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21 UNITED STATES DISTRICT COURT
22 CENTRAL DISTRICT OF CALIFORNIA

23 NAGRAVISION SA and
24 OPENTV, INC,
25
26 Plaintiffs,
27
28 v.
29 NFL ENTERPRISES, LLC,
30 Defendant.

CASE NO. 2:17-cv-3919

**COMPLAINT FOR PATENT
INFRINGEMENT**

JURY TRIAL DEMANDED

1 Plaintiffs NagraVision SA and OpenTV, Inc. ("Plaintiffs"), by and through
 2 the undersigned counsel, hereby brings this action and makes the following
 3 allegations of patent infringement relating to U.S. Patent Nos. 7,996,861,
 4 7,421,729, 7,028,327, 7,950,033, 7,055,169, 7,020,888 6,233,736 and 6,154,172
 5 against Defendant NFL Enterprises, LLC. ("NFLE"), and allege as follows upon
 6 actual knowledge with respect to themselves and their own acts, and upon
 7 information and belief as to all other matters:

8 **NATURE OF THE ACTION**

9 1. This is an action for patent infringement. Plaintiffs allege that NFLE
 10 infringes U.S. Patent No. 7,996,861 ("the '861 Patent"), U.S. Patent No. 7,421,729
 11 ("the '729 Patent"), U.S. Patent No. 7,028,327 ("the '327 Patent"), U.S. Patent No.
 12 7,950,033 ("the '033 Patent"), U.S. Patent No. 7,055,169 ("the '169 Patent"), U.S.
 13 Patent No. 7,020,888 ("the '888 Patent"), U.S. Patent No. 6,233,736 ("the '736
 14 Patent) and U.S. Patent No. 6,154,172 ("the '172 Patent) copies of which are
 15 attached as Exhibits A-H, respectively (collectively "the Asserted Patents").

16 2. NFLE has been on notice of its infringement of the '861 Patent, the
 17 '729 Patent, the '327 Patent, the '033 Patent, the '169 Patent and the '736 Patent
 18 since at least November 30, 2015 by virtue of a letter emailed from Joe Chernesky,
 19 Senior Vice President, IP & Innovation of the Kudelski Group to Michael
 20 Buchwald, counsel of the National Football League (NFL). NFLE has been on
 21 notice of its infringement of the '888 Patent by no later than January 12, 2017.
 22 NFLE has been on notice of its infringement of the '172 patent by no later than
 23 May 8, 2017.

24 3. Plaintiffs allege that NFLE directly and indirectly infringes the
 25 Asserted Patents by making, using, offering for sale, and selling its online video
 26 services and inducing and contributing to the infringement of others. Plaintiffs seek
 27 damages and other relief for NFLE's infringement of the Asserted Patents.
 28

THE PARTIES

4. Plaintiff Nagravision SA is a Swiss corporation with its principle place of business in Cheseaux-sur-Lausanne, Switzerland. Nagravision is a wholly owned subsidiary of Kudelski SA (the “Kudelski Group”)

5. Plaintiff OpenTV is a Delaware corporation with its principal place of business at 275 Sacramento St., San Francisco, California, 94111. OpenTV is a U.S. subsidiary company of Kudelski S.A.

6. Upon information and belief, Defendant NFLE is a Delaware limited liability company 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. NFLE has offices and employees located at 10950 Washington Boulevard, Suite 100, Culver City, California 90232.

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

JURISDICTION AND VENUE

8. 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.

9. This Court has both general and specific personal jurisdiction over NFLE because NFLE has committed acts within the Central District of California 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

1 subsidiaries and intermediaries (including distributors, retailers, franchisees and
 2 others), has committed and continues to commit acts of infringement in this District
 3 by, among other things, making, using, testing, selling, licensing, importing, and/or
 4 offering for sale/license products and services that infringe the Asserted Patents.

5 10. Venue is proper in this district and division under 28 U.S.C.
 6 §§1391(b)-(d) and 1400(b) because NFLE has committed acts of infringement in
 7 the Central District of California and has a regular and established place of business
 8 in the Central District of California.

9 **BACKGROUND**

10 **A. OpenTV**

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

20 12. The Kudelski Group was founded in 1951 by Stefan Kudelski
 21 successfully launching portable recording devices for cinema, TV and radio
 22 recording. The success of its products allowed The Kudelski Group to expand its
 23 technology into the digital television domain. In 1989, The Kudelski Group
 24 launched its first conditional access systems for pay TV. Over the next 10 years
 25 (1990-1999) The Kudelski Group continued to expand its technology development
 26 in the digital TV space, providing global, universally compatible solutions to
 27 manage, organize, enhance, market, and secure digital content. Today, The
 28 Kudelski Group is led by Stefan's son, Andre Kudelski, and Andre Kudelski has

1 led the company into an era where digital television is The Kudelski Group's core
2 business.

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

11 14. The success of its products allowed The Kudelski Group to expand its
12 technology into the digital television domain. In 1989, The Kudelski Group
13 launched its first conditional access system for pay TV. Over the next decade, The
14 Kudelski Group continued to expand its technology development in the digital TV
15 space, providing global, universally compatible solutions to manage, organize,
16 enhance, market, and secure digital content, regardless of whether it was
17 transmitted over managed or unmanaged networks and broadcasted linearly or on-
18 demand.

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

26 16. The Kudelski Group has also grown as a leader in the digital television
27 domain through acquisitions of pioneering technology companies, including such
28

1 notable companies as Lysis (2001), Livewire (2001), MediaGuard (2004),
 2 SmarDTV (2006), OpenTV (2007), and Conax (2014).

3 17. OpenTV is headquartered in San Francisco, California, has offices
 4 throughout the world, and employs hundreds of people worldwide, including more
 5 than 120 in the United States. OpenTV develops software that provides its
 6 customers with high quality technology, services, and end-to-end solutions enabling
 7 intuitive and personalized viewing experiences for consumers. OpenTV's software
 8 solutions enable a variety of advanced and interactive services for television,
 9 including advanced user interfaces, video-on-demand ("VOD"), personal video
 10 recording ("PVR"), high-definition ("HD"), interactive and addressable advertising,
 11 and a variety of enhanced television applications. OpenTV's software has been
 12 shipped in over 200 million set-top boxes. OpenTV has 80 worldwide customers
 13 that run OpenTV solutions, including 40 OEMs.

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

20 19. OpenTV is the owner of all right title and interest in the '861 Patent,
 21 the '729 Patent, the '327 Patent, the '033 Patent, the '169 Patent, the '888 Patent,
 22 and the '736 Patent.

23 **B. NagraVision SA**

24 20. NagraVision SA is the digital television division of The Kudelski
 25 Group, and the global leader in delivering secure, end-to-end digital media
 26 technologies. NagraVision works with the world's leading television operators to
 27 bring the next generation of pay-TV services to market, while ensuring content is
 28 protected. NagraVision's core business is content protection in a dynamic,

connected and multiscreen TV landscape and protects its research and development investment with a robust patent portfolio comprising thousands of patents that represent the results of years of innovation, investment and effort by numerous inventors and engineers. Nagravision encourages innovation by licensing its intellectual property portfolio and enforces its patent rights when necessary to protect its research investment and the fruits of the efforts of its employees from unauthorized use.

21. Nagravision is the owner of all right title and interest in the '172 Patent.

C. NFLE

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

23. 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

24. The allegations of paragraphs 1-23 of this Complaint are incorporated by reference as though fully set forth herein.

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

26. The '861 Patent was issued by the United States Patent and Trademark Office on August 9, 2011 and is titled "Flexible Interface for Secure

1 Input of Pin Code.” A true and correct copy of the ’861 Patent is attached hereto as
2 Exhibit A.

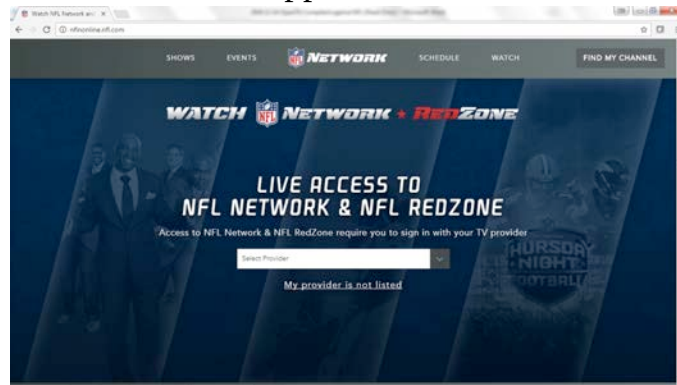
3 27. Pursuant to 35 U.S.C. § 282, the ’861 Patent is presumed valid.

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

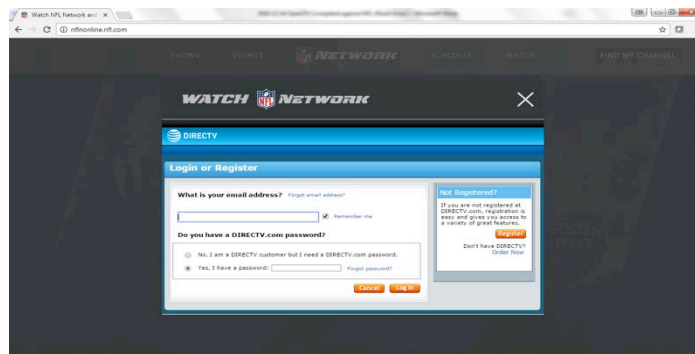
18 29. Upon information and belief, NFLE has directly infringed at least
19 Claim 9 of the ’861 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using,
20 testing, selling, licensing, importing, and/or offering for sale/license without
21 authority its Watch NFL Network/NFL Redzone applications (the “Watch NFL
22 Network Application”) incorporating authorization functionality (collectively, “the
23 ’861 Infringing Instrumentalities”) in the exemplary manner described below:

24 A. The ’861 Infringing Instrumentalities meet all of the elements of
25 Claim 9 of the ’861 Patent in that they provide executable
26 instructions for authenticating a PIN code of a user in order to run
27 an application.
28

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.

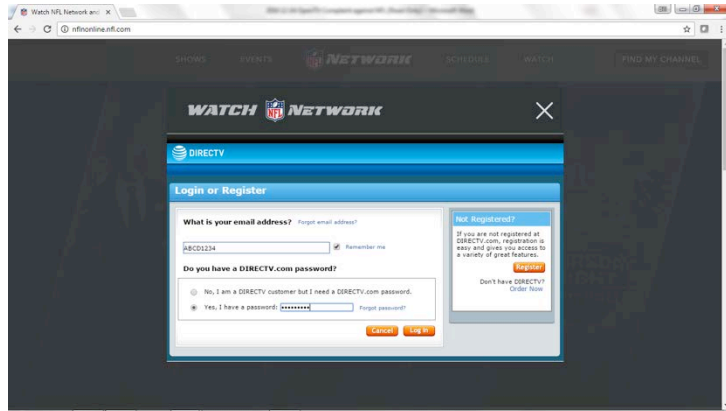


Screenshot of the Watch NFL Network MVPD selection screen for authenticating with a service provider's TV Everywhere service



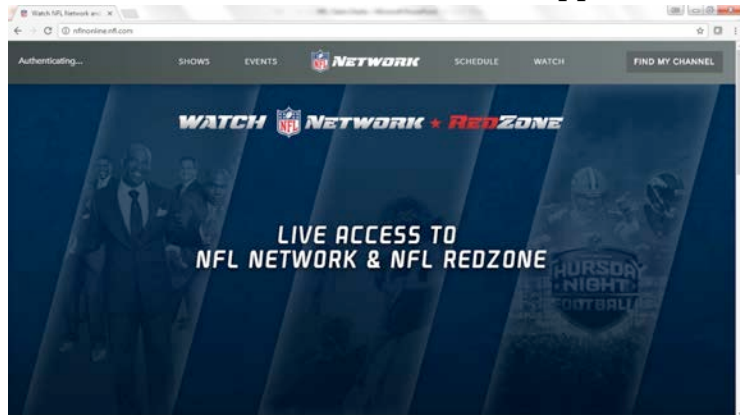
Screenshot of an exemplary MVPD login iFrame

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

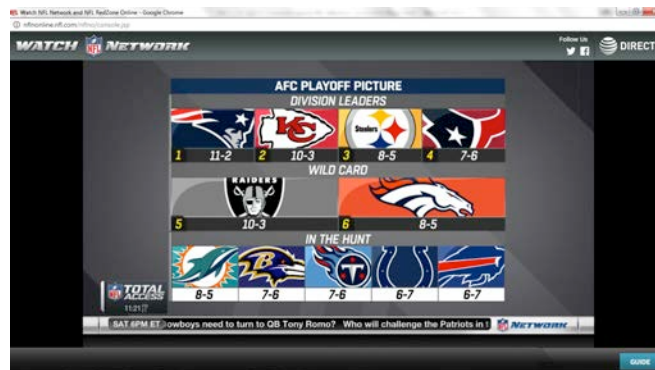
D. Once it is determined that the PIN code of the user matches the registered PIN code, authorization to run the application is given.



