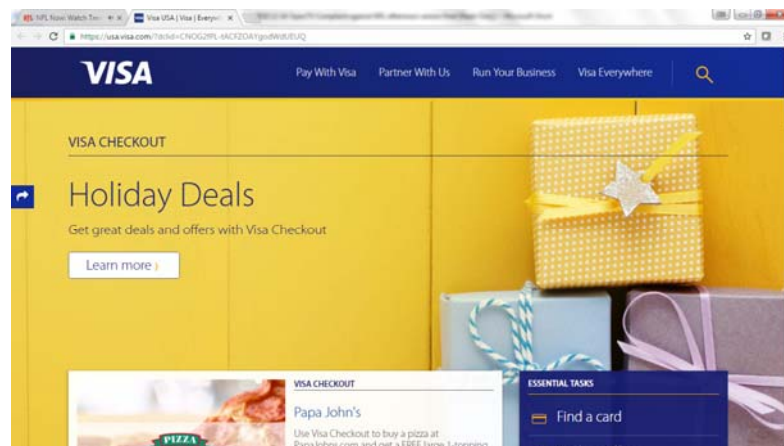
- B. One or more of the ’736 Infringing Instrumentalities indicate to the user that a link to online information services is available for receiving the online information. In particular, the ’736 Infringing Instrumentalities provide an automatic visual indication that an address to, *e.g.*, associated advertising content, has been extracted and provided through either a companion ad

banner and/or a textual or other visual reference viewable in the video program player.



Exemplary screenshot from NFL Now of a VAST supported video advertisement with click-through URL functionality

C. One or more of the '736 Infringing Instrumentalities automatically and directly electronically access the online information associated with the link when a user selects the visual indicator in the player window which causes a direct link to the online information associated with the advertiser.



Exemplary linked website of the online information provider associated with the video advertisement

145. NFLE has thus infringed one or more claims of the '736 Patent by having made,

used, tested, sold, licensed, imported, and/or offered for sale/license the '736 Infringing Instrumentalities, and operating them such that all steps of at least Claim 8 of the '736 Patent are performed, including within this District. Moreover, NFLE fully implemented, managed, and supported the use of the '736 Infringing Instrumentalities by its customers.

146. NFLE's customers have infringed, including under 35 U.S.C. §271(a), at least Claim 8 of the '736 Patent by using the '736 Infringing Instrumentalities.

147. NFLE has, since at least November 30, 2015, known or been willfully blind to the fact that such acts by its customers of having used the '861 Infringing Instrumentalities directly infringed the '736 Patent.

148. NFLE's knowledge of the '736 Patent, which covers having operated the '736 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 8 of the '736 Patent were met, made it known to NFLE that its customers' use of the '736 Infringing Instrumentalities would and did directly infringe the '736 Patent, or, at the very least, rendered NFLE willfully blind to such infringement.

149. Having known or been willfully blind to the fact that its customers' use of the '736 Infringing Instrumentalities in their intended manner and such that all limitations of at least Claim 8 of the '736 Patent are met would directly infringe the '736 Patent, NFLE, upon information and belief, actively encouraged its customers to directly infringe the '736 Patent by having used, sold, licensed, offered to sell/license, or imported the said '736 Infringing Instrumentalities, and, for example, by having marketed the '736 Infringing Instrumentalities to customers; by having worked with its customers to implement, install and operate the '736 Infringing Instrumentalities and components thereof; by having fully supported and managed its customers' use of the '736 Infringing Instrumentalities; and by having provided technical

assistance to customers during their use of the '736 Infringing Instrumentalities. *See, e.g.*, <http://www.nfl.com/static/content/public/photo/2016/08/09/0ap3000000682159.pdf>.

150. NFLE induced its users to infringe at least Claim 8 of the '736 Patent at least by having encouraged them to install and operate the '736 Infringing Instrumentalities, which, alone or in combination with the users' devices, satisfied all the limitations of at least Claim 8 of the '736 Patent. For example, NFLE advertised and promoted the features of the '736 Infringing Instrumentalities on its website NFL.com, and encouraged its users to configure and operate their mobile and computer devices in an infringing manner (*see, e.g.*, <http://www.nfl.com/static/content/public/photo/2016/08/09/0ap3000000682159.pdf>). In response, NFLE's users acquired, configured and operated the '736 Infringing Instrumentalities such that all the limitations of at least Claim 8 of the '736 Patent were practiced. NFLE has been aware of the '736 Patent since at least November 30, 2015.

