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VIA EDIS

April 16, 2020

The Honorable Lisa R. Barton
Secretary to the Commission
U.S. International Trade Commission
500 E Street, S.W., Room 112
Washington, D.C. 20436

Re: *In the Matter of Certain Electronic Devices, Including Streaming Players, Televisions, Set Top Boxes, Remote Controllers, and Components Thereof,*

Dear Secretary Barton:

Enclosed for filing, please find documents in support of a request by Universal Electronics Inc., (“Complainant”) that the U.S. International Trade Commission institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, concerning certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof. There is no confidential business information contained in the complaint itself, but we have included a separate letter requesting confidential treatment of certain exhibits included with this filing.

On March 16, 2020, the Commission provided “notice that it is temporarily waiving and amending certain of the Commission’s rules that required the filing of paper copies, CD-ROMS, and other physical media in section 337 investigations to address concerns about COVID-19.” International Trade Commission, Temporary Changes to Filing Procedures, Federal Register Vol. 85, No. 54 (March 19, 2020). Specifically, the Commission approved the temporary amendment of various rules “to permit parties to file section 337 complaints, exhibits, attachments, and appendices, electronically.” *Id.* Accordingly, Complainant’s filing only contains electronic exhibits. Complainant confirms that it will serve copies of the Complaint and all associated exhibit upon institution of this investigation on all Respondents and other entities consistent with 19 CFR 201.

Complainant’s submission via EDIS includes the following documents:

1. One (1) electronic copy of Complainant’s Verified Complaint, pursuant to Commission Rule 210.8(a)(1)(i).

2. One (1) electronic copy of the public exhibits to the Verified Complaint, pursuant to Commission Rules 210.8(a)(1)(i) and 210.12(a)(9).
3. One (1) electronic copy of the confidential exhibits to the Verified Complaint, pursuant to Commission Rules 201.6(c) and 210.8(a)(1)(ii).
4. One (1) electronic copy of certified versions of the Asserted Patents pursuant to Commission Rule 210.12(a)(9)(i).
5. One (1) electronic copy of certified versions of the assignment of the Asserted Patents, pursuant to Commission Rules 210.12(a)(9)(ii).
6. One (1) electronic copy of certified versions of the U.S. Patent and Trademark Office prosecution history¹ for each Asserted Patent, pursuant to Commission Rules 210.12(c)(i).
7. One (1) electronic copy of each patent and applicable pages of each technical reference mentioned in the prosecution history of each Asserted Patent, pursuant to Commission Rules 210.12(c)(ii).
8. One (1) electronic copy of a letter and certification requesting confidential treatment for the information contained in Confidential Exhibits 38C, 44C, 49C, 50C, 51C, 52C, 53C, 124C pursuant to Commission Rules 201.6(b) and 210.5(d).
9. One (1) electronic copy of a statement on the Public Interest regarding the remedial order sought by the Complainant in the Verified Complaint, pursuant to Commission Rule 210.8(b).

Thank you for your attention to this matter. Please contact me with any questions regarding this filing.

Sincerely,



Adam D. Swain

*Counsel for Complainant
Universal Electronics Inc.*

¹ Complainant has ordered a certified copy of the file history for U.S. Pat. No. 10,593,196 and expects it to arrive in short order. Complainant will file the certified copy with the Commission promptly upon receipt.

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The Honorable Lisa R. Barton
Secretary to the Commission
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500 E Street, S.W., Room 112
Washington, D.C. 20436

Re: *In the Matter of Certain Electronic Devices, Including Streaming Players, Televisions, Set Top Boxes, Remote Controllers, and Components Thereof*, Inv. No. 337-TA- _____

Dear Secretary Barton:

Pursuant to Commission Rule 201.6, Complainant Universal Electronics Inc. respectfully requests confidential treatment of certain confidential business information contained in Confidential Exhibits 38C, 44C, 49C, 50C, 51C, 52C, 53C, and 124C filed herewith.

The information in the exhibits for which Complainant seeks confidential treatment consists of proprietary commercial information, including:

- (i) personal financial and other personal information that may not be public (Confidential Exhibits 38C, 44C, 124C)¹;
- (ii) a confidential list of licensees to the asserted patent (Confidential Exhibit 50C);
- (iii) confidential terms of a licensing agreements (Confidential Exhibits 49C, 51C, and 52C);
- (iv) proprietary financial data regarding Complainant's domestic investments (Confidential Exhibit 53C);

The proprietary information described herein qualifies as confidential business information under Commission Rule 201.6 because substantially-identical information is not available to the public, because the disclosure of this information would cause substantial competitive harm to Complainant and third parties, and because the disclosure of this information would likely impede the Commission's efforts and ability to obtain similar information in the future.

¹ Public versions of Exhibits 38, 44, and 124 have been submitted with the Complaint.

April 16, 2020
Page 2

Thank you for your attention. Please contact me with any questions regarding this request for confidential treatment.

Sincerely,

A handwritten signature in blue ink that reads "Adam D Swain". The signature is written in a cursive, flowing style.

Adam D. Swain

*Counsel for Complainant
Universal Electronics Inc.*

**U.S. INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**Certain Electronic Devices, Including
Streaming Players, Televisions, Set Top
Boxes, Remote Controllers, and
Components Thereof**

Investigation No. 337-TA-____

COMPLAINANT’S PUBLIC INTEREST STATEMENT

Complainant Universal Electronics Inc. (“UEI” or “Complainant”) submits this public-interest statement, as required by 19 C.F.R. § 210.8(b). As discussed below, the remedy sought against the Proposed Respondents, i.e., Roku, TCL, Hisense, and Funai¹ will not have an adverse effect on public health or welfare, competitive conditions in the U.S. economy, production of like or directly competitive articles in the United States, or U.S. consumers.

I. THE REQUESTED REMEDY WILL NOT HARM THE PUBLIC INTEREST

The Accused Products in this matter are Proposed Respondents’ streaming players, televisions, set top boxes, remote controllers, and related products that infringe the Asserted Patents. As a result, the requested remedy is directed only at those specific products manufactured by or on behalf of Respondents and sold for importation, imported, and/or sold after importation into the United States. Thus, the only potentially relevant public-interest inquiry is whether the exclusion of this discrete subset of articles, not streaming players, televisions, set top boxes, or remote controllers generally, necessitates the denial of Section 337 relief based on the statutory

¹ The Proposed Respondents are: (i) Roku, Inc., (“Roku”); (ii) TCL Electronics Holdings Limited, Shenzhen TCL New Technology Company Limited, TCL King Electrical Appliances (Huizhou) Company Limited, TTE Technology Inc., TCL Corp., TCL Moka, Int’l Ltd., TCL Overseas Marketing Ltd., TCL Industries Holdings Co., Ltd. and TCL Smart Device (Vietnam) Company, Ltd.(collectively, “TCL”); (iii) Hisense Co., Ltd., Hisense Electronics Manufacturing Company of America Corporation (doing business as Hisense USA), Hisense Import & Export Co. Ltd., Qingdao Hisense Electric Co., Ltd., and Hisense International (HK) Co., Ltd. (collectively, “Hisense”); and (iv) Funai Electric Company, Ltd., Funai Corporation, and Funai (Thailand) Co., Ltd. (collectively, “Funai”)

public-interest factors. As shown below, there are no public interest concerns implicated by this small subset of devices that would implicate public interest for at least three reasons.

First, the exclusion order would not exclude devices that specifically implicate the significant national security or public health issues upon which the ITC has precluded or reduced relief in the past.² Second, Respondents' Accused Products generally make up a minority of the U.S. market for streaming players, televisions, set top boxes, and remote controllers. Third, any demand gap felt by the exclusion order could be made up by UEI, UEI's customers, and/or the Proposed Respondents' competitors. UEI expands on these reasons below.

II. SPECIFIC PUBLIC-INTEREST INQUIRIES

A. The Commission has a Strong Public Interest in Protecting IP

The ITC has made clear that the public interest rests in the protection of intellectual-property rights ("IPR").³ That protection is to be denied in only limited situations.⁴ The question with respect to the public interest, then, is not whether a "balancing" of factors merely favors a remedy, but rather whether competing interests exist of so great a significance with regard to only the Accused Products that the strong public policy of protecting IPR must give way. As shown

² See *Certain Fluidized Supporting Apparatus*, Inv. Nos. 337-TA-182/188, Comm'n Op. (Oct. 5, 1984); *Certain Inclined-Field Acceleration Tubes*, Inv. No. 337-TA-67, Comm'n. Op. (Dec. 29, 1980); *Certain Automatic Crankpin Grinders*, Inv. No. 337-TA-60, Comm'n Op. (Dec. 17, 1979); see also *Personal Data & Mobile Communication Devices*, Inv. No. 337-TA-710, Comm'n Op., at 81 n.56 (Dec. 29, 2011) (stating that the ITC "does not believe that the mere fact that a technological field has been determined to provide benefits to the economy is sufficient to excuse infringement of a patent in that field").

