

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

VIDEOLABS, INC. and VL COLLECTIVE IP LLC,	)	
	)	
Plaintiffs,	)	C. A. No.: 23-cv-1136 (JHS)
	)	
v.	)	<b>DEMAND FOR JURY TRIAL</b>
	)	
ROKU, INC.,	)	
	)	
Defendant.	)	

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**FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiffs VideoLabs, Inc. (“VL”) and VL Collective IP LLC (“VL IP”) (collectively “VideoLabs” or “Plaintiffs”) file this First Amended Complaint against Defendant Roku, Inc. (“Roku” or “Defendant”), and in support thereof allege as follows:

**NATURE OF THE ACTION**

1. Digital video has become fundamental to how society interacts, communicates, educates, and entertains. In fact, video consumption now accounts for more than 82% of all Internet traffic.<sup>1</sup> The ability to reliably provide high-quality and secure video content drives the growth of digital platforms that are increasingly integral to the global economy.

2. The advent of high-quality video as a staple of digital consumption did not happen instantaneously. As with any complex technology, digital video presented implementation challenges. Many companies spent many years and resources to develop new and innovative

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<sup>1</sup> See *The Sustainable Future of Video Entertainment*, INTERDIGITAL (Aug. 2020), [https://www.interdigital.com/white\\_papers/the-sustainable-future-of-video-entertainment?submit\\_success=true](https://www.interdigital.com/white_papers/the-sustainable-future-of-video-entertainment?submit_success=true) (last visited October 10, 2023).

technologies that guide how video is created, streamed, secured, managed, and consumed.

3. Various inventions and technological advances have transformed digital video. Some of these technologies, such as techniques to efficiently compress video file size, address central challenges to storing and transmitting video. Others enable video content to be efficiently and securely streamed to the many user devices that exist today. Yet others involve managing and organizing videos to provide viewers easier access to content and address how they interact with content. Successful video streaming thus requires a myriad of technologies that necessarily coordinate with one another.

4. Because various companies played roles in developing the foundational technology for today's digital video, no single company can provide the high-quality video experiences that consumers have come to expect without using technology owned by other companies. Companies wisely focus their innovation activities and R&D investments on developing unique products and services while relying on the sum total of all other industry investment in the various technologies that enable their products and services to work in the global, connected technology market.

5. The founders of VideoLabs recognized this problem and understood that collective action was needed to address it. If the companies that developed critical video technologies worked together, everyone could benefit: all innovators could receive fair compensation for their contributions, companies deploying video technology could respect other innovators' patented technologies and license them on affordable and predictable terms, and consumers could experience better and more affordable video technology.

6. In 2019, with support from widely recognized industry leaders, VideoLabs launched a platform to achieve these goals. VideoLabs spent millions of dollars and thousands of hours analyzing the video space and identifying the patents that reflect the innovations with the highest

impact. VideoLabs then compiled a portfolio of these core patents, obtaining them from leading companies, including Hewlett Packard Enterprise, Alcatel-Lucent S.A., Siemens AG, Swisscom AG, 3Com, Panasonic, LG, and Nokia.

7. VideoLabs then opened-up participation in its platform to all willing companies. In exchange for low-cost membership or licensing fees, VideoLabs provides efficient access to its aggregated patent portfolio and a commitment to seek out the most important patents in the video industry and acquire them to the benefit of the industry. Many prominent companies recognized the benefits of the VideoLabs platform and worked with VideoLabs to efficiently and responsibly license its video technology patents.

8. Today, VideoLabs' licensing platform has evolved and grown significantly from the early days. VideoLabs' primary focus continues to be serving patent implementers in the broader video industry by identifying, acquiring, aggregating, and licensing high-quality patents through its unique collective platform and providing companies flexible licensing structures (including membership) for more efficient licensing. VideoLabs has expanded its focus on serving patent innovators to provide them a better path to realize fair compensation for their patents. VideoLabs also works in partnership with patent owners by building and running independent licensing programs specifically focused on licensing the partner's patent portfolio as a service to them and the IP industry.

9. To this day, VideoLabs continues to promote an efficient, respected, and balanced intellectual property environment where technology companies have predictable design freedom and innovators who contribute impactful patented inventions can obtain fair and just compensation. It has and continues to successfully bring on many patent owners, licensees and members to its efficient and equitable licensing platform. Equitable licensing dictates that all patent implementers accept their responsibility to license. When one (or many) peer company(ies) elects to holdout or refuses to

negotiate in good faith for a license to valid patents that are infringed and enforceable, it unfairly disadvantages those companies who chose to license responsibly.

10. Unfortunately, Roku has not worked responsibly to license VideoLabs' video technology patents. Roku is one of the world's largest users of video technologies and sells digital media players, smart TVs, a streaming video service, an advertising platform, and also provides an operating system platform for third-party OEMs to manufacture their own smart TVs. It is enmeshed in practically every aspect of video, from creation to processing, delivery, and display.

11. VideoLabs contacted Roku multiple times in 2019, 2020, 2021, 2022 and 2023 to offer Roku the benefit of VideoLabs' platform and to alert it to its use of VideoLabs' patented technology. Roku never responded. Accordingly, VideoLabs felt that it had no recourse but to file an action to stop Roku's unauthorized use of VideoLabs' patents. Failure to take action would undermine the equity and viability of VideoLabs' licensing platform and permit further free riding by Roku of the significant innovations of VideoLabs' patents.

12. This case is ultimately about ensuring the integrity of the patent system and compensating patent owners for their protected innovations. Respect for intellectual property, as the law requires, is essential to incentivize innovation and promote technological progress. Accordingly, VideoLabs brings this action under the patent laws, 35 U.S.C. § 1 *et seq.*, in order to stop Roku's willful infringement of U.S. Patent Nos. 7,440,559, 8,605,794, 7,233,790, 8,291,236, 8,667,304, 7,769,238 and 7,970,059 (collectively, "patents-in-suit").

### **THE PARTIES**

13. VL was founded in 2018 as part of an industry-sponsored and funded effort to reduce the cost and risk of technological gridlock associated with diverse patent ownership. VL's leadership has decades of experience in intellectual property licensing, during which they have completed over

1,000 intellectual property transactions worldwide and drawn more than \$6 billion in revenue.

14. VL is a corporation organized under the laws of the State of Delaware, with its principal place of business in Palo Alto, California.

15. VL IP was founded in 2019 as a subsidiary of VideoLabs, Inc.

16. VL IP is a corporation organized under the laws of the State of Delaware, with its principal place of business in Palo Alto, California.

17. On information and belief, Roku is a publicly traded corporation organized and existing under the laws of the State of Delaware and is registered to do business in the State of Delaware. On information and belief, Roku's headquarters are located at 1155 Coleman Ave., San Jose, California 95110.

#### **JURISDICTION AND VENUE**

18. This is an action for patent infringement arising under the patent laws of the United States. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a), 15 U.S.C. § 1121, and 28 U.S.C. § 1367(a).

19. This Court has personal jurisdiction over Roku because, on information and belief, Roku conducts business in and has committed acts of patent infringement in this District and has established minimum contacts with this forum state such that the exercise of jurisdiction over Roku would not offend traditional notions of fair play and substantial justice. Roku is incorporated in this District. On information and belief, Roku offers products and/or services, including those accused herein of infringement, to customers and potential customers located in this District.

20. Venue is proper in this Court under 28 U.S.C. §§ 1391 and 1400(b). Roku resides in this District. Roku has chosen to incorporate in the state of Delaware, thereby receiving the benefits offered to Delaware corporations. Roku must accordingly assume responsibilities to Delaware and

its citizens.

21. Further, on information and belief, Roku has offered and sold, and continues to offer and sell, its infringing products and services in this District. On information and belief, Roku makes, uses, distributes, sells, and/or offers to sell the infringing products and services to consumers and businesses in this District.

22. On information and belief, Roku is a corporation with global reach and annual revenue in the billions of dollars. Roku accordingly cannot reasonably claim it would be inconvenient to litigate in the forum in which it is incorporated.

23. Moreover, litigating in this District is convenient and would serve the interests of judicial economy because of related pending lawsuits in this District.<sup>2</sup>

### **THE VIDEOLABS PATENTS-IN-SUIT**

#### **A. U.S. Patent No. 7,440,559**

24. U.S. Patent No. 7,440,559 (the “’559 patent”), titled “System and Associated Terminal, Method and Computer Program Product for Controlling the Flow of Content,” issued on October 21, 2008. VL IP owns all rights and title to the ’559 patent, as necessary to bring this action. A true and correct copy of the ’559 patent is attached as Exhibit 1.

25. The original assignee of the ’559 patent is Nokia Corporation, one of the largest consumer electronics and information technology companies in the world at the time of the invention and a major innovator of digital communications technologies. In 2003, the year in which Nokia filed for patent protection for the innovations of the ’559 patent, Nokia was a world leader in mobile device

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<sup>2</sup> See *Starz Entertainment, LLC v. VL Collective IP, LLC*, 1:21-cv-01448 (D. Del. filed Oct. 13, 2021); *VideoLabs, Inc. v. Netflix Inc.*, 1:22-cv-00229 (D. Del. filed Feb. 23, 2022).

sales and technology. That year, Nokia launched its first media device, the Nokia 7700, and invested nearly one billion euros in research and development.<sup>3</sup>

26. Customers are consuming more content via streaming services, commonly referred to in the industry as OTT (Over-The-Top) services, than ever before. At the same time, competition among video services is increasing. The number of OTT providers is constantly growing, and consumer confusion is mounting. Consumers expect the same level of innovation and development for OTT video as they do for other online services, and broadcasters and content providers are under constant pressure to distinguish their offerings through personalization and availability of innovative apps that entice and retain customers. The management, curation and optimization of audience viewing experiences across screens is becoming a core customer need, and at the same time an opportunity for service differentiation.

27. In the early 2000s, the deployment of high bit-rate mobile networks such as 3G enabled the delivery of new digital services, including video calling and streaming. *See, e.g.*,<sup>3</sup>559 patent at 1:17-40. While audio could be delivered adequately using the bit rates available at the time, the limited transfer rates made it difficult to handle data-intensive tasks like delivering high quality full-motion video. *See, e.g., id.* For this and other reasons, alternative broadband delivery techniques were being investigated to support the delivery of data-intensive content. As digital broadband data broadcast networks evolved, there was increasing interest in combining use of mobile telecommunications with a broadband delivery technique to achieve efficient delivery of digital services to users on the move. But this led to new technical challenges for content providers as they had to learn new techniques to efficiently deliver content to the myriad mobile devices that could

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<sup>3</sup> *See* Press Release, Nokia, Nokia Closes 2003 With Excellent Fourth Quarter, (Jan. 24, 2004), at 6, 9, available at <https://www.nokia.com/system/files/files/q4-2003-earnings-release-pdf.pdf>.

consume broadband content over mobile networks.