Screenshot illustrating the Authentication process



1 *Screenshot illustrating NFL Network authorization by the security-*
 2 *manager*



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

12
13 30. NFLE has thus infringed, and continues to infringe, at least Claim 9 of
 14 the '861 Patent by making, using, testing, selling, licensing, importing, and/or
 15 offering for sale/license the '861 Infringing Instrumentalities, and operating them
 16 such that all steps of at least Claim 9 of the '861 Patent are performed, including
 17 within this District. Moreover, NFLE fully implements, manages, and supports the
 18 '861 Infringing Instrumentalities by its customers.

19 31. NFLE's customers have been and are now infringing, including under
 20 35 U.S.C. §271(a), at least Claim 9 of the '861 Patent by using the '861 Infringing
 21 Instrumentalities.

22 32. NFLE has, since at least November 30, 2015 and by no later than
 23 January 12, 2017, known or been willfully blind to the fact that such acts by its
 24 customers of using '861 Infringing Instrumentalities directly infringe at least Claim
 25 9 of the '861 Patent.

26 33. NFLE's knowledge of the '861 Patent, which covers operating the
 27 '861 Infringing Instrumentalities in their intended manner and such that all
 28 limitations of at least Claim 9 of the '861 Patent are met, made it known to NFLE

1 that its customers' use of the '861 Infringing Instrumentalities would directly
 2 infringe the '861 Patent, or, at the very least, rendered NFLE willfully blind to such
 3 infringement.

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

17 35. NFLE induces its users to infringe at least Claim 9 of the '861 Patent
 18 at least by encouraging them to install and operate the '861 Infringing
 19 Instrumentalities, which, alone or in combination with the users' devices, satisfy all
 20 the limitations of at least Claim 9 of the '861 Patent. For example, NFLE
 21 advertises and promotes the features of its Watch NFL Network Application on its
 22 websites NFL.com and nflnline.nfl.com, and encourages its users to configure
 23 and operate their mobile and computer devices in an infringing manner (*see, e.g.,*
 24 [http:// http://nflnline.nfl.com/](http://http://nflnline.nfl.com/)). In response, NFLE's users acquire, configure and
 25 operate the Watch NFL Network Application such that all the limitations of at least
 26 Claim 9 of the '861 Patent are practiced. NFLE has been aware of the '861 Patent
 27 since at least November 30, 2015.

28 36. Thus, NFLE has specifically intended to induce, and has induced, its

1 customers to infringe at least Claim 9 of the '861 Patent, and NFLE has known of
 2 or been willfully blind to such infringement. NFLE has advised, encouraged,
 3 and/or aided its customers to engage in direct infringement, including through its
 4 encouragement, advice and assistance to customers to use the '861 Infringing
 5 Instrumentalities.

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

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

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

20 40. The authorization functionality in the '861 Infringing Instrumentalities
 21 is specially made and adapted to infringe at least Claim 9 of the '861 Patent. Upon
 22 information and belief, the authorization functionality in the '861 Infringing
 23 Instrumentalities is not a staple article or commodity of commerce, and, because the
 24 functionality is designed to work with the '861 Infringing Instrumentalities solely
 25 in a manner that is covered by at least claim 9 of the '861 Patent, it does not have a
 26 substantial non-infringing use. At least since November 30, 2015 and by no later
 27 than January 12, 2017, based on the forgoing facts, NFLE has known or been
 28 willfully blind to the fact that such functionality is especially made and adapted

1 for—and is in fact used in—’861 Infringing Instrumentalities in a manner that is
2 covered by the ’861 Patent.

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

6 42. NFLE’s acts of infringement of the ’861 Patent have been willful and
7 intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,
8 136 S. Ct. 1923 (2016). Since at least November 30, 2015, NFLE has willfully
9 infringed the ’861 Patent by refusing to take a license and continuing to make, use,
10 test, sell, license, import, and/or offer for sale/license the ’861 Infringing
11 Instrumentalities. NFLE has been aware that it infringes the ’861 Patent since at
12 least November 30, 2015 and instead of taking a license, NFLE has opted to make
13 the business decision to “efficiently infringe” the ’861 Patent. In doing so, NFLE
14 willfully infringed the ’861 Patent.

15 43. Defendant’s acts of direct and indirect infringement have caused, and
16 continue to cause, damage to Plaintiff, and Plaintiff is entitled to recover damages
17 sustained as a result of Defendant’s wrongful acts in an amount subject to proof at
18 trial. The infringement of Plaintiff’s exclusive rights under the ’861 Patent has
19 damaged and will continue to damage Plaintiff, causing irreparable harm, for which
20 there is no adequate remedy at law, with the balance of hardships between Plaintiff
21 and Defendant, and the public interest, warranting an injunction.

22 **COUNT 2: INFRINGEMENT OF THE ’729 PATENT**

23 44. The allegations of paragraphs 1-23 of this Complaint are incorporated
24 by reference as though fully set forth herein.

25 45. OpenTV owns by assignment the entire right, title, and interest in the
26 ’729 Patent.

27 46. The ’729 Patent was issued by the United States Patent and
28 Trademark Office on September 2, 2008 and is titled “Generation and Insertion of

1 Indicators Using An Address Signal Applied To A Database.” A true and correct
2 copy of the ’729 Patent is attached hereto as Exhibit B.

3 47. Pursuant to 35 U.S.C. § 282, the ’729 Patent is presumed valid.

4 48. A person of ordinary skill in the art reading the ’729 Patent would
5 understand that the patent’s disclosure and claims are rooted in complex computer-
6 implemented operations that require complex computer hardware and software
7 technologies that can be used to overcome the problem of how to insert content
8 (additional information) at the relevant time into a video stream (*e.g.*, a television
9 program) so that the additional information is provided when it directly relates to
10 the current content of the video stream. By way of example, the ’729 Patent
11 provides a system and method for inserting content into a video stream by
12 generating video indicators, such as tags and markers, which can be inserted in a
13 video signal provided to a set-top box or viewer’s computer. In exemplary
14 embodiments, the content identification tags can provide information regarding
15 upcoming video segments and markers that indicate the beginning/end of video
16 segments and can automatically connect the system to an interactive web page
17 overlay, alternative video source information, or any other information that may be
18 useful in viewing or controlling the video signal. In an exemplary embodiment, the
19 video signal also includes video segment markers that indicate the beginning and
20 ending of each video segment. These video segment markers are associated with
21 the tags through a unique ID associated with each marker.

22 49. The ’729 Patent concerns streaming video broadcast data in the
23 context of interactive or digital television and addresses the technological problem
24 of how to send indicators concerning specific video segments within a video
25 program stream as opposed to the prior art method that only allowed for indicators
26 or data that related to the entire program. The ’729 Patent claims an inventive
27 solution that uses a time code generator to present to an address generator the
28 location within an input video stream. The address generator generates an address,

1 which is used as an index into a database. The database provides an indicator
 2 (located/stored at the address within the database) to an encoder, which generates
 3 an output consisting of the video stream encoded with the indicator. This solution
 4 effects an improvement in technology because it provides a repeatable and efficient
 5 mechanism to encode content and/or tags/markers with a video stream based on the
 6 time code synchronized with the video stream. *OpenTV v. NFL Enterprises, LLC*,
 7 No. 2:17-cv-0031, Dkt. No. 46-3, ¶¶ 17-27 (E.D. Tex. April 13, 2017) (*case*
 8 *voluntarily dismissed without prejudice*).

9 50. The '729 Patent addresses a problem that was not long-standing or
 10 fundamental at the time of the invention. The '729 Patent claims priority to at least
 11 August 25, 2000 based on the face of the patent. This invention is rooted in digital
 12 video streaming in order to overcome the very specific technical problem of
 13 sending time-coded data that relates to individual video streams. At that time,
 14 digital television was new technology and the patent offered a new and specific
 15 improvement to the video broadcast space. The invention cannot be practiced
 16 entirely in the human mind or on paper. It would be impossible for a human to
 17 provide this specific computer functionality to disseminate and unpackage the
 18 indicators and/or linked information based on computer addresses. *Id.*

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

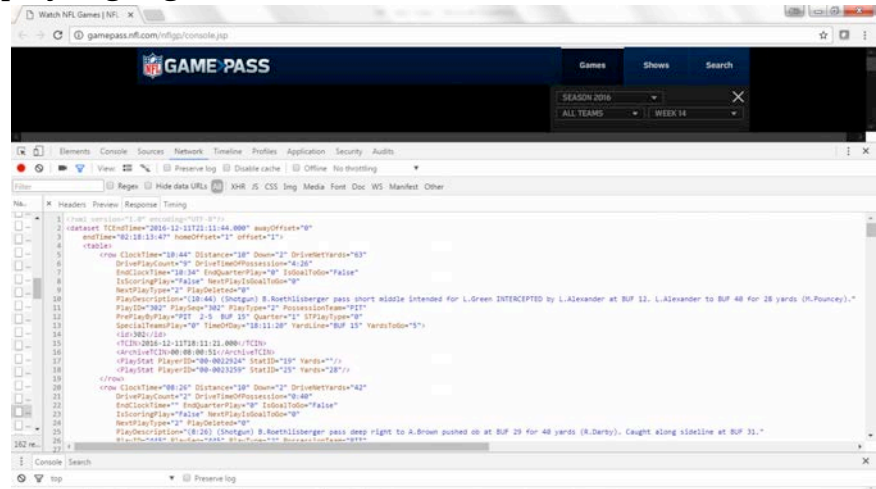
- 27 A. One or more of the '729 Infringing Instrumentalities meet all the
 28 elements of at least Claim 1 of the '729 Patent, including

1 generating and inserting indicators into a video stream. In
 2 particular, the '729 Infringing Instrumentalities comprise time code
 3 signals to synchronize play highlights with the NFL video stream
 4 content, *e.g.*, game video content accessed through NFL Game Pass
 5 or similar viewer functionality that may display “play highlight” or
 6 “Big Play Markers”.

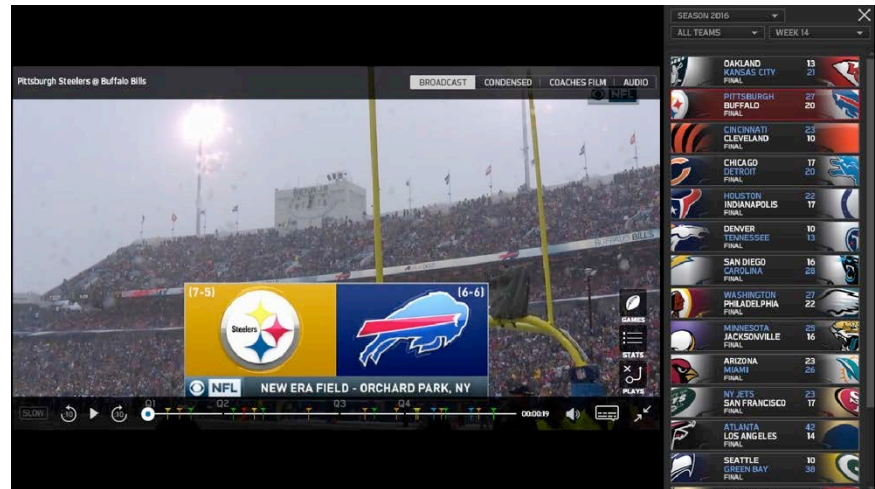
7 B. One or more of the '729 Infringing Instrumentalities generate a
 8 time code signal that is synchronized with the video stream and
 9 apply the time code signal to an address generator that decodes the
 10 time code signal and generates a corresponding address signal that
 11 is applied to a database storing a plurality of indicators. In
 12 particular, NFLE generates time code signals with its game video
 13 content and those time code signals are decoded and used to index a
 14 database of metadata for play highlights that is correlated to “play
 15 highlight” or “Big Play” indicators.

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

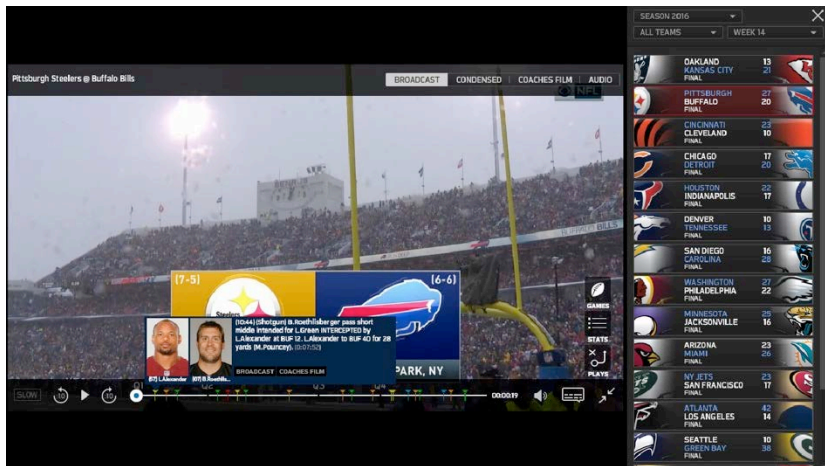
of NFLE, for example as XML-encoded data indicating availability of a play highlight.