³ See, e.g., *Certain Digital Television Prods. & Certain Prods. Containing Same & Methods of Using Same*, Inv. No. 337-TA-617, Comm'n Op., at 9 (Aug. 23, 2009) ("*Digital TV Products*").

⁴ See *Certain Baseband Processor Chips & Chipsets, Transmitter & Receiver (Radio) Chips, Power Control Chips, & Prods. Containing Same, Including Cellular Tel. Handsets*, Inv. No. 337-TA-543, Comm'n Op., at 153 (June 19, 2007) ("[T]he statute requires relief for an aggrieved patent holder, except in those limited circumstances in which the statutory public interest concerns are so great as to trump the public interest in enforcement of [IPR].")

below, any public interest concerns invoked by this investigation pales in comparison to this countervailing interest.

B. Exclusion of the Accused Products Would Not Implicate Public Health, Safety, or Welfare Concerns

The Accused Products do not invoke any specific public health, safety, or welfare concerns. Moreover, the general availability of streaming players, televisions, set top boxes, and/or remote controllers will not be affected, such that current customers can continue to use their existing devices.

C. Like Articles are Available to Satisfy Demand for Excluded Accused Products

Assuming an exclusion order is entered, the technologies embodied in the relevant infringed patents will continue to be available. Thus, any U.S. consumer with a desire for those technologies will have access to ample substitutes containing those features from UEI or UEI's licensees.

Regarding streaming players and set top boxes, Roku's competitors and/or UEI's licensees, would easily be able to fill any demand gap felt by the requested remedies, if any. As is readily apparent from Confidential Exhibit 50C to the Complaint, UEI has several licensees to the Asserted Patents thus ensuring both supply and competition in the U.S. market for streaming players and set top boxes.

Regarding televisions, the accused televisions are a small portion of the U.S. market for televisions. Accordingly, TCL, Hisense, Funai themselves, their competitors, and/or UEI's licensees, would easily be able to fill any demand gap felt by the requested remedies, if any. Further, as discussed above, UEI has several licensees to the Asserted Patents thus ensuring both supply and competition in the U.S. market for televisions.

Regarding remote controllers, the Accused Products include Roku's Voice Remote and the Enhanced Voice Remote. Again, these Accused Products represent a small portion of the U.S. market for remote controllers. UEI, UEI's licensees, or the Proposed Respondents' competitors would easily be able to fill any demand gap felt by the requested remedies, if any. For example, as shown in Confidential Exhibit 53C to the Complaint, UEI has the capability to fill any demand gap felt by the requested remedies related to remote controllers. Further, UEI has several licensees to the Asserted Patents thus ensuring both supply and competition in the U.S. market for remote controllers.

The availability of streaming players, televisions, set top boxes, and/or remote controllers from UEI, UEI's licensees, or the Proposed Respondents' competitors will ensure that, even after the requested remedy is issued, U.S. consumers will still have choices with respect to streaming players, televisions, set top boxes, and remote controllers. Thus, issuance of the requested remedy will not result in any shortage of streaming players, televisions, set top boxes, and/or remote controllers in the United States.⁵

D. There Is Sufficient Capacity to Replace Excluded Accused Products

There is no question that UEI, UEI's licensees, or other large market players have the capacity to replace the volume of Accused Products subject to the requested remedial orders within a commercially reasonable time. Thus, there is no indication that excluding the Accused Products will harm the public interest via unmet demand.⁶

⁵ See *Certain Agric. Tractors Under 50 Power Take-off Horsepower*, USITC Pub. 3026, Inv. No. 337-TA-380, Comm'n Op., at 34 (Mar. 1997) (concluding that orders at issue had limited economic impact due to considerable competition from other non-infringing goods).

⁶ See *Certain Optical Disk Controller Chips*, Inv. No. 337-TA-506, Comm'n Op., at 61 (Sept. 28, 2005) (issuing remedy where "there is no evidence that the U.S. demand for the covered products cannot be met by other entities, including the Complainants").

E. The Remedy Has No Relevant Public-Interest Impact on U.S. Consumers

As discussed above, even after the requested remedy is issued, customers may purchase and consumers will have access to streaming players, televisions, set top boxes, and/or remote controllers from numerous sources. Accordingly, the issuance of such relief will have no relevant public interest impact on U.S. consumers.⁷

III. CONCLUSION

For the foregoing reasons, no public-interest concerns preclude the issuance of the proposed remedy against the Proposed Respondents in this matter.

Dated: April 16, 2020

Respectfully submitted,

/s/ Adam D. Swain

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⁷ See *Digital TV Prods.*, Comm'n Op., at 15-16 (finding that any adverse effect on U.S. consumers resulting from remedy would be minimal, given the range of available products, and would not outweigh the benefit of protecting complainant's IPR).

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*Counsel for Complainant Universal
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**U.S. INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**Certain Electronic Devices, Including
Streaming Players, Televisions, Set Top
Boxes, Remote Controllers, and
Components Thereof**

Investigation No. 337-TA-____

**COMPLAINT UNDER SECTION 337 OF
THE TARIFF ACT OF 1930, AS AMENDED**

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3	Certified Copy of U.S. Patent No. 7,969,514
4	Certified Copy of U.S. Patent No. 10,600,317
5	Certified Copy of U.S. Patent No. 10,593,196
6	Certified Copy of U.S. Patent No. 9,716,853
7	Certified Copy of Assignment Record for U.S. Patent No. 9,911,325
8	Certified Copy of Assignment Record for U.S. Patent No. 7,589,642
9	Certified Copy of Assignment Record for U.S. Patent No. 7,969,514
10	Certified Copy of Assignment Record for U.S. Patent No. 10,600,317
11	Certified Copy of Assignment Record for U.S. Patent No. 10,593,196
12	Certified Copy of Assignment Record for U.S. Patent No. 9,716,853
13	Claim Chart Showing Infringement of U.S. Patent No. 9,911,325 by Roku
14	Claim Chart Showing Infringement of U.S. Patent No. 9,911,325 by TCL
15	Claim Chart Showing Infringement of U.S. Patent No. 7,589,642 by Roku
16	Claim Chart Showing Infringement of U.S. Patent No. 7,589,642 by TCL
17	Claim Chart Showing Infringement of U.S. Patent No. 7,589,642 by Roku, TCL, Hisense, and Funai
18	Claim Chart Showing Infringement of U.S. Patent No. 7,969,514 by Roku
19	Claim Chart Showing Infringement of U.S. Patent No. 7,969,514 by TCL
20	Claim Chart Showing Infringement of U.S. Patent No. 10,600,317 by Roku
21	Claim Chart Showing Infringement of U.S. Patent No. 10,600,317 by TCL
22	<i>Roku Smart Soundbar description and technical specification,</i> https://www.roku.com/products/audio/roku-smart-soundbar
23	<i>Roku Streaming Stick+ description and technical specification,</i> https://www.roku.com/products/streaming-stick-plus
24	<i>How do I set up my Roku enhanced remote to control my TV?,</i> https://support.roku.com/article/115013019828-how-do-i-set-up-my-roku-enhanced-remote-to-control-my-tv-
25	<i>TCL 43" Class 4-Series Roku Smart TV 43S425 description and technical specification,</i> https://www.tclusa.com/us/products/home-theater/4-series/tcl-43-class-4-series-4k-uhd-hdr-roku-smart-tv-43s425

26	<i>Roku Ultra description and technical specification,</i> https://www.roku.com/products/roku-ultra
27	<i>Connecting a Sound Bar to your TV using ARC,</i> https://support.tclusa.com/connecting-a-sound-bar-to-your-tv-using-arc
28	<i>My TCL Roku TV Remote is Not Working,</i> https://support.tclusa.com/televisions-troubleshooting/259100-my-tcl-roku-tv-remote-control-is-not-working
29	<i>Roku OS Software Release Notes,</i> https://support.roku.com/article/228844467-roku-os-software-release-notes
30	<i>Roku OS Release Notes,</i> https://developer.roku.com/docs/developer-program/release-notes/roku-os-release-notes.md
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71	<i>Introducing the Roku Streaming Stick+ and the new Roku streaming player lineup, plus Roku OS 8</i> , https://blog.roku.com/introducing-the-roku-streaming-stick-and-the-new-roku-streaming-player-lineup-plus-roku-os-8
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108	<i>Hisense Acquires Sharp America's Assets and Brand Name All Sharp TVs sold in the U.S. are made by Hisense,</i> https://www.lifewire.com/hisense-now-has-sharp-assets-1847076
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111	<i>Panasonic says to transfer Sanyo TV unit in U.S. to Funai Electric</i> , https://www.reuters.com/article/us-panasonic-tv/panasonic-says-to-transfer-sanyo-tv-unit-in-u-s-to-funai-electric-idUSKCN0IF03B20141026
112	<i>4000 series LED-LCD TV 32PFL4664/F7</i> , https://www.usa.philips.com/c-p/32PFL4664_F7/roku-tv-4000-series-led-lcd-tv
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Appendix	Description	Production Nos.
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C	Certified Copy of Prosecution History of U.S. Patent No. 7,589,642	UEITC00172-552
D	Copy of References Cited in Prosecution History of U.S. Patent No. 7,589,642	UEITC00553-652
E	Certified Copy of Prosecution History of U.S. Patent No. 7,969,514	UEITC00653-757
F	Copy of References Cited in Prosecution History of U.S. Patent No. 7,969,514	UEITC00758-779
G	Certified Copy of Prosecution History of U.S. Patent No. 10,600,317	UEITC06676-7308
H	Copy of References Cited in Prosecution History of U.S. Patent No. 10,600,317	UEITC01264-2394
I	Copy of Prosecution History of U.S. Patent No. 10,593,196 ¹	UEITC02395-2832
J	Copy of References Cited in Prosecution History of U.S. Patent No. 10,593,196	UEITC02833-5841
K	Certified Copy of Prosecution History of U.S. Patent No. 9,716,853	UEITC05842-6103
L	Copy of References Cited in Prosecution History of U.S. Patent No. 9,716,853	UEITC06104-6675

¹ U.S. Patent No. 10,593,196 issued on March 17, 2020. A certified copy of this patent's file history has been ordered and will be provided as soon as it is available.