28. At the time, mobile terminals would typically download content by “pulling” it from a server. *See, e.g., id.* at 2:25-39. This is because content providers tended to use content flow policies that had been used in non-mobile networks. *See id.* In those cases, the content provider typically maintained control over the content flow policy to the mobile terminal to enforce content access rights requirements. *See id.* The “pull” technique was thus rooted in the industry’s established habits, which ignored input from the devices consuming the content that might otherwise affect an operator’s content flow policy. Such outdated content flow policies were inefficient and undesirable as broadband content became accessible to mobile users everywhere and with myriad devices. When controlling content sent to a mobile device, they did not take into account, for example, the user preferences, terminal capabilities, previous content downloads, and/or use of previous content for that device. *See id.* at 2:40-53.

29. The inventors of the ’559 patent recognized that the Internet disrupted traditional channels of delivering video content, such as television and cable, and that new solutions were needed to optimize online video access. The ’559 patent addresses these problems, among others, by describing and claiming an improved network architecture that enables efficient content access, providing myriad improvements over previous means of controlling access to video. The ’559 Patent addresses the disconnect between user devices and content provided by adding a separate “content flow manager” that obtains status information and uses it to control the flow of content. *See, e.g., ’559 patent* at 3:10-25. The ’559 patent describes and claims a departure from the conventional “pull” technique for accessing content. For example, the ’559 patent describes giving a network entity control of the flow of content to the terminal based, in part, on status information from the terminal. *See ’559 patent* at 2:57-3:9. The addition of a content flow manager was a modification to then-



existing network architectures for content delivery, and its inclusion led to a variety of benefits. Content flow is controlled, for example, by instructing the terminal to perform actions, such as downloading pieces of content from an origin server, or other content related actions based, in part, on the status information provided to the network entity from the terminal. *See id.* at 3:20-51. For example, the content provider can control the downloading and storage of content, as well as the deletion of content, at the terminal based upon status information regarding the terminal, and if so desired, further based upon status information regarding a source of content, such as the digital broadcast receiver, an origin server, or the like. *See id.* at 11:6-30. For instance, terminals can now automatically be instructed to download certain content, such as when a new season of a previously watched show is released. *Id.* at 3:1-66, 11:21-30, 12:60-13:37. As another example, content already stored on a terminal can be automatically deleted, like when digital rights management (“DRM”) dictates that the user no longer has access to the content, potentially due to a time or geographic restriction. *Id.* Terminal preferences can also be matched with available advertisement content to better tailor advertisements to particular users. *Id.* at 11:17-21. In view of the foregoing, the flow of content to the terminal is more efficient since the flow of new content to the terminal is affected by aspects of the terminal itself. *See id.* at 10:45-59.

**B. U.S. Patent No. 8,605,794**

30. U.S. Patent No. 8,605,794 (the “’794 patent”), titled “Method for Synchronizing Content-Dependent Data Segments of Files,” issued on December 10, 2013. VL IP owns all rights and title to the ’794 patent, as necessary to bring this action. A true and correct copy of the ’794 patent is attached as Exhibit 2.

31. The original assignee of the ’794 patent is Siemens Aktiengesellschaft (“Siemens”), one of the largest consumer electronics companies at the time of the invention and a major innovator

in Internet technologies. In 2005 alone, the year in which Siemens filed for patent protection for the inventions of the '794 patent, Siemens invested €5.2 billion in research and development.<sup>4</sup>

32. In the early 2000s, the inventors realized that the way that audiovisual content (e.g., television shows and movies) was transmitted to consumers was fundamentally changing. While content could be stored and accessed from media such as VHS tapes and DVDs, content was *transmitted* to consumers primarily through televisions—and had been for decades. Moreover, within each global region (e.g., the United States or Europe), all television content was encoded in a single formatting standard (e.g., the PAL standard in Europe and the NTSC standard in the United States) that could be played by all televisions. '794 patent at 1:23-33.

33. But with the increasing importance of the Internet, the types of devices to which content could be transmitted was proliferating. *See, e.g., id.* at 1:34-43. Content was now being streamed to computers, laptops, PDAs, and other electronic devices. Unlike the conventional televisions, which were all designed to play content formatted in the same way, these new devices could play content encoded in any number of formats based on their capabilities. For example, a PDA, with its limited screen resolution and processing capabilities, could not process the higher quality content intended for high-resolution monitors connected to desktop computers. Additionally, a computer running a Windows operating system could play different content formats than an Apple computer.

34. The varying strength of Internet connections, particularly on wireless devices, also necessitated multiple content formats. For example, while a desktop computer might be capable of playing high resolution content, doing so was not desirable if the Internet connection for that

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<sup>4</sup>[https://www.siemens.com/investor/pool/en/investor\\_relations/downloadcenter/e05\\_00\\_gb2005\\_1336469.pdf](https://www.siemens.com/investor/pool/en/investor_relations/downloadcenter/e05_00_gb2005_1336469.pdf) (last visited October 10, 2023).

computer was slow. Instead, it can be a better viewer experience for a lower quality version of the content to be transmitted more quickly rather than having the user constantly waiting for higher quality content to download. Content delivery companies further realized that it would be beneficial to be able to change the quality of content *during a stream*. That is, when an Internet connection is weak, send lower quality content; when the connection is strong, send higher quality content. Thus, not only were different content formats necessitated by different device capabilities — even for the same device and during a single stream, but it was also advantageous to be able to vary the quality of the transmitted content.

35. Consumer expectations for the delivery of content also began to change. Whereas consumers could previously only watch whatever was “on TV,” consumers increasingly began to expect to watch whatever they wanted whenever they wanted, i.e., “on demand.” Consumers expected content to start playing at the click of a mouse, and to be able to jump to any point in the content and have playback resume immediately.

36. These changes in technology and consumer expectations led to new techniques for managing and processing audiovisual content. Content was no longer stored as a single file in a single location. Instead, for example, a movie’s audio and video data was broken up into numerous “segments” that might be stored on various Internet servers. These segments could be more easily transmitted over the Internet to consumer devices, and content could be played as soon as the first few segments were received instead of waiting until the entire file had been downloaded.

37. Prior to the innovations of the ’794 patent, however, there was not a suitable method for aligning the various audio and video segments that comprised a piece of content. The need was all the greater when switching between content formats midstream (e.g., to account for changing Internet bandwidth) or skipping to different points within a piece of content.

38. Known techniques at the time would align the segments for playback using timestamp information stored in each segment. Essentially, each segment included metadata indicating when in the timeline of the content the segment should be played (e.g., audio content from 5 minutes and 30 seconds of the movie to 6 minutes and 30 seconds of the movie). Once a segment was downloaded, this information would have to be read out (which could require decoding the segment), and then additional processing would be needed to order this segment with the other segments. This technique was rooted in the nature of the old technologies, in which viewers received content in the order it was to be played, did not alternate in real time between different versions of the same content, and could not selectively play different parts of the content. Disadvantageously, this technique had a large overhead, and so could be slow and resource intensive. *See, e.g., id.* at 2:4-12, 2:36-54.

39. The '794 patent improves upon these timestamp-based implementations. It describes a novel technique in which segments are ordered chronologically and aligned with corresponding segments (e.g., aligning a video segment with the correct audio segment) using predefined assignment rules. *See id.* at 2:36-42; 5:10-13. These assignment rules are not based on timestamps. *See id.* at 2:2-43. Instead, they flexibly permit the alignment of segments using rules appropriate for different contexts. This could include implementations in which, for example, each sequential video segment is aligned with every fourth audio segment. *See id.* at 2:55-60; 5:35-6:42. Alternatively, the assignment rules could be used to build pseudo-timelines that order and match audio and video segments based on the context of the content. *See id.* at 6:50-60. For example, key audio and video segments will align at the start of new scenes, changes in camera viewpoint, or the start of a song. The assignment rules of the '794 patent require little overhead and are thus significantly faster than timestamp-based techniques while also providing more options in the management of segments. *See, e.g., id.* at 2:4-12, 2:36-54. This flexibility enables, for example, a user to jump to a key scene in a

movie, and the corresponding segments to quickly be located, downloaded, and played. *See id.* at 3:20-28. This is because the context of content can be mapped to a particular segment, and then assignment rules can be used to quickly identify the corresponding and subsequent segments.

40. The assignment rules of the '794 patent are therefore much more compact and make the processing and playback of content much faster and require fewer computer and network resources. As described in the '794 patent, conventional methods require “a sizeable quantity of data” and such “a large overhead” that it was “generally not made possible to synchronize different data types.” *Id.* at 2:6-9. However, the inventions of the '794 patent “enable[s] content-related first and second data segments to be synchronized in a simple and standard-complaint manner” through use of assignment rules. *Id.* at 2:27. The improvements described and claimed in the '794 patent result in computing benefits including, e.g., less data, less overhead, lower processing costs, flexibility, and simplicity. As such, the '794 patent is rooted in improvements to computer technology.

41. Today, online video streaming is ubiquitous, and the ability to alter the format of content mid-stream has been standardized and is known as “adaptive bitrate streaming.” There are two main protocols for this type of delivery: HTTP Live Streaming (“HLS”) and Dynamic Adaptive Streaming over HTTP (“DASH”). These protocols are used to stream the vast majority of online video and by major streaming services.

42. The '794 patent is core to these technologies, which has been recognized by the video technology industry. MPEG LA, which pioneered the concept of technology-specific patent pools and has created and maintained patent pools that efficiently license key technologies worldwide, launched a patent pool for DASH in November 2016.<sup>5</sup> The '794 patent was submitted for inclusion

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<sup>5</sup> *MPEG LA Releases MPEG-DASH Patent Portfolio License*, MPEG LA (Nov. 17, 2016), <https://www.mpegla.com/media/> (last visited October 10, 2023).

into MPEG LA's DASH patent pool, evaluated by MPEG LA's patent experts, and at that time was declared as essential to using DASH to stream content. Indeed, the '794 patent is one of just 10 U.S. patents that previously have been deemed essential to DASH, and its importance to the streaming technology and foundational nature is evidenced by the fact that it has the earliest invention date of all patents in the pool. Numerous companies have taken a license to the '794 patent to obtain the right to use its technology to implement DASH.<sup>6</sup>

**C. U.S. Patent No. 7,233,790**

43. U.S. Patent No. 7,233,790 (the "'790 patent"), titled "Device Capability Based Discovery, Packaging and Provisioning of Content for Wireless Mobile Devices," issued on June 19, 2007. The U.S. Patent Office confirmed the validity of claims 1 (as amended), 2, 4, 8 (as amended), and 9 of the '790 patent and issued an Ex Parte Reexamination Certificate on August 11, 2023.<sup>7</sup> VL owns all rights and title to the '790 patent, as necessary to bring this action. A true and correct copy of the '790 patent and Ex Parte Reexamination Certificate is attached as Exhibit 3.

