

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

ESW HOLDINGS, INC.

Plaintiff,

v.

ROKU, INC.

Defendant.

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CIVIL ACTION NO.: 6:19-CV-00044

JURY TRIAL DEMANDED

PATENT CASE

PLAINTIFF’S ORIGINAL COMPLAINT

Plaintiff ESW Holdings, Inc. (“Plaintiff” or “ESW”) files this Complaint for patent infringement against Defendant Roku, Inc. (“Defendant” or “Roku”).

PARTIES

1. ESW Holdings, Inc. is a corporation existing under the laws of Delaware with its principal place of business at 401 Congress Avenue, Suite 2650, Austin, Texas 78701.
2. On information and belief, Defendant Roku, Inc. is a corporation organized and existing under the laws of Delaware, is authorized to do business in Texas, and has a research and development office at 9606 N. Mopac Expressway, Suite 400, Austin, Texas 78759.
3. On information and belief, Roku may be served with process via its registered agent Corporation Service Company, at 211 E. 7th Street, Suite 620, Austin, Texas 78701.
4. On information and belief, Roku offers streaming players that connect to a TV and licenses their operating system to TV manufacturers that integrate Roku’s operating system into TVs and sell the TVs as Roku TVs.

5. The Roku operating system provides several features, including the More Ways to Watch feature, which is discussed in more detail below. On information and belief, Roku also provides developers with a development environment to create streaming channels, create advertisements associated with streaming channels, and lay out visual aspects of a streaming channel for quick prototyping and design purposes.

JURISDICTION AND VENUE

6. This is an action for patent infringement under the Patent Laws of the United States, 35 U.S.C. §271.

7. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§1331 and 1338(a).

8. Defendant is subject to this Court's personal jurisdiction at least because Defendant has minimum contacts with the State of Texas and with this judicial district, Defendant has purposefully availed itself of the privileges of conducting business in the State of Texas and within this judicial district, Defendant regularly conducts business within the State of Texas and within this judicial district, and at least of a portion of Defendant's infringement at issue relates to Defendant's contacts with the State of Texas and with this judicial district.

9. Venue is proper in this judicial district under 28 U.S.C. §1400(b). Defendant has a regular and established place of business in this judicial district -- a research and development office located at 9606 N. Mopac Expressway, Suite 400, Austin, Texas 78759, and, on information and belief, has committed at least a portion of its infringement at issue in this case forum and within this judicial district.

PATENTS-IN-SUIT

10. On September 20, 2016, the United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 9,451,294 (“the '294 Patent”), entitled “Methods and systems for distributing interactive content.” The '294 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code. A true and correct copy of the '294 Patent is attached as **Exhibit A**.

11. ESW Holdings, Inc. is the owner, by assignment, of the '294 Patent.

12. ESW holds all right, title, and interest in and to the '294 Patent, including the right to sue and recover damages for infringement thereof.

13. As described in detail below, Roku’s More Ways to Watch feature infringes one or more claims of the '294 Patent.

14. On August 16, 2016, the United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 9,420,349 (“the '349 Patent”), entitled “Methods and systems for monitoring a media stream and selecting an action.” The '349 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code. A true and correct copy of the '349 Patent is attached as **Exhibit B**.

15. ESW is the owner, by assignment, of the '349 patent.

16. ESW holds all right, title, and interest in and to the '349 Patent, including the right to sue and recover damages for infringement thereof.

17. As described in detail below, Roku’s More Ways to Watch feature infringes one or more claims of the '349 Patent.

18. On August 21, 2007, the United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 7,260,782 (“the '782 Patent”), entitled “Method

and system for generating flexible time-based control of application appearance and behavior.” The '782 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code. A true and correct copy of the '782 Patent is attached as **Exhibit C**.

19. ESW is the owner, by assignment, of the '782 Patent.

20. ESW holds all right, title, and interest in and to the '782 Patent, including the right to sue and recover damages for infringement thereof.

21. As described in detail below, Roku’s Development Environment (for example, Roku’s Advertising Framework (RAF), Roku’s Stream Tester, and Roku’s Direct Publisher) infringes one or more claims of the '782 Patent.

22. On September 30, 2008, the United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 7,430,718 (“the '718 Patent”), entitled “Configurable interface for template completion.” The '718 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code. A true and correct copy of the '718 Patent is attached as **Exhibit D**.

23. ESW is the owner, by assignment, of the '718 Patent.

24. ESW holds all right, title, and interest in and to the '718 Patent, including the right to sue and recover damages for infringement thereof.

25. As described in detail below, Roku’s Development Environment (for example, Roku’s advance layout editor (RALE) and Eclipse Plugin) infringes one or more claims of the '718 Patent.

26. On March 25, 2014, the United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 8,682,945 (“the '945 Patent”), entitled “Method and system for authoring multiple application versions based on audience qualifiers.” The '945

Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code. A true and correct copy of the '945 Patent is attached as **Exhibit E**.

27. ESW is the owner, by assignment, of the '945 Patent.

28. ESW holds all right, title, and interest in and to the '945 Patent, including the right to sue and recover damages for infringement thereof.

29. As described in detail below, Roku's Development Environment infringes one or more claims of the '945 Patent.

COUNT I
INFRINGEMENT OF THE '294 PATENT

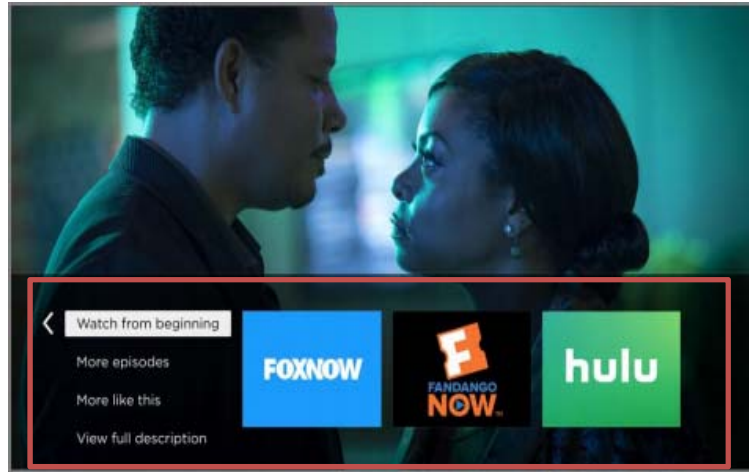
30. ESW incorporates the foregoing paragraphs as if fully set forth herein.

31. On information and belief, Defendant has been and is now directly infringing, literally and/or under the doctrine or equivalents, at least claim 1 of the '294 Patent by making, using, offering to sell, selling (directly or through intermediaries), licensing, and/or importing, in this District and elsewhere in the United States, Roku's More Ways to Watch feature.

32. On information and belief, Defendant infringes at least claim 1 of the '294 Patent through, at minimum, offering for sale, selling, and licensing Roku's More Ways to Watch feature that uses Automatic Content Recognition (ACR) technology and other technology to collect information about a movie or a TV show that one is watching via devices connected to an Antenna TV and HDMI® inputs, including over-the-air broadcasts and cable/satellite set-top boxes. *See* page 1 of Exhibit F, available at <https://support.roku.com/article/115005739288-how-to-use-more-ways-to-watch-on-your-roku-tv->.

33. On information and belief, Roku's More Ways to Watch feature monitors a broadcast stream and displays supplementary content (see highlighted portions in figures below) associated with the monitored broadcast stream. *See* page 56 of Exhibit G, available at

<https://image.roku.com/c3VwcG9ydC1B/Roku-TV-User-Guide-US-CA-8-0-2.pdf>; See page 3 of Exhibit F.



34. On information and belief, Roku's More Ways to Watch feature collects data corresponding to the content that is broadcast and compares the collected data to other content in a reference database to determine supplementary content (see highlighted portions in figures above) associated with the broadcast stream for display. See page 1 of Exhibit F.