I. INTRODUCTION

1. Universal Electronics Inc. (“UEI” or “Complainant”) files this complaint pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”), based on the unlawful importation into the United States, the sale for importation into the United States, and/or the sale within the United States after importation of certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof.

2. The Proposed Respondents are: (i) Roku, Inc., (“Roku”); (ii) TCL Electronics Holdings Limited, Shenzhen TCL New Technology Company Limited, TCL King Electrical Appliances (Huizhou) Company Limited, TTE Technology Inc., TCL Corp., TCL Moka, Int’l Ltd., TCL Overseas Marketing Ltd., and TCL Industries Holdings Co., Ltd., and TCL Smart Device (Vietnam) Company, Ltd.(collectively, “TCL”); (iii) Hisense Co., Ltd., Hisense Electronics Manufacturing Company of America Corporation (doing business as Hisense USA Corp.), Hisense Import & Export Co. Ltd., Qingdao Hisense Electric Co., Ltd., and Hisense International (HK) Co., Ltd. (collectively, “Hisense”); and (iv) Funai Electric Company, Ltd., Funai Corporation, and Funai (Thailand) Co., Ltd. (collectively, “Funai”)².

3. The Complaint is directed to the Proposed Respondents’ controllable devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof that infringe one or more of: claims of: U.S. Patent Nos. 9,911,325 (the “’325 Patent”), 7,589,642 (the “’642 Patent”), 7,969,514 (the “’514 Patent”), 10,600,317 (the “’317 Patent”), 10,593,196 (the “’196 Patent”), and 9,716,853 (the “’853 Patent”) (collectively, “the Asserted Patents”). The Roku Accused Products, TCL Accused Products, Hisense Accused Products, and Funai Accused Products (collectively, “the Accused Products”) include at least the products listed below:

² Collectively, Roku, TCL, Hisense, and Funai are referred to as the “Proposed Respondents.”

U.S. Patent No.	Asserted Claims	The Roku Accused Products
9,911,325	1, 2, 4, 6-9, 11-16	Roku's streaming players, including, but not limited to the following Roku products and models: Roku Ultra, Roku Ultra LT, Roku Express, Roku Express+, Roku Premier, Roku Premier+, Roku Streaming stick, Roku Streaming Stick+, Roku Streaming Stick+ HE, Roku Smart Soundbar, Roku 1, Roku 2, Roku 3, Roku 4, Model Nos.: 4670X, 4662X, 4661X, 4660X, 4640X, 4630X, 4620X, 4400X, 4230X, 4210X, 4200X, 3931X, 3930X, 3921X, 3920X, 3910X, 3900X, 3811X, 3810X, 3800X, 3710X, 3700X, 3600X, 3500X, 2720X, 2710X, 2700X, 2500X, 2450X, 2400X, and/or 9101R.
7,589,642	1-7, 20, 22-25	
7,969,514	1-6, 20	
10,600,317	1-11	
10,593,196	1, 3, 6-22	
9,716,853	1-3, 5-8	
7,589,642	12, 14, 19	For the '642 Patent the Roku Accused Products also include the Roku Voice Remote and the Roku Enhanced Voice Remote.

Table 1

U.S. Patent No.	Asserted Claims	The TCL Accused Products
9,911,325	1, 2, 4, 7, 8, 16	All of TCL's Roku TVs ³ , including, but not limited to the following TCL products and models: • 8 Series – Model Nos.: 75Q825, 65Q825 • 6 Series – Model Nos.: 75R615, 65R615, 55R615, 75R617, 65R617, 55R617, 55R625, 65R625 • 5 Series – Model Nos.: 43S525, 50S525, 55S525, 65S525, 43S517, 49S517, 55S517, 65S517, 43S515, 49S515, 55S515, 65S515 • 4 Series – Model Nos.: 75S425, 65S425, 55S425, 50S425, 49S425, 43S425, 75S423, 65S423, 55S423, 50S423, 43S423; 65S401, 55S401, 65S421, 55S421, 50S421, 43S421, 65S403, 55S403, 49S403, 43S403, 65S405, 55S405, 49S405, 43S405 • 3 Series – Model Nos.: 49S325, 43S325, 40S325, 32S325, 49S303, 43S303, 40S303, 49S305, 43S305, 40S305, 32S305, 28S305, 32S301, 32S321, 32S327
7,589,642	1-6, 22-25	
7,969,514	1-6, 20	
10,600,317	1, 4-11	
7,589,642	12, 14, 19	For the '642 Patent the TCL Accused Products also include the Roku Voice Remote and the Roku Enhanced Voice Remote.

Table 2

³ Roku TVs refers to all televisions with the Roku Operating System.

U.S. Patent No.	Asserted Claims	The Hisense Accused Products
9,911,325	1, 2, 4, 7, 8, 16	All of Hisense’s Roku TVs, including, but not limited to the following Hisense products and models: • R6 Series Model Nos.: 75R6E, 65R6E, 60R6E, 55R6E, 50R6E, 43R6E; • R7 Series Model Nos.: 65R7E, 55R7E, 50R7E, 43R7E; • R8 Series Model Nos.: 65R8F, 55R8F • R6070 Series Model Nos.: 55R6070E3 • R6270 Series Model Nos.: 70R6270F • R6290 Series Model Nos.: 70R6290F • R7050 Series Model Nos.: 65R7050E1 • R7070 Series Model Nos.: 75R7070E2 • H4030 Series Model Nos.: 43H4030F, 40H4030F, 32H4030F • H4 Series Model Nos.: 40H4F, 32H4F; • All Sharp branded Roku TVs, including, but not limited to Model Nos: LC-40LB601U, LC-50LBU711U, LC-55LBU711U, LC-24LB601U, LC-50LB601U, LC-32LB601U, LC-55LBU591U, LC-50LBU591U and LC-43LBU591U.
7,589,642	1-6, 22-25	
7,969,514	1-6, 20	
10,600,317	1, 4-11	
7,589,642	12, 14, 19	For the ’642 Patent the Hisense Accused Products also include the Roku Voice Remote and the Roku Enhanced Voice Remote.

Table 3

U.S. Patent No.	Asserted Claims	The Funai Accused Products
9,911,325	1, 2, 4, 7, 8, 16	All of Funai’s Roku TVs, including, but not limited to the following Funai products and models: • All Philips branded Roku TVs, including, but not limited to: ○ 4000 Series Model Nos.: 65PFL4864/F7, 55PFL4864/F7, 50PFL4864/F7, 40PFL4764/F7, 32PFL4764/F7, 32PFL4664/F7, 24PFL4664/F7 • All Magnavox branded Roku TVs, including, but not limited to: ○ Class 4K Ultra HD Model Nos.: 65MV379R/F7, 55MV379R/F7 ○ Class 1080P Model Nos.: 50MV349R/F7, 43MV349R/F7, ○ Class 720p Model Nos.: 32MV319R/F7 • All Sanyo branded Roku TVs, including, but not limited to:
7,589,642	1-6, 22-25	
7,969,514	1-6, 20	
10,600,317	1, 4-11	

U.S. Patent No.	Asserted Claims	The Funai Accused Products
		○ Class 4L Model Nos.: FW65R19F, FW55R70F ○ Class 2KL Model No.: FW40R49FC ○ Class LED Model No.: FW32R19F
7,589,642	12, 14, 19	For the '642 Patent the Funai Accused Products also include the Roku Voice Remote and the Roku Enhanced Voice Remote.

Table 4

4. A complete listing of all of the claims at issue in this investigation, with the independent claims bolded, is shown in Table 5 below. Table 5 further shows that the Asserted Patents comprise only three families.

U.S. Patent No.	Family	Asserted Claims
9,911,325	Mui	1 , 2-8, 9 , 11-16
7,589,642		1 , 2 , 3-7, 12 , 14, 19 , 20 , 22-25
7,969,514	Haughawout	1 , 2-6, 20
10,600,317		1 , 2-11
10,593,196	Arling	1 , 2-22
9,716,853		1 , 2-3, 5-8

Table 5

5. Upon information and belief, the Accused Products are manufactured and/or sold for importation into the United States, imported into the United States, and/or sold within the United States after importation by or on behalf of the Proposed Respondents.