44. The original assignee of the '790 patent is Openwave Systems, Inc. ("Openwave"), a leading developer of software applications for mobile devices. In the early 2000s, when the inventions of the '790 patent were in development, Openwave's operating system and web browser software was being installed on billions of mobile phones.<sup>8</sup> This provided Openwave with a front seat to the many new products and services available to consumers on mobile devices.

45. The TV industry has been heavily affected by the rise of video on demand ("VOD")

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<sup>6</sup> *DASH Licensees*, MPEG-LA, <https://www.mpegla.com/programs/dash/licensees/> (last visited October 10, 2023).

<sup>7</sup> The remaining, duly issued and valid claims of the '790 patent were not reexamined.

<sup>8</sup> *Openwave Announces Mobile Browser Integration for Qualcomm's Brew Solution*, INTERNET ARCHIVE WAYBACK MACHINE, (Sept. 12, 2006), [https://web.archive.org/web/20061127222501/http://www.openwave.com/us/news\\_room/press\\_releases/2006/20060912\\_opvw\\_brew\\_0912.htm](https://web.archive.org/web/20061127222501/http://www.openwave.com/us/news_room/press_releases/2006/20060912_opvw_brew_0912.htm), at 1 (last visited October 10, 2023).

and OTT services, which allow users to conveniently stream over the Internet their favorite video content and watch it at any time, in any place, and in the format that best fits their needs. Today, digital video content is available from myriad streaming services and Pay TV operators and can be consumed on an ever-growing number of different connected consumer devices.

46. In the early 2000s, when digital video delivery over the Internet was in its nascent period, delivering media to large numbers of mobile users presented challenges due to the stringent requirements of streaming media, mobility, wireless, and scaling to support large numbers of users. While advances in next-generation cellular networks and wireless networks were bringing higher bandwidths to mobile users, these higher bandwidths naturally created the demand for media-rich content, which in turn created requirements for a media delivery infrastructure that could handle the challenges of streaming media, user mobility, and scaling to large numbers of users accessing content with different types of devices. Traditional content delivery techniques that had previously served the market reasonably well at the time were no longer capable of meeting current needs.

47. Indeed, these techniques were rooted in the nature of the old technologies, in which content was prepared and packaged once, for distribution over a traditional broadcast medium and in a singular, conventional broadcast format. From a content supplier's perspective, an impediment to the efficient distribution of digital content was the fact that different connected devices often required different content packaging formats and provisioning protocols. In order for the content supplier to make a given item of digital content available to multiple connected devices supporting different provisioning models, a digital content supplier would normally have to deploy that item of content multiple times, packaging it differently for each of the provisioning models. Needing to package and provision digital content in a manner that is suitable for all of the connected devices in the marketplace is very burdensome. Moreover, it was a challenge for content suppliers to keep up with the constant

changes in device capabilities for the many connected devices in the marketplace. As such, there was often a gap between the interoperability of a given digital product and how effective it could be used on a certain device.

48. The '790 patent addresses this problem, among others, providing an efficient way for content providers to distribute digital content to different connected devices without the need to separately package and deploy the content differently for each device. *See* '790 patent at 1:60-2:17, 12:40-45. Since multiple different implementations of the content are kept in the content library, each associated with certain device capabilities, content can be packaged once, and distributed to the different user devices, leaving to the device the choice of which implementation version of the content to obtain from the service. *See* '790 patent at 2:50-67; 9:37-50; 12: 45-58; 11:42-62; 12:54-58. In the patented inventions, the product information is separated from the content itself, the content is separated from how it is packaged for delivery, the packaged content is separated from the delivery mechanism, and the delivery mechanism is separated from the discovery mechanism. *See* '790 patent at 12:46-54. By virtue of this separation, a content supplier can deploy content only once, targeting a wide range of devices, and trust it will successfully be delivered to those devices over a wide range of provisioning protocols. '790 patent at 12:54-58. Furthermore, access to different implementations of the content can be managed by the content supplier based on a device's capabilities ensuring the efficient distribution of compatible material. *See* '790 patent at 2:7-17; 7:39-45; 8:66-9:12; 9:37-62. As such, the '790 patent allows a system to perform more efficiently, effectively, and automatically. *See, e.g., id.* at 13:3-5 (“the ability to deliver the ‘best-fit’ content based on ‘active’ (dynamic) capabilities of a device is advantageous.”). The '790 patent solved a technological problem by disclosing a specific way of efficiently storing and distributing digital content to myriad users in specific implementations, formats, and protocols based on device capabilities.



**D. U.S. Patent No. 8,291,236**

49. U.S. Patent No. 8,291,236 (the “’236 patent”), titled “Methods and Apparatuses for Secondary Conditional Access Server,” issued on October 16, 2012. VL owns all rights and title to the ’236 patent, as necessary to bring this action. A true and correct copy of the ’236 patent is attached as Exhibit 4.

50. The original assignee of the ’236 patent is Digital Keystone, Inc. (“Digital Keystone”) a Silicon-Valley based video technology company. Digital Keystone develops digital entertainment technologies, including security software for video applications. In the early 2000s, when the inventions of the ’236 patent were in development, Digital Keystone was developing world-first digital entertainment solutions that bridged the personal computer, consumer electronics and content industries. Next generation digital cable TVs, PC-based entertainment systems and media distribution networks were powered by Digital Keystone hardware and software technologies. And Digital Keystone was also licensing its industry-leading security technology to TV broadcasters, consumer electronics manufacturers, developers of digital home components, and chip manufacturers.<sup>9</sup> In partnership with Microsoft and CableLabs, Digital Keystone developed the world’s first secure Pay TV bridge, which was demonstrated by Bill Gates in his keynote speech during the 2006 Consumer Electronics Show.<sup>10</sup> Digital Keystone was at the forefront of enabling secure content access throughout the entire home.

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<sup>9</sup> *Company Overview*, Digital Keystone (2003).

<https://web.archive.org/web/20031206063740/http://www.digitalkeystone.com/profile/mission.htm> (last visited October 10, 2023)

<sup>10</sup> *Microsoft and CableLabs Announce Agreement to Enable High-Definition Digital Cable Programming on Windows-Based PCs* (Press release), Microsoft, November 16, 2005; *Gates Outlines Vision for the Digital Lifestyle and Showcases New Products and Technologies From Microsoft* (Press release), Microsoft, January 4, 2006. [https://web.archive.org/web/20061127222501/http://www.openwave.com/us/news\\_room/press\\_releases/2006/20060912\\_opvw\\_brew\\_0912.htm](https://web.archive.org/web/20061127222501/http://www.openwave.com/us/news_room/press_releases/2006/20060912_opvw_brew_0912.htm), at 1 (last visited October 10, 2023).

51. Conditional access (“CA”) refers to techniques for limiting the access of content (such as TV programs and movies) to authorized users. CA systems have historically been developed for both cable TV (CAS) and, more recently, for OTT services (DRM). Regardless of the implementation, conditional access serves as a type of access management, requiring certain criteria to be met before granting access to protected content. For example, in a CA system for digital television, the media content is scrambled (encrypted) before broadcasting. The key used for scrambling/descrambling the media content in a CA system is called a control word, and it is securely provided to subscribers through entitlement control messages and entitlement management messages. A security device, such as a set top box, uses the control word to descramble (decrypt) the received media content and reproduce the content for display. Similarly, in a DRM system for content streaming, the content is encrypted before distribution. The key(s) used for encrypting the media content in a DRM system is/are typically maintained by a license server, and requested by the media player when the content is attempted to be played. The license server authenticates the requesting user, and the decryption keys are provided to permitted users. The media player uses the received keys to decrypt and render the content for viewing.

52. In digital television, for example, the media content (e.g., video and audio signals) is converted into a digital form using the MPEG-2 format. The digital form of the media content of one program is multiplexed together with those of other programs for transmission so that multiple programs appear to be transmitted simultaneously. The CA system scrambles the digital form of programs and transmits the entitlement control messages and the entitlement management messages with the digital form of programs for broadcast either within the multiplex (e.g., satellite) or through an out-of-band channel (e.g., cable).

53. Typically, a set-top box (STB) at the receiving end descrambles the data stream and decodes the MPEG-2 data for viewing. A tuner portion of the STB receives the incoming signal, demodulates it and reconstitutes the transport stream, which contains many packets of information. The STB can de-multiplex the entitlement management messages and entitlement control messages and the media content. The data (e.g., service key and control word) contained in the entitlement management message and entitlement control message are used to descramble the encrypted programming material. The STB then renders the MPEG-2 data for viewing.

54. A digital rights management (DRM) system manages rights digitally. Digital rights management uses encryption software to protect electronic information and prevent widespread distribution. In a typical digital rights management scheme, a DRM server software program “wraps” the digital content through encryption according to applicable policies. A DRM client software program “unwraps” the content and makes it accessible in accordance with its rights. The rights are typically distributed to clients separately from the “wrapped” electronic information. DRM clients may include desktop PCs, handheld devices, set-top boxes, mobile phones and other portable devices. In addition to encrypting/scrambling the digital content to limit the distribution, a digital rights management system may also provide the description, identification, trading, protection, monitoring and tracking of various forms of rights.

55. Both CAS and DRM systems are critically important technologies for securing valuable content programming intended for myriad consumer devices. To individually manage each such device, such as a set-top box, a mobile phone, a streaming media device, a laptop or desktop computer, or a smartTV, each device is typically provided with a unique identity so that the CA or DRM system can provide the necessary keys specifically for use on only the intended device. In this way, the integrity of the decryption keys can be maintained within the content provider’s security

domain. Typically, each device has a unique, secret user key so that an entitlement management message or a DRM license key for one device can only be decrypted using the unique user key of that device.

56. In the early-2000s, content consuming devices were proliferating rapidly, each with different device security platforms and capabilities, and content delivery standards were evolving to address the growing need for securing the integrity of the content being delivered to myriad networked devices. Conditional access techniques at the time of the invention suffered from the problem of being limited to one security technique so that each device was required to be associated with the security technique to operate correctly in a network.