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

52. Claim 1 does not claim a well known, routine, or conventional combination or use of elements. The claim requires the specific use of a time code generator, address generator, database, and encoder in a particular way. There is also no risk that this invention would unduly tie up any abstract idea. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt. No. 46-4, ¶¶ 17-27 (E.D. Tex. April 13, 2017) (*case voluntarily dismissed without prejudice*).

53. 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.

54. 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 '729 Infringing Instrumentalities.

1 55. NFLE has, since at least November 30, 2015 and by no later than
 2 January 12, 2017, known or been willfully blind to the fact that the third party
 3 infringers' use of '729 Infringing Instrumentalities directly infringe at least Claim 1
 4 of the '729 Patent.

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

11 57. Having known or been willfully blind to the fact that the third party
 12 infringers' use of the '729 Infringing Instrumentalities in their intended manner and
 13 such that all limitations of at least Claim 1 of the '729 Patent are met would directly
 14 infringe the '729 Patent, NFLE, upon information and belief, actively encouraged
 15 and continues to actively encourage the third party infringers to directly infringe the
 16 '729 Patent by using, selling, licensing, offering to sell/license, or importing said
 17 '729 Infringing Instrumentalities, and by, for example, marketing '729 Infringing
 18 Instrumentalities to the third party infringers; working with the third party
 19 infringers to implement, install and operate the '729 Infringing Instrumentalities
 20 and components thereof; fully supporting and managing the third party infringers'
 21 continued use of the '729 Infringing Instrumentalities; and providing technical
 22 assistance to the third party infringers during their continued use of the '729
 23 Infringing Instrumentalities. *See, e.g.,*
 24 <https://gamepass.nfl.com/nflgp/secure/schedule>;
 25 <http://gamepass.nfl.com/nflgp/console.jsp>; [https://digitalcare.nfl.com/hc/en-](https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass)
 26 [us/categories/200275708-Game-Pass](https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass).

27 58. NFLE induces the third party infringers to infringe at least Claim 1 of
 28 the '729 Patent at least by directing or encouraging them to install and operate the

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

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

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

22 61. Further, NFLE sells, provides and/or licenses to the third party
 23 infringers '729 Infringing Instrumentalities that are especially made and adapted—
 24 and specifically intended by NFLE—to be used as components and material parts
 25 of the inventions covered by at least claim 1 of the '729 Patent. For example,
 26 NFLE provides content, applications and software, which the third party infringers
 27 configure and use in a manner that all limitations of at least Claim 1 of the '729
 28

1 Patent are met, and without which the third party infringers would be unable to use
2 and avail of the '729 Infringing Instrumentalities in their intended manner.

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

6 63. The indicator generation and insertion functionality in the '729
7 Infringing Instrumentalities is specially made and adapted to infringe at least Claim
8 1 of the '729 Patent. Upon information and belief, such functionality in the '729
9 Infringing Instrumentalities is not a staple article or commodity of commerce, and
10 because the functionality is designed to work with the '729 Infringing
11 Instrumentalities solely in a manner that is covered by the '729 Patent, it does not
12 have a substantial non-infringing use. At least since November 30, 2015 and no
13 later than January 12, 2017, based on the forgoing facts, NFLE has known or been
14 willfully blind to the fact that such functionality is especially made and adapted
15 for—and is in fact used in—'729 Infringing Instrumentalities in a manner that is
16 covered by the '729 Patent.

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

20 65. NFLE's acts of infringement of the '729 Patent have been willful and
21 intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,
22 136 S.Ct. 1923 (2016). Since at least November 30, 2015, NFLE has willfully
23 infringed the '729 Patent by refusing to take a license and continuing to make, use,
24 test, sell, license, import, and/or offer for sale/license the '729 Infringing
25 Instrumentalities. NFLE has been aware that it infringes the '729 Patent since at
26 least November 30, 2015 and instead of taking a license, NFLE has opted to make
27 the business decision to “efficiently infringe” the '729 Patent. In doing so, NFLE
28 willfully infringed the '729 Patent.

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

COUNT 3: INFRINGEMENT OF THE '327 PATENT

67. The allegations of paragraphs 1-23 of this Complaint are incorporated by reference as though fully set forth herein.

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

69. 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.

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

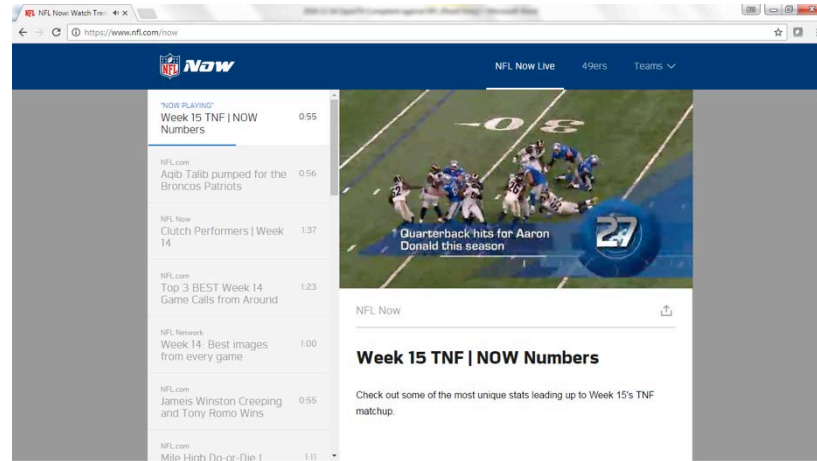
71. A person of ordinary skill in the art reading the '327 Patent would understand that the patent's disclosure and claims are rooted in complex computer-implemented operations that require complex computer hardware and software technologies that can be used to overcome the problem of how to synchronize 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,

1 terminated, run for a duration, suspended, resumed, or triggered by a processor at a
 2 time of the presentation of the video content. Such data is then received by a
 3 customer electronic device (*e.g.*, a personal computer) to control execution of the
 4 interactive application. The customer electronic device interprets the timing offset
 5 information, for example to suspend/resume execution of the interactive
 6 application. The customer electronic device interprets the timing offset
 7 information, for example, to suspend/resume execution of the interactive
 8 application at appropriate times. As reflected in exemplary Claim 13, a computer
 9 can control the operation of an interactive application by determining with an
 10 electronic program guide an interactive application associated with a video
 11 program, controlling the interactive application to maintain synchrony with a
 12 display of the video program using timing offsets, using the timing offsets to
 13 determine breaks in the program content, and suspending the interactive application
 14 at the start of a break and resuming the interactive application at the end of the
 15 break.

16 72. Upon information and belief, NFLE, alone or through agents or third
 17 parties under NFLE's direction and control, has directly infringed at least Claim 13
 18 of the '327 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing,
 19 selling, licensing, importing, and/or offering for sale/license in the United States
 20 without authority online video delivery services, such as those available at least by
 21 and through its NFL.com website, including but not limited to NFL Now, that
 22 incorporate the aforementioned electronic program guide and synchronization
 23 features (collectively, "the '327 Infringing Instrumentalities") in an exemplary
 24 manner as described below:

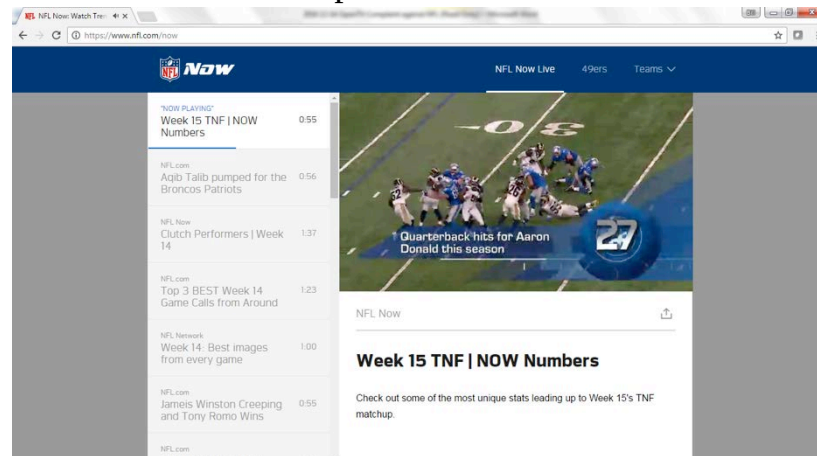
25 A. One or more of the '327 Infringing Instrumentalities meet all the
 26 elements of at least claim 13 of the '327 Patent. In particular, the
 27 '327 Infringing Instrumentalities comprise an electronic program
 28

guide of available multimedia content, including broadcast TV programs, *e.g.*, NFL content shows.



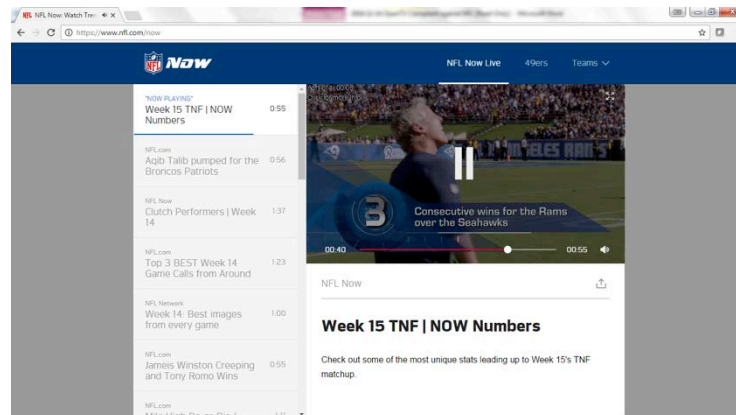
Exemplary screenshot of the electronic program guide of available content for NFL Now

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

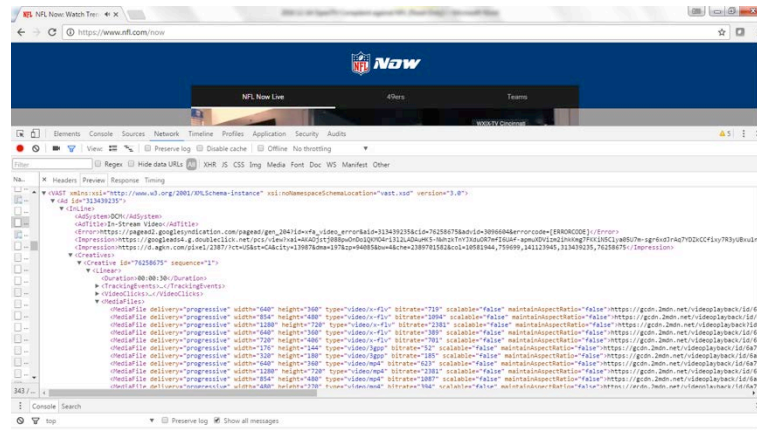
C. One or more of the '327 Infringing Instrumentalities controls the interactive application to maintain synchrony with a display of the broadcast program. In particular, the '327 Infringing Instrumentalities include functionality, *e.g.*, an interactive slider bar in an NFL content player application, 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.



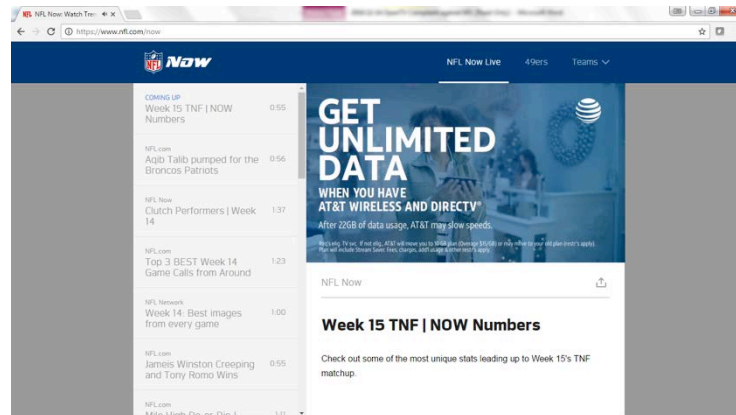
Exemplary screenshot of NFL Now illustrating interactive controls associated with the player application

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.