6. An industry as required by 19 U.S.C. §§ 1337(a)(2) and (3) exists in the United States relating to articles protected by the Asserted Patents.

7. UEI seeks as relief, a permanent limited exclusion order prohibiting entry into the United States of the Proposed Respondents' infringing products. UEI also requests permanent cease and desist orders prohibiting the Proposed Respondents, or their parents, subsidiaries, related companies, other affiliates, or agents, from importing, admitting or withdrawing from a foreign

trade zone, marketing, advertising, demonstrating, warehousing inventory of, distributing, offering for sale, selling, transferring (except for exportation), licensing, repairing, programming, updating their infringing products.

8. UEI also requests that the Commission require an appropriate bond for any activities otherwise covered by the limited exclusion order and/or permanent cease and desist orders during the Presidential review period.

II. COMPLAINANT UEI

9. UEI is a 30-year old public company based in Scottsdale, Arizona. UEI is the technology leader in home entertainment and home automation control, winning numerous awards related to universal entertainment control processes and technology. Throughout its 30-year history, UEI has consistently prioritized investments in research and development that have allowed it to pioneer, patent, and perfect key technologies in the area of entertainment interaction and control. For example, UEI was the first to create the pre-programmed universal remote control, which allows one remote control to command numerous devices. When infrared (“IR”) technology was the dominant method of controlling televisions and accessories, UEI invested significant time and resources to develop a device control database that correlated certain IR control codes with certain brands and devices. As other forms of communication and control were implemented with TVs and accessories, such as HDMI and WiFi, UEI continued to innovate and improve how remote controls interface with a range of devices. As a result, UEI holds over 350 U.S. patents related to TV, home entertainment, and home control technologies and has many additional patent applications pending in the United States and jurisdictions throughout the world.

10. Since beginning in 1986, UEI has compiled an extensive device control code database that covers over one million individual device functions and approximately 8,600 individual consumer electronic equipment brand names, including virtually

all IR controlled set-top boxes, televisions, audio components, and digital video players, such as, Blu-Ray/-DVD and streaming media players. UEI's technology also includes other remote-controlled home entertainment devices and home automation control modules, as well as wired Consumer Electronics Control ("CEC") and wireless Internet Protocol ("IP") control protocols commonly found on many of the latest HDMI and internet connected devices. Many of the world's leading consumer electronics OEM brands and subscription broadcasting operators purchase or license UEI's control technologies.

A. QuickSet

11. One of UEI's flagship technologies is QuickSet, a product family dedicated to simplifying and automating the configuration and control of remote controls and home entertainment devices. *See* Exhibits 59-63. The Asserted Patents relate to features incorporated into the QuickSet product family.

12. UEI's proprietary QuickSet software automatically detects, identifies, and enables the appropriate control commands for home entertainment, automation, and air conditioning devices in the home. UEI's libraries are continuously updated with device control codes used in newly introduced AV and IoT devices. These control codes are captured directly from original remote-control devices or from the manufacturer's written specifications to ensure the accuracy and integrity of the database. UEI's proprietary QuickSet software and know-how permit UEI to offer a device control code database that is more robust and efficient than similarly priced products of UEI's competitors. UEI's goal is to provide universal control solutions that require minimal or no user set-up and deliver consistent and intuitive one-touch control of all connected content sources and devices. QuickSet may be embedded in an AV device, set-top box, or other host device, or delivered as a Cloud-based service to enable universal remote setup and control. *See* Exhibits 59, 60, 62.

13. QuickSet enables universal device control set-up using automated and guided on-screen instructions and a wireless two-way communication link between the remote and the QuickSet enabled device. QuickSet greatly simplifies the universal control set-up process and can enable other time saving features. QuickSet utilizes data transmitted over HDMI or IP networks to automatically detect various attributes of the connected device and downloads the appropriate control codes and functions into the remote control without the need for additional information from the user. The user does not need to know the brand or model number to set up the device in the remote.

14. Moreover, any compatible new device that is connected to a device using QuickSet is recognized. Consumers can quickly and easily set up their control interface to control multiple devices. Features in QuickSet address common consumer challenges in universal device control, such as mode confusion and input switching. With QuickSet, consumers switch easily between activities and reliably view their chosen content source with a single touch. QuickSet handles the device-specific control. A QuickSet user experience can be delivered via a tactile remote, touchscreen interface, on-screen graphical user interface (“GUI”) or voice-enabled system.

15. QuickSet is already deployed in over 150 million devices in the United States including set-top boxes, televisions, game consoles, smartphones, and tablets to enable effortless configuration and control of nearly any connected home entertainment device. Licensees of QuickSet include service providers such as Verizon, Comcast, AT&T, and Echostar Technologies, smart TV manufacturers such as Sony Corp. and its affiliates (collectively, “Sony”), Samsung Electronics Co., Ltd. (“Samsung”), and LG Electronics Inc; and game console manufacturers including Microsoft Corp. (“Microsoft”), which uses QuickSet on its Xbox One game system. *See, e.g., Exhibits 59, 60, 62.*

III. PROPOSED RESPONDENTS

A. Roku

16. On information and belief, Roku, Inc. (“Roku”) is a corporation duly organized and existing under the laws of Delaware, with a principal place of business located at 150 Winchester Circle, Los Gatos, CA 95032.

17. Upon information and belief, Roku designs, develops, manufactures, sells, imports into the United States, and sells within the United States after importation the Roku Accused Products further described herein.

18. Roku is a relative newcomer to home entertainment control. Despite a mutually successful previous business relationship with UEI, Roku decided to forgo licensing key UEI patented technologies that are prevalent in a number of Roku’s home entertainment products.

B. TCL

19. On information and belief, TCL Electronics Holdings Limited, formerly known as TCL Multimedia Holdings Limited, is a corporation duly organized under the laws of the Cayman Islands with a principal place of business located at 9 Floor, TCL Electronics Holdings Limited Building, TCL International E City, #1001 Zhongshan Park Road, Nanshan District, Shenzhen, Guangdong, 518067 P.R. China. Upon information and belief, TCL Electronics Holdings Limited also has a location located at 7/F, TCL Building, 22E Science Park East Avenue, Hong Kong Science Park, Shatin, New Territories, Hong Kong.

20. On information and belief, Shenzhen TCL New Technology Company Limited, is a corporation duly organized under the laws of the People’s Republic of China, with a principal place of business located at 5 Shekou Industrial Avenue Shenzhen, 518067, P.R. China. On information and belief, Shenzhen TCL New Technology Company Limited also has a location at TCL Base, No. 5, Nanhai Road, Nanshan District, Shenzhen, China 508067.

21. On information and belief, TCL King Electrical Appliances (Huizhou) Company Limited is a corporation duly organized under the laws of the People's Republic of China with a principal place of business located at 78 Zhongkai Development Zone Huizhou, 516006, P.R. China.

22. On information and belief, TTE Technology Inc., doing business as TCL USA and TCL North America, is a corporation duly organized under the laws of Delaware with a principal place of business located at 555 South Promenade Avenue Suite 103 Corona, CA 92879.

23. On information and belief, TCL Corp. is a corporation duly organized under the laws of the People's Republic of China with a principal place of business located at 9/F, TCL Industry Building, No. 6, Eling South Road Huicheng District, Huizhou, Guangdong, 516008, China. On information and belief, TCL Corp. also has operations at TCL Technology Building, 17 Huifeng 3rd Road, Zhongkai Hi-Tech Development District, Huizhou City, Guangdong Province. Upon information and belief TCL Corp. is a parent of TCL Electronics Holdings Ltd., TCL King Electrical Appliances (Huizhou) Co. Ltd., TCL Moka, Int'l Ltd., TCL Overseas Marketing Ltd., TCL Industries Holdings Co., TTE Technology Inc, and TCL Smart Device (Vietnam) Company, Ltd.

24. On information and belief, TCL Moka, Int'l Ltd. is a Chinese enterprise with a principal place of business located at 7/F Hong Kong Science Park, Bldg 22 E, 22 Science Park East Ave, Sha Tin Hong Kong and/or 13/F, TCL Tower, 8 Tai Chung Road Tsuen Wan, New Territories, Hong Kong.

25. On information and belief, TCL Overseas Marketing Ltd. is Chinese enterprise with a principal place of business located at 13/F, TCL Tower, 8 Tai Chung Road Tsuen Wan, New Territories, Hong Kong.

26. On information and belief, TCL Industries Holdings Co., Ltd. is Chinese enterprise with a principal place of business located at 13/F, TCL Tower, 8 Tai Chung Road Tsuen Wan, New Territories Hong Kong. On information and belief, TCL Industries Holdings Co., Ltd. is a parent of TCL Electronics Holdings Ltd., TCL King Electrical Appliances (Huizhou) Co. Ltd., TCL Moka, Int'l Ltd., and TCL Overseas Marketing Ltd., TTE Technology Inc., and TCL Smart Device (Vietnam) Company, Ltd.