57. The '236 patent addresses this problem by providing a more flexible security model that could allow devices to operate correctly under different security techniques while still maintaining the benefits of the primary security system of a content provider with full ability to control the dissemination of content securely across networking components with different security features and platforms. '236 patent at 2:56-60 (“bridging two security systems so that a primary security system can control premium content distribution to external devices secured by a secondary security system”). The '236 patent allows, among other things, content to be distributed to legitimate, authorized devices of two different security systems. *Id.* at 3:1-7. The inventors developed a novel approach by implementing a new type of networked device to bridge primary and secondary security domains and pass access-protected content from the primary security domain to the secondary security domain, such as a localized network within the home, or the Internet, so that authorized devices in the secondary security domain can access secured content. *Id.* at 7:19-43; 7:66 – 8:2; 8:39-61. The inventors recognized that incorporating security messages into the primary conditional access protocols could allow the networked device to act as a client in the primary security domain and as a

control information provider of the secondary security domain. *Id.* at 7:19-39. The networked device common to both domains could then conditionally allow clients in the secondary security domain to access the content, converting the protected content from one protected format to another protected format. *Id.* at 7:40-43; 17:42-51.

58. As such, the '236 patent describes and claims novel improvements to the networked system allowing content to be distributed to proper devices, including devices that do “not support[] the primary digital rights management system” of the content provider. *Id.* at 3:8-15. The '236 patent thus allows, among other things, securely transferring content (e.g., premium video content) to a greater number of devices and types of devices.

**E. U.S. Patent No. 8,667,304**

59. U.S. Patent No. 8,667,304 (the “'304 patent”), titled “Methods and Apparatuses for Secondary Conditional Access Server,” issued on March 4, 2014. VL owns all rights and title to the '304 patent, as necessary to bring this action. A true and correct copy of the '304 patent is attached as Exhibit 5.

60. The original assignee of the '304 patent is Digital Keystone, Inc. (“Digital Keystone”), a Silicon-Valley based video technology company. Digital Keystone develops digital entertainment technologies, including security software for video applications. In the early 2000s, when the inventions of the '304 patent were in development, Digital Keystone was developing world-first digital entertainment solutions that bridged the personal computer, consumer electronics and content industries. Next generation digital cable TVs, PC-based entertainment systems and media distribution networks were powered by Digital Keystone hardware and software technologies. And Digital Keystone was also licensing its industry-leading security technology to TV broadcasters, consumer

electronics manufacturers, developers of digital home components, and chip manufacturers.<sup>11</sup> In partnership with Microsoft and CableLabs, Digital Keystone developed the world's first secure Pay TV bridge, which was demonstrated by Bill Gates in his keynote speech during the 2006 Consumer Electronics Show.<sup>12</sup> Digital Keystone was at the forefront of enabling secure content access throughout the entire home.

61. As discussed with regard to the '236 patent *infra*, both CAS and DRM systems are critically important technologies for securing valuable content programming intended for myriad consumer devices. To individually manage each such device, such as a set-top box, a mobile phone, a streaming media device, a laptop or desktop computer, or a smartTV, each device is typically provided with a unique identity so that the CA or DRM system can provide the necessary keys specifically for use on only the intended device. In this way, the integrity of the decryption keys can be maintained within the content provider's security domain. Typically, each device has a unique, secret user key so that an entitlement management message or a DRM license key for one device can only be decrypted using the unique user key of that device.

62. In the early-2000s, content consuming devices were proliferating rapidly, each with different device security platforms and capabilities, and content delivery standards were evolving to address the growing need for securing the integrity of the content being delivered to myriad networked devices. Conditional access techniques at the time of the invention suffered from the

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<sup>11</sup> *Company Overview*, Digital Keystone (2003).  
<https://web.archive.org/web/20031206063740/http://www.digitalkeystone.com/profile/mission.htm> (last visited October 10, 2023)

<sup>12</sup> *Microsoft and CableLabs Announce Agreement to Enable High-Definition Digital Cable Programming on Windows-Based PCs* (Press release), Microsoft, November 16, 2005; *Gates Outlines Vision for the Digital Lifestyle and Showcases New Products and Technologies From Microsoft* (Press release), Microsoft, January 4, 2006.  
[https://web.archive.org/web/20061127222501/http://www.openwave.com/us/news\\_room/press\\_releases/2006/20060912\\_opvw\\_brew\\_0912.htm](https://web.archive.org/web/20061127222501/http://www.openwave.com/us/news_room/press_releases/2006/20060912_opvw_brew_0912.htm), at 1 (last visited October 10, 2023).

problem of being limited to one security technique so that each device was required to be associated with the security technique to operate correctly in a network.

63. The '304 patent is a continuation of the '236 patent, and, like the '236 patent, the '304 patent addresses this problem, allowing, among other things, content to be distributed to legitimate, authorized devices of two different security systems. *Id.* at 3:4-10. Content may be distributed to proper devices, including devices that do “not support[] the primary digital rights management system” of the content provider. *Id.* at 3:11-11. As such, the '304 patent allows, among other things, securely transferring content (e.g., premium video content) to a greater number of devices and types of devices by providing a more flexible security model that could allow devices to operate correctly under different security techniques while still maintaining the benefits of the primary security system of a content provider with full ability to control the dissemination of content securely across networking components with different security features and platforms.

**F. U.S. Patent No. 7,769,238**

64. On August 3, 2010, the United States Patent Office issued U.S. Patent No. 7,769,238, titled “Picture Coding Method And Picture Decoding Method” (the “'238 patent”). A true and correct copy of the '238 patent is attached hereto as Exhibit 6.

65. The '238 patent generally relates to video and audio coding. Video and audio coding refers to both the encoding and decoding of video or audio content. Video and audio coding may include compression techniques that minimize the size of the data that is sent between the encoder and the decoder by, e.g., removing redundancies and then efficiently representing the remaining data for transmission.

66. The '238 patent was developed by engineers at Panasonic, one of the largest consumer electronics companies at the time of the invention and a major innovator in Internet technologies. In

2002, when the patent application was first filed for the '238 patent, and as set forth in Panasonic's 2002 annual report, Panasonic was a world leader in digital video technologies. Panasonic developed video coding technologies and designed consumer electronics, including TVs, DVD players and memory cards, for storing, processing and displaying video content. The inventions of the '238 patent are the result of years of research by Panasonic engineers at the cutting edge of video processing and coding.

67. Encoding video content pursuant to the '238 patent allows the content to be made small for storage and transmission, while decoding permits the viewer to watch high-quality content on his or her device. In addition to making real-time streaming of content possible, every incremental increase in compression efficiency yields substantial benefits to companies that store, process, transmit or access video.

68. The '238 patent describes breakthrough techniques for decoding audiovisual content so that it can be transmitted and stored with fewer resources. The patent vastly improves upon existing methods, and the core technology it describes has been used throughout the industry for years as the gold standard for coding video.

69. In particular, the '238 patent is directed to decoding audio and video content. With respect to video, the '238 patent describes a type of coding called "Context-based Adaptive Variable Length Coding," or "CAVLC." *See, e.g.*, Ex. 6, '238 patent at col. 1, ll. 49-52. Content encoded would then be stored or transmitted before ultimately being decoded for playback using the techniques of the '238 patent.

70. When encoded, the image data in a particular image block is represented by, among other things, "coefficients." *Id.* at col. 1, ll. 63-67; col. 7, ll. 38-43; col. 21, ll. 60-66; col. 25, ll. 29-36. Larger coefficients for a block may indicate a larger amount of changes in that block as compared



with a reference block. *See id.* For many blocks, there are no such changes, and so all the coefficients have a value of zero. *See id.* at col. 21, ll. 60-66. The inventors of the '238 patent recognized that these “zero-coefficient” blocks allow for compression. *See, e.g., id.* at col. 1, ll. 49-52.

71. The inventors of the '238 patent realized that the decoder did not need to know every single time a zero-coefficient block existed; rather, the decoder needs to know only when blocks have *non-zero* coefficients. They devised a technique wherein data about zero-coefficient blocks are effectively not encoded at all, and only non-zero coefficient block data is stored and transmitted. *See, e.g., id.* at col. 1, ll.49-52, 56-62; col. 1, l. 65 – col. 2, l. 10. The inventors thereby achieved nearly perfect compression for these zero-coefficient blocks by communicating them practically without sending any information whatsoever. *See id.* at col. 2, ll.11-14.

72. The inventors made substantial contributions to the efficiency of entropy coding. They recognized that the coefficients in neighboring blocks were a good predictor of the coefficients in the block being analyzed, and so could be used to select the optimal coding table for the block, yielding enhanced compression. *See, e.g., id.* at col. 9, ll. 34-37; col. 13, ll. 4-11. The inventors disclosed using the same coding table for both inter- and intra-predictive coding, which was inefficient because there could be significant differences between neighboring blocks in the current frame and blocks in subsequent frames. *See, e.g., id.* at col. 1, ll. 33-38. Due to these limitations in the use of coding tables, compression efficiency in previously known entropy coding techniques would vary significantly between different types of content, and generally decreased as the quality of content increased. *Id.* at col. 1, ll.39-44. These problems (and others) were overcome by the inventors of the '238 patent.

73. The innovations of the '238 patent provided a significant advance in compression that was recognized throughout the industry. In fact, the compression techniques of the '238 patent are used in the ubiquitous video codec, H.264. H.264 was revolutionary in the video industry, as it

provided a quantum leap of improvement over the video codecs that had previously been commonly used, such as Motion JPEG video and MPEG-2. In particular, H.264 “has an 80% lower bitrate than Motion JPEG video” and “the bitrate savings can be as much as 50% or more compared to MPEG-2.”<sup>13</sup>

**G. U.S. Patent No. 7,970,059**

74. On June 28, 2011, the United States Patent Office issued U.S. Patent No. 7,970,059, titled “Variable Length Coding Method and Variable Length Decoding Method” (the “’059 patent”). A true and correct copy of the ’059 patent is attached hereto as Exhibit 7.

75. The ’059 patent generally relates to video and audio coding. Video and audio coding refers to both the encoding and decoding of video or audio content. Video and audio coding may include compression techniques to minimize the size of the data that is sent between the encoder and the decoder by removing redundancies and then efficiently representing the remaining data for transmission.

76. The ’059 patent was developed by engineers at Panasonic, one of the largest consumer electronics companies at the time of the invention and a major innovator in Internet technologies. In 2002, when the patent application was first filed for the ’059 patent, and as set forth in Panasonic’s 2002 annual report, Panasonic was a world leader in digital video technologies. Panasonic developed video coding technologies and designed consumer electronics, including TVs, DVD players and memory cards, for storing, processing and displaying video content. The inventions of the ’059 patent are the result of years of research by Panasonic engineers at the cutting edge of video processing and

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<sup>13</sup> *What is H264 Encoding?*, BlackBox, <https://www.blackbox.co.uk/gb-gb/page/38313/Resources/Technical-Resources/Black-Box-Explains/Multimedia/What-is-H264-video-encoding/>, at 2.

coding.