- 1 E. One or more of the '327 Infringing Instrumentalities controls the
2 interactive application to maintain synchrony with the display of
3 the broadcast program in accordance with the timing offsets
4 wherein the broadcast program is a television show. In particular,
5 the '327 Infringing Instrumentalities include timing offset
6 functionality, *e.g.*, coded "duration" markers that determine breaks
7 in the programming to support dynamic ad insertion. Synchrony
8 with the NFL video content displayed through the NFL content
9 player application is maintained in accordance with the timing
10 offset functionality associated with dynamic ad insertion.
- 11 F. One or more of the '327 Infringing Instrumentalities, responsive to
12 determining from the timing offsets that there is a break in the
13 television show, generate a command to suspend execution of the
14 interactive application associated with the television show. In
15 particular, the '327 Infringing Instrumentalities, for example,
16 include controls that maintain the user's ability to interact, allowing
17 a user to navigate to different segments of video content. When a
18 coded "duration" marker is processed, an advertisement is
19 dynamically called and rendered in the NFL interactive player
20 application. At that time the interactive controls are suspended
21 such that the user is no longer able to interact and navigate to
22 different segments of video content while ad content is rendered.
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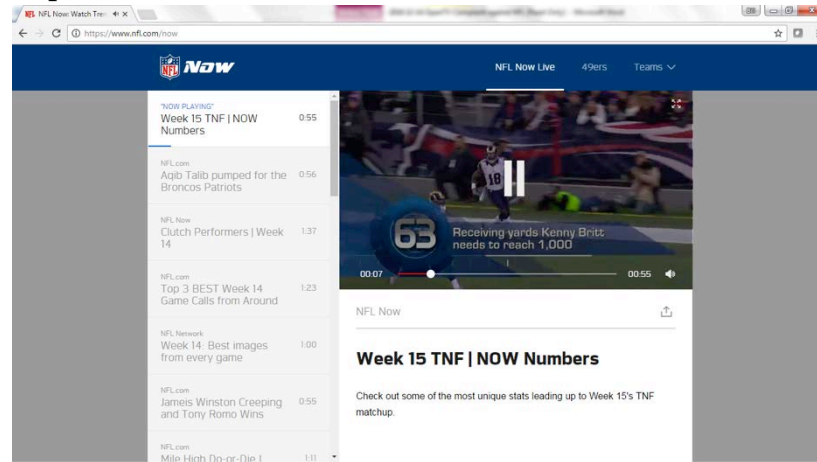
Exemplary XML source of a VAST ad insertion response that controls ad position and duration for the NFL Now video service



Exemplary screenshot of NFL Now illustrating a rendered advertisement 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

1 coded “duration” markers, and resume user interactivity at the
 2 expiration of said commercial break.



11 *Exemplary screenshot of NFL Now demonstrating the resumption*
 12 *of the interactive player controls after the conclusion of the*
 13 *advertisement*

14
 15 73. NFLE has thus infringed, and continues to infringe, at least Claim 13
 16 of the '327 Patent by making, using, testing, selling, licensing, importing, and/or
 17 offering for sale/license '327 Infringing Instrumentalities, and operating them such
 18 that all steps of at least Claim 13 of the '327 Patent are performed, including within
 19 this District. In addition, NFLE directs its agents or third parties to perform acts of
 20 infringement under NFLE direction and control. Moreover, NFLE fully
 21 implements, manages, and supports the infringing '327 Infringing Instrumentalities
 22 by its customers.

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

1 75. NFLE has, since at least November 30, 2015 and by no later than
2 January 12, 2017, known or been willfully blind to the fact that the third party
3 infringers' use of '327 Infringing Instrumentalities directly infringe the '327 Patent.

4 76. NFLE's knowledge of the '327 Patent, which covers operating the
5 '327 Infringing Instrumentalities in their intended manner and such that all
6 limitations of at least Claim 13 of the '327 Patent are met, made it known to NFLE
7 that the third party infringers' use of the '327 Infringing Instrumentalities would
8 directly infringe the '327 Patent, or, at the very least, rendered NFLE willfully blind
9 to such infringement.

10 77. Having known or been willfully blind to the fact that the third party
11 infringers' use of the '327 Infringing Instrumentalities in their intended manner and
12 such that all limitations of at least Claim 13 of the '327 Patent are met would
13 directly infringe the '327 Patent, NFLE, upon information and belief, actively
14 encouraged and continues to actively encourage the third party infringers to directly
15 infringe the '327 Patent by using, selling, licensing, offering to sell/license, or
16 importing the said '327 Infringing Instrumentalities, and by, for example,
17 marketing '327 Infringing Instrumentalities to the third party infringers; working
18 with the third party infringers to implement, install and operate the '327 Infringing
19 Instrumentalities and components thereof; fully supporting and managing the third
20 party infringers' continued use of the '327 Infringing Instrumentalities; and
21 providing technical assistance to the third party infringers during their continued
22 use of the '327 Infringing Instrumentalities. *See, e.g.,* <http://nflnline.nfl.com/>;
23 <https://digitalcare.nfl.com/hc/en-us>.

24 78. NFLE induces the third party infringers to infringe at least Claim 13 of
25 the '327 Patent at least by directing or encouraging them to install and operate the
26 '327 Infringing Instrumentalities, which, alone or in combination with the users'
27 devices, satisfy all the limitations of at least Claim 13 of the '327 Patent. For
28 example, NFLE advertises and promotes the features of the '327 Infringing

1 Instrumentalities on its website NFL.com, and encourages the third party infringers
 2 to configure and operate their mobile and computer devices in an infringing manner
 3 (*see, e.g.*, [http:// nflnline.nfl.com/](http://nflnline.nfl.com/); <https://digitalcare.nfl.com/hc/en-us>). In
 4 response, the third party infringers acquire, configure and operate the '327
 5 Infringing Instrumentalities such that all the limitations of at least Claim 13 of the
 6 '327 Patent are practiced. NFLE has been aware of the '327 Patent since at least
 7 November 30, 2015.

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

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

17 81. Further, NFLE sells, provides and/or licenses to the third party
 18 infringers '327 Infringing Instrumentalities that are especially made and adapted—
 19 and specifically intended by NFLE—to be used as components and material parts
 20 of the inventions covered by the '327 Patent. For example, NFLE provides content,
 21 applications and software, which the third party infringers configure and use in a
 22 manner that all limitations of at least Claim 13 of the '327 Patent are met, and
 23 without which the third party infringers would be unable to use and avail of the
 24 '327 Infringing Instrumentalities in their intended manner.

25 82. Upon information and belief, NFLE also knew that '327 Infringing
 26 Instrumentalities operate in a manner that satisfy all limitations of at least Claim 13
 27 of the '327 Patent.
 28

83. 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 January 12, 2017, 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—'327 Infringing Instrumentalities in a manner that is covered by the '327 Patent.

84. 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).

85. 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 (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.

86. Defendant's acts of direct and indirect infringement have caused, and continue to cause, damage to Plaintiff, and Plaintiff is entitled to recover damages sustained as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Plaintiff's exclusive rights under the '327 Patent has

1 damaged and will continue to damage Plaintiff, causing irreparable harm, for which
 2 there is no adequate remedy at law, with the balance of hardships between Plaintiff
 3 and Defendant, and the public interest, warranting an injunction.

4 **COUNT 4: INFRINGEMENT OF THE '033 PATENT**

5 87. The allegations of paragraphs 1-23 of this Complaint are incorporated
 6 by reference as though fully set forth herein.

7 88. OpenTV owns by assignment the entire right, title, and interest in the
 8 '033 Patent.

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

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

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

27 92. The '033 Patent concerns improving the use of metadata for television
 28 broadcast and is directed to solving the technological problem of how to use

1 relational metadata in order to appropriately relate two or more data streams in a
 2 more flexible, effective manner of incorporating relational metadata into interactive
 3 program streams. The patent invents an architecture that specifically incorporates
 4 components for injecting relational metadata into a programming stream and for
 5 processing it appropriately and discloses a relational metadata processing engine so
 6 that the relationship identifiers could be translated and processed by a variety of
 7 different hardware or client-end software. *OpenTV v. NFL Enterprises, LLC*, No.
 8 2:17-cv-0031, Dkt. No. 46-2, ¶¶ 11-19 (E.D. Tex. April 13, 2017) (*case voluntarily*
 9 *dismissed without prejudice*).

10 93. The '033 Patent addresses a problem that was not long-standing or
 11 fundamental at the time of the invention. Relational metadata was a new way to
 12 use metadata in the context of interactive television in the early 2000's, especially
 13 in the way that the patent teaches. *Id.*

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

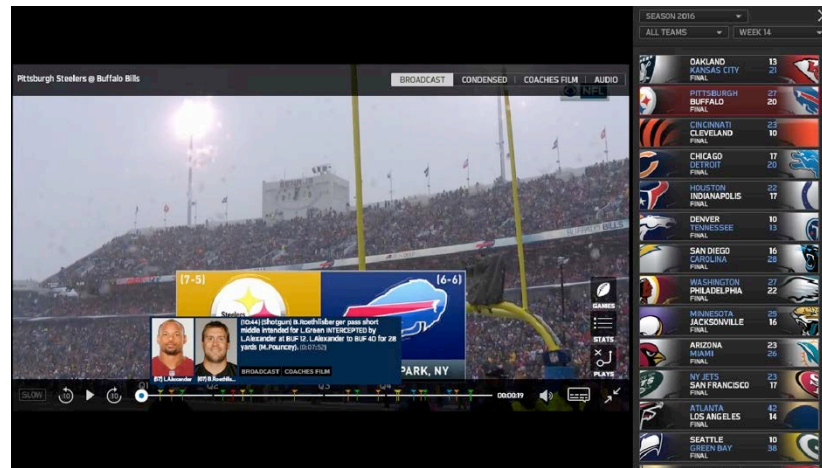
20 A. One or more of the '033 Infringing Instrumentalities meet all the
 21 elements of Claim 27 of the '033 Patent. In particular, the '033
 22 Infringing Instrumentalities comprise program instructions that are
 23 executable to receive relational metadata because the '033
 24 Infringing Instrumentalities parse relational metadata corresponding
 25 to a broadcast signal to present the play highlights in the application
 26 user interface.

27 B. One or more of the '033 Infringing Instrumentalities use relational
 28 metadata that includes a relational metadata instruction, (for

1 example, the Game Pass application utilizes the public function
 2 showTIP (param1: Object, param2: Point) : void), with at least a
 3 relationship identifier (for example, this. Data = param1;) and a
 4 dataset element (for example, Source: 56503.xml) wherein the
 5 relationship identifier specifies a type of relationship between a first
 6 data (for example, param1.players) and a second data (for example,
 7 information about the player and the play highlight) such that the
 8 play highlight metadata is identified by the dataset element.

9 C. One or more of the '033 Infringing Instrumentalities include an
 10 action corresponding to the relational metadata instruction (for
 11 example, public function showTIP (param1: Object, param2: Point)
 12 : void) and the action (such as instantiating a view window for
 13 displaying relational metadata) is initiated in response the
 14 identification.

15 D. One or more of the '033 Infringing Instrumentalities include a
 16 relationship of the second data to the first data that is selected from
 17 a group consisting of a summary, a correction, a repeat, a highlight,
 18 more detailed content, related text and a related icon such that the
 19 play highlight metadata provides a summary of the selected play in
 20 the pop-up view window when the user selects a particular Big Play
 21 Marker from the time line.
 22
 23
 24
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 27
 28



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

95. Claim 27 of the '033 Patent does not claim a well known, routine, or conventional combination or use of elements. Using relational metadata with a video stream was a new concept, especially considering the use of identifiers to link the metadata to the appropriate data sets. The claims also require a relationship identifier and a dataset element along with the program functionality to identify these elements and take the appropriate actions, which are limited by the final wherein clause limitation. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt. No. 46-2, ¶¶ 11-19 (E.D. Tex. April 13, 2017) (*case voluntarily dismissed without prejudice*).

96. 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 '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 infringing '033 Infringing Instrumentalities by its customers.

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

5 98. NFLE has, since at least November 30, 2015 and no later than January
6 12, 2017, known or been willfully blind to the fact that the third party infringers'
7 use of the '033 Infringing Instrumentalities directly infringe the '033 Patent.

8 99. NFLE's knowledge of the '033 Patent, which covers operating the
9 '033 Infringing Instrumentalities in their intended manner and such that all
10 limitations of at least Claim 27 of the '033 Patent are met, made it known to NFLE
11 that the third party infringers' use of the '033 Infringing Instrumentalities would
12 directly infringe the '033 Patent, or, at the very least, rendered NFLE willfully blind
13 to such infringement.

14 100. Having known or been willfully blind to the fact that the third party
15 infringers' use of the '033 Infringing Instrumentalities in their intended manner and
16 such that all limitations of at least Claim 27 of the '033 Patent are met would
17 directly infringe the '033 Patent, NFLE, upon information and belief, actively
18 encouraged and continues to actively encourage the third party infringers to directly
19 infringe the '033 Patent by using, selling, licensing, offering to sell/license, or
20 importing the '033 Infringing Instrumentalities, and by, for example, marketing the
21 '033 Infringing Instrumentalities to the third party infringers; working with the
22 third party infringers to implement, install and operate the '033 Infringing
23 Instrumentalities and components thereof; fully supporting and managing the third
24 party infringers' continued use of the '033 Infringing Instrumentalities; and
25 providing technical assistance to the third party infringers during their continued
26 use of the '033 Infringing Instrumentalities. *See, e.g.,*
27 <https://gamepass.nfl.com/nflgp/secure/schedule>;
28

1 <http://gamepass.nfl.com/nflgp/console.jsp>; [https://digitalcare.nfl.com/hc/en-](https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass)
 2 [us/categories/200275708-Game-Pass](https://digitalcare.nfl.com/hc/en-us/categories/200275708-Game-Pass).