35. On information and belief, Roku's More Ways to Watch feature distributes the supplementary content (see highlighted portions in figures above) for display when a match between the collected data and the other content in a reference database is detected. See figures above and page 2 of Exhibit F.

36. On information and belief, Roku's More Ways to Watch feature stops distribution of the supplementary content when a match between the collected data and the other content in a reference database is no longer detected. *See* page 2 of Exhibit F.

37. In view of the foregoing, on information and belief, Defendant directly infringes at least claim 1 of the '294 Patent.

38. Further, Defendant's customers, licensees, and end users who utilize the More Ways to Watch feature are, in turn, infringing the '294 Patent.

39. Pursuant to 35 U.S.C. §271(b), Defendant has induced its customers, licensees, and end users to directly infringe at least claim 1 of the '294 Patent by selling, licensing, and providing them the More Ways to Watch feature with the intent that they utilize the More Ways to Watch feature in a manner that infringes upon one or more claims in the '294 Patent. A copy of Roku's online support associated with Roku's More Ways to Watch feature is attached as Exhibit F and a copy of Roku's User Guide is attached as Exhibit G, both of which the Defendant intends to be used by its customers, licensees, and end users in utilizing Roku's More Ways to Watch feature in a manner taught by and claimed in the '294 Patent.

40. Pursuant to 35 U.S.C. §271(c), Defendant has also knowingly contributed to the direct infringement of at least claim 1 of the '294 Patent by its customers, licensees, and end users by supplying Roku's More Ways to Watch feature, which has no substantial noninfringing use, is especially designed for use in the patented invention, and constitutes a material part of the patented invention.

41. Defendant's direct and indirect infringement have caused, and are continuing to cause, injury to ESW.

42. ESW has been damaged by Defendant's direct and indirect infringement of the '294 Patent in an amount to be determined at trial and has suffered and will continue to suffer irreparable loss and injury unless the Defendant is permanently enjoined from directly and indirectly infringing the '294 Patent.

43. At least as early as its receipt of ESW's Original Complaint, Defendant has had knowledge of the '294 Patent, has had written notice of its infringement, has intended that its customers, licensees, and end users infringe the '294 Patent by their utilization of Roku's More Ways to Watch feature, has actively induced such infringement by continuing to sell, license, provide, and support Roku's More Ways to Watch feature, and has contributed to such infringement by continuing to supply Roku's More Ways to Watch feature. Despite such knowledge, Defendant continues to infringe the '294 Patent.

44. It is ESW's belief that Roku's More Ways to Watch feature could not have been developed without a high likelihood that Roku's More Ways to Watch feature would infringe upon the '294 Patent. ESW reserves its right to seek leave to amend its complaint if, after discovery, facts are uncovered that substantiate a finding of willful infringement.

COUNT II
INFRINGEMENT OF THE '349 PATENT

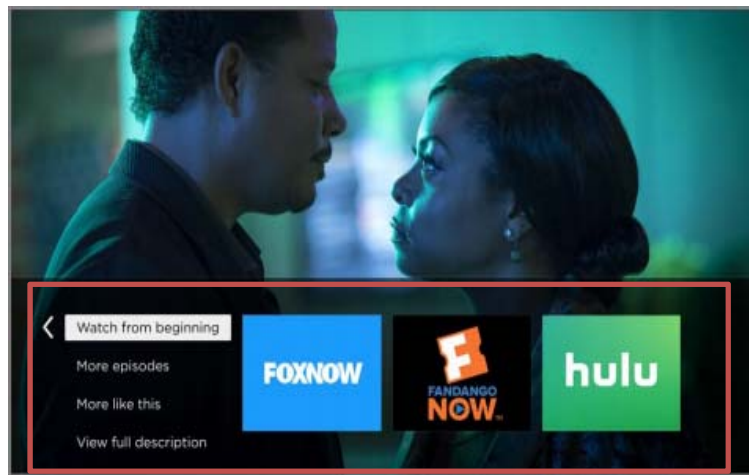
45. ESW incorporates the foregoing paragraphs as if fully set forth herein.

46. On information and belief, Defendant has been and is now directly infringing, literally and/or under the doctrine or equivalents, at least claim 7 of the '349 Patent by making, using, offering to sell, selling (directly or through intermediaries), licensing, and/or importing, in this District and elsewhere in the United States, Roku's More Ways to Watch Feature.

47. On information and belief, Defendant infringes at least claim 7 of the '349 Patent through, at minimum, offering for sale, selling, and licensing Roku's More Ways to Watch

feature that uses Automatic Content Recognition (ACR) technology and other technology to collect information about a movie or a TV show that one is watching via devices connected to an Antenna TV and HDMI® inputs, including over-the-air broadcasts and cable/satellite set-top boxes. See page 1 of Exhibit B, available at <https://support.roku.com/article/115005739288-how-to-use-more-ways-to-watch-on-your-roku-tv->.

48. On information and belief, Roku's More Ways to Watch feature receives a media stream and displays supplementary content (see highlighted portions in figures below) associated with the received media stream. See page 56 of Exhibit G; See page 3 of Exhibit F.



49. On information and belief, Roku's More Ways to Watch feature enables the generation of a fingerprint from a portion of a media stream and enables distribution and display

of supplementary content (see highlighted portions in figures above) associated with the media stream based on the generated fingerprint. *See* pages 1 and 2 of Exhibit F.

50. In view of the foregoing, on information and belief, Defendant directly infringes at least claim 7 of the '349 Patent.

51. Further, Defendant's customers, licensees, and end users who utilize the More Ways to Watch feature are, in turn, directly infringing the '349 Patent.

52. Pursuant to 35 U.S.C. §271(b), Defendant has induced its customers, licensees, and end users to directly infringe at least claim 7 of the '349 Patent by selling, licensing, and providing them the More Ways to Watch Feature with the intent that they utilize the More Ways to Watch Feature in a manner that infringes upon one or more claims in the '349 Patent. A copy of Roku's online support associated with Roku's More Ways to Watch feature is attached as Exhibit F and a copy of Roku's User Guide is attached as Exhibit G, both of which the Defendant intends to be used by its customers, licensees, and end users in utilizing Roku's More Ways to Watch feature in a manner taught by and claimed in the '349 Patent.

53. Pursuant to 35 U.S.C. §271(c), Defendant has also knowingly contributed to the direct infringement of at least claim 7 of the '349 Patent by its customer, licensees, and end users by supplying Roku's More Ways to Watch feature, which has no substantial noninfringing use, is especially designed for use in the patented invention, and constitutes a material part of the patented invention.

54. Defendant's direct and indirect infringement have caused, and are continuing to cause, injury to ESW.

55. ESW has been damaged by Defendant's direct and indirect infringement of the '349 Patent in an amount to be determined at trial and has suffered and will continue to suffer

irreparable loss and injury unless the Defendant is permanently enjoined from directly and indirectly infringing the '349 Patent.

56. At least as early as its receipt of ESW's Original Complaint, Defendant has had knowledge of the '349 Patent, has had written notice of its infringement, has intended that its customers, licensees, and end users infringe the '349 Patent by their utilization of Roku's More Ways to Watch feature, has actively induced such infringement by continuing to sell, license, provide, and support Roku's More Ways to Watch feature, and has contributed to such infringement by supplying Roku's More Ways to Watch feature. Despite such knowledge, Defendant continues to infringe the '349 Patent.

57. It is ESW's belief that Roku's More Ways to Watch feature could not have been developed without a high likelihood that Roku's More Ways to Watch feature would infringe upon the '349 Patent. ESW reserves its right to seek leave to amend its complaint if, after discovery, facts are uncovered that substantiate a finding of willful infringement.