77. Encoding video content pursuant to the '059 patent allows the content to be made small for storage and transmission, while decoding permits the viewer to watch high-quality content on his or her device. In addition to making real-time streaming of content possible, every incremental increase in compression efficiency yields substantial benefits to companies that store, process, transmit or access video.

78. The '059 patent describes breakthrough techniques for decoding audiovisual content so that it can be transmitted and stored with fewer resources. The patent vastly improves upon existing methods for coding video.

79. In particular, the '059 patent is directed to decoding audio and video content. With respect to video, the '059 patent describes a type of coding called "Context-based Adaptive Binary Arithmetic Coding," or "CABAC," and the '059 patent describes using a plurality of probability tables that are switched during the coding process. *See, e.g.*, Ex. 7, '059 patent at col. 1, ll. 49-56.

80. An arithmetic encoder converts a series of input signals into a representation that may be encoded as a single fractional number, which is communicated in the encoded bitstream. As a result, fewer or less common symbol values are represented using fewer or larger numbers of bits, which can lead to more effective compression than variable length coding.

81. The innovations of the '059 patent provided a significant advance in compression that was recognized throughout the industry. In fact, the compression techniques of the '059 patent are used in the ubiquitous video codec, H.264. H.264 was revolutionary in the video industry, as it provided a quantum leap of improvement over the video codecs that had previously been commonly used, such as Motion JPEG video and MPEG-2. In particular, H.264 "has an 80% lower bitrate than Motion JPEG video" and "the bitrate savings can be as much as 50% or more compared to MPEG-

2.”<sup>14</sup>

**FIRST COUNT**

**(INFRINGEMENT OF U.S. PATENT NO. 7,440,559)**

82. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended Complaint as if fully set forth herein.

83. VL IP is the assignee and lawful owner of all right, title, and interest in and to the '559 patent. The '559 patent is valid and enforceable.

84. On information and belief, Roku has directly infringed and continues to directly infringe one or more claims of the '559 patent, including at least claim 13 of the '559 patent by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the '559 patent Accused Instrumentalities, including servers used by Roku that are associated with providing digital content to user devices, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

85. The '559 patent Accused Instrumentalities satisfy all claim limitations of one or more claims of the '559 patent. A claim chart comparing exemplary independent claim 13 of the '559 patent to representative Accused Instrumentalities is attached as Exhibit 8.

86. By making, using, offering for sale, selling and/or importing into the United States the '559 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '559 patent pursuant to 35 U.S.C. § 271(a).

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<sup>14</sup> *What is H264 Encoding?*, BlackBox, <https://www.blackbox.co.uk/gb-gb/page/38313/Resources/Technical-Resources/Black-Box-Explains/Multimedia/What-is-H264-video-encoding/>, at 2.

87. Roku has been on notice of its infringement since at least June 21, 2022, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement of the '559 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter.

88. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '559 patent, began investigating the '559 patent and its infringement. Roku has been given further notice of its infringement of the '559 patent through the filing of the Complaint in this Action. On information and belief, Roku is either knowingly infringing the '559 patent or is willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

89. Despite becoming aware of or willfully blinding itself to its infringement of the '559 patent, Roku has nonetheless continued to engage in and has escalated its infringing activities by continuing to develop, advertise, make available, and use the '559 patent Accused Instrumentalities. On information and belief, Roku has made no attempts to design around the '559 patent or otherwise stop its infringing behavior.

90. Roku's infringement of the '559 patent therefore has been and remains willful.

91. Roku also indirectly infringes the '559 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '559 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '559 patent since at least June 21, 2022.

92. On information and belief, Roku has actively induced the infringement of the '559 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '559 patent Accused

Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringes the '559 patent in violation of 35 U.S.C. § 271(a).

93. Roku actively encouraged and continues to actively encourage third parties to directly infringe the '559 patent by, for example, marketing the '559 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, install and/or operate Roku's software to use the '559 patent Accused Instrumentalities and infringing functionalities; fully supporting and managing consumers' continuing use of the '559 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers during their continued use of the '559 patent Accused Instrumentalities and infringing functionalities. *See, e.g.*, <https://support.roku.com/article/360021586854>.

94. For example, Roku induces third parties to infringe the '559 patent by encouraging them to install and/or operate Roku software on their user devices, which when used causes a user to infringe the '559 patent. Roku further provides its platform to third party manufacturers and/or OEMs, including Hisense, TCL, Sharp, Philips, and Onn, to incorporate the inventive features of the '559 patent in their offerings.<sup>15</sup> On information and belief, Roku encourages and instructs the third-party manufacturers and/or OEMS to make, use, sell, offer for sale, and import the offerings and thereby infringe the '559 patent. Roku advertises and promotes its Roku platform and encourages consumers to configure and operate their devices in a manner that results in infringement.<sup>16</sup> In response, consumers acquire, configure, and operate the Roku software causing an infringing use of the '559 patent via the Accused Instrumentalities.

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<sup>15</sup> *See, e.g.*, <https://www.roku.com/products/finder/roku-tv>.

<sup>16</sup> *See, e.g.*, <https://support.roku.com/article/360021586854>.

95. On information and belief, Roku contributorily infringes the '559 patent under 35 U.S.C. § 271(c) by importing, selling, and/or offering to sell within the United States the '559 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the accused functionality is material, has no substantial non-infringing uses, and is known by Roku to be especially made or adapted for use in a manner that infringes the '559 patent.

96. As a result of Roku's direct and indirect infringement of the '559 patent, VideoLabs is entitled to monetary damages (past, present and future) in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention by Roku, together with interest and costs as fixed by the Court.

97. On information and belief, despite having knowledge of the '559 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '559 patent, Roku has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Roku's infringing activities relative to the '559 patent have been, and continue to be, willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

98. Roku's acts of direct and indirect infringement have caused and continue to cause damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

## **SECOND COUNT**

### **(INFRINGEMENT OF U.S. PATENT NO. 8,605,794)**

99. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended

Complaint as if fully set forth herein.

100. VL IP is the assignee and lawful owner of all right, title, and interest in and to the '794 patent. The '794 patent is valid and enforceable.

101. On information and belief, Roku has directly infringed and continues to directly infringe one or more claims of the '794 patent, including at least claim 1 of the '794 patent by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the '794 patent, including but not limited to the '794 patent Accused Instrumentalities, including Roku's media player software, such as is used to synchronize HLS segments for Roku Channel content, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

102. The '794 patent Accused Instrumentalities satisfy all claim limitations of one or more claims of the '794 patent. A claim chart comparing exemplary independent claim 1 of the '794 patent to representative Accused Instrumentalities is attached as Exhibit 9.

103. By making, using, offering for sale, selling and/or importing into the United States the '794 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '794 patent pursuant to 35 U.S.C. § 271(a).

104. Roku has been on notice of its infringement since at least June 21, 2022, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement of the '794 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter.

105. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '794 patent, began investigating the '794 patent and its infringement. Roku



has been given further notice of its infringement of the '794 patent through the filing of the Complaint in this Action. On information and belief, Roku is either knowingly infringing the '794 patent or is willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

106. Despite becoming aware of or willfully blinding itself to its infringement of the '794 patent, Roku has nonetheless continued to engage in and has escalated its infringing activities by continuing to develop, advertise, make available, and use the '794 patent Accused Instrumentalities. On information and belief, Roku has made no attempts to design around the '794 patent or otherwise stop its infringing behavior.

107. Roku's infringement of the '794 patent therefore has been and remains willful.

108. Roku also indirectly infringes the '794 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '794 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '794 patent since at least June 21, 2022.

109. On information and belief, Roku has actively induced the infringement of the '794 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '794 patent Accused Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringes the '794 patent in violation of 35 U.S.C. § 271(a).

110. Roku actively encouraged and continues to actively encourage third parties to directly infringe the '794 patent by, for example, marketing the '794 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, install and/or operate the '794 patent Accused Instrumentalities and infringing functionalities; fully supporting and

managing consumers' continuing use of the '794 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers during their continued use of the '794 patent Accused Instrumentalities and infringing functionalities.<sup>17</sup>

111. For example, Roku induces third parties to infringe the '794 patent by encouraging them to install and operate the Roku software, which alone and/or in combination with the third parties' devices constitutes infringement of the '794 patent. Roku advertises and promotes its Roku Channel and encourages consumers to configure and operate their devices in an infringing manner.<sup>18</sup> In response, consumers acquire, configure, and operate the Roku Channel in an infringing manner. Further, Roku provides developers information and instructions to develop Roku platform applications that practice the '794 patent.

112. On information and belief, Roku contributorily infringes the '794 patent under 35 U.S.C. § 271(c) by importing, selling, and/or offering to sell within the United States the '794 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the Roku software is material, has no substantial non-infringing uses, and is known by Roku to be especially made or adapted for use in a manner that infringes the '794 patent.

113. As a result of Roku's direct and indirect infringement of the '794 patent, VideoLabs is entitled to monetary damages (past, present and future) in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention by Roku, together with interest and costs as fixed by the Court.

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<sup>17</sup> See, e.g., <https://www.roku.com/en-gb/whats-on/the-roku-channel>; <https://image.roku.com/c3VwcG9ydC1B/Roku-TV-User-Guide-10-0-en-US-.pdf>, at 34.

<sup>18</sup> See, e.g., <https://image.roku.com/c3VwcG9ydC1B/Roku-TV-User-Guide-10-0-en-US-.pdf>, at 34 (encouraging users to “check out” the Roku Channel for a “huge assortment” of “movies, programs, live news, and kid’s TV”).

114. On information and belief, despite having knowledge of the '794 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '794 patent, Roku has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Roku's infringing activities relative to the '794 patent have been, and continue to be, willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

115. Roku's acts of direct and indirect infringement have caused and continue to cause damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

### **THIRD COUNT**

#### **(INFRINGEMENT OF U.S. PATENT NO. 7,233,790)**

116. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended Complaint as if fully set forth herein.

117. VL is the assignee and lawful owner of all right, title, and interest in and to the '790 patent. The '790 patent is valid and enforceable.

118. On information and belief, Roku has directly infringed and continues to directly infringe one or more claims of the '790 patent, including at least claim 2 of the '790 patent by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the '790 patent, including but not limited to the '790 patent Accused Instrumentalities, including servers used by Roku that are associated with receiving, storing, and providing access to digital content to user devices. As an example, the Accused Instrumentalities include a back-end control plane server system (e.g., my.roku.com) to facilitate

access to Roku Channel programming content available on the Roku platform, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

119. The '790 patent Accused Instrumentalities satisfy all claim limitations of one or more claims of the '790 patent. A claim chart comparing exemplary independent claim 2 of the '790 patent to representative Accused Instrumentalities is attached as Exhibit 10.