3 101. NFLE induces the third party infringers to infringe at least Claim 27 of
 4 the '033 Patent at least by directing or encouraging them to install and operate the
 5 '033 Infringing Instrumentalities, which, alone or in combination with the users'
 6 devices, satisfy all the limitations of at least Claim 27 of the '033 Patent. For
 7 example, NFLE advertises and promotes the features of the '033 Infringing
 8 Instrumentalities on its websites NFL.com and
 9 <https://gamepass.nfl.com/nflgp/secure/schedule>, as well as through its NFL Mobile
 10 application, and encourages the third party infringers to configure and operate their
 11 mobile and computer devices in an infringing manner (*see, e.g.*,
 12 <https://gamepass.nfl.com/nflgp/secure/schedule>;
 13 <http://gamepass.nfl.com/nflgp/console.jsp>;
 14 <https://digitalcare.nfl.com/hc/enus/categories/200275708-Game-Pass>). In response,
 15 the third party infringers acquire, configure and operate the '033 Infringing
 16 Instrumentalities such that all the limitations of at least Claim 27 of the '033 Patent
 17 are practiced. NFLE has been aware of the '033 Patent since at least November 30,
 18 2015.

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

25 103. Based on, among other things, the foregoing facts, NFLE has induced,
 26 and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 27
 27 of the '033 Patent.
 28

1 104. Further, NFLE sells, provides and/or licenses to the third party
 2 infringers '033 Infringing Instrumentalities that are especially made and adapted—
 3 and specifically intended by NFLE—to be used as components and material parts
 4 of the inventions covered by the '033 Patent. For example, NFLE provides content,
 5 applications and software, which the third party infringers configure and use in a
 6 manner that all limitations of at least Claim 27 of the '033 Patent are met, and
 7 without which the third party infringers would be unable to use and avail of the
 8 '033 Infringing Instrumentalities in their intended manner.

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

12 106. The relational metadata functionality in the '033 Infringing
 13 Instrumentalities is specially made and adapted to infringe at least Claim 27 of the
 14 '033 Patent. Upon information and belief, the relational metadata functionality in
 15 the '033 Infringing Instrumentalities is not a staple article or commodity of
 16 commerce, and, because the functionality is designed solely to work with the '033
 17 Infringing Instrumentalities in a manner that is covered by the '033 Patent, it does
 18 not have a substantial non-infringing use. At least since January 12, 2017, based on
 19 the forgoing facts, NFLE has known or been willfully blind to the fact that such
 20 functionality is especially made and adapted for—and is in fact used in—'033
 21 Infringing Instrumentalities in a manner that is covered by the '033 Patent.

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

25 108. NFLE's acts of infringement of the '033 Patent have been willful and
 26 intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,
 27 136 S. Ct. 1923 (2016). Since at least November 30, 2015, NFLE has willfully
 28 infringed the '033 Patent by refusing to take a license and continuing to make, use,

1 test, sell, license, import, and/or offer for sale/license the '033 Infringing
 2 Instrumentalities. NFLE has been aware that it infringes the '033 Patent since at
 3 least November 30, 2015 and instead of taking a license, NFLE has opted to make
 4 the business decision to "efficiently infringe" the '033 Patent. In doing so, NFLE
 5 willfully infringed the '033 Patent.

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

13 **COUNT 5: INFRINGEMENT OF THE '169 PATENT**

14 110. The allegations of paragraphs 1-23 of this Complaint are incorporated
 15 by reference as though fully set forth herein.

16 111. OpenTV owns by assignment the entire right, title, and interest in the
 17 '169 Patent.

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

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

23 114. A person of ordinary skill the art reading the '169 Patent would
 24 understand that the patent's disclosure and claims are rooted in complex computer-
 25 implemented operations that require complex computer hardware and software to
 26 overcome the problem encountered when digital audio, video and/or graphic
 27 presentation initiates without the computer-implemented resources necessary for
 28 the presentation being present. This problem prevents the proper (or any)

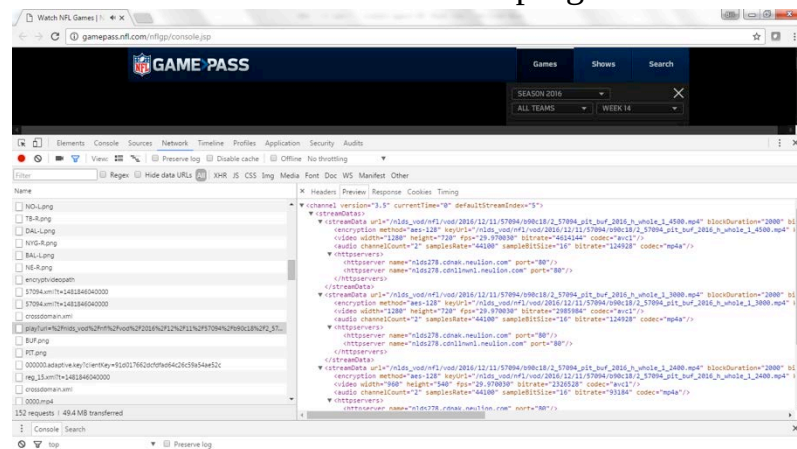
1 presentation of digital audio, video and/or graphic information. In particular, the
 2 '169 Patent uses an innovative, specially programmed computer system to
 3 determine whether a digital audio, video and/or graphic presentation requires other
 4 computer-implemented resources for its presentation. If the innovative, specially
 5 programmed computer system determines that the digital audio, video and/or
 6 graphic presentation does not require other resources, it permits the presentation to
 7 be initiated. If, on the other hand, the innovative specially programmed computer
 8 system determines that additional resources are required by the digital audio, video
 9 and/or graphic presentation, it prohibits initiation of the presentation until the
 10 additional computer-implemented resources are present.

11 115. The '169 patent is directed to interactive television functionality in a
 12 system and method for creating and controlling interactive television content. The
 13 patent addresses a technological problem concerning whether an interactive
 14 television broadcast has the necessary or "prerequisite" resources before it be
 15 allowed to play. The invention claims an innovative and automatic technique to
 16 administer this process, even over multiple different types of hardware and software
 17 platforms and functionalities, by using a scripting protocol that is deterministic and
 18 unambiguously designed so that other computers, even using different signals and
 19 platforms, could understand each other, and automate the process so that the
 20 millions of different streams could each act appropriately based on their own
 21 particular needs. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt. No.
 22 46-1, ¶¶ 29-47 (E.D. Tex. April 13, 2017) (*case voluntarily dismissed without*
 23 *prejudice*).

24 116. The patent claims priority at least to June 30, 2001. The technological
 25 issue addressed was not a long-standing or fundamental problem at the time of the
 26 invention. There was relatively little Internet and interactive television deployed to
 27 households at that time. This is not an invention that can be practiced entirely in
 28 the human mind or on paper. *Id.*

117. 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, 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.

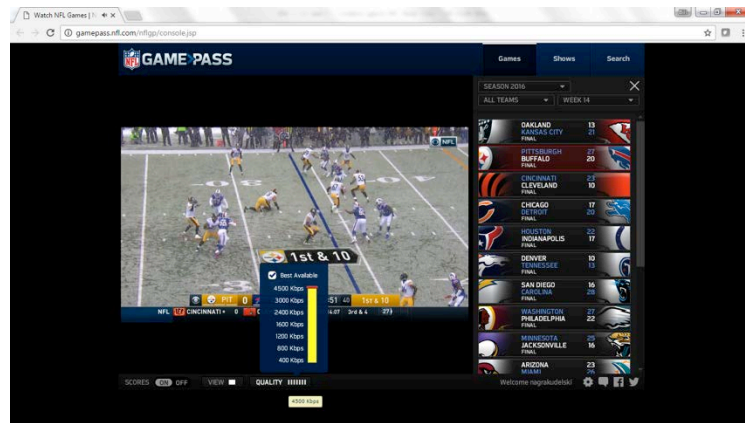


Exemplary received XML manifest to support adaptive bit rate streaming in the NFL Game Pass application

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

118. Claim 1 does not claim a well known, routine, or conventional combination or use of elements. The claim requires the presence of certain structure such as “the directives” that are indicative of specific resources and the presentation itself. It also requires the programming structure that will provide the claimed functionality of receiving those resources and being able to determine the nature of the resources and prevent or authorize the presentation appropriately. There is also no risk that this invention would unduly tie up any abstract idea. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt. No. 46-1, ¶¶ 29-47 (E.D.

1 Tex. April 13, 2017) (*case voluntarily dismissed without prejudice*).

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

8 120. NFLE's customers have been and are now infringing, including under
9 35 U.S.C. § 271(a), at least Claim 1 of the '169 Patent by using the '169 Infringing
10 Instrumentalities.

11 121. NFLE has, since at least November 30, 2015 and by no later than
12 January 12, 2017, known or been willfully blind to the fact that its customers' use
13 of '169 Infringing Instrumentalities directly infringe the '169 Patent.

14 122. NFLE's knowledge of the '169 Patent, which covers operating the
15 '169 Infringing Instrumentalities in their intended manner and such that all
16 limitations of at least Claim 1 of the '169 Patent are met, made it known to NFLE
17 that its customers' use of the '169 Infringing Instrumentalities would directly
18 infringe the '169 Patent, or, at the very least, rendered NFLE willfully blind to such
19 infringement.

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

1 supporting and managing its customers' continued use of the '169 Infringing
 2 Instrumentalities; and providing technical assistance to customers during their
 3 continued use of the '169 Infringing Instrumentalities. *See*,
 4 *e.g.*, [https://digitalcare.nfl.com/hc/en-us/articles/214751028-Video-Choppy-](https://digitalcare.nfl.com/hc/en-us/articles/214751028-Video-Choppy-Lagging)
 5 [Lagging](https://digitalcare.nfl.com/hc/en-us/articles/215465157-Video-Quality); <https://digitalcare.nfl.com/hc/en-us/articles/215465157-Video-Quality>.

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

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

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

1 of the '169 Patent.

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

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

13 129. The adaptive streaming functionality in the '169 Infringing
14 Instrumentalities is specially made and adapted to infringe at least Claim 1 of the
15 '169 Patent. Upon information and belief, the adaptive streaming functionality in
16 the '169 Infringing Instrumentalities is not a staple article or commodity of
17 commerce, and, because the functionality is designed solely to work with the '169
18 Infringing Instrumentalities in a manner that is covered by the '169 Patent, it does
19 not have a substantial non-infringing use. At least since November 30, 2015 and by
20 no later than January 12, 2017, based on the forgoing facts, NFLE has known or
21 been willfully blind to the fact that such functionality is especially made and
22 adapted for—and is in fact used in—the '169 Infringing Instrumentalities in a
23 manner that is covered by the '169 Patent.

24 130. Based on, among other things, the forgoing facts, NFLE has
25 contributorily infringed, and continues to contributorily infringe, at least Claim 1 of
26 the '169 Patent under 35 U.S.C. § 271(c).

27 131. NFLE's acts of infringement of the '169 Patent have been willful and
28 intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,

1 136 S. Ct. 1923 (2016). Since at least November 30, 2015, NFLE has willfully
 2 infringed the '169 Patent by refusing to take a license and continuing to make, use,
 3 test, sell, license, import, and/or offer for sale/license the '169 Infringing
 4 Instrumentalities. NFLE has been aware that it infringes the '169 Patent since at
 5 least November 30, 2015 and instead of taking a license, NFLE has opted to make
 6 the business decision to "efficiently infringe" the '169 Patent. In doing so, NFLE
 7 willfully infringed the '169 Patent.

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

15 **COUNT 6: INFRINGEMENT OF THE '888 PATENT**

16 133. The allegations of paragraphs 1-23 of this Complaint are incorporated
 17 by reference as though fully set forth herein.

18 134. OpenTV owns by assignment the entire right, title, and interest in the
 19 '888 Patent.

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

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

25 137. A person of ordinary skill the art reading the '888 Patent would
 26 understand that the patent's disclosure and claims are rooted in complex computer-
 27 implemented operations that require complex computer hardware and software that
 28 can be used to combine audio, video and metadata data streams into a broadcast

1 stream by, in exemplary embodiments, transcoding the streams by specialized
 2 preprocessor, packager and multiplexor systems into broadcast data formats based
 3 on a framework definition specifying data formats, combining the streams into a
 4 broadcast stream, and transmitting said stream to users in a form which can be
 5 decoded and displayed by a user's set top box or other receiver device.

6 138. The '888 Patent concerns streaming content for interactive and digital
 7 television broadcast data and is directed to creating digital transmission formats that
 8 allows for transmitting a combination of different data streams as one stream. The
 9 claims package and convert specific digital content so that it make different streams
 10 appear as one stream for transmission and be accessible on a variety of different set
 11 top boxes and receivers. The inventive solution could use a specialized
 12 preprocessor, packager, and multiplexor systems to transcode different streams into
 13 a cohesive broadcast stream and transmit it to viewers and provides a "framework
 14 definition" that identifies the associated content after it compares format of the
 15 different data streams and converts them to the required format. This effects an
 16 improvement in technology because it collects, reformats and combines the content
 17 into a stream that can be broadcast. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-
 18 cv-0031, Dkt. No. 46-3, ¶¶ 28-40 (E.D. Tex. April 13, 2017) (*case voluntarily*
 19 *dismissed without prejudice*).