COUNT III
INFRINGEMENT OF THE '782 PATENT

58. ESW incorporates the foregoing paragraphs as if fully set forth herein.

59. On information and belief Defendant provides a Development Environment to encourage and allow 3rd party developers to create video streaming channels, including advertisements, that would be made available to Roku subscriber customers via the Roku video streaming platform.

60. On information and belief, Defendant has been and is now directly infringing, literally and/or under the doctrine or equivalents, at least claim 1 of the '782 Patent by making, using, offering to sell, selling (directly or through intermediaries), licensing, and/or importing, in this District and elsewhere in the United States, Roku's Development Environment.

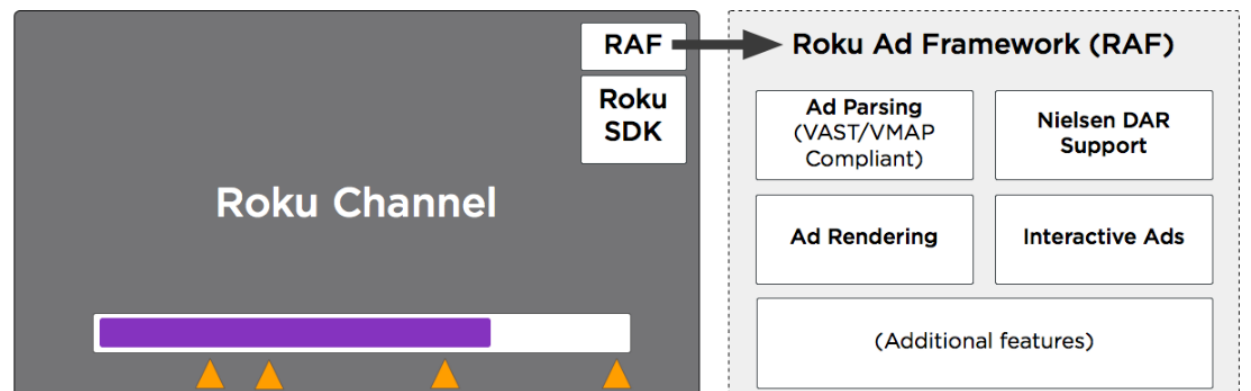
61. On information and belief, Defendant infringes at least claim 1 of the '782 Patent through, at minimum, using Roku's Development Environment, which provides developers with the Roku Advertising Framework (RAF), which is a universal ad solution that allows developers to insert advertisements within their video content. See page 1 of Exhibit H, available at <https://sdkdocs.roku.com/display/sdkdoc/Roku+Advertising+Framework>. As illustrated in the figure below, the Roku Development Environment provides RAF that allows ad rendering, ad parsing, Nielsen DAR support, and interactive ads.

The Roku Advertising Framework is a universal video ad solution integrated directly into the core Roku SDK as a common library. RAF natively integrates baseline and advanced advertising capabilities, including:

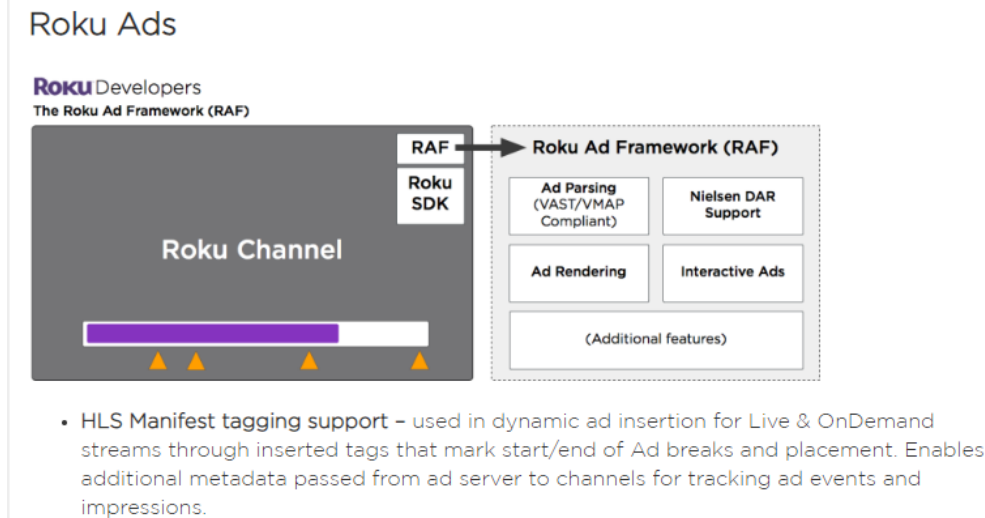
- IAB¹ VAST² 2.0/3.0 processing
- IAB VMAP³ playlist management
- Interactive ad units
- Roku's new privacy-friendly device ID ("RIDA")⁴
- Nielsen DAR Support - a comprehensive, next-day view of your ad's online and mobile audience in a way comparable to the Nielsen TV ratings

Roku Developers

The Roku Ad Framework (RAF)



62. On information and belief, the Roku Development Environment provides RAF that allows a developer to insert tags or markers that mark the start or end of ad breaks within a video content. See page 4 of Exhibit I, available at https://blog.roku.com/developer/2016/04/05/roku-os-7-1-dev-highlights?utm_source=itdadao&utm_medium=referral. As illustrated in the figure below, the Roku Development Environment provides RAF that allows ad insertion for live and OnDemand streams through inserted tags that mark start/end of ad breaks and placement. *Id.*



63. Further, on information and belief, the Roku Development Environment provides a Direct Publisher that allows a publisher of video content to insert mid-roll breakpoints within a video content during scene transitions or at regularly-scheduled intervals. See page 5 of Exhibit J, available at <https://blog.roku.com/developer/2017/05/01/direct-publisher-monetization#ad-insertion>. As illustrated in the figure below, the Roku Development Environment provides the Direct Publisher to allow a publisher to determine how many mid-roll ads they would like to serve against their content and when those ads should be shown. *Id.*

Determining mid-roll break points

It is up to the publisher's discretion how many mid-roll ads they'd like to serve against their content and when they should be shown. Generally, there are two approaches to inserting adBreaks:

1. **During scene transitions:** The best user experience for mid-roll ads occurs when ads are displayed during natural breaks in tension, such as during scene transitions, breaks in dialogue, or lulls in action. If adBreak metadata is not already available, this may require an "editor" to review the content and determine points in the content that lend themselves well to adBreaks.
2. **At regularly-scheduled intervals:** Publishers who don't have the resources to insert adBreaks during natural breakpoints may choose to insert adBreaks at regular intervals. Some publishers choose to show an ad every seven minutes (so as to maximize our ad frequency rules), while others space ads out every 10 or 15 minutes. Note that this approach can create jarring experiences for the viewer, such as cutting to an ad while a character is mid-sentence or in the middle of a high-stakes car chase.

64. Additionally, on information and belief, Roku's Development Environment provides a Stream Tester that allows developers to monitor a video content and to observe execution of the video content. *See* pages 2, 3 of Exhibit K, available at <https://blog.roku.com/developer/new-web-tools-for-faster-development-on-roku>. For example, Roku's Development Environment provides the Stream Tester that allows a developer to monitor a video content and observe how video content looks on a Roku device and how ads function when inserted into a video content. *See* page 3 of Exhibit K (see figure below).

Before you even begin development on your channel, you'll want to make sure the Roku platform supports your video content. To this end, developers can use our [Stream Tester Tool](#) to play video streams inside a private Roku channel. The tool also allows for DRM encodings or insertion of video ads from your own ad server.

To use the Stream Tester Tool, you must first install the associated private channel, using [Vanity Code ZJMQ6D5](#). Once installed, verify that your Roku box and computer are on the same network, then enter the IP address of your Roku box in the web tool. Specify whether you're testing a video stream or an ad, and fill in the necessary details: video format, encoding type, encoding key, etc.