27. On information and belief, TCL Smart Device (Vietnam) Company, Ltd. is Chinese enterprise with a principal place of business located at No. 26 VSIP II-A, Street 32, Vietnam Singapore Industrial Park II-A, Tan Binh Commune, Bac Tan Uyen District, Binh Duong Province, Vietnam.

28. On information and belief, TCL Electronics Holdings Limited, Shenzhen TCL New Technology Company Limited, TCL King Electrical Appliances (Huizhou) Company Limited, TTE Technology Inc., TCL Corp., TCL Moka, Int'l Ltd., TCL Overseas Marketing Ltd., TCL Industries Holdings Co., Ltd., and TCL Smart Device (Vietnam) Company, Ltd. (collectively, "TCL") are an interrelated group of companies which design, develop, manufacture, sell, import into the United States, and sell within the United States after importation the TCL Accused Products as further described below.

29. On information and belief, TCL designs, develops, manufactures, sells, imports into the United States, and sells within the United States after importation Roku TVs under multiple brands. Exhibits 129 and 132 contain importation records from ImportGenius (<https://www.importgenius.com/>) showing that TCL shipped Funai Accused Products, including Sanyo and Philips branded Roku TVs to Funai.

C. Hisense

30. On information and belief, Hisense Co., Ltd., is a corporation duly organized and existing under the laws of the People's Republic of China, with a principal place of business at Hisense Tower No. 17, Donghaixi Road, Qingdao, Shandong Province, 266071, P.R. China.

31. On information and belief, Hisense Electronics Manufacturing Company of America Corporation is a corporation duly organized and existing under the laws of the state of Georgia, with a principal place of business at 7310 McGinnis Ferry Road, Suwanee, Georgia 20024. On information and belief, Hisense Electronics Manufacturing Company of America Corporation formerly did business as Hisense USA Corporation, and continues to use the Hisense USA Corporation name in some capacities. For example, Hisense Electronics Manufacturing Company of America Corporation uses the name "Hisense USA" on the <https://www.hisense-usa.com/> website. Hisense Electronics Manufacturing Company of America Corporation also uses the name "Hisense USA Corp." on the labeling of the Hisense Accused Products.

32. On information and belief, Hisense International Co., Ltd. is a corporation duly organized and existing under the laws of the People's Republic of China, with a principal place of business at Hisense Tower, No.17 Donghaixi Road, Qingdao, Shandong Province, 266071 P.R. China.

33. On information and belief, Hisense Import & Export Co. Ltd., is a corporation duly organized and existing under the laws of the People's Republic of China, with a principal place of business at Hisense Tower No. 17, Donghaixi Road, Qingdao, Shandong Province, 266071, P.R. China.

34. On information and belief, Qingdao Hisense Electric Co., Ltd., is a corporation duly organized and existing under the laws of the People's Republic of China, with an address of No. 218, Qianwangang Road, Economic and Technological Development Zone, Qingdao, Shandong

Province 266555, P.R. China, which formerly did business under the name Hisense Electric Co., Ltd.

35. On information and belief, Hisense International (HK) Co., Ltd., is a corporation duly organized and existing under the laws of Hong Kong, with a principal place of business at Room 3101-3105, Singga Commercial Centre, No. 148 Connaught Road West, Hong Kong.

36. On information and belief, Hisense Co., Ltd., Hisense Electronics Manufacturing Company of America Corporation (doing business as Hisense USA), Hisense International Co., Ltd., Hisense Import & Export Co. Ltd., Qingdao Hisense Import & Export Co. Ltd., Qingdao Hisense Electric Co., Ltd., and Hisense International (HK) Co., Ltd., (collectively, “Hisense”) are an interrelated group of companies which design, develop, manufacture, sell, imports into the United States, and sell within the United States after importation the Hisense Accused Products as further described below.

37. On information and belief, Hisense designs, develops, manufactures, sells, imports into the United States, and sells within the United States after importation Roku TVs under multiple brands, including Hisense and Sharp. Exhibit 108.

D. Funai

38. On information and belief, Funai Electric Company, Ltd. is a corporation duly organized under the laws of Japan with a principal place of business at 7-7-1 Nakagaito, Daito City, Osaka 574-0013, Japan.

39. On information and belief, Funai Corporation, Inc. is a corporation duly organized under the laws of New Jersey with a principal place of business at 201 Route 17 North, Suite 903, Rutherford, NJ 07070. On information and belief, Funai USA is a wholly owned subsidiary of Funai Electric Company, Ltd.

40. On information and belief, Funai (Thailand) Co., Ltd. has a principal place of business at 835 Moo 18, Pakchong-Lumsompung Road, Tambon Chantuek, Amphur Pakchong, Nakhon Ratchasima, Thailand, 30130.

41. On information and belief, Funai Electric Company, Ltd., Funai Corporation, and Funai (Thailand) Co., Ltd. are an interrelated group of companies which designs, develops, manufactures, sells, imports into the United States, and sells within the United States after importation the Funai Accused Products as further described below.

42. On information and belief, Funai designs, develops, manufactures, sells, imports into the United States, and sells within the United States after importation Roku TVs under multiple brands, including Philips, Magnavox, and Sanyo. Exhibits 109-111.

IV. THE TECHNOLOGY AND ACCUSED PRODUCTS AT ISSUE

43. The Asserted Patents, described in more detail below, are a reflection of the breadth of UEI's extensive dedication and investment in the technology and development in the area of entertainment interaction and control.

44. Pursuant to 19 CFR § 210.10(b)(1) and 210(a)(12), the Accused Products include televisions, set-top boxes, remote control devices, human interface devices, streaming devices, and sound bars that incorporate the infringing technology.

A. The Roku Accused Products

45. The Roku Accused Products include all of Roku's streaming players such as the Roku Ultra and Streaming Stick+ depicted below.



Exhibit 26, <https://www.roku.com/products/roku-ultra>
Exhibit 23, <https://www.roku.com/products/streaming-stick-plus>

46. As an additional example, the Roku Accused Products include streaming players such as Roku's Smart Soundbar.



Exhibit 22, <https://www.roku.com/products/audio/roku-smart-soundbar>

47. The Roku Accused Products also include Roku remote controls such as Roku's Enhance Voice Remote and Voice Remote.



Exhibit 34, <https://www.roku.com/products/accessories/player>

48. A listing of the known Roku Accused Products is provided above in Table 1.

B. The TCL Accused Products

49. The TCL Accused Products include all of TCL's Roku TVs, including, but not limited to TCL's 8, 6, 5, 4, and 3 series Roku TVs. TCL's Roku TVs use Roku's operating system.

50. A listing of the known TCL Accused Products is provided above in Table 2.

51. An example, TCL's 75Q825 Roku Smart TV is shown below.



Exhibit 36, <https://www.tclusa.com/products/home-theater/8-series/tcl-75-class-8-series-4k-qlcd-hdr-roku-smart-tv-75q825>

52. As an additional example, a TCL's 43S425 Class 3-Series Roku Smart TV model is shown below.



Exhibit 25, <https://www.tclusa.com/us/products/home-theater/4-series/tcl-43-class-4-series-4k-uhd-hdr-roku-smart-tv-43s425>

53. The TCL Accused Products also include Roku remote controls such as Roku's Enhance Voice Remote and Voice Remote that are shipped with TCL's Roku TVs.



Exhibit 34, <https://www.roku.com/products/accessories/player>

C. The Hisense Accused Products

54. The Hisense Accused Products include Hisense's Roku TVs, including, but not limited to all of Hisense's R6, R7, R8, R6270, R6290, R7050, R7070, H4030, and H4 series Roku TVs. The Hisense Accused Products also include all Sharp branded Roku TVs. *See* Exhibit 108. Hisense's Roku TVs use Roku's operating system.

55. A listing of the known Hisense Accused Products is provided above in Table 3.

56. An example, R7 series model number 43R7E is shown below.



Exhibit 107, https://www.hisense-usa.com/televisions/all-tvs/43R7E_4k-uhd-hisense-roku-tv-with-hdr-42-5-diag

57. The Hisense Accused Products also include Roku remote controls such as Roku's Enhance Voice Remote and Voice Remote that are shipped with Hisense's Roku TVs.



Exhibit 34, <https://www.roku.com/products/accessories/player>

D. The Funai Accused Products

58. The Funai Accused Products include Funai's Roku TVs, including, but not limited to: (i) all Philips branded Roku TVs, including, but not limited to all 4000 series models; (ii) all Magnavox branded Roku TVs, including, but not limited to all class 4k, 1080P and 720P models; and (iii) all Sanyo branded Roku TVs, including, but not limited to all class 4L, class 2KL, and class LED models. Funai's Roku TVs use Roku's operating system.

59. A listing of the known Funai Accused Products is provided above in Table 4.

60. An example, Philips branded 4000 series Roku TV with model number 32PFL4664/F7 is shown below.



Exhibit 112, https://www.usa.philips.com/c-p/32PFL4664_F7/roku-tv-4000-series-led-lcd-tv

61. The Funai Accused Products also include Roku remote controls such as Roku's Enhance Voice Remote and Voice Remote that are shipped with Funai's Roku TVs.