20 139. The patent claims priority at least to November 27, 2000. The
 21 technological issue of enhancing and improving interactive television signals was
 22 not a long-standing or fundamental problem at the time of the invention. This is not
 23 an invention that can be practiced entirely in the human mind or on paper. *Id.*

24 140. Upon information and belief, NFLE, alone or through agents acting
 25 under NFLE's direction and control, has directly infringed at least Claim 1 of the
 26 '888 Patent in violation of 35 U.S.C. § 271 *et seq.*, by making, using, testing,
 27 selling, licensing, importing, and/or offering for sale/license without authority its
 28 NFL Game Pass application together with its related video, audio and metadata

1 content generation, transcoding, stream packaging and content delivery
 2 functionalities (collectively, “the ’888 Infringing Instrumentalities”) in the
 3 exemplary manner described below:

- 4 A. One or more of the ’888 Infringing Instrumentalities meet all of
 5 the elements of Claim 1 of the ’888 Patent in that they provide a
 6 method for producing a broadcast stream that contains various
 7 stream types of audio content, video content and metadata
 8 content. In particular, NFLE generates omnimedia content for its
 9 Game Pass application, including at a minimum, NFL game
 10 video, audio and metadata such as text features, game statistics,
 11 Big Play highlight Markers and other identifiers.
- 12 B. One or more of the ’888 Infringing Instrumentalities create a
 13 framework definition that identifies various stream types in the
 14 audio content, the video content and the metadata content
 15 associated with a broadcast and attributes of said stream types
 16 including the format of said various stream types. In particular, as
 17 an example, NLFE captures football game footage in certain high-
 18 quality video and audio formats. Before this footage may be
 19 transmitted to Game Pass clients, these formats are transcoded to
 20 transmission-friendly stream types and various metadata stream
 21 types are added and transcoded. A transcoder apparatus (*e.g.*, as
 22 provided by NeuLion acting under NFLE’s direction and control)
 23 may be used for this purpose and provides multi-bitrate encoding
 24 functions. A transcoder comprises a framework definition that
 25 specifies type, format and attributes of input and output streams.
 26
 27
 28

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.

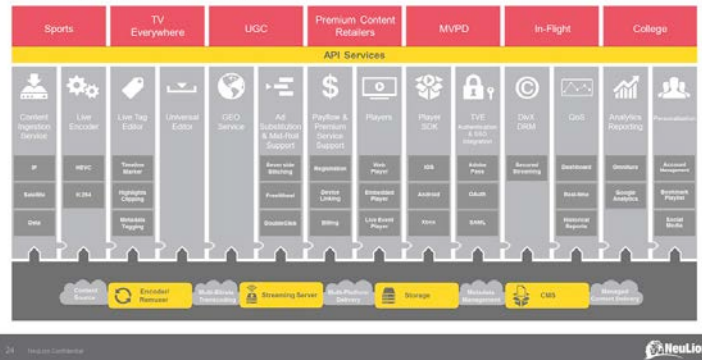
Live HD games | Snap to whistle | Highlight touch points | Extensive stats | Coaches Film | Telestrator



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>

NeuLion Digital Platform

Providing digital video broadcasting, distribution and monetization of live and on-demand content, up to 4K, to Internet-enabled devices.



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.

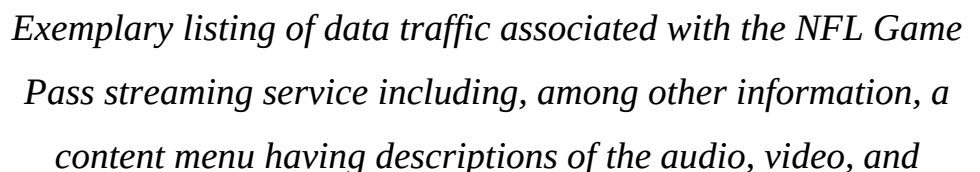
ENCODING

- 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

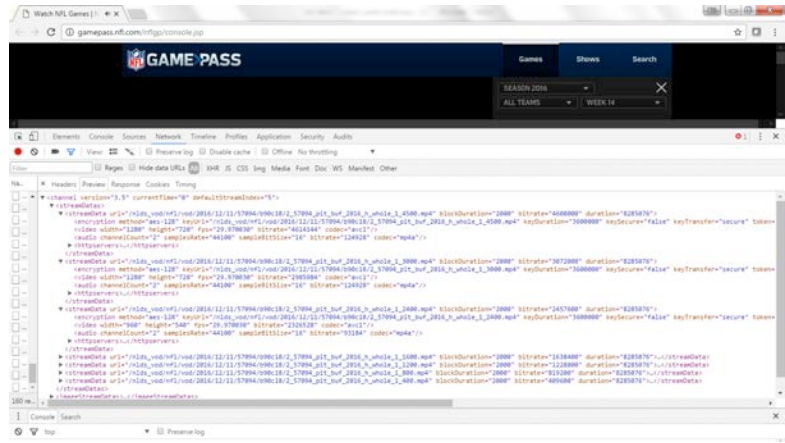
- Archive live streams to disk as MP4
- Amazon S3 file storage
- IP streams: RTMP, UDP, RTP, HTTP
- CDN Support: Akamai, Amazon CloudFront

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.

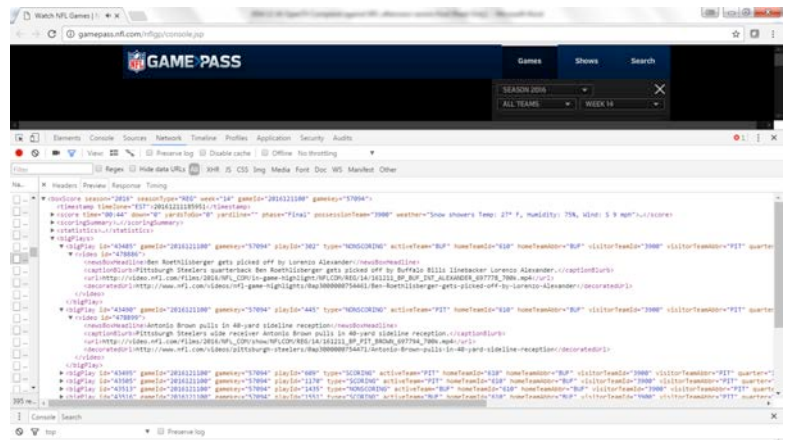
D. One or more of the '888 Infringing Instrumentalities create a menu describing said audio content, said video content, and said metadata content. In particular, as one example, a content manifest is created which includes descriptions of the transmitted audio, video and metadata available to a Game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



metadata



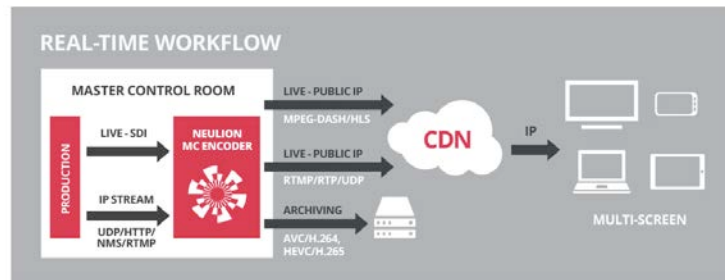
Exemplary received XML menu containing the audio and video references for a selected game in the NFL Game Pass application



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.

141. Claim 1 does not claim a well known, routine, or conventional combination or use of elements. The ability to reformat multiple streams of

1 information to a capacity that will match the capabilities of the broadcast medium is
 2 not routine even by today's standards. In addition the inclusion of a menu
 3 describing the content was not conventional. The use of the menu to determine
 4 which streams of information the receiver may use was not conventional. The claim
 5 elements, especially in this combination, are more than simply applying an idea on
 6 a computer. There is also no risk that this invention would unduly tie up any
 7 abstract idea. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt. No. 46-3,
 8 ¶¶ 28-40 (E.D. Tex. April 13, 2017) (*case voluntarily dismissed without prejudice*)

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

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

21 144. NFLE has, since at least by no later than January 12, 2017, known or
 22 been willfully blind to the fact that the third party infringers' use of '888 Infringing
 23 Instrumentalities directly infringe the '888 Patent.

24 145. NFLE's knowledge of the '888 Patent, which covers operating the
 25 '888 Infringing Instrumentalities in their intended manner and such that all
 26 limitations of at least Claim 1 of the '888 Patent are met, made it known to NFLE
 27 that the third party infringers' use of the '888 Infringing Instrumentalities would
 28

1 directly infringe the '888 Patent, or, at the very least, rendered NFLE willfully blind
2 to such infringement.

3 146. Having known or been willfully blind to the fact that the third party
4 infringers' use of the '888 Infringing Instrumentalities in their intended manner and
5 such that all limitations of at least Claim 1 of the '888 Patent are met would directly
6 infringe the '888 Patent, NFLE, upon information and belief, actively encouraged
7 and continues to actively encourage the third party infringers to directly infringe the
8 '888 Patent by using, selling, licensing, offering to sell/license, or importing the
9 said '888 Infringing Instrumentalities, and by, for example, marketing '888
10 Infringing Instrumentalities to the third party infringers; working with the third
11 party infringers to implement, install and operate the '888 Infringing
12 Instrumentalities and components thereof; fully supporting and managing the third
13 party infringers' continued use of the '888 Infringing Instrumentalities; and
14 providing technical assistance to the third party infringers during their continued
15 use of the '888 Infringing Instrumentalities. *See, e.g.*, <http://nflnline.nfl.com/>;
16 <https://digitalcare.nfl.com/hc/en-us>.

17 147. NFLE induces the third party infringers to infringe at least Claim 1 of
18 the '888 Patent at least by directing or encouraging them to install and operate the
19 '888 Infringing Instrumentalities, which, alone or in combination with the third
20 party infringers' devices, satisfy all the limitations of at least Claim 1 of the '888
21 Patent. For example, NFLE advertises and promotes the features of the '888
22 Infringing Instrumentalities on its website NFL.com, and encourages the third party
23 infringers to configure and operate their mobile and computer devices in an
24 infringing manner; NFLE further provides technical requirements and
25 specifications as to how the '888 Infringing Functionalities should be implemented.
26 (*see, e.g.*, <http://nflnline.nfl.com/>; <https://digitalcare.nfl.com/hc/en-us>). In
27 response, the third party infringers acquire, configure and operate the '888
28 Infringing Instrumentalities such that all the limitations of at least Claim 1 of the

1 '888 Patent are practiced. NFLE has been aware of the '888 Patent since at least
2 January 12, 2017.

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

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

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

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

23 152. The broadcast stream production technology in the '888 Infringing
24 Instrumentalities is specially made and adapted to infringe at least Claim 1 of the
25 '888 Patent. Upon information and belief, broadcast stream production technology
26 in the '888 Infringing Instrumentalities is not a staple article or commodity of
27 commerce, and, because the functionality is designed to work with the '888
28 Infringing Instrumentalities solely in a manner that is covered by the '888 Patent, it

1 does not have a substantial non-infringing use. At least by no later than January 12,
 2 2017, based on the forgoing facts, NFLE has known or been willfully blind to the
 3 fact that such functionality is especially made and adapted for—and is in fact used
 4 in—'888 Infringing Instrumentalities in a manner that is covered by the '888
 5 Patent.

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

9 154. NFLE's acts of infringement of the '888 Patent have been willful and
 10 intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,
 11 136 S. Ct. 1923 (2016). Since at least January 12, 2017, NFLE has willfully
 12 infringed the '888 Patent by refusing to take a license and continuing to make, use,
 13 test, sell, license, import, and/or offer for sale/license the '888 Infringing
 14 Instrumentalities. NFLE has been aware that it infringes the '888 Patent since at
 15 least January 12, 2017 and instead of taking a license, NFLE has opted to make the
 16 business decision to “efficiently infringe” the '888 Patent. In doing so, NFLE
 17 willfully infringed the '888 Patent.

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

25 **COUNT 7: INFRINGEMENT OF THE '736**

26 **PATENT**

27 156. The allegations of paragraphs 1-23 of this Complaint are incorporated
 28 by reference as though fully set forth herein.

1 157. OpenTV owns by assignment the entire right, title, and interest in the
2 '736 Patent.