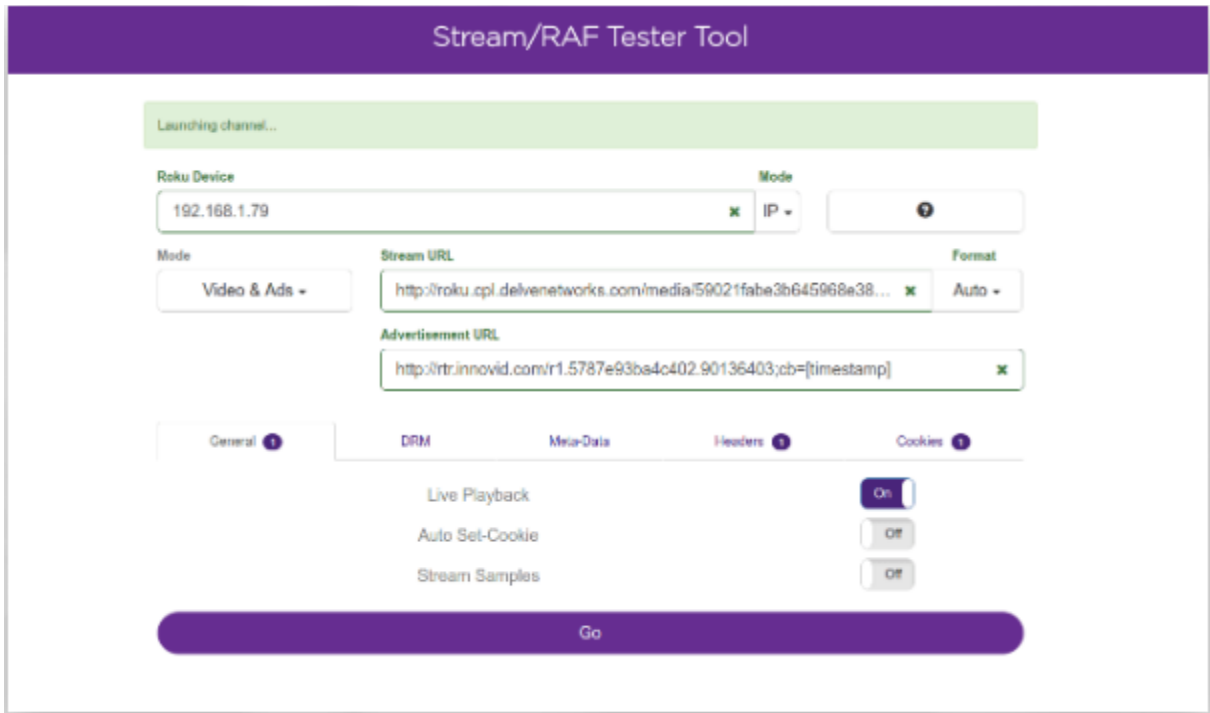


When you're finished, hit Go. If your stream is supported, it will launch within the Roku Stream Tester private channel you just installed on your Roku box. The video will be overlaid by metadata associated with the stream, such as the audio format or subtitle tracks.

65. The Stream Tester also allows a developer to choose a video stream URL along with an advertisement URL to observe how the video content looks on a Roku device along with

the advertisement. *See* pages 3 and 4 of Exhibit L, available at <https://devtools.web.roku.com/>.

As illustrated in the figure below, the Stream Tester allows a developer to insert URLs corresponding to a video stream and an advertisement in order to observe how video content looks on a Roku device and how ads function when inserted into a video content. *See* page 4 of Exhibit L.



66. In view of the foregoing, on information and belief, Defendant directly infringes at least claim 1 of the '782 Patent.

67. Defendant's infringement has caused, and is continuing to cause, injury to ESW.

68. ESW has been damaged by Defendant's infringement of the '782 Patent in an amount to be determined at trial and has suffered and will continue to suffer irreparable loss and injury unless the Defendant is permanently enjoined from infringing the '782 Patent.

69. At least as early as its receipt of ESW's Original Complaint, Defendant has had knowledge of the '782 Patent and has had written notice of its infringement. Despite such knowledge, Defendant continues to infringe the '782 Patent.

70. It is ESW's belief that the Roku Development Environment could not have been developed without a high likelihood that the Roku Development Environment would infringe upon the '782 patent. ESW reserves its right to seek leave to amend its complaint if, after discovery, facts are uncovered that substantiate a finding of willful infringement.

COUNT IV
INFRINGEMENT OF THE '718 PATENT

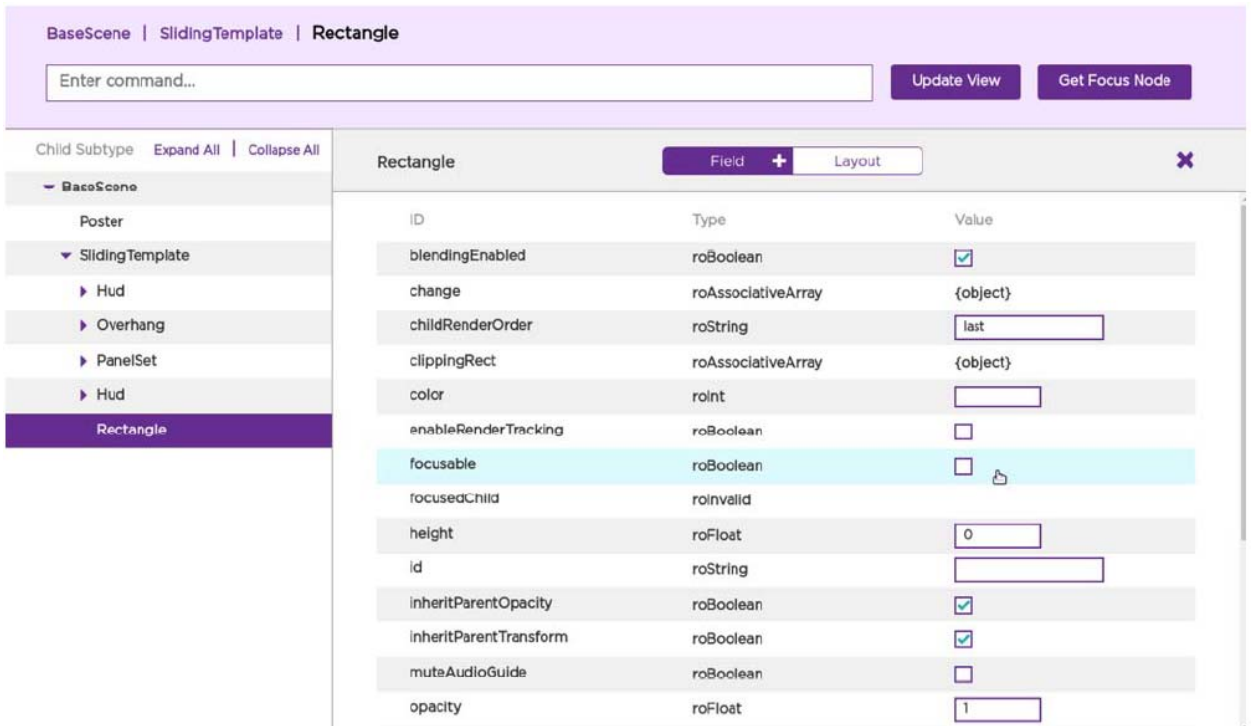
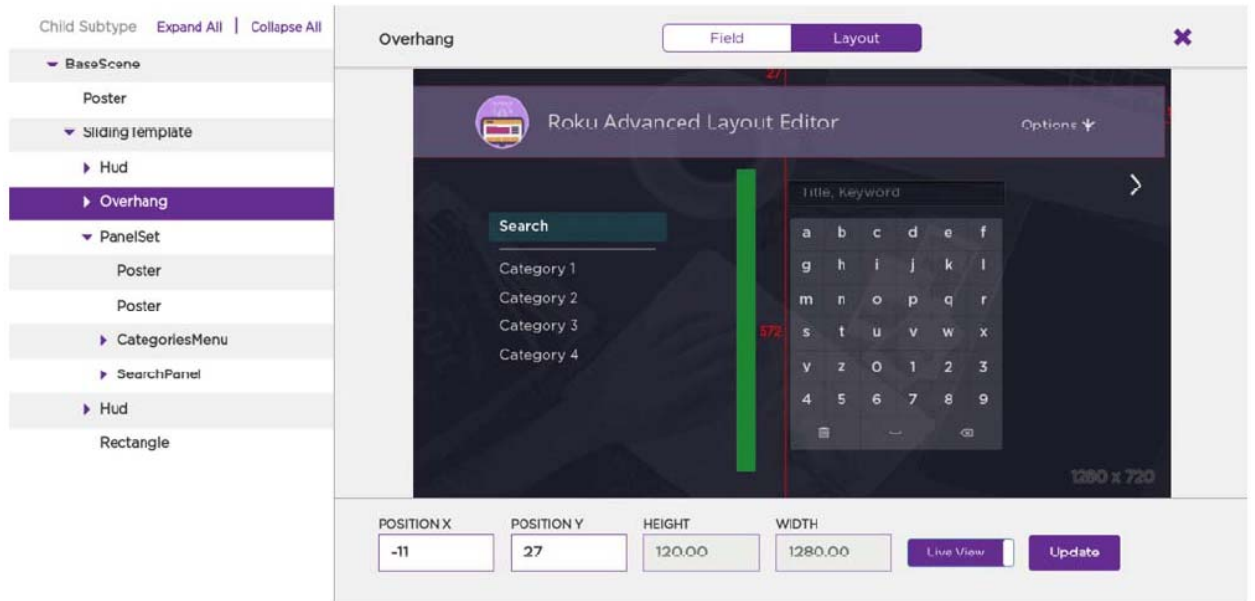
71. ESW incorporates the foregoing paragraphs as if fully set forth herein.