120. By making, using, offering for sale, selling and/or importing into the United States the '790 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '790 patent pursuant to 35 U.S.C. § 271(a).

121. Roku has been on notice of its infringement since at least June 21, 2022, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement of the '790 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter.

122. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '790 patent, began investigating the '790 patent and its infringement. Roku has been given further notice of its infringement of the '790 patent through the filing of the Complaint in this Action. On information and belief, Roku is either knowingly infringing the '790 patent or is willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

123. Despite becoming aware of or willfully blinding itself to its infringement of the '790 patent, Roku has nonetheless continued to engage in and has escalated its infringing activities by continuing to develop, advertise, make available, and use the '790 patent Accused Instrumentalities. On information and belief, Roku has made no attempts to design around the '790 patent or otherwise

stop its infringing behavior.

124. Roku's infringement of the '790 patent therefore has been and remains willful.

125. Roku also indirectly infringes the '790 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '790 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '790 patent since at least June 21, 2022.

126. On information and belief, Roku has actively induced the infringement of the '790 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '790 patent Accused Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringes the '790 patent in violation of 35 U.S.C. § 271(a).

127. Roku actively encouraged and continues to actively encourage third parties to directly infringe the '790 patent by, for example, marketing the '790 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, install and/or operate the '790 patent Accused Instrumentalities and infringing functionalities; fully supporting and managing consumers' continuing use of the '790 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers and developers in support of the continued use of the '790 patent Accused Instrumentalities and infringing functionalities.<sup>19</sup>

128. For example, Roku induces third parties to infringe the '790 patent by encouraging them to install and operate the Roku Channel software, which alone and/or in combination with the third parties' devices constitutes infringement of the '790 patent. Roku advertises and promotes its

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<sup>19</sup> See, e.g., <https://www.roku.com/whats-on/the-roku-channel>; <https://support.roku.com/category/202683127>; <https://support.roku.com/article/208756498>; <https://developer.roku.com/docs/developer-program/media-playback/trick-mode/hls-and-dash.md>.

software and encourages consumers to configure and operate their mobile and computer devices in a manner that results in infringement.<sup>20</sup> In response, consumers use the Accused Instrumentalities in an infringing manner.

129. On information and belief, Roku contributorily infringes the '790 patent under 35 U.S.C. § 271(c) by importing, selling, and/or offering to sell within the United States the '790 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the Roku servers that are associated with receiving, storing, and providing access to digital content to user devices are material, have no substantial non-infringing uses, and are known by Roku to be especially made or adapted for use in a manner that infringes the '790 patent.

130. As a result of Roku's direct and indirect infringement of the '790 patent, VideoLabs is entitled to monetary damages (past, present and future) in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention by Roku, together with interest and costs as fixed by the Court.

131. On information and belief, despite having knowledge of the '790 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '790 patent, Roku has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Roku's infringing activities relative to the '790 patent have been, and continue to be, willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

132. Roku's acts of direct and indirect infringement have caused and continue to cause

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<sup>20</sup> See, e.g., <https://www.roku.com/whats-on/the-roku-channel>.

damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

**FOURTH COUNT**

**(INFRINGEMENT OF U.S. PATENT NO. 8,291,236)**

133. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended Complaint as if fully set forth herein.

134. VL is the assignee and lawful owner of all right, title, and interest in and to the '236 patent. The '236 patent is valid and enforceable.

135. On information and belief, Roku has directly infringed and continues to directly infringe one or more claims of the '236 patent, including at least claim 130 of the '236 patent by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the '236 patent, including but not limited to the '236 patent Accused Instrumentalities, including Roku devices compatible with HDCP, such as, e.g., Roku's streaming players, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

136. The '236 patent Accused Instrumentalities satisfy all claim limitations of one or more claims of the '236 patent. A claim chart comparing exemplary independent claim 130 of the '236 patent to representative Accused Instrumentalities is attached as Exhibit 11.

137. By making, using, offering for sale, selling and/or importing into the United States the '236 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '236 patent pursuant to 35 U.S.C. § 271(a).

138. Roku has been on notice of its infringement since at least June 27, 2023, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement

of the '236 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter and the June 27, 2023 letter.

139. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '236 patent, began investigating the '236 patent and its infringement. Roku has been given further notice of its infringement of the '236 patent through the filing of the Complaint in this Action. On information and belief, Roku is either knowingly infringing the '236 patent or is willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

140. Despite becoming aware of or willfully blinding itself to its infringement of the '236 patent, Roku has nonetheless continued to engage in and has escalated its infringing activities by continuing to develop, advertise, make available, and use the '236 patent Accused Instrumentalities. On information and belief, Roku has made no attempts to design around the '236 patent or otherwise stop its infringing behavior.

141. Roku's infringement of the '236 patent therefore has been and remains willful.

142. Roku also indirectly infringes the '236 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '236 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '236 patent since at least June 27, 2023.

143. On information and belief, Roku has actively induced the infringement of the '236 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '236 patent Accused Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringes the '236 patent in



violation of 35 U.S.C. § 271(a).

144. Roku actively encouraged and continues to actively encourage third parties to directly infringe the '236 patent by, for example, marketing the '236 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, install and/or operate the '236 patent Accused Instrumentalities and infringing functionalities; fully supporting and managing consumers' continuing use of the '236 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers during their continued use of the '236 patent Accused Instrumentalities and infringing functionalities.<sup>21</sup>

145. For example, Roku induces third parties to infringe the '236 patent by encouraging them to operate the '236 Accused Instrumentalities, constituting infringement of the '236 patent. Roku advertises and promotes the '236 Accused Instrumentalities and encourages consumers to use them in an infringing manner.<sup>22</sup>

146. On information and belief, Roku contributorily infringes the '236 patent under 35 U.S.C. § 271(c) by importing, selling, and/or offering to sell within the United States the '236 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the Accused Instrumentalities are material, have no substantial non-infringing uses, and are known by Roku to be especially made or adapted for use in a manner that infringes the '236 patent.

147. As a result of Roku's direct and indirect infringement of the '236 patent, VideoLabs is entitled to monetary damages (past, present and future) in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention

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<sup>21</sup> See, e.g., <https://support.roku.com/es-ar/category/4403790058903>.

<sup>22</sup> See, e.g., <https://www.roku.com/products/roku-streaming-stick-4k>.

by Roku, together with interest and costs as fixed by the Court.

148. On information and belief, despite having knowledge of the '236 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '236 patent, Roku has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Roku's infringing activities relative to the '236 patent have been, and continue to be, willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

149. Roku's acts of direct and indirect infringement have caused and continue to cause damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

#### **FIFTH COUNT**

#### **(INFRINGEMENT OF U.S. PATENT NO. 8,667,304)**

150. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended Complaint as if fully set forth herein.

151. VL is the assignee and lawful owner of all right, title, and interest in and to the '304 patent. The '304 patent is valid and enforceable.

152. On information and belief, Roku has directly infringed and continues to directly infringe one or more claims of the '304 patent, including at least claim 5 of the '304 patent by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the '304 patent, including but not limited to the '304 patent Accused Instrumentalities, including Roku devices compatible with HDCP, including,

e.g., Roku 4K and 8K TVs, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

153. The '304 patent Accused Instrumentalities satisfy all claim limitations of one or more claims of the '304 patent. A claim chart comparing exemplary independent claim 5 of the '304 patent to representative Accused Instrumentalities is attached as Exhibit 12.

154. By making, using, offering for sale, selling and/or importing into the United States the '304 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '304 patent pursuant to 35 U.S.C. § 271(a).

155. Roku has been on notice of its infringement since at least June 27, 2023, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement of the '304 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter and the June 27, 2023 letter.

156. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '304 patent, began investigating the '304 patent and its infringement. Roku has been given further notice of its infringement of the '304 patent through the filing of the Complaint in this Action. On information and belief, Roku is either knowingly infringing the '304 patent or is willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

157. Despite becoming aware of or willfully blinding itself to its infringement of the '304 patent, Roku has nonetheless continued to engage in and has escalated its infringing activities by continuing to develop, advertise, make available, and use the '304 patent Accused Instrumentalities. On information and belief, Roku has made no attempts to design around the '304 patent or otherwise

stop its infringing behavior.

158. Roku's infringement of the '304 patent therefore has been and remains willful.

159. Roku also indirectly infringes the '304 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '304 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '304 patent since at least June 27, 2023.

160. On information and belief, Roku has actively induced the infringement of the '304 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '304 patent Accused Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringes the '304 patent in violation of 35 U.S.C. § 271(a).

161. Roku actively encouraged and continues to actively encourage third parties to directly infringe the '304 patent by, for example, marketing the '304 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, and/or operate the '304 patent Accused Instrumentalities and infringing functionalities; fully supporting and managing consumers' continuing use of the '304 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers during their continued use of the '304 patent Accused Instrumentalities and infringing functionalities.<sup>23</sup>

162. For example, Roku induces third parties to infringe the '304 patent by encouraging and instructing them to, e.g., connect streaming devices to the Accused Instrumentalities using the

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<sup>23</sup> See, e.g., <https://image.roku.com/c3VwcG9ydC1B/Roku-TV-User-Guide-10-0-en-US-.pdf>, at 7-8.

HDMI interface of the Accused Instrumentalities, which when used to stream high-bandwidth content constitutes infringement of the '304 patent.<sup>24</sup> In response, consumers acquire, configure, and operate the Roku devices (e.g., Roku's devices compatible with HDCP such as Roku 4K and 8K TVs) in an infringing manner.

163. On information and belief, Roku contributorily infringes the '304 patent under 35 U.S.C. § 271(c) by importing, selling, and/or offering to sell within the United States the '304 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the HDCP-related components of the Accused Instrumentalities are material, have no substantial non-infringing uses, and are known by Roku to be especially made or adapted for use in a manner that infringes the '304 patent.

164. As a result of Roku's direct and indirect infringement of the '304 patent, VideoLabs is entitled to monetary damages (past, present and future) in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention by Roku, together with interest and costs as fixed by the Court.

165. On information and belief, despite having knowledge of the '304 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '304 patent, Roku has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Roku's infringing activities relative to the '304 patent have been, and continue to be, willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

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<sup>24</sup> *See, e.g., id.*

166. Roku's acts of direct and indirect infringement have caused and continue to cause damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

**SIXTH COUNT**

**(INFRINGEMENT OF U.S. PATENT NO. 7,769,238)**

167. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended Complaint as if fully set forth herein.