151. Thus, NFLE has specifically intended to induce, and has induced, its customers to infringe one or more claims of the '736 Patent, and NFLE has known of or been willfully blind to such infringement. NFLE has advised, encouraged, and/or aided its customers to engage in direct infringement, including through its encouragement, advice, and assistance to customers to use the '736 Infringing Instrumentalities.

152. Based on, among other things, the foregoing facts, NFLE has induced infringement under 35 U.S.C. § 271(b) of at least Claim 8 of the '736 Patent.

153. Further, NFLE sold, provided and/or licensed to its customers '736 Infringing Instrumentalities that are especially made and adapted—and specifically intended by NFLE—to be used as components and material parts of the inventions covered by the '736 Patent. For example, NFLE provided applications and software, which customers configured and used in a

manner such that all limitations of at least Claim 8 of the '736 Patent are met, and without which, NFLE's customers would have been unable to use and avail of the '736 Infringing Instrumentalities in their intended manner.

154. Upon information and belief, NFLE also knew that the '736 Infringing Instrumentalities operate in a manner that satisfy all limitations of at least Claim 8 of the '736 Patent.

155. The online information linking functionality in the '736 Infringing Instrumentalities is specially made and adapted to infringe at least Claim 8 of the '861 Patent. Upon information and belief, the online information linking functionality in the '736 Infringing Instrumentalities is not a staple article or commodity of commerce, and, because the functionality is designed to work with the '736 Infringing Instrumentalities solely in a manner that is covered by the '736 Patent, it does not have a substantial non-infringing use. At least since November 30, 2015 based on the forgoing facts, NFLE has known or been willfully blind to the fact that such functionality is especially made and adapted for—and is in fact used in—'736 Infringing Instrumentalities in a manner that is covered by the '736 Patent.

156. Based on, among other things, the foregoing facts, NFLE has contributorily infringed at least Claim 8 of the '736 Patent under 35 U.S.C. § 271(c).

157. NFLE's acts of direct and indirect infringement have caused damage to OpenTV, and OpenTV is entitled to recover damages sustained as a result of NFLE's wrongful acts in an amount subject to proof at trial.

PRAYER FOR RELIEF

WHEREFORE, OpenTV prays for the following relief:

A. A judgment that NFLE has infringed one or more claims of the '861 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement;

B. A judgment that NFLE has infringed one or more claims of the '729 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement;

C. A judgment that NFLE has infringed one or more claims of the '327 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement;

D. A judgment that NFLE has infringed one or more claims of the '033 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement;

E. A judgment that NFLE has infringed one or more claims of the '169 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement;

F. A judgment that NFLE has infringed one or more claims of the '888 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement;

G. A judgment that NFLE has infringed one or more claims of the '736 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by inducing infringement and/or by contributory infringement

H. That for each OpenTV Patent this Court judges infringed by NFLE, this Court award OpenTV its damages pursuant to 35 U.S.C. § 284 and any royalties determined to be appropriate;

I. That this be determined to be an exceptional case under 35 U.S.C. § 285 and that OpenTV be awarded enhanced damages up to treble damages for willful infringement as provided by 35 U.S.C. § 284;

J. That this Court award OpenTV prejudgment and post-judgment interest on its damages;

K. An order permanently enjoining NFLE and its officers, agents, employees, and those acting in privity with them, from further infringement of the OpenTV patents;

L. That OpenTV be granted its reasonable attorneys' fees in this action;

M. That this Court award OpenTV its costs; and

N. That this Court award OpenTV such other and further relief as the Court deems proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, OpenTV demands a trial by jury for all issues so triable.

Dated: January 12, 2017

/s/ Margaret Elizabeth Day by permission Wesley Hill

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