72. On information and belief, Defendant has been and is now indirectly infringing at least claim 1 of the '718 Patent.

73. Pursuant to 35 U.S.C. §271(b), Defendant has induced developers to directly infringe at least claim 1 of the '718 Patent by providing them the Roku Development Environment with the intent that they use the Roku Development Environment in a manner that infringes upon at least claim 1 in the '718 Patent. Copies of Exhibits L and N are attached, which the Defendant intends to be used by developers in utilizing the Roku Development Environment in a manner taught by and claimed in the '718 Patent.

74. On information and belief, the Roku Development Environment provides a Roku Advanced Layout Editor (RALE), which enables its developers to lay out visual aspects of a channel for quick prototyping and design purposes. *See* Exhibit M, available at <http://devtools.web.roku.com/roku-advanced-layout-editor/>. For instance, RALE enables a developer to see their design in a graphical user interface and to assign various properties to the

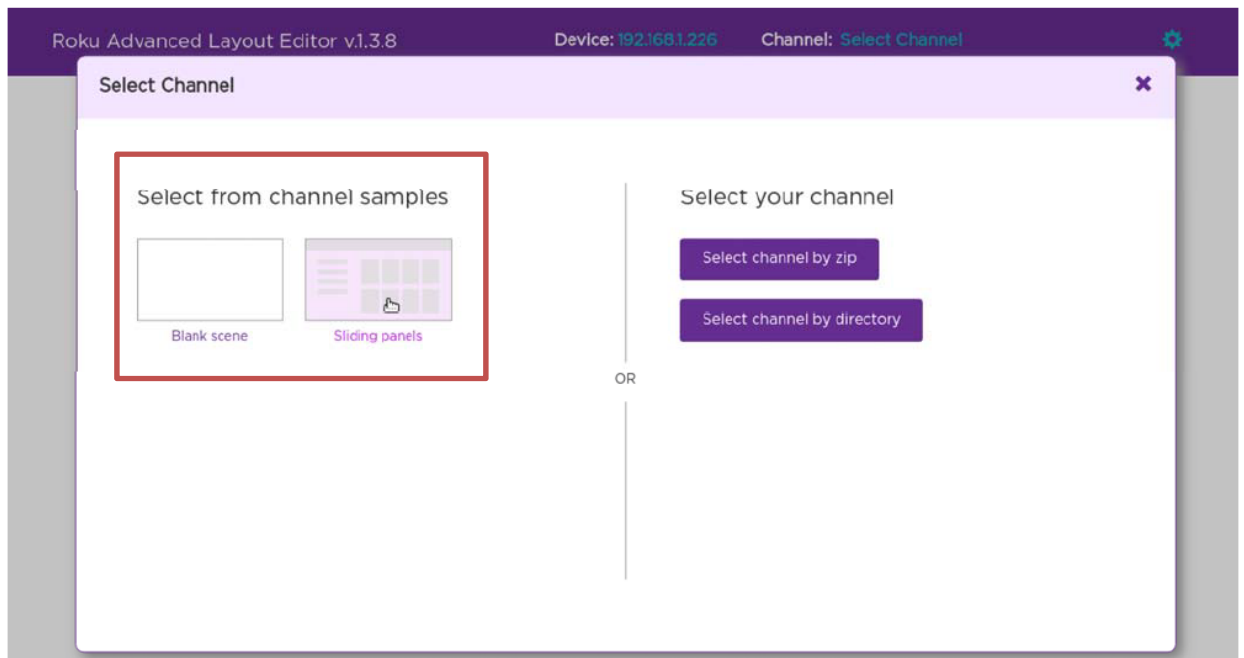
designs, which are reflected in real-time. See page 2 and figures below of Exhibit N, available at <https://sdkdocs.roku.com/display/sdkdoc/Roku+Advanced+Layout+Editor>.



75. On information and belief, RALE further provides predefined channel templates that enable developers to customize further. *See* page 1 of Exhibit N (and highlighted portion of the figure below). As illustrated below, RALE enables a developer to select from channel samples.