168. VL is the assignee and lawful owner of all right, title, and interest in and to the '238 patent. The '238 patent is valid and enforceable.

169. On information and belief, Roku has directly infringed claim 1 of the '238 patent by, among other things, having made, used, sold, offered for sale, and/or imported into the United States products that embody one or more of the inventions claimed in the '238 patent, including but not limited to the '238 patent Accused Instrumentalities, including Roku TV and Roku streaming devices, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

170. The '238 patent Accused Instrumentalities satisfy all claim limitations of claim 1 of the '238 patent. A claim chart comparing independent claim 1 of the '238 patent to representative Accused Instrumentalities is attached as Exhibit 13.

171. By having made, used, offered for sale, sold and/or imported into the United States the '238 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '238 patent pursuant to 35 U.S.C. § 271(a).

172. Roku has been on notice of its infringement since at least June 21, 2022, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement of the '238 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with

Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter and the June 27, 2023 letter.

173. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '238 patent, began investigating the '238 patent and its infringement. On information and belief, Roku either knowingly infringed the '238 patent or was willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

174. Despite becoming aware of or willfully blinding itself to its infringement of the '238 patent, Roku continued to engage in and escalate its infringing activities by continuing to develop, advertise, make available, and use the '238 patent Accused Instrumentalities. On information and belief, Roku made no attempts to design around the '238 patent or otherwise stop its infringing behavior prior to the expiration of the '238 patent.

175. Roku's infringement of the '238 patent therefore has been willful.

176. Roku also indirectly infringed the '238 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '238 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '238 patent since at least June 21, 2022.

177. On information and belief, Roku has actively induced the infringement of the '238 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '238 patent Accused Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringed the '238 patent in violation of 35 U.S.C. § 271(a).

178. Roku actively encouraged third parties to directly infringe the '238 patent by, for

example, marketing the '238 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, and/or operate the '238 patent Accused Instrumentalities and infringing functionalities; fully supporting and managing consumers' continuing use of the '238 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers during their continued use of the '238 patent Accused Instrumentalities and infringing functionalities.<sup>25</sup>

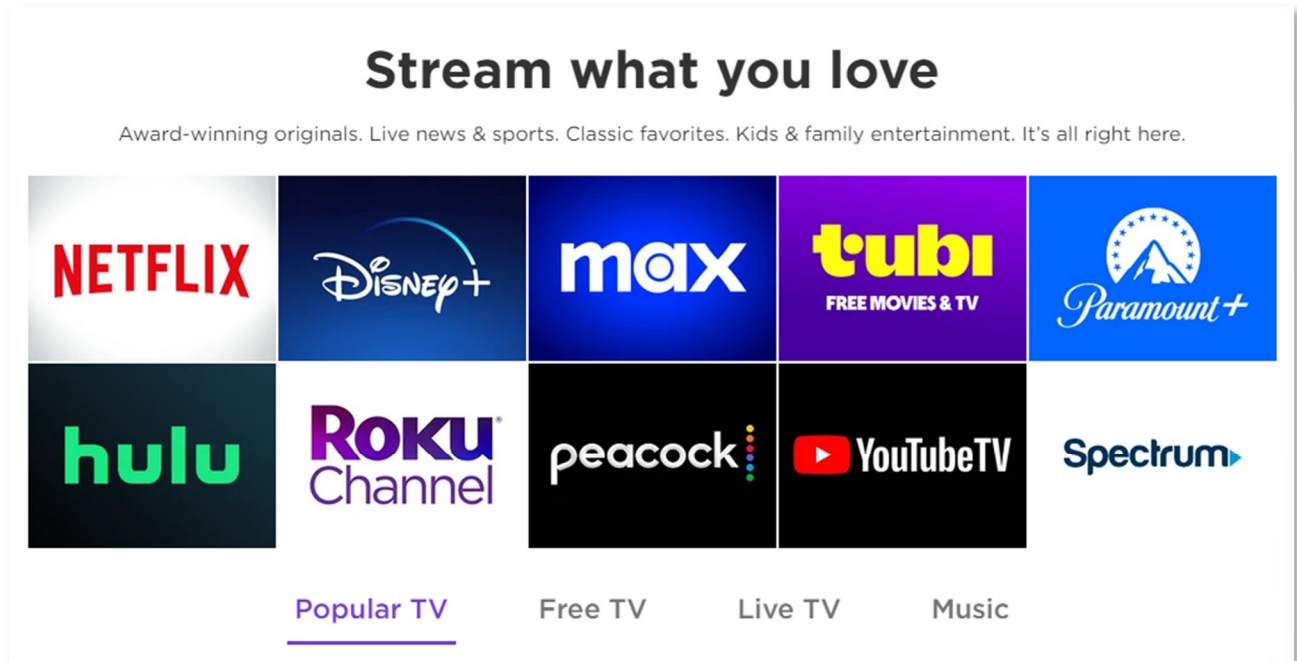
179. For example, Roku induced third parties to infringe the '238 patent by encouraging and instructing them to, e.g., use the '238 patent Accused Instrumentalities to stream audiovisual content. As an example, Roku advertises its Roku TV as having “America’s #1 TV streaming platform built in,” making “it easy to enjoy all our favorite entertainment in one place.” <https://www.roku.com/products/roku-tv>; *see also* <https://www.roku.com/products/players> (“A Roku streaming device is all you need to stream what you love on your TV. Enjoy thousands of free and paid channels with live TV, movies, shows, music, and more.”).

180. Indeed, Roku encouraged users of the '238 patent Accused Instrumentalities to stream audiovisual content from content providers such as those shown in the image below:

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<sup>25</sup> *See, e.g.*, <https://image.roku.com/c3VwcG9ydC1B/Roku-TV-User-Guide-10-0-en-US-.pdf>, at 7-8.





<https://www.roku.com/products/roku-tv>

181. Roku instructed users of the '238 patent Accused Instrumentalities to “stream just about *anything*.” <https://www.roku.com/products/roku-tv>.

182. Roku instructed users of the '238 patent Accused Instrumentalities how to use the instrumentalities to stream audiovisual content. *See, e.g.,* <https://www.roku.com/products/players> (“How do I set up a Roku streaming device”).

183. Streaming content of “just about *anything*” instructed and encouraged by Roku resulted in infringement of the '238 patent. Over 90% of streaming is done using audiovisual data with H.264 data. *See, e.g.,* <https://www.irma-international.org/viewtitle/287102/?isxn=9781799863144> (“H.264/AVC continues to be a pillar of online streaming, taking the top spot three years in a row, as the most used video codec in 2019 at 91%.”). As such, streaming content as Roku encouraged necessarily resulted in streaming H.264 data, which resulted in infringement of the '238 patent.

184. As one specific example, Roku has encouraged others to stream content on the '238 Accused Instrumentalities via “Amazon Video on Demand,” which provides “high-quality video through its use of the advanced h.264 codec.” <https://newsroom.roku.com/news/2009/01/amazon-video-demand-brings-customers-new%e2%80%90release-movies-and-tv/dfvrf5jj-1564179703>.

185. Thus Roku actively and intentionally encouraged others to infringe the '238 patent. *See, e.g., Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936 (2005) (advertising or instructing an infringing use “show an affirmative intent that the product be used to infringe.”); *Barry v. Medtronic, Inc.*, 914 F.3d 1310, 1334 (Fed. Cir. 2019) (advertising to customers and instructing them on how to engage in an infringing use satisfied the intent requirement); *Telecomm Innovations, LLC v. Ricoh Co.*, 966 F. Supp. 2d 390, 395 (D. Del. 2013) (intent satisfied where defendant provided “technical support and services, as well as detailed explanations, instructions and information as to arrangements, applications and uses” of accused products).

186. Additionally, the '238 patent Accused Instrumentalities during their normal and intended operation of streaming audiovisual content having H.264 data, infringed the '238 patent without any additional specific action of end users. By instructing and encouraging others to stream content, Roku thus actively and intentionally encouraged others to infringe the '238 patent.

187. Further, Roku instructed and encouraged developers for the Roku platform to use container formats having H.264 video data. <https://developer.roku.com/docs/specs/media/streaming-specifications.md>. The instruction and encouragement of use of coding using these container formats resulted in infringement of the '238 patent.

188. In response to Roku’s instructions and encouragement, consumers and developers infringed the '238 patent via the '238 patent Accused Instrumentalities.

189. On information and belief, Roku contributorily infringed the '238 patent under 35

U.S.C. § 271(c) by having imported, sold, and/or offered to sell within the United States the '238 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the video and audio codecs of the Accused Instrumentalities are material, have no substantial non-infringing uses, and are known by Roku to be especially made or adapted for use in a manner that infringed the '238 patent.

190. As a result of Roku's direct and indirect infringement of the '238 patent, VideoLabs is entitled to monetary damages in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention by Roku, together with interest and costs as fixed by the Court.

191. On information and belief, despite having knowledge of the '238 patent and knowledge that it has directly and/or indirectly infringed the '238 patent, Roku nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement prior to the expiration of the '238 patent. Roku's infringing activities relative to the '238 patent have been willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

192. Roku's acts of direct and indirect infringement have caused damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

**SEVENTH COUNT**

**(INFRINGEMENT OF U.S. PATENT NO. 7,970,059)**

193. VideoLabs incorporates by reference the foregoing paragraphs of this First Amended Complaint as if fully set forth herein.

194. VL is the assignee and lawful owner of all right, title, and interest in and to the '059 patent. The '059 patent is valid and enforceable.

195. On information and belief, Roku has directly infringed one or more claims of the '059 patent, including at least claim 1 of the '059 patent by, among other things, having made, used, sold, offered for sale, and/or imported into the United States products that embody one or more of the inventions claimed in the '059 patent, including but not limited to the '059 patent Accused Instrumentalities, including Roku TVs and Roku streaming players, as well as all reasonably similar products, in violation of 35 U.S.C. § 271(a).

196. The '059 patent Accused Instrumentalities satisfy all claim limitations of one or more claims of the '059 patent. A claim chart comparing exemplary independent claim 1 of the '059 patent to representative Accused Instrumentalities is attached as Exhibit 14.

197. By having made, used, offered for sale, sold and/or imported into the United States the '059 patent Accused Instrumentalities, Roku has injured VideoLabs and is liable for infringement of the '059 patent pursuant to 35 U.S.C. § 271(a).