Exhibit 34, <https://www.roku.com/products/accessories/player>

V. THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTION OF THE INVENTIONS PER 19 CFR 210.12(a)(9)(vi)⁴

A. Ownership of the Asserted Patents

62. UEI owns the entire right, title, and interest to the Asserted Patents. Certified copies of the assignments for the Asserted Patents are attached as Exhibits 7-12.

B. The Mui Patents

63. The '325 and '642 Patents are related and share a common specification. The '325 and '642 Patents are collectively referred to as the Mui Patents.

1. U.S. Patent No. 9,911,325

64. The '325 Patent, entitled "Relaying key code signals through a remote control device," issued on March 6, 2018, to inventor Daniel SauFu Mui. The '325 Patent issued from U.S. Patent Application Serial No. 15/153,905, filed on May 13, 2016, and expires on December 16, 2023.

65. The '325 Patent is a continuation of and claims the benefit of U.S. application Ser. No. 13/068,820, filed on May 21, 2011, which application is a continuation of and claims the benefit of U.S. application Ser. No. 12/462,526, filed on Aug. 4, 2009, which application is a continuation of and claims the benefit of U.S. application Ser. No. 10/737,029, filed on Dec. 16, 2003, now the '642 Patent discussed below.

66. A certified copy of the '325 Patent is attached as Exhibit 1.

⁴ All non-technical descriptions of the inventions herein are presented to give a general background of those inventions. Such statements are not intended to be used, nor should be used, for purposes of patent claim interpretation. UEI presents these statements subject to, and without waiver of, its right to argue that claim terms should be construed in a particular way, as contemplated by claim interpretation jurisprudence and the relevant evidence.

67. A copy of the prosecution history of the '325 Patent and copies of each reference cited in the '325 Patent and its prosecution history are included in Appendices A and B, respectively.

68. The '325 Patent has sixteen claims, two of which are independent claims. UEI is asserting the claims listed in Tables 1-6.

69. Per 19 CFR 210.12(a)(9)(vi), the following is a nontechnical description of the patented technology of the '325 Patent. The '325 Patent generally relates to remote control devices and, more specifically, to relaying key code signals through a remote control device to operate an electronic consumer device. Most households today possess multiple types of electronic consumer devices, such as televisions, stereo radios, digital video disk players, video cassette recorders, set-top cable television boxes and set-top satellite boxes. Therefore, it is common for a consumer who has multiple electronic devices to have multiple remote control devices. Consumers may find it inconvenient to operate their electronic devices using multiple remote control devices and consumers may wish to operate multiple electronic consumer devices using a single remote control device. The '325 Patent solves this problem by enabling a remote control device to control a selected one of multiple different electronic consumer devices without requiring the codeset associated with the selected electronic consumer device to be stored on the remote control device.

2. U.S. Patent No. 7,589,642

70. The '642 Patent, entitled "Relaying key code signals through a remote control device," issued on September 15, 2009, to inventor Daniel SauFu Mui. The '642 Patent issued from U.S. Patent Application Serial No. 10/737,029, filed on December 16, 2003, and expires on December 16, 2023.

71. A certified copy of the '642 Patent is attached as Exhibit 2.

72. A copy of the prosecution history of the '642 Patent and copies of each reference cited in the '642 Patent and its prosecution history are included in Appendices C and D, respectively.

73. The '642 Patent has twenty-five claims, eight of which are independent claims. UEI is asserting the claims listed in Tables 1-6.

74. Per 19 CFR 210.12(a)(9)(vi), the following is a nontechnical description of the patented technology of the '642 Patent. The '642 Patent generally relates to remote control devices and, more specifically, to relaying key code signals through a remote control device to operate an electronic consumer device. Most households today possess multiple types of electronic consumer devices, such as televisions, stereo radios, digital video disk players, video cassette recorders, set-top cable television boxes and set-top satellite boxes. Therefore, it is common for a consumer who has multiple electronic devices to have multiple remote control devices. Consumers may find it inconvenient to operate their electronic devices using multiple remote control devices and consumers may wish to operate multiple electronic consumer devices using a single remote control device. The '642 Patent solves this problem by enabling a remote control device to control a selected one of multiple different electronic consumer devices without requiring the codeset associated with the selected electronic consumer device to be stored on the remote control device.

C. The Haughawout Patents

75. The '514 and '317 Patents are related and share a common specification. The '514 and '317 Patents are collectively referred to as the Haughawout Patents.

1. U.S. Patent No. 7,969,514

76. The '514 Patent, entitled "System and method for simplified setup of a universal remote control," issued on June 28, 2011, to inventors Joseph Lee Haughawout and Patrick H.

Hayes. The '514 Patent issued from U.S. Patent Application Serial No. 12/768,325, filed on April 27, 2010, and expires on September 5, 2026.

77. The '514 Patent claims the benefit is a continuation of U.S. application Ser. No. 11/515,962, filed on Sep. 5, 2006, which application claims the benefit of U.S. Provisional Application Ser. No. 60/715,229 filed on Sep. 8, 2005.

78. A certified copy of the '514 Patent is attached as Exhibit 3.

79. A copy of the prosecution history of the '514 Patent and copies of each reference cited in the '514 Patent and its prosecution history are included in Appendices E and F, respectively.

80. The '514 Patent has twenty claims, four of which are independent claims. UEI is asserting the claims listed in Tables 1-6.

81. Per 19 CFR 210.12(a)(9)(vi), the following is a nontechnical description of the patented technology of the '514 Patent. Manufacturers typically provide a remote control with an appliance, such as a television, or DVR, and, as such, different appliance types of different manufacturers are often commanded with different remote controls. To minimize the number of individual remote controls a user requires, universal remote controls have been developed. Prior art methods of setting up and configuring universal remote controls were demanding, exacting, and generally frustrating for many users. For example, documents containing the setup instructions and setup codes are often be lost, misplaced, or may be superseded as brand and/or model names evolve. The '514 Patent solves this problem by providing a system and method for enabling set up of a controlling device capable of controlling a plurality of appliances, via an interactive instruction set and associated programming.

2. U.S. Patent No. 10,600,317

82. The '317 Patent, entitled "System and method for simplified setup of a universal remote control," issued on March 24, 2020, to inventors Joseph Lee Haughawout and Patrick H. Hayes. The '317 Patent issued from U.S. Patent Application Serial No. 16/393,348, filed on April 24, 2019, and expires on September 5, 2026.

83. The '317 Patent claims the benefit of and is a Continuation of U.S. application Ser. No. 15/843,407 filed on December 15, 2017, which application claims the benefit of and is a continuation of U.S. application Ser. No. 15/226,742 filed on August 2, 2016, which application claims the benefit of and is a continuation of U.S. application Ser. No. 14/699,625 filed on April 29, 2015, which application claims the benefit of and is a continuation of U.S. application Ser. No. 14/036,435 filed on September 25, 2013, which application claims the benefit of and is a continuation of U.S. application Ser. No. 13/443,435 filed on April 10, 2012, which application claims the benefit of and is a continuation of U.S. application Ser. No. 13/026,768 filed on February 14, 2011, which application claims the benefit of and is a continuation of U.S. application Ser. No. 12/768,325 filed on April 27, 2010, now the '514 Patent, which claims the benefit and is a continuation of U.S. application Ser. No. 11/515,962, filed on Sep. 5, 2006, which application claims the benefit of U.S. Provisional Application Ser. No. 60/715,229 filed on Sep. 8, 2005.

84. A certified copy of the '317 Patent is attached as Exhibit 4.

85. A certified copy of the prosecution history of the '317 Patent and copies of each reference cited in the '317 Patent and its prosecution history are included in Appendices G and H, respectively.

86. The '317 Patent has eleven claims, one of which is independent claims. UEI is asserting the claims listed in Tables 1-6.

87. Per 19 CFR 210.12(a)(9)(vi), the following is a nontechnical description of the patented technology of the '317 Patent. Manufacturers typically provide a remote control with an appliance, such as a television, or DVR, and, as such, different appliance types of different manufacturers are often commanded with different remote controls. To minimize the number of individual remote controls a user requires, universal remote controls have been developed. Prior art methods of setting up and configuring universal remote controls were demanding, exacting, and generally frustrating for many users. For example, documents containing the setup instructions and setup codes are often be lost, misplaced, or may be superseded as brand and/or model names evolve. The '317 Patent solves this problem by providing a device for enabling set up of a controlling device capable of controlling a plurality of appliances, via an interactive instruction set and associated programming.

D. The Arling Patents

88. The '196 and '853 Patents are related and collectively referred to as the Arling Patents.

1. U.S. Patent No. 10,593,196

89. The '196 Patent, entitled "System and Method for Optimized Appliance Control," issued on March 17, 2020, to inventors Paul D. Arling. The '196 Patent issued from U.S. Patent Application Serial No. 16/197,748, filed on November 21, 2018, and expires on October 22, 2032.