Predefined Channel Templates

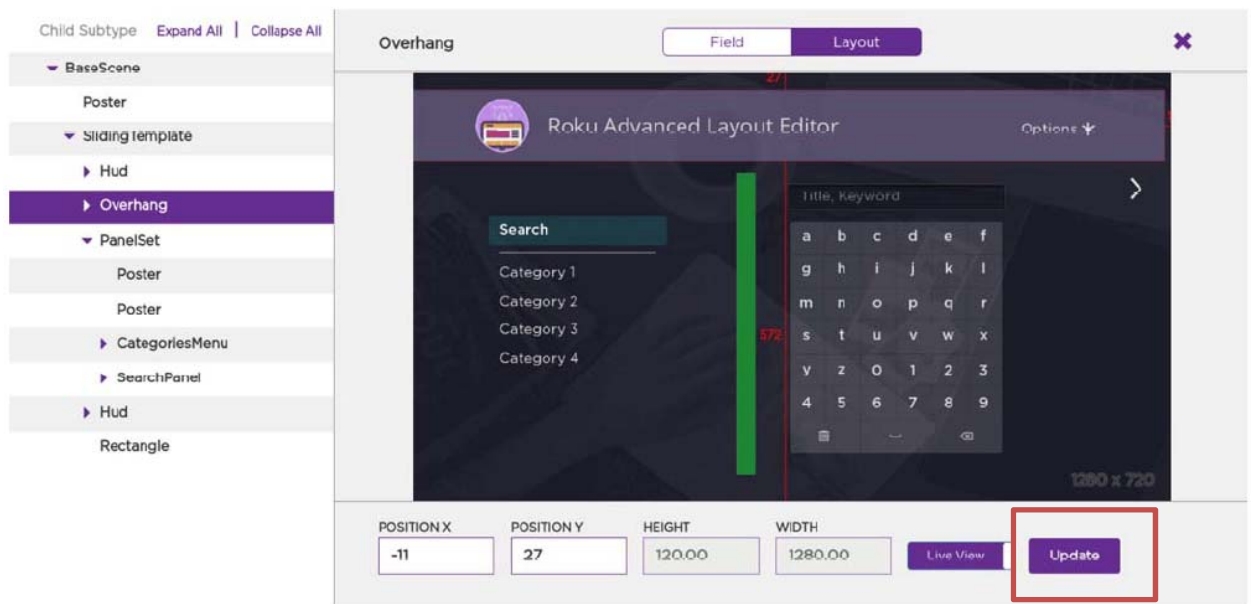
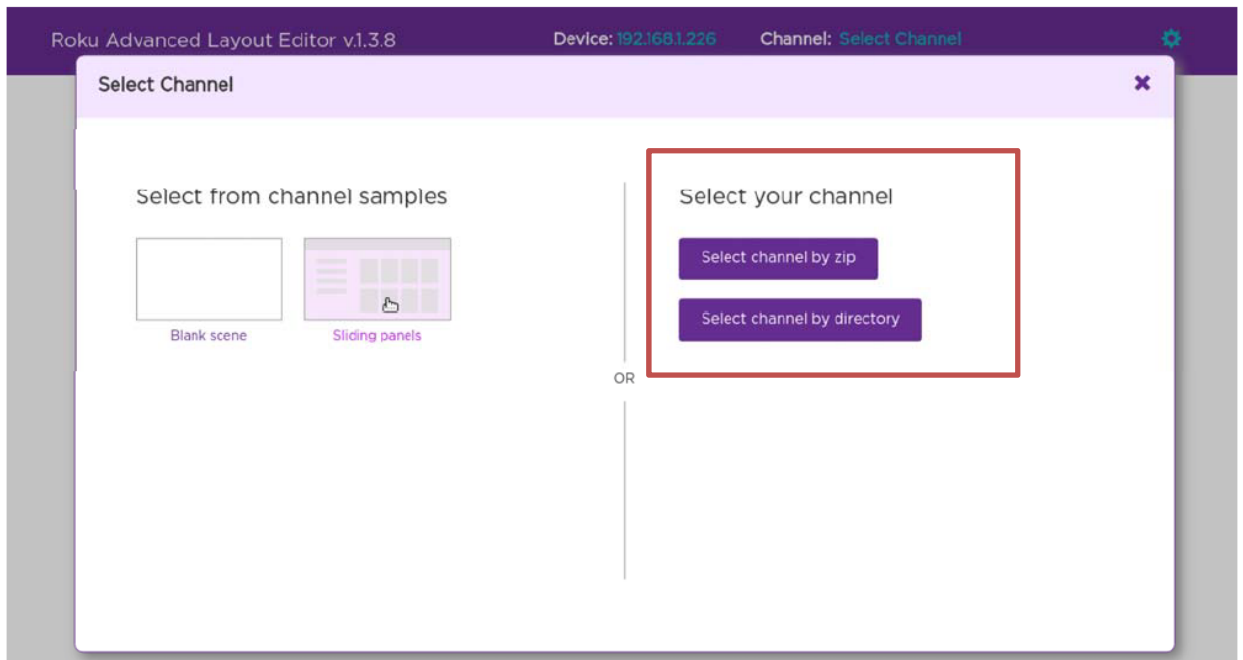
By default, RALE offers some predefined channel templates to help the designer get started. These templates can be used as pre-built channels, or simply as a starting point for the designer to customize further.



76. Further, on information and belief, RALE enables presentation of previously saved channel templates and enables changes made via RALE to be saved. *See* pages 1 and 2 of Exhibit N (and highlighted portions of the figures below). As illustrated below, RALE enables a developer to select their channel template by zip or by directory and enables a developer to update changes made via RALE.

Predefined Channel Templates

By default, RALE offers some predefined channel templates to help the designer get started. These templates can be used as pre-built channels, or simply as a starting point for the designer to customize further.

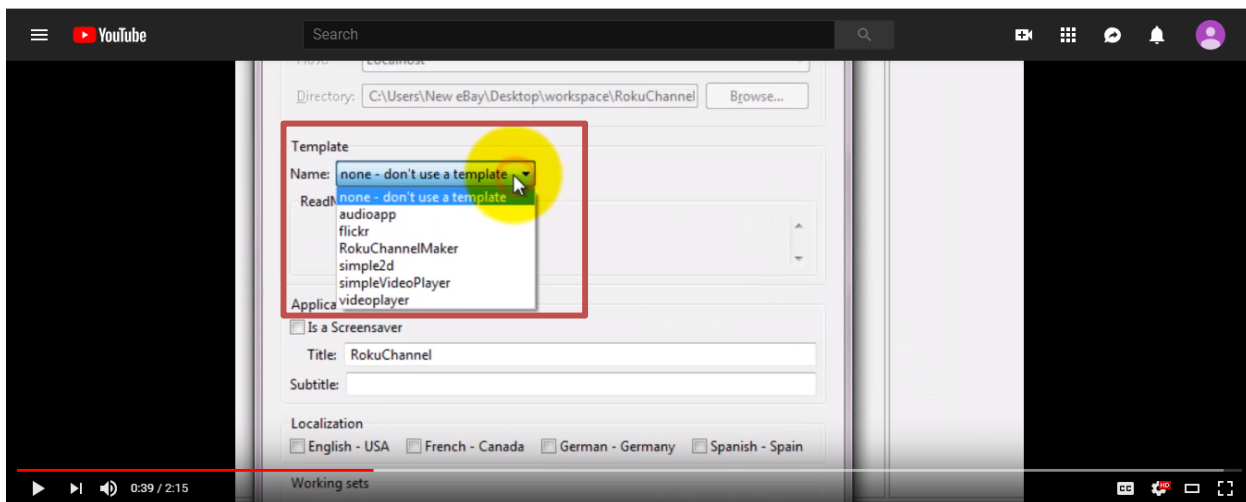
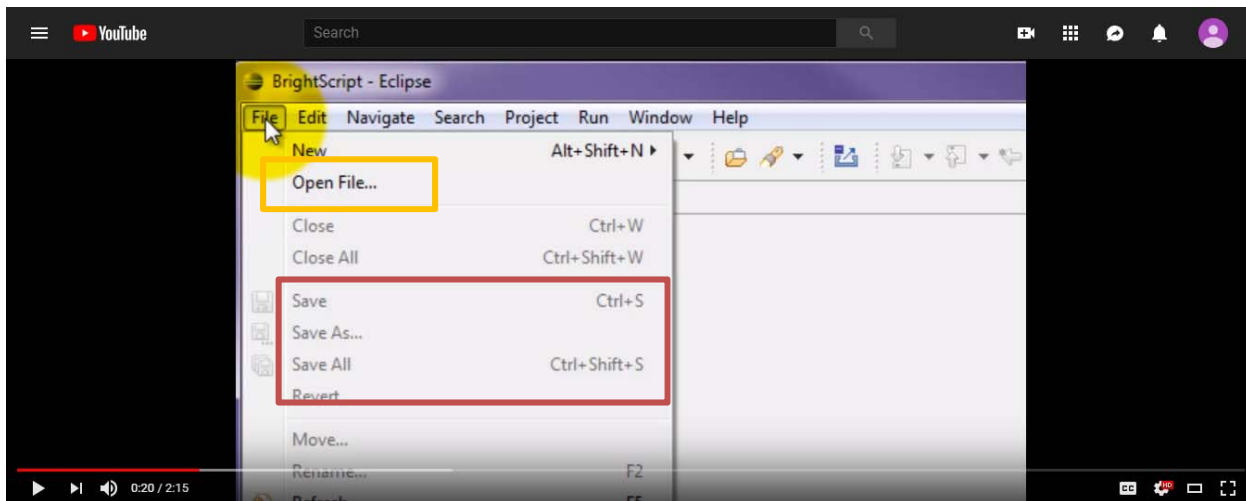