198. Roku has been on notice of its infringement since at least June 21, 2022, when VideoLabs wrote to the General Counsel of Roku and specifically informed Roku of its infringement of the '059 patent. Prior to the letter, VideoLabs attempted several times to initiate discussions with Roku about its patent portfolio including in October 2019, November 2019, March 2020 and April 2021, all of which were ignored just like the June 21, 2022 letter.

199. Roku of course knows how its products operate, and on information and belief, upon receiving notice of the '059 patent, began investigating the '059 patent and its infringement. On information and belief, Roku either knowingly infringed the '059 patent or was willfully blind to its infringement — including by ignoring VideoLabs' communications and continuing to act in wanton disregard of VideoLabs' patent rights.

200. Despite becoming aware of or willfully blinding itself to its infringement of the '059 patent, Roku engaged in and escalated its infringing activities by developing, advertising, making available, and using the '059 patent Accused Instrumentalities prior to the expiration of the '059 patent. On information and belief, Roku has made no attempts to design around the '059 patent or otherwise stop its infringing behavior prior to the expiration of the '059 patent.

201. Roku's infringement of the '059 patent therefore has been willful.

202. Roku also indirectly infringed the '059 patent by inducing others to infringe and contributing to the infringement of others, including third-party users of the '059 patent Accused Instrumentalities in this District and throughout the United States. As described above, on information and belief, Roku has known about the '059 patent since at least June 21, 2022.

203. On information and belief, Roku has actively induced the infringement of the '059 patent under 35 U.S.C. § 271(b) by actively inducing the infringement of the '059 patent Accused Instrumentalities by third parties in the United States. Roku knew or was willfully blind to the fact that its conduct would induce these third parties to act in a manner that infringes the '059 patent in violation of 35 U.S.C. § 271(a).

204. Roku actively encouraged third parties to directly infringe the '059 patent by, for example, marketing the '059 patent Accused Instrumentalities and infringing functionalities to consumers; working with consumers to implement, and/or operate the '059 patent Accused

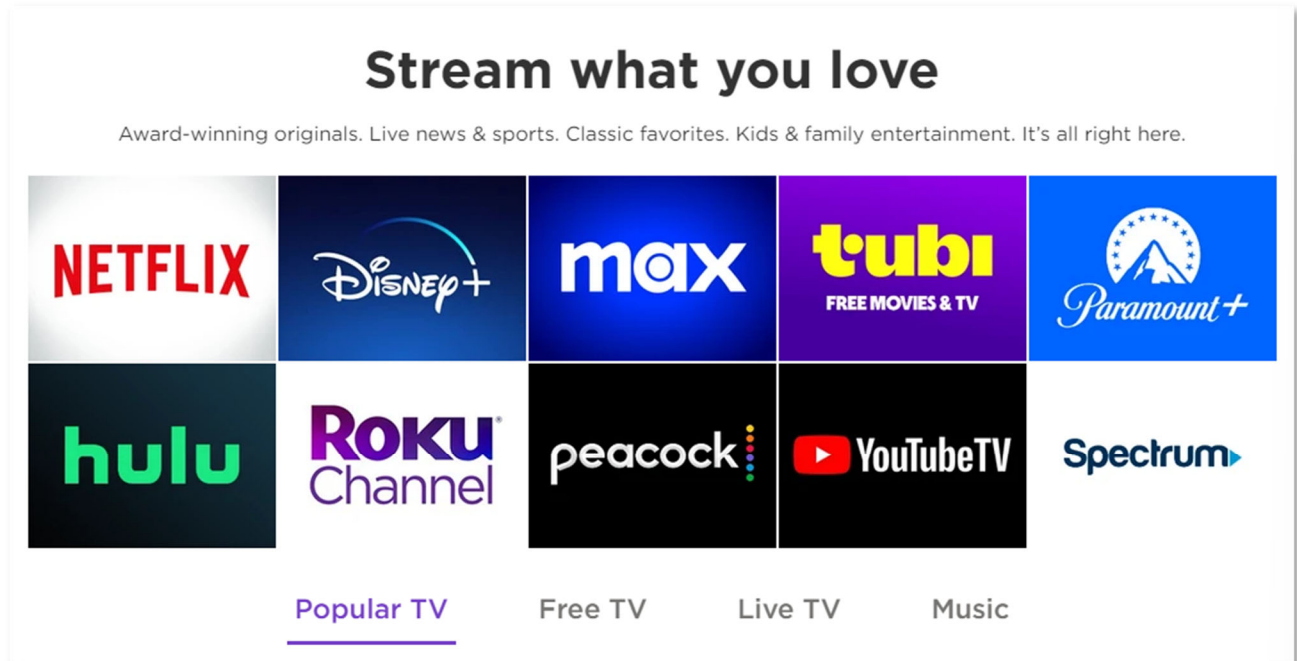
Instrumentalities and infringing functionalities; fully supporting and managing consumers' continuing use of the '059 patent Accused Instrumentalities and infringing functionalities; and providing technical assistance to consumers during their continued use of the '059 patent Accused Instrumentalities and infringing functionalities.<sup>26</sup>

205. For example, Roku induced third parties to infringe the '059 patent by encouraging and instructing them to, e.g., use the '059 patent Accused Instrumentalities to stream audiovisual content. As an example, Roku advertises its Roku TV as having “America’s #1 TV streaming platform built in,” making “it easy to enjoy all our favorite entertainment in one place.” <https://www.roku.com/products/roku-tv>; *see also* <https://www.roku.com/products/players> (“A Roku streaming device is all you need to stream what you love on your TV. Enjoy thousands of free and paid channels with live TV, movies, shows, music, and more.”).

206. Indeed, Roku encouraged users of the '059 patent Accused Instrumentalities to stream audiovisual content from content providers such as those shown in the image below:

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<sup>26</sup> *See, e.g.*, <https://image.roku.com/c3VwcG9ydC1B/Roku-TV-User-Guide-10-0-en-US-.pdf>, at 7-8.



<https://www.roku.com/products/roku-tv>

207. Roku instructed users of the '059 patent Accused Instrumentalities to “stream just about *anything*.” <https://www.roku.com/products/roku-tv>.

208. Roku instructed users of the '059 patent Accused Instrumentalities how to use the instrumentalities to stream audiovisual content. *See, e.g.,* <https://www.roku.com/products/players> (“How do I set up a Roku streaming device”).

209. Streaming content of “just about *anything*” instructed and encouraged by Roku resulted in infringement of the '059 patent. Over 90% of streaming is done using audiovisual data with H.264 data. *See, e.g.,* <https://www.irma-international.org/viewtitle/287102/?isxn=9781799863144> (“H.264/AVC continues to be a pillar of online streaming, taking the top spot three years in a row, as the most used video codec in 2019 at 91%.”). As such, streaming content as Roku encouraged necessarily resulted in streaming H.264 data, which resulted in infringement of the '059 patent.

210. As one specific example, Roku has encouraged others to stream content on the '059 Accused Instrumentalities via “Amazon Video on Demand,” which provides “high-quality video through its use of the advanced h.264 codec.” <https://newsroom.roku.com/news/2009/01/amazon-video-demand-brings-customers-new%e2%80%90release-movies-and-tv/dfvrf5jj-1564179703>.

211. Thus Roku actively and intentionally encouraged others to infringe the '059 patent. *See, e.g., Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936 (2005) (advertising or instructing an infringing use “show an affirmative intent that the product be used to infringe.”); *Barry v. Medtronic, Inc.*, 914 F.3d 1310, 1334 (Fed. Cir. 2019) (advertising to customers and instructing them on how to engage in an infringing use satisfied the intent requirement); *Telecomm Innovations, LLC v. Ricoh Co.*, 966 F. Supp. 2d 390, 395 (D. Del. 2013) (intent satisfied where defendant provided “technical support and services, as well as detailed explanations, instructions and information as to arrangements, applications and uses” of accused products).

212. Additionally, the '059 patent Accused Instrumentalities during their normal and intended operation of streaming audiovisual content having H.264 data, infringed the '059 patent without any additional specific action of end users. By instructing and encouraging others to stream content, Roku thus actively and intentionally encouraged others to infringe the '059 patent.

213. Further, Roku instructed and encouraged developers for the Roku platform to use container formats having H.264 video data. <https://developer.roku.com/docs/specs/media/streaming-specifications.md>. The instruction and encouragement of use of coding using these container formats resulted in infringement of the '059 patent.

214. In response to Roku’s instructions and encouragement, consumers and developers infringed the '059 patent via the '059 patent Accused Instrumentalities.

215. On information and belief, Roku contributorily infringed the '059 patent under 35



U.S.C. § 271(c) by having imported, sold, and/or offered to sell within the United States the '059 patent Accused Instrumentalities (or components thereof) that constitute a material part of the claimed invention and are not staple articles of commerce suitable for substantial non-infringing use. For example, the video and audio codecs of the Accused Instrumentalities are material, have no substantial non-infringing uses, and are known by Roku to be especially made or adapted for use in a manner that infringed the '059 patent.

216. As a result of Roku's direct and indirect infringement of the '059 patent, VideoLabs is entitled to monetary damages in an amount adequate to compensate for Roku's infringement, but in no event less than a reasonable royalty for the use made of the invention by Roku, together with interest and costs as fixed by the Court.

217. On information and belief, despite having knowledge of the '059 patent and knowledge that it directly and/or indirectly infringed one or more claims of the '059 patent, Roku has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Roku's infringing activities relative to the '059 patent have been willful, wanton, malicious, deliberate, consciously wrongful, and an egregious case of misconduct beyond typical infringement such that VideoLabs is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

218. Roku's acts of direct and indirect infringement have caused damage to VideoLabs. VideoLabs is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, and 284 sustained as a result of Roku's wrongful acts in an amount to be proven at trial.

#### **PRAYER FOR RELIEF**

WHEREFORE, VideoLabs prays for judgment and seeks relief against Roku as follows:

A. For judgment that Roku has infringed one or more claims of the patents-in-suit,

- directly, and/or indirectly by way of inducement and/or contributory infringement;
- B. For judgment awarding VideoLabs damages adequate to compensate it for Roku's infringement of the patents-in-suit, including all pre-judgment and post-judgment interest as well as an award of mandatory future royalties for continuing infringement;
  - C. For judgment that Roku has willfully infringed one or more claims of the patents-in-suit;
  - D. For judgment awarding enhanced damages pursuant to 35 U.S.C. § 284;
  - E. For judgment awarding attorneys' fees pursuant to 35 U.S.C. § 285 or otherwise permitted by law;
  - F. For judgment awarding costs of suit; and
  - G. For judgment awarding VideoLabs such other and further relief as the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure VideoLabs hereby demands a trial by jury of this action.

Dated: March 8, 2024

Respectfully submitted,

FARNAN LLP

/s/ Brian E. Farnan

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