90. The '196 Patent claims the benefit of and is a continuation of U.S. application Ser. No. 15/789,547, filed on Oct. 20, 2017, U.S. application Ser. No. 15/259,847, filed on Sep. 8, 2016, which application claims the benefit of and is a continuation of U.S. application Ser. No. 14/136,023, filed on Dec. 20, 2013, which application claims the benefit of and is a continuation-in-part of U.S. application Ser. No. 13/899,671, filed on May 22, 2013, which application claims the benefit of and is a continuation of U.S. application Ser. No. 13/657,176, filed on Dec. 22, 2012,

which application claims the benefit of U.S. Provisional Application No. 61/552,857, filed Oct. 28, 2011, and U.S. Provisional Application No. 61/680,876, filed Aug. 8, 2012.

91. A certified copy of the '196 Patent is attached as Exhibit 5.

92. A copy of the prosecution history of the '196 Patent and copies of each reference cited in the '196 Patent and its prosecution history are included in Appendices I and J, respectively.

93. The '196 Patent has twenty-two claims, one of which is independent claims. UEI is asserting the claims listed in Tables 1-6.

94. Per 19 CFR 210.12(a)(9)(vi), the following is a nontechnical description of the patented technology of the '196 Patent. Controlling devices, for example remote controls, for use in issuing commands to entertainment and other appliances, and the features and functionality provided by such controlling devices are well known in the art. At the time of invention, the recent proliferation of wireless and wired communication and/or digital interconnection methods such as WiFi, Bluetooth, HDMI, etc., amongst and between appliances has resulted in a corresponding proliferation of such communication protocols and command formats. Confusion, mis-operation, or other problems were common when users or manufacturers of a controlling device, such as a remote control, attempted to take advantage of the enhanced features and functionalities of these new control methods because prior generation appliances and adoption of such newer methods was inconsistent and fragmented. The '196 Patent solves this problem by providing methods for taking advantage of improved appliance control communication methods and/or command formats in a reliable manner which is largely transparent to a user and/or seamlessly integrated with legacy appliance control technology.

2. U.S. Patent No. 9,716,853

95. The '853 Patent, entitled "System and Method for Optimized Appliance Control," issued on July 25, 2017, to inventors Paul D. Arling, Ramzi Ammari, Arsham Hatambeiki, and

Graham Williams. The '853 Patent issued from U.S. Patent Application Serial No. 14/948,927, filed on November 23, 2017, and expires on October 22, 2032.

96. The '853 Patent claims the benefit of and is a continuation of U.S. application Ser. No. 13/933,877, filed on Jul. 2, 2013, which application claims the benefit of and is a continuation of U.S. application Ser. No. 13/657,176, filed on Oct. 22, 2012, which application claims the benefit of U.S. Provisional Application No. 61/552,857, filed Oct. 28, 2011, and U.S. Provisional Application No. 61/680,876, filed Aug. 8, 2012.

97. A certified copy of the '853 Patent is attached as Exhibit 6.

98. A copy of the prosecution history of the '853 Patent and copies of each reference cited in the '853 Patent and its prosecution history are included in Appendices K and L, respectively.

99. The '853 Patent has eight claims, one of which is independent claims. UEI is asserting the claims listed in Tables 1-6.

100. Per 19 CFR 210.12(a)(9)(vi), the following is a nontechnical description of the patented technology of the '853 Patent. Controlling devices, for example remote controls, for use in issuing commands to entertainment and other appliances, and the features and functionality provided by such controlling devices are well known in the art. At the time of invention, the recent proliferation of wireless and wired communication and/or digital interconnection methods such as WiFi, Bluetooth, HDMI, etc., amongst and between appliances has resulted in a corresponding proliferation of such communication protocols and command formats. Confusion, mis-operation, or other problems were common when users or manufacturers of a controlling device, such as a remote control, attempted to take advantage of the enhanced features and functionalities of these new control methods because prior generation appliances and adoption of such newer methods was inconsistent and fragmented. The '853 Patent solves this problem by providing methods for

taking advantage of improved appliance control communication methods and/or command formats in a reliable manner which is largely transparent to a user and/or seamlessly integrated with legacy appliance control technology. For example, the '853 Patent provides that when a device receives a request from a controlling device, *e.g.*, a remote control or smart phone, where the request is intended to have one or more target devices perform a functional operation(s). The device responds to the request by applying the optimum methodology to propagate the command(s) to each intended target appliance to cause each intended target appliance to perform the intended functional operation(s).

E. Foreign Counterparts of the Asserted Patents

101. When known, a list of each foreign patent, each foreign patent application, and each foreign application that has been denied, abandoned, or withdrawn corresponding to the Asserted Patents, with an indication of the prosecution status of each such foreign patent application, is included as Exhibit 58. UEI is aware of no other foreign patent, foreign patent application, or foreign application that has been denied, abandoned, or withdrawn that corresponds to the Asserted Patents.

F. Licensees Under the Asserted Patents

102. Any party other than UEI that may be licensed to one or more of the Asserted Patents is identified in Exhibit 50C.

VI. THE PROPOSED RESPONDENTS' UNLAWFUL AND UNFAIR ACTS

103. The Proposed Respondents have engaged in unfair trade practices, including the sale for importation, importation, and/or sale after importation of certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof that infringe the asserted claims of the Asserted Patents. These activities by the Proposed Respondents constitute a violation of Section 337.

104. UEI asserts that the Proposed Respondents directly infringe, literally or under the doctrine of equivalents, actively induce the infringement of, and/or contributorily infringe one or more asserted claims of the Asserted Patents. This complaint includes charts comparing claims of the Asserted Patents to exemplary products and photographs of the exemplary infringing devices and services. UEI asserts that the Accused Products infringe the claims set forth in Tables 1-4. Discovery may reveal that the Accused Products and/or Proposed Respondents infringe additional claims of the Asserted Patents.

105. The infringement allegations contained in this Complaint include the Proposed Respondents' (i) direct infringement of the asserted claims (literally and/or under the doctrine of equivalents); (ii) contributory infringement by knowingly selling products or components thereof without substantial noninfringing uses that are the same or especially made or especially adapted for use in an infringement of the asserted claims; and/or (iii) infringement by inducement by exhibiting an affirmative intent to cause direct infringement of the asserted claims.

106. The Proposed Respondents have been given notice of their infringement by, among other things, the filing and service of this Complaint and, as discussed in greater detail below, prior district court litigations.

107. The Proposed Respondents have induced, and continue to induce, others to infringe the asserted claims. The Proposed Respondents have taken active steps to encourage and facilitate direct infringement by others, such as sellers, distributors, and users of the Accused Products, with knowledge that infringement, such as by contracting for the distribution of the Accused Products, by marketing the Accused Products, and by creating and/or distributing user manuals, white papers, datasheets, marketing materials, and/or similar materials with instructions on using the Accused Products in an infringing manner. *See* Exhibits 22-36. The use of the Accused Products in their ordinary and customary fashion results in infringement of the asserted claims. *Id.*

108. The Proposed Respondents have contributorily infringed, and continue to contributorily infringe, the asserted claims. The Proposed Respondents have sold for importation into the United States, offered for sale within the United States, and/or imported into the United States Accused Products that embody a material part of the claimed inventions, that are known by Proposed Respondents to be specially made or specially adapted for use in an infringing manner and that are not staple articles or commodities suitable for substantial non-infringing use. *See* Exhibits 22-36.

A. Roku

109. The Roku Accused Products include the products listed in Table 1, as well as any Roku product that operates in a manner reasonably similar to the specific theory of infringement identified in the corresponding infringement claim charts.

110. Roku has been on notice of its infringement of each of the Asserted Patents prior to the filing of this Complaint.

111. Roku has been on notice of at least its infringement of the '325, '642, and '853 Patents since at least September 18, 2018. On September 18, 2018 Roku was served with a copy of the Complaint in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), which explicitly accused Roku of infringing the '325, '642, and '853 Patents.

112. Roku has been on notice of its infringement of the '514, '317, and '196 Patents since at least April 10, 2020, when UEI asserted the '514, '317, and '196 Patents against Roku in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:20-cv-00701 (C.D. Cal). On April 10, 2020, Roku was provided with a courtesy copy of the Complaint in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:20-cv-00701 (C.D. Cal), which explicitly accused Roku of infringing the '514, '317, and '196 Patents. Further, on April 15, 2020, Roku was formally served with a summons and

copy of the Complaint in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:20-cv-00701 (C.D. Cal).

1. Infringement of U.S. Patent No. 9,911,325

113. Exhibit 13 includes a chart comparing the asserted independent claims of the '325 Patent to the Roku Accused Products. Exhibit 13 shows that the Roku Accused Products infringe at least these claims. Exhibit 13 shows that Roku directly infringes the '325 Patent. Exhibit 13 also shows that Roku indirectly infringes the '325 Patent by inducing and/or contributing to Roku's customers and/or end users directly infringe the '325 Patent.

2. Infringement of U.S. Patent No. 7,589,642

114. Exhibit 15 and 17 each include a chart comparing the asserted independent claims of the '642 Patent to the Roku Accused Products. Exhibits 15 and 17 show that the Roku Accused Products infringe at least these claims. Exhibits 15 and 17 show that Roku directly infringes the '642 Patent. Exhibits 15 and 17 also show that Roku indirectly infringes the '642 Patent by inducing and/or contributing to Roku's customers and/or end users directly infringe the '642 Patent.