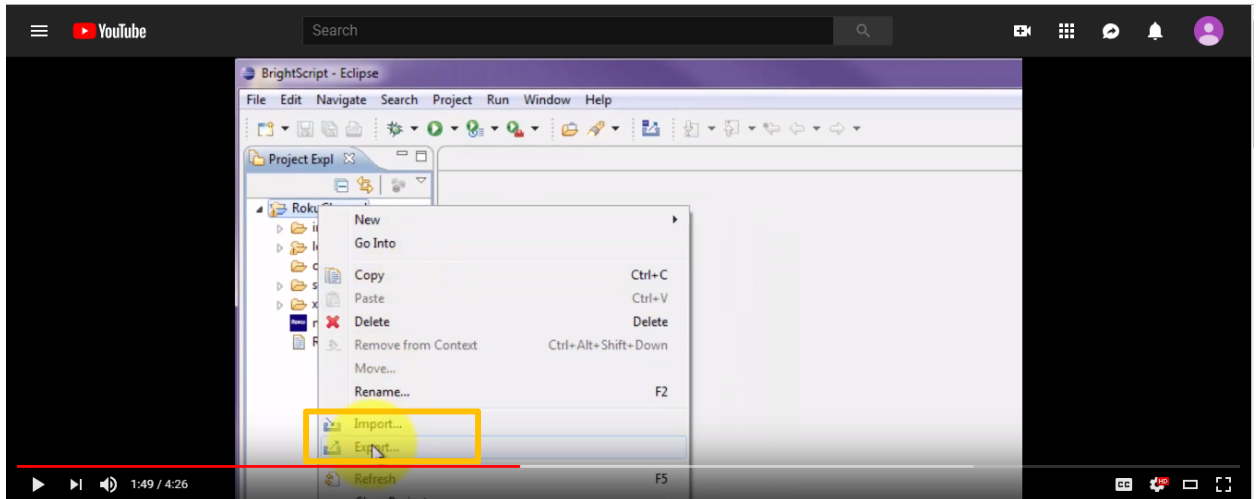
77. On information and belief, the Roku Development Environment also provides an Eclipse Plugin, which enables a developer to save an application template, to open a previously saved application template, to import an application template, and to export an application

template. See highlighted portions of the figures below, available at

<https://www.youtube.com/watch?v=suQ0qxFs0jw> and

<https://www.youtube.com/watch?v=qyqc0klehuE>. See also pages 6 and 7 of Exhibit L.





78. Pursuant to 35 U.S.C. §271(c), Defendant has also knowingly contributed to the direct infringement of at least claim 1 of the '718 Patent by developers by supplying Roku's Development Environment, which has no substantial noninfringing use, is especially designed for use in the patented invention, and constitutes a material part of the patented invention.

79. In view of the foregoing, on information and belief, Defendant indirectly infringes at least claim 1 of the '718 Patent.

80. Defendant's infringement has caused, and is continuing to cause, injury to ESW.

81. ESW has been damaged by Defendant's infringement of the '718 Patent in an amount to be determined at trial and has suffered and will continue to suffer irreparable loss and injury unless the Defendant is permanently enjoined from infringing the '718 Patent.

82. At least as early as its receipt of ESW's Original Complaint, Defendant has had knowledge of the '718 Patent, has had written notice of its infringement, has intended that developers infringe the '718 Patent by their use of the Roku Development Environment, has actively induced such infringement by continuing to provide and support the Roku Development Environment, and has contributed to such infringement by supplying the Roku Development Environment. Despite such knowledge, Defendant continues to infringe the '718 Patent.

83. It is ESW's belief that the Roku Development Environment could not have been developed without a high likelihood that the Roku Development Environment would infringe upon the '718 Patent. ESW reserves its right to seek leave to amend its complaint if, after discovery, facts are uncovered that substantiate a finding of willful infringement.

COUNT V
INFRINGEMENT OF THE '945 PATENT

84. ESW incorporates the foregoing paragraphs as if fully set forth herein.

85. On information and belief, Defendant has been and is now indirectly infringing at least claim 1 of the '945 Patent.

86. Pursuant to 35 U.S.C. §271(b), Defendant has induced developers to directly infringe at least claim 1 of the '945 Patent by providing them the Roku Development Environment with the intent that they use the Roku Development Environment in a manner that infringes upon at least claim 1 in the '945 Patent. Copies of Exhibits O and P are attached, which the Defendant intends to be used by developers in utilizing the Roku Development Environment in a manner taught by and claimed in the '945 Patent.

87. On information and belief, Roku's Development Environment enables developers to create, maintain, and distribute two versions of their channel, for example, a non-certified version and a public version. *See* Exhibits O (available at <https://sdkdocs.roku.com/display/sdkdoc/Create+a+Non-Certified+Channel>) and P (available at <https://sdkdocs.roku.com/display/sdkdoc/Create+a+Public+Channel>). As illustrated in the figures below, a developer is enabled to add a channel by either selecting a public channel or a non-certified channel. Exhibits O and P.

Add Channel Window

From the radio buttons, select **Developer SDK**, and **Non-certified**, and then enter a **Channel Name** in the field.

The screenshot shows the 'Add Channel' window with the following elements:

- Header: Add Channel
- Section 1: *How do you plan to publish your channel? ?
Get more information on [publishing a channel](#).
 Direct Publisher
 Developer SDK
- Section 2: *Is this a public or non-certified channel? ?
 Public
 Non-certified
- Section 3: *Channel Name ?
[Empty text input field]
- Buttons: Continue (blue), Cancel (white with blue border)

2. Next, select **Developer SDK**, **Public**, enter a **Channel Name** and click **Continue**.

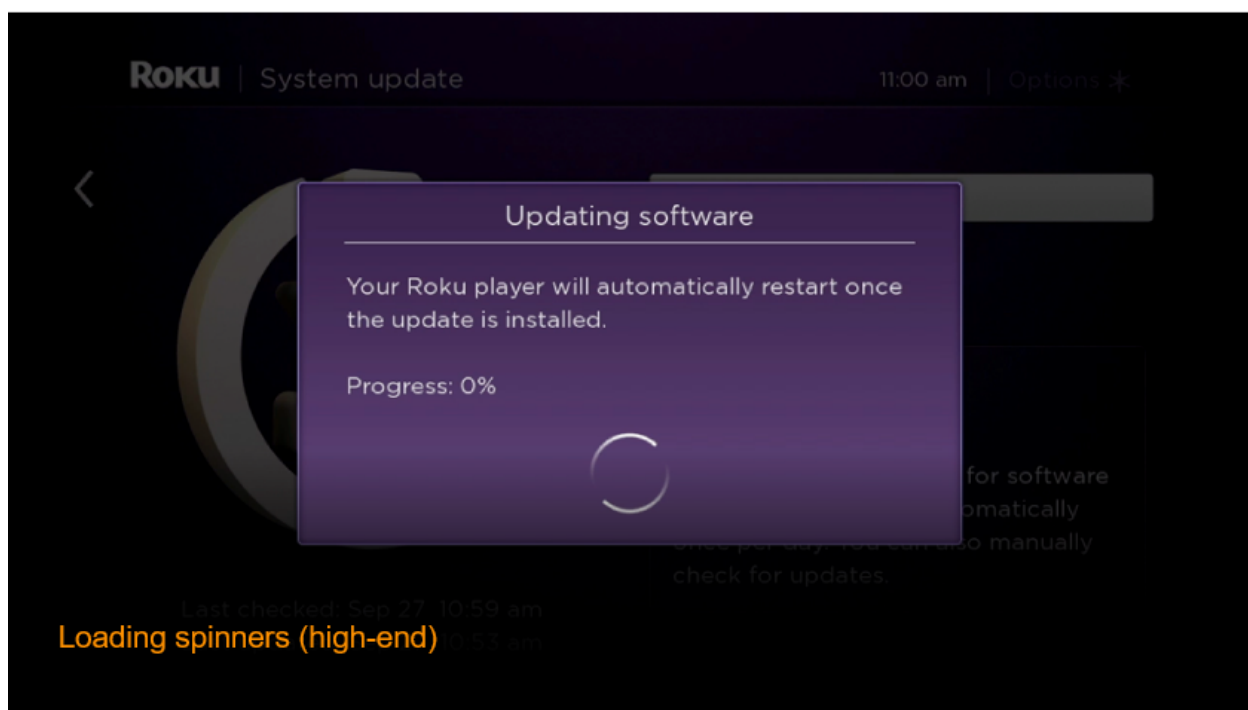
The screenshot shows the 'Add Channel' window with the following elements:

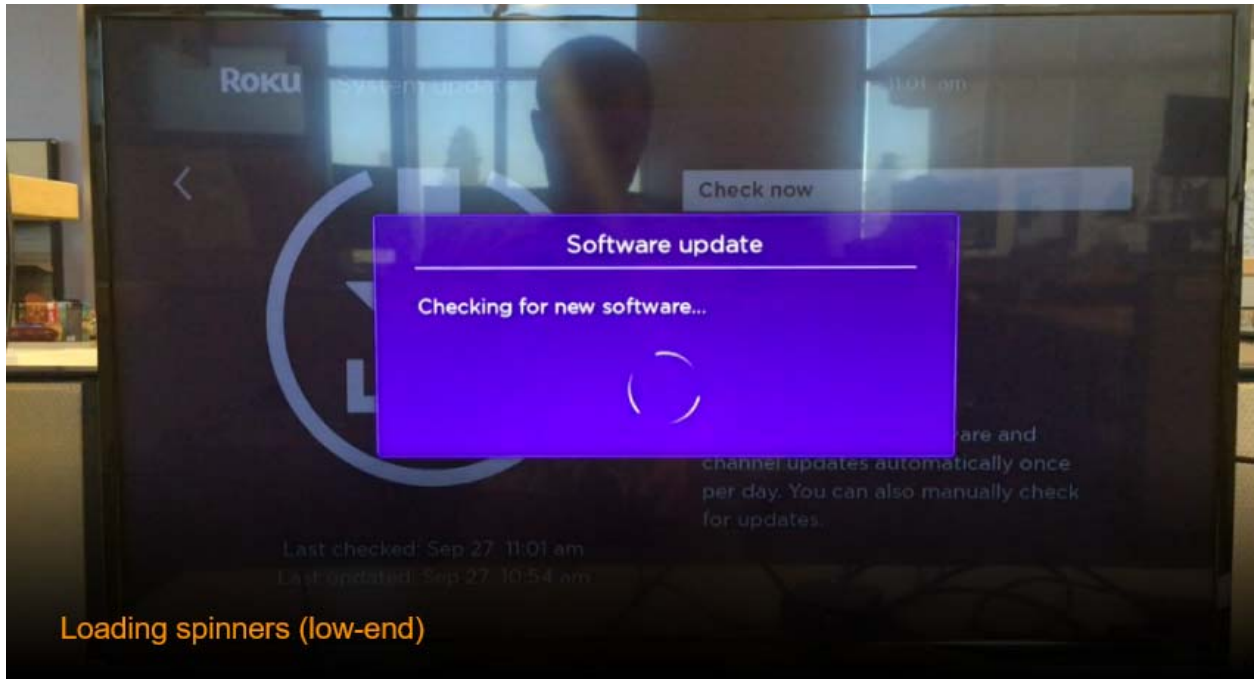
- Header: Add Channel
- Section 1: *How do you plan to publish your channel? ?
Get more information on [publishing a channel](#).
 Direct Publisher
 Developer SDK
- Section 2: *Is this a public or non-certified channel? ?
 Public
 Non-certified
- Section 3: *Channel Name ?
[Empty text input field]
- Buttons: Continue (blue), Cancel (white with blue border)

88. On information and belief, Roku’s Development Environment enables developers to create the non-certified version of the channel for users of lower end-devices and to create the

public channel for users of higher-end devices. *See* Exhibit Q (available at <https://roku.app.box.com/v/Roku-UX-Best-Practices>).

89. As illustrated in the figures below, on information and belief, the public channel uses Roku SceneGraph (RSG) visual elements to display the channel on higher-end devices, whereas the non-certified channel uses non-RSG visual elements to display the channel on lower-end device. *See* Exhibits Q and R (available at <https://blog.roku.com/developer/2018-channel-certification-criteria>).





90. Pursuant to 35 U.S.C. §271(c), Defendant has also knowingly contributed to the direct infringement of at least claim 1 of the '945 Patent by developers by supplying Roku's Development Environment, which has no substantial noninfringing use, is especially designed for use in the patented invention, and constitutes a material part of the patented invention.

91. In view of the foregoing, on information and belief, Defendant indirectly infringes at least claim 1 of the '945 Patent.

92. Defendant's infringement has caused, and is continuing to cause, injury to ESW.

93. ESW has been damaged by Defendant's infringement of the '945 Patent in an amount to be determined at trial and has suffered and will continue to suffer irreparable loss and injury unless the Defendant is permanently enjoined from infringing the '945 Patent.

94. At least as early as its receipt of ESW's Original Complaint, Defendant has had knowledge of the '945 Patent, has had written notice of its infringement, has intended that developers infringe the '945 Patent by their use of the Roku Development Environment, has actively induced such infringement by continuing to provide and support the Roku Development

Environment, and has contributed to such infringement by supplying the Roku Development Environment. Despite such knowledge, Defendant continues to infringe the '945 Patent.

95. It is ESW's belief that the Roku Development Environment could not have been developed without a high likelihood that the Roku Development Environment would infringe upon the '945 Patent. ESW reserves its right to seek leave to amend its complaint if, after discovery, facts are uncovered that substantiate a finding of willful infringement.

DEMAND FOR JURY TRIAL

Plaintiff demands a trial by jury of any and all issues triable of right before a jury.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff ESW Holdings, Inc. prays for the following relief against Defendant Roku, Inc.:

- A. A judgment in favor of ESW that Defendant has directly infringed one or more claims of ESW's '294, '349, and '782 Patents;
- B. A judgement in favor of ESW that Defendant has indirectly infringed one or more claims of ESW's '294, '349, '718, and '945 Patents;
- C. A permanent injunction, enjoining Defendant along with its officers, directors, agents, servants, employees, affiliates, divisions, branches, subsidiaries, and parents from infringing, directly or indirectly, ESW's '294, '349, '782, '718 and '945 Patents;
- D. A judgment against Defendant under 35 U.S.C. §284 awarding ESW damages in an amount adequate to compensate Plaintiff for Defendant's infringement, but in no event less than a reasonable royalty for the use made by Defendant of the inventions set forth in the '294, '349, '782, '718 and '945 Patents, together with an award of interest and costs;

E. A judgment and order finding Defendant to pay ESW damages for Defendant's direct infringement of ESW's '294, '349, and '782 Patents and indirect infringement of ESW's '294, '349, '718, and '945 Patents, together with interest (both pre-and post-judgment), costs and disbursements as fixed by this Court under 35 U.S.C. § 284; and

F. Such other and further relief in law or in equity to which ESW may be justly entitled.

Date: February 8, 2019

Respectfully submitted,

**PILLSBURY WINTHROP SHAW PITTMAN
LLP**

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