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Exhibit A-1: Infringement of U.S. Patent validity of U.S. Patent No. 7,589,642 the Roku TV, Roku Ultra, Roku Premiere, Roku Premiere+, Roku StreamingStick, Roku StreamingStick+, Roku 4, and any variations of the same that include device power and volume control functionality discussed herein ("Roku Streaming Products with Device Control")

e infringement contentions are provided based on information obtained to date and may not be exhaustive. UEI's investigation of Roku's ngement is ongoing. UEI reserves the right to seek to supplement and/or amend these disclosures to identify additional asserted claims, accused umentalities, and/or to further identify where each element of each asserted claim is found in each accused instrumentality, including on the basis scovery obtained from Roku and from third-parties during the course of this litigation.

accused instrumentalities and associated documents discussed and/or cited herein are representative in all material aspects for all other accused umentalities identified in this chart. Based on information presently available to UEI, each of the Roku Streaming Products with Device Control derstood to operate in the same manner with respect to the contentions provided in this chart, unless otherwise noted. Roku has not yet produced overy in this action, and UEI reserves the right to amend its contentions as to these products should Roku provide information showing any rant differences among the products or any additional products containing the same functionality.

Pat. No. 7,589,642	Roku Streaming Products with Device Control
method comprising:	The Roku Streaming Products with Device Control perform when a user chooses to "Set up a remote for TV control."
	Set up a remote for TV control:

	ROKU Remote settings	3:01 pm Options 🛠	
<	Set up remote for TV control	Your Roku remote can control your TV's	>
	Find remote	volume and power.	
	Change remote finder sound	This setup process may take a few minutes.	
	Preview remote finder sound		
	Pair remote		
	Battery level		

Pat. No. 7,589,642	Roku Streaming Products with Device Control			
	ROKU Control your TV	10:45 am		
	Your Roku remote can control this TV's volume and power! Let's quickly check to see if everything is set up correctly.			
	Check remote settings			
	(images taken from https://support.roku.com/article/115 enhanced-remote-to-control-my-tv- , UEI_001310).	5013019828-how-do-i-set-up-my-roku-		
	See also https://support.roku.com/article/360004786894-why-is-my-roku-enhanced-remote-not-controlling-volume-and-power-on-my-tv- , UEI_001327 (providing instructions for setting up the Roku Enhanced Remote).			
receiving a keystroke indicator all from a remote control device, rein the keystroke indicator all indicates a key on said remote	The Roku Streaming Products with Device Control receive a keystroke indicator signal from the Roku remote control, wherein the keystroke indicator signal indicates a key on the Roku remote that the user has pressed.			
trol device that a user has cted;	A user of a Roku Streaming Product presses one of the	keys on the Roku remote:		

Pat. No. 7,589,642	Roku Streaming Products with Device Control
	The Roku Streaming Products will respond (or not respond) based on which button is pressed on the remote control due to a signal received from the remote, which is a keystroke indicator signal.
generating a key code within a code generator device using the stroke indictor signal;	The Roku Streaming Products with Device Control are key code generators that generate a key code using the keystroke indicator signal.
and induction original,	An example of a generated key code is the code that corresponds to a function of an external device, such as volume or power. This process occurs during set-up and regular operation of the Roku Streaming Products.
	Roku informs its customers that the Roku players narrow the list of "remote codes" during remote setup and program the "correct code" to the remote. (<i>See</i> , <i>e.g.</i> , https://support.roku.com/article/360004786894-why-is-my-roku-enhanced-remote-not-controlling-volume-and-power-on-my-tv- , UEI_001327 at 28).
modulating said key code onto a ier signal, thereby generating a code signal; and	The Roku Streaming Products with Device Control can modulate key codes onto a carrier signal to communicate with the Roku remote. The Roku Streaming Products with Device Control communicate with the Roku remotes by modulating data onto wireless signals, e.g., Wi-Fi or Wi-Fi Direct. For example, the Roku Streaming Products with Device Control program Roku remotes with remote codes for TVs. (<i>See</i> , e.g., https://support.roku.com/article/360004786894-why-is-my-roku-enhanced-remote-not-controlling-volume-and-power-on-my-tv , UEI_001327 at 28). This programming is conducted via sending data over a carrier signal, e.g., a wireless connection.
transmitting said key code signal n said key code generator device aid remote control device.	The Roku Streaming Products with Device Control transmit said key code signal to the Roku remote. The Roku Streaming Products with Device Control program Roku remotes with remote codes for external devices, such as TVs. (<i>See, e.g.</i> , https://support.roku.com/article/360004786894-why-is-my-roku-enhanced-remote-not-controlling-volume-and-power-on-my-tv- , UEI_001327 at 28). This

Pat. No. 7,589,642	Roku Streaming Products with Device Control
	programming is conducted via sending data over a carrier signal, e.g., a wireless connection via Wi-Fi or Wi-Fi Direct.
The method of claim 1, wherein key code consists of a binary liber.	The key codes discussed in claim 1 consist of a binary number. The Roku Streaming Devices with Device Control control external devices, such as a TV, via either IR or CEC (relayed through the Roku device). Both IR and CEC data comprise a binary number.
The method of claim 1, wherein key code comprises a binary niber and timing information, and rein said timing information nes how said binary number is lulated in (c) onto said carrier al.	The key code discussed in claim 1 comprises a binary number and timing information, and wherein said timing information defines how said binary number is modulated in (c) onto said carrier signal. The Roku Streaming Devices with Device Control control the TV via either IR or CEC (relayed through the Roku device). Both IR and CEC data comprise a binary number, which represents the data. Both IR and CEC also require timing information in order to send the data.
he method of claim 1, wherein carrier signal is in a radio uency band, wherein said key e signal is received by said ote control device, and wherein method further comprises:	The carrier signal discussed with respect to claim 1 is in a radio frequency band, wherein said key code signal is received by said the Roku remote paired with the Roku Streaming Product with Device Control.
	The Roku Streaming Products with Device Control have a remote containing a receiver to receive wireless signals from a Roku device via Wi-Fi or Wi-Fi Direct. <i>See</i> , <i>e.g.</i> , https://support.roku.com/article/360004786894-why-is-my-roku-enhanced-remote-not-controlling-volume-and-power-on-my-tv- , UEI_001327 ("Some Roku Enhanced Remotes incorporate both wireless and infrared (IR) technologies to seamlessly control both your Roku streaming player and your TV.").
	Roku devices send key codes to the Roku Streaming Products with Device Control during at least the remote setup process. <i>See</i> , <i>e.g.</i> , https://support.roku.com/article/360004786894-why-is-my-roku-enhanced-remote-not-controlling-volume-and-power-on-my-tv- , UEI_001327.

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