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

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

8 160. The technologies claimed in the '736 Patent were aimed at solving
9 problems specific to interactive electronic content delivery systems, such as the
10 Internet, and in particular, the problem of coupling content distribution with
11 interactivity, *i.e.*, responsive to user-specific characteristics, or user-specific
12 interactions with the electronic content delivery system. For example, the '736
13 Patent teaches and claims a method for allowing users viewing video content to
14 directly access online information associated with that video content via a web link.
15 A person of ordinary skill in the art reading the '736 Patent would understand that
16 the patent's disclosure and claims are rooted in complex computer-implemented
17 methods that require complex hardware and software technologies that can be used
18 to overcome the problem described above. At the time of the invention, the
19 technology of providing a link to web-based information in or with a video program
20 was not a conventional business practice. The '736 Patent explains that
21 '[h]eretofore, media receiving and display systems such as television and radio
22 receivers have been linked to interactive information providers in only very limited
23 ways." '736 Patent, at 1:16-18. But "[t]he viewer of a video program . . . may often
24 seek to discover more information which relates to a topic presented in the video
25 program." *Id.*, at 1:38-43. The invention disclosed by the '736 Patent thus solved
26 the problem of allowing video viewers to directly access web-based information
27 associated with a video program.
28

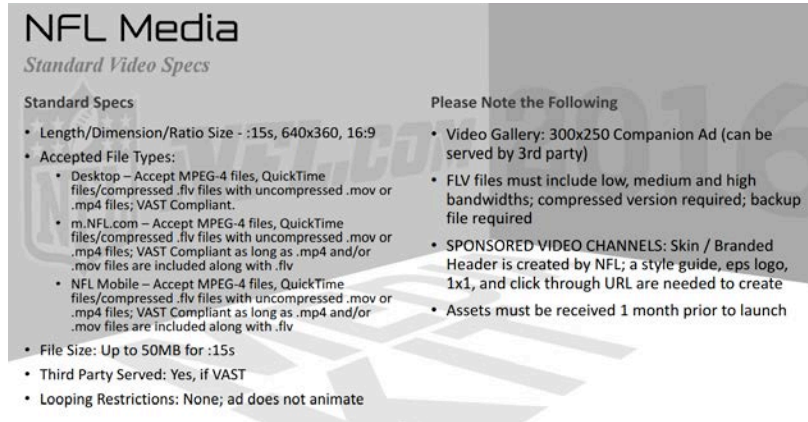
1 161. The '736 Patent is directed to improving television broadcast
 2 transmissions and overcoming the technological problem of how to provide a direct
 3 communication link with an online information provider and a user that is
 4 facilitated through a video program data stream but that is not ultimately controlled
 5 by a broadcast or cable television operator. The technical solution has two parts to
 6 allow a user to retrieve information from an online source that is included with the
 7 video program stream and establishing a separate link with that online source.
 8 *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt. No. 46-1, ¶¶ 48-61 (E.D.
 9 Tex. April 13, 2017) (*case voluntarily dismissed without prejudice*).

10 162. This technological problem was not one that was long-standing or
 11 fundamental at the time of the invention. The '736 Patent claims priority to at least
 12 September 15, 1995. At that time, very few households or businesses had Internet
 13 access and if they did, almost all connections were through a hosting program such
 14 as America Online or Prodigy. Also, this is not an invention that can be practiced
 15 in the human mind or on paper. It requires automatically establishing a direct link
 16 through a video program between a viewer and an online information source based
 17 on the contents of that stream. *Id.*

18 163. Upon information and belief, NFLE has directly infringed at least
 19 Claim 8 of the '736 Patent in violation of 35 U.S.C. § 271 *et seq.*, by having made,
 20 used, tested, sold, licensed, imported and/or offered for sale/license without
 21 authority its online streaming video functionalities that incorporate links to
 22 advertising or other online information content and services from within the video
 23 program content, including such streaming video functionalities available at least
 24 on NFL.com, NFL Now, NFL Mobile, the NFL App, and the NFL Fantasy Football
 25 application (collectively, "the '736 Infringing Instrumentalities") in the exemplary
 26 manner described below:

27 A. One or more of the '736 Infringing Instrumentalities meet all of
 28 the elements of Claim 8 of the '736 Patent in that they provide to a user of online

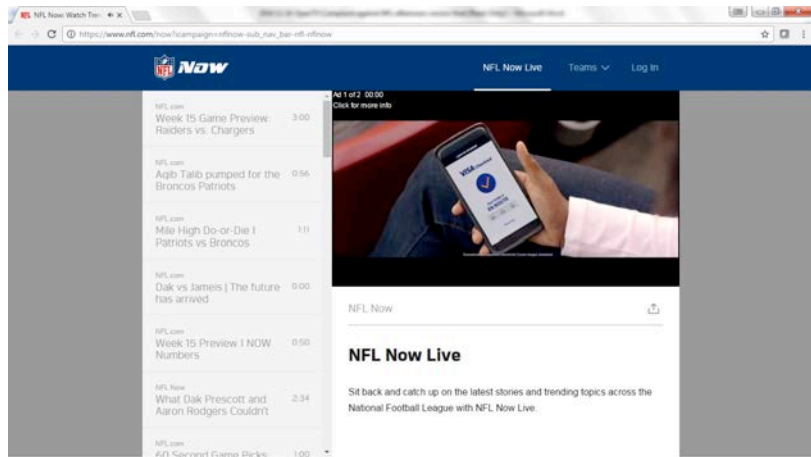
services automatic and direct access to online information through a link provided in a video program. In particular, the '736 Infringing Instrumentalities comprise a video program player that renders video program content (*e.g.*, VAST or VPAID compliant video advertising content) including links to additional online information associated with the advertiser.



Source: NFL Media Kit available at

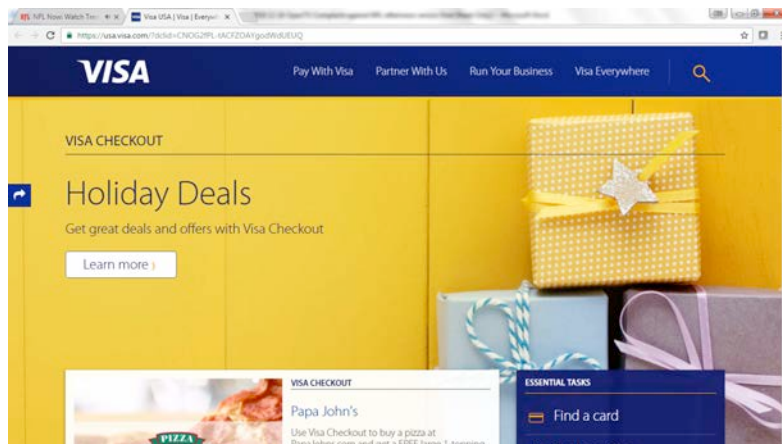
<http://www.nfl.com/static/content/public/photo/2016/08/09/0ap300000682159.pdf>

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

164. Claim 8 does not claim a well known, routine, or conventional combination or use of elements. A television signal operating in its normal,

1 expected manner does not transmit a signal that can be used to create a separate
 2 transmission between a third-party and the user. Inserting link information in the
 3 video program stream, such as a link to online information, was not conventional at
 4 the time of the invention. There is also no risk that this invention would unduly tie
 5 up any abstract idea. *OpenTV v. NFL Enterprises, LLC*, No. 2:17-cv-0031, Dkt.
 6 No. 46-1, ¶¶ 48-61 (E.D. Tex. April 13, 2017) (*case voluntarily dismissed without*
 7 *prejudice*).

8 165. NFLE has thus infringed one or more claims of the '736 Patent by
 9 having made, used, tested, sold, licensed, imported, and/or offered for sale/license
 10 the '736 Infringing Instrumentalities, and operating them such that all steps of at
 11 least Claim 8 of the '736 Patent are performed, including within this District.
 12 Moreover, NFLE fully implemented, managed, and supported the '736 Infringing
 13 Instrumentalities by its customers.

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

16 167. NFLE has, since at least November 30, 2015 and by no later than
 17 January 12, 2017, known or been willfully blind to the fact that such acts by its
 18 customers of having used the '861 Infringing Instrumentalities directly infringed
 19 the '736 Patent.

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

26 169. Having known or been willfully blind to the fact that its customers'
 27 use of the '736 Infringing Instrumentalities in their intended manner and such that
 28 all limitations of at least Claim 8 of the '736 Patent are met would directly infringe

1 the '736 Patent, NFLE, upon information and belief, actively encouraged its
 2 customers to directly infringe the '736 Patent by having used, sold, licensed,
 3 offered to sell/license, or imported the said '736 Infringing Instrumentalities, and,
 4 for example, by having marketed the '736 Infringing Instrumentalities to customers;
 5 by having worked with its customers to implement, install and operate the '736
 6 Infringing Instrumentalities and components thereof; by having fully supported and
 7 managed its customers' use of the '736 Infringing Instrumentalities; and by having
 8 provided technical assistance to customers during their use of the '736 Infringing
 9 Instrumentalities. *See, e.g.,*

10 <http://www.nfl.com/static/content/public/photo/2016/08/09/0ap3000000682159.pdf>

11 170. NFLE induced its users to infringe at least Claim 8 of the '736 Patent
 12 at least by having encouraged them to install and operate the '736 Infringing
 13 Instrumentalities, which, alone or in combination with the users' devices, satisfied
 14 all the limitations of at least Claim 8 of the '736 Patent. For example, NFLE
 15 advertised and promoted the features of the '736 Infringing Instrumentalities on its
 16 website NFL.com, and encouraged its users to configure and operate their mobile
 17 and computer devices in an infringing manner (*see, e.g.,* [http://](http://www.nfl.com/static/content/public/photo/2016/08/09/0ap3000000682159.pdf)
 18 www.nfl.com/static/content/public/photo/2016/08/09/0ap3000000682159.pdf). In
 19 response, NFLE's users acquired, configured and operated, the '736 Infringing
 20 Instrumentalities such that all the limitations of at least Claim 8 of the '736 Patent
 21 were practiced. NFLE has been aware of the '736 Patent since at least November
 22 30, 2015.

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

172. 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.

173. 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.

174. 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.

175. 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 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—'736 Infringing Instrumentalities in a manner that is covered by the '736 Patent.

176. 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).

177. Defendant's acts of direct and indirect infringement have caused

1 damage to Plaintiff, and Plaintiff is entitled to recover damages sustained as a result
2 of Defendant's wrongful acts in an amount subject to proof at trial.

3 **COUNT 8: INFRINGEMENT OF THE '172 PATENT**

4 178. The allegations of paragraphs 1-23 of this Complaint are incorporated
5 by reference as though fully set forth herein.

6 179. Nagravision SA owns by assignment the entire right, title, and interest
7 in the '172 Patent.

8 180. The '172 Patent was issued by the United States Patent and Trademark
9 Office on November 28, 2000 and is titled "System and Process for Limiting
10 Distribution of Information on a Communication Network Based on Geographic
11 Location." A true and correct copy of the '172 Patent is attached hereto as Exhibit
12 H.

13 181. Pursuant to 35 U.S.C. § 282, the '172 Patent is presumed valid.

14 182. A person of ordinary skill in the art reading the '172 Patent would
15 understand that the patent's disclosure and claims are rooted in complex computer-
16 implemented operations that require complex computer hardware and software
17 technologies that can be used to overcome the problem of how to control and limit
18 distribution of information from an electronic communication unit such as a server
19 to geographically remote communication units (e.g., user computers) connected via
20 the Internet. By way of example, an electronic communication unit such as a server
21 may limit access to information based on geographic location data associated with
22 remote communication units where the data is supplied by a GPS (global
23 positioning system) signal or other electronic means. For example, data
24 corresponding to user computer locations may be processed by the server in a
25 specialized comparison routine to determine whether or not the coordinates are
26 within a restricted region. The server may then perform another specialized routine
27 to deny information to the user computer based on the geographic location, or to
28 provide over the Internet communication network only certain information to the

restricted region computer. However, if the user computer is located outside the restricted area, the server performs a specialized routine to determine the user's location from the location data and to provide over the Internet to the unrestricted user computer different information than that available to a restricted computer.

183. Upon information and belief, NFLE has directly infringed at least Claim 19 of the '172 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 GamePass and NFL Mobile browser or app-based clients and associated servers implementing geographic restrictions or "black-outs" (collectively, "the '172 Infringing Instrumentalities") in the exemplary manner described below:

A. One or more of the '172 Infringing Instrumentalities meet all the elements of at least Claim 19 of the '172 Patent. In particular, as an example, NFL Game Pass and NFL Mobile are server-client media platforms using the Internet as the transmission medium; with one or more game content and control servers representing a first communication unit and one or more geographically remote GamePass clients (e.g. browser-based or app-based clients) representing a second communications unit, where the GamePass/NFL servers control communications with the user computing device clients;



NFL Game Pass

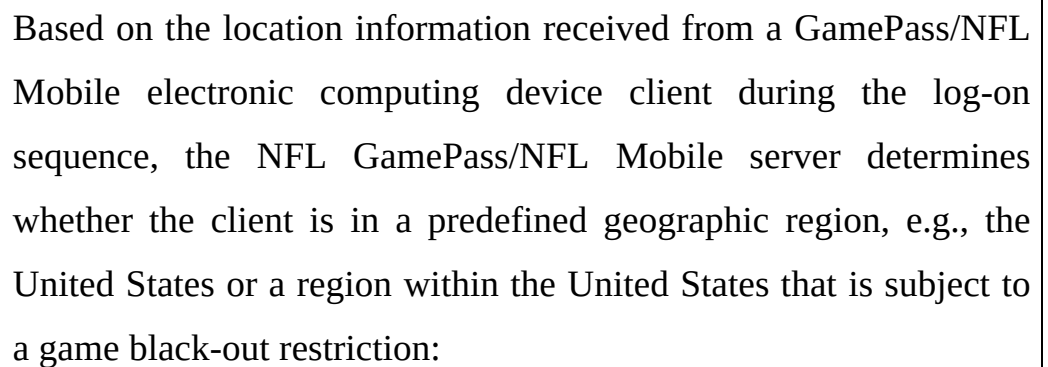


What do Verizon Customers get in the NFL Mobile App?

- **Live primetime and local NFL Games** based on the location of your device. (For Preseason, only national games are provided.)

NFL Mobile Android platform app support screen showing geographic restriction/black out features

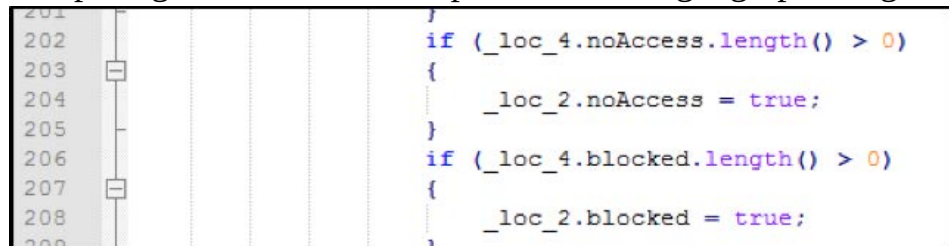
B. One or more of the '172 Infringing Instrumentalities receives location information over the Internet with the first communications unit, the location information corresponding to the geographic location of the second communications unit and determines, from the location information, whether the geographic location of the second communications unit is within a predefined geographic region. In particular, as an example, the NFL GamePass/NFL Mobile Internet platforms implement geographic restrictions or blackouts. For example, the availability of GamePass/NFL Mobile programming is dependent on the client computer IP address and Internet routing information, which correlates to a geographic location and may trigger a blackout/geographic restriction. See <https://digitalcare.nfl.com/hc/en-us/articles/218099028-Unavailable-in-Your-Area-on-Mobile-or-Tablet>;



See, e.g., GamePass `simpleconsole.xml` file.

	68	
COMPLAINT FOR PATENT INFRINGEMENT		

geographic location of the GamePass clients. Using GamePass as an example, after the user selects a game to watch, the GamePass client requests and receives XML data corresponding to individual games in files called games.xml. As indicated by the code in file SearchModule.as, the XML data in games.xml files can contain tags called <noAccess> and <blocked> with values that may be set to “true” or “false” depending on the client computing device’s location information. In this manner the GamePass server controls communication of game information based on whether the client computing device is within a predetermined geographic region.



```

201 }
202 if (_loc_4.noAccess.length() > 0)
203 {
204     _loc_2.noAccess = true;
205 }
206 if (_loc_4.blocked.length() > 0)
207 {
208     _loc_2.blocked = true;
209 }

```

See, e.g., GamePass SearchModule.as file.

D. One or more of the '172 Infringing Instrumentalities provides the second communications unit with access to first information in the event that the geographic location of the second communications unit is determined to be within the predefined region and providing the second communications unit with access to second information in the event that the geographic location of the second communications unit is determined to not be within the predefined region wherein said second information includes information different from said first information. In particular, as an example, the NFL GamePass/NFL Mobile Internet platform server may allow a client computing device access to a particular game content or disallow such access based on the GamePass client computing

device's location. If the game is not blocked, the client goes on to display the selected game.

```

899         else
900         {
901             _loc_6 = 0;
902             while (_loc_6 < this.m_lastLiveGames.length)
903             {
904
905                 _loc_7 = this.m_lastLiveGames[_loc_6];
906                 if (!_loc_7.noAccess && !_loc_7.blocked && _loc_7.elias == _loc_5)

```

See e.g., GamePass BaseGamesComponent.as file.

In this case a video file for the game is loaded over the Internet from the NFL GamePass server with a GET command:

```

4928         "method": "GET",
4929         "url": "http://nlids21.cdn13nl.newlion.com/nlds/nfl/nfltv/as/live/nfltv_hd_1600/20170504/17/3120.mp4",
4930         "httpVersion": "HTTP/1.1",

```

GamePass BaseGamesComponent.as file.

In case the client computing device is in a restricted/blacked-out geographic location, access to alternative content is made available to the client device that does not include the game feed.

184. NFLE has thus infringed, and continues to infringe, at least Claim 19 of the '172 Patent by making, using, testing, selling, licensing, importing, and/or offering for sale/license the '172 Infringing Instrumentalities, and operating them such that all steps of at least Claim 19 of the '172 Patent are performed, including within this District. Moreover, NFLE fully implements, manages, and supports the '172 Infringing Instrumentalities by its customers.

185. NFLE's customers have been and are now infringing, including under 35 U.S.C. §271(a), at least Claim 19 of the '172 Patent by using the '172 Infringing Instrumentalities.

186. NFLE has, by no later than May 8, 2017, known or been willfully blind to the fact that such acts by its customers of using the '172 Infringing

1 Instrumentalities directly infringe at least Claim 19 of the '172 Patent.

2 187. NFLE's knowledge of the '172 Patent, which covers operating the
3 '172 Infringing Instrumentalities in their intended manner and such that all
4 limitations of at least Claim 19 of the '172 Patent are met, made it known to NFLE
5 that its customers' use of the '172 Infringing Instrumentalities would directly
6 infringe the '172 Patent, or, at the very least, rendered NFLE willfully blind to such
7 infringement.

8 188. Having known or been willfully blind to the fact that its customers'
9 use of the '172 Infringing Instrumentalities in their intended manner and such that
10 all limitations of at least Claim 19 of the '172 Patent are met would directly
11 infringe the '172 Patent, NFLE, upon information and belief, actively encouraged
12 and continues to actively encourage its customers to directly infringe the '172
13 Patent by using, selling, licensing, offering to sell/license, or importing the said
14 '172 Infringing Instrumentalities, and, by, for example, marketing the '172
15 Infringing Instrumentalities to customers; working with its customers to implement,
16 install and operate the '172 Infringing Instrumentalities and components thereof;
17 fully supporting and managing its customers' continued use of the '172 Infringing
18 Instrumentalities; and providing technical assistance to customers during their
19 continued use of the '172 Infringing Instrumentalities. *See, e.g.,*
20 <http://nflnline.nfl.com/>; [https://digitalcare.nfl.com/hc/en-](https://digitalcare.nfl.com/hc/en-us/categories/200275708-NFL-Game-Pass)
21 [us/categories/200275708-NFL-Game-Pass](https://digitalcare.nfl.com/hc/en-us/categories/200275708-NFL-Game-Pass); [https://digitalcare.nfl.com/hc/en-](https://digitalcare.nfl.com/hc/en-us/categories/200275728-NFL-Mobile-App)
22 [us/categories/200275728-NFL-Mobile-App](https://digitalcare.nfl.com/hc/en-us/categories/200275728-NFL-Mobile-App).

23 189. NFLE induces its users to infringe at least Claim 19 of the '172 Patent
24 at least by encouraging them to install and operate the '172 Infringing
25 Instrumentalities, which, alone or in combination with the users' devices, satisfy all
26 the limitations of at least Claim 19 of the '172 Patent. For example, NFLE
27 advertises and promotes the features of its GamePass and NFL Mobile applications
28 on its websites NFL.com and nflnline.nfl.com, and encourages its users to

1 configure and operate their mobile and computer devices in an infringing manner
 2 (*see, e.g.*, <http://nflnline.nfl.com/>; [https://digitalcare.nfl.com/hc/en-](https://digitalcare.nfl.com/hc/en-us/categories/200275708-NFL-Game-Pass)
 3 [us/categories/200275708-NFL-Game-Pass](https://digitalcare.nfl.com/hc/en-us/categories/200275728-NFL-Mobile-App); [https://digitalcare.nfl.com/hc/en-](https://digitalcare.nfl.com/hc/en-us/categories/200275728-NFL-Mobile-App)
 4 [us/categories/200275728-NFL-Mobile-App](https://digitalcare.nfl.com/hc/en-us/categories/200275728-NFL-Mobile-App).) In response, NFLE's users acquire,
 5 configure and operate the '172 Infringing Instrumentalities such that all limitations
 6 of at least Claim 19 of the '172 Patent are practiced. NFLE has been aware of the
 7 '172 Patent since at least May 8, 2017.

8 190. Thus, NFLE has specifically intended to induce, and has induced, its
 9 customers to infringe at least Claim 19 of the '172 Patent, and NFLE has known of
 10 or been willfully blind to such infringement. NFLE has advised, encouraged,
 11 and/or aided its customers to engage in direct infringement, including through its
 12 encouragement, advice and assistance to customers to use the '172 Infringing
 13 Instrumentalities.

14 191. Based on, among other things, the foregoing facts, NFLE has induced,
 15 and continues to induce, infringement under 35 U.S.C. § 271(b) of at least Claim 19
 16 of the '172 Patent.

17 192. Further, NFLE sells, provides and/or licenses to its customers '172
 18 Infringing Instrumentalities that are especially made and adapted—and specifically
 19 intended by NFLE—to be used as components and material parts of the inventions
 20 covered by the '172 Patent. For example, NFLE provides applications and
 21 software, which customers configure and use in a manner such that all limitations
 22 of at least Claim 19 of the '172 Patent are met, and without which, NFLE's
 23 customers would be unable to use and avail of the '172 Infringing Instrumentalities
 24 in their intended manner.

25 193. Upon information and belief, NFLE also knew that the '172 Infringing
 26 Instrumentalities operate in a manner that satisfy all limitations of at least Claim 19
 27 of the '172 Patent.

28 194. The geographic restriction/blackout functionality in the '172 Infringing

1 Instrumentalities is specially made and adapted to infringe at least Claim 19 of the
 2 '172 Patent. Upon information and belief, the geographic restriction/blackout
 3 functionality in the '172 Infringing Instrumentalities is not a staple article or
 4 commodity of commerce, and, because the functionality is designed to work with
 5 the '172 Infringing Instrumentalities solely in a manner that is covered by at least
 6 claim 19 of the '172 Patent, it does not have a substantial non-infringing use. By
 7 no later than the filing of this Complaint, based on the forgoing facts, NFLE has
 8 known or been willfully blind to the fact that such functionality is especially made
 9 and adapted for—and is in fact used in—'172 Infringing Instrumentalities in a
 10 manner that is covered by the '172 Patent.

11 195. Based on, among other things, the foregoing facts, NFLE has
 12 contributorily infringed, and continues to contributorily infringe, at least Claim 19
 13 of the '172 Patent under 35 U.S.C. § 271(c).

14 196. NFLE's acts of infringement of the '172 Patent have been willful and
 15 intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*,
 16 136 S. Ct. 1923 (2016). Since at least May 8, 2017, NFLE has willfully infringed
 17 the '172 Patent by refusing to take a license and continuing to make, use, test, sell,
 18 license, import, and/or offer for sale/license the '172 Infringing Instrumentalities.
 19 NFLE has been aware that it infringes the '172 Patent since at least May 8, 2017
 20 and instead of taking a license, NFLE has opted to make the business decision to
 21 "efficiently infringe" the '172 Patent. In doing so, NFLE willfully infringed the
 22 '172 Patent.

23 197. Defendant's acts of direct and indirect infringement have caused, and
 24 continue to cause, damage to Plaintiff, and Plaintiff is entitled to recover from
 25 damages sustained as a result of Defendant's wrongful acts in an amount subject to
 26 proof at trial. The infringement of Plaintiff's exclusive rights under the '172 Patent
 27 has damaged and will continue to damage Plaintiff, causing irreparable harm, for
 28 which there is no adequate remedy at law, with the balance of hardships between

1 Plaintiff and Defendant, and the public interest, warranting an injunction.

2 **PRAYER FOR RELIEF**

3 WHEREFORE, Nagravision and OpenTV pray for the following
4 relief:

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

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

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

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

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

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

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

26 H. A judgment that NFLE has infringed one or more claims of the '172
27 Patent literally and/or under the doctrine of equivalents directly and/or indirectly by
28 inducing infringement and/or by contributory infringement;

1 I. That for each Asserted Patent this Court judges infringed by NFLE,
2 this Court award Plaintiffs their damages pursuant to 35 U.S.C. § 284 and any
3 royalties determined to be appropriate;

4 J. That this be determined to be an exceptional case under 35 U.S.C. §
5 285 and that Plaintiffs be awarded enhanced damages up to treble damages for
6 willful infringement as provided by 35 U.S.C. § 284;

7 K. That this Court award Plaintiffs prejudgment and post-judgment
8 interest on its damages;

9 L. An order permanently enjoining NFLE and its officers, agents,
10 employees, and those acting in privity with them, from further infringement of the
11 Asserted Patents;

12 M. That Plaintiffs be granted their reasonable attorneys' fees in this
13 action;

14 N. That this Court award Plaintiffs their costs; and

15 O. That this Court award Plaintiffs such other and further relief as the
16 Court deems proper.

17 **DEMAND FOR JURY TRIAL**

18 Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiffs
19 demand a trial by jury for all issues so triable.
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1 Dated: May 23, 2017

By /s/ Margaret Elizabeth Day

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