3. Infringement of U.S. Patent No. 7,969,514

115. Exhibit 18 includes a chart comparing the asserted independent claims of the '514 Patent to the Roku Accused Products. Exhibit 18 shows that the Roku Accused Products infringe at least these claims. Exhibit 18 shows that Roku directly infringes the '514 Patent. Exhibit 18 also shows that Roku indirectly infringes the '514 Patent by inducing and/or contributing to Roku's customers and/or end users directly infringe the '514 Patent.

4. Infringement of U.S. Patent No. 10,600,317

116. Exhibit 20 includes a chart comparing the asserted independent claim of the '317 Patent to the Roku Accused Products. Exhibit 20 shows that the Roku Accused Products infringe at least this claim. Exhibit 20 shows that Roku directly infringes the '317 Patent. Exhibit 20 also

shows that Roku indirectly infringes the '317 Patent by inducing and/or contributing to Roku's customers and/or end users directly infringing the '317 Patent.

5. Infringement of U.S. Patent No. 10,593,196

117. Exhibit 55 includes a chart comparing the asserted independent claim of the '196 Patent to the Roku Accused Products. Exhibit 55 shows that the Roku Accused Products infringe at least this claim. Exhibit 55 shows that Roku directly infringes the '196 Patent. Exhibit 55 also shows that Roku indirectly infringes the '196 Patent by inducing and/or contributing to Roku's customers and/or end users directly infringing the '196 Patent.

6. Infringement of U.S. Patent No. 9,716,853

118. Exhibit 48 includes a chart comparing the asserted independent claim of the '853 Patent to the Roku Accused Products. Exhibit 48 shows that the Roku Accused Products infringe at least this claim. Exhibit 48 shows that Roku directly infringes the '853 Patent. Exhibit 48 also shows that Roku indirectly infringes the '853 Patent by inducing and/or contributing to Roku's customers and/or end users directly infringing the '853 Patent.

7. Indirect Infringement Related to Roku TVs

119. As shown in sections VI.B – VI.D below, Roku induces and/or contributes to TCL, Hisense, and Funai's infringement of the '325, '642, '514, and '317 Patents. *See, e.g.*, Exhibits 14, 16, 17, 19, 21, 113-120. Additionally, sections VI.B – VI.D below and the exhibits cited therein show that Roku induces and/or contributes to TCL, Hisense, and Funai's customers and/or end users directly infringing the '325, '642, '514, and '317 Patents. *Id.*

120. Roku has induced, and continues to induce, others such as TCL, Hisense, Funai, and end users to infringe the asserted claims. Roku has taken active steps to encourage and facilitate direct infringement by others, such as TCL, Hisense, Funai, and end users of the Accused Products, with knowledge that infringement, such as by providing the Roku OS, contracting for

the distribution of the Roku TVs, by marketing the Roku TVs, and by creating and/or distributing user manuals, white papers, datasheets, marketing materials, and/or similar materials with instructions on using the Roku TVs in an infringing manner. The use of the Roku TVs in their ordinary and customary fashion results in infringement of the asserted claims. *See, e.g.*, Exhibits 14, 16, 17, 19, 21, 113-120.

121. Roku has also contributorily infringed, and continues to contributorily infringe, the asserted claims. For example, Roku provides the Roku OS, which embodies a material part of the claimed inventions, to TCL, Hisense, Funai, and others. It is known to Roku that the Roku OS is specially made or specially adapted for use in an infringing manner and that devices having the Roku OS is not staple articles or commodities suitable for substantial non-infringing use. *See, e.g.*, Exhibits 14, 16, 17, 19, 21, 113-120.

B. TCL

122. The TCL Accused Products include the products listed in Table 2, as well as any TCL product that operates in a manner reasonably similar to the specific theory of infringement identified in the corresponding infringement claim charts.

123. TCL has been on notice of its infringement of '325, '642, '514, and '317 Patents prior to the filing of this Complaint.

124. On December 24, 2018, UEI served its Disclosure of Asserted Claims and Infringement Contentions in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), which explicitly accused Roku TVs, such as the TCL Accused Products of infringing the '325 and '642 Patents. Further, on October 22, 2019, in that same case UEI served a subpoena on TCL seeking documents and testimony related to TCL's infringement of the '325 and '642 Patents.

125. On information and belief, TCL had actual knowledge of the existence and relevance of the '325 and '642 Patents, or was willfully blind to their existence and relevance, prior to the filing of this Complaint, through UEI's prior lawsuit against Roku, *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), or through UEI's subpoena to TCL in that case. Further, TCL knew or was willfully blind that the TCL Accused Products infringe the '325 and '642 Patents during normal operation based upon the allegations made in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal).

126. Further, TCL has been on notice of its infringement of the '325, '642, '514, and '317 Patents since at least April 10, 2020, when UEI asserted the '325, '642, '514, and '317 Patents against TCL in *Universal Electronics Inc. v. TCL Electronics Holdings Ltd. et al.*, Case No. 8:20-cv-00704 (C.D. Cal). On April 10, 2020, TCL Electronics Holdings Limited, f/k/a TCL Multimedia Holdings Limited, Shenzhen TCL New Technology Company Limited, TTE Technology Inc. d/b/a/ TCL USA and TCL North America, TCL Corp., TCL Moka, Int'l Ltd., TCL Overseas Marketing Ltd., TCL Industries Holdings Co., Ltd., TCL Smart Device (Vietnam) Company, Ltd., and TCL were formally served with a summons and copy of the Complaint in *Universal Electronics Inc. v. TCL Electronics Holdings Ltd. et al.*, Case No. 8:20-cv-00704 (C.D. Cal), which explicitly accused TCL of infringing '325, '642, '514, and '317 Patents). On April 14, 2020, TCL Overseas Marketing Ltd. was formally served with a summons and copy of the Complaint in *Universal Electronics Inc. v. TCL Electronics Holdings Ltd. et al.*, Case No. 8:20-cv-00704 (C.D. Cal). Moreover, courtesy copies of the Complaint in *Universal Electronics Inc. v. TCL Electronics Holdings Ltd. et al.*, Case No. 8:20-cv-00704 (C.D. Cal) were delivered to TTE Technology Inc. d/b/a/ TCL USA and TCL North America on April 10, 2020, TCL Smart Device (Vietnam) Company, Ltd. on April 13, 2020, TCL Moka, Int'l Ltd. on April 14, 2020, and TCL Industries Holdings Co., Ltd. on April 14, 2020.

1. Infringement of U.S. Patent No. 9,911,325

127. Exhibit 14 includes a chart comparing the asserted independent claims of the '325 Patent to the TCL Accused Products. Exhibit 14 shows that the TCL Accused Products infringe at least these claims. Exhibit 14 shows that TCL directly infringes the '325 Patent. Exhibit 14 also shows that TCL indirectly infringes the '325 Patent by inducing and/or contributing to TCL's customers and/or end users directly infringing the '325 Patent.

2. Infringement of U.S. Patent No. 7,589,642

128. Exhibits 16 and 17 each include a chart comparing the asserted independent claims of the '642 Patent to the TCL Accused Products. Exhibits 16 and 17 show that the TCL Accused Products infringe at least these claims. Exhibits 16 and 17 show that TCL directly infringes the '642 Patent. Exhibits 16 and 17 also show that TCL indirectly infringes the '642 Patent by inducing and/or contributing to TCL's customers and/or end users directly infringing the '642 Patent.

3. Infringement of U.S. Patent No. 7,969,514

129. Exhibit 19 includes a chart comparing the asserted independent claims of the '514 Patent to the TCL Accused Products. Exhibit 19 shows that the TCL Accused Products infringe at least these claims. Exhibit 19 shows that TCL directly infringes the '514 Patent. Exhibit 19 also shows that TCL indirectly infringes the '514 Patent by inducing and/or contributing to TCL's customers and/or end users directly infringing the '514 Patent.

4. Infringement of U.S. Patent No. 10,600,317

130. Exhibit 21 includes a chart comparing the asserted independent claim of the '317 Patent to the TCL Accused Products. Exhibit 21 shows that the TCL Accused Products infringe at least this claim. Exhibit 21 shows that TCL directly infringes the '317 Patent. Exhibit 21 also shows that TCL indirectly infringes the '317 Patent by inducing and/or contributing to TCL's customers and/or end users directly infringing the '317 Patent.

C. Hisense

131. The Hisense Accused Products include the products listed in Table 3, as well as any Hisense product that operates in a manner reasonably similar to the specific theory of infringement identified in the corresponding infringement claim charts.

132. Hisense has been on notice of its infringement of '325, '642, '514, and '317 Patents prior to the filing of this Complaint.

133. On December 24, 2018, UEI served its Disclosure of Asserted Claims and Infringement Contentions in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), which explicitly accused Roku TVs, such as the Hisense Accused Products of infringing the '325 and '642 Patents. Further, on October 24, 2019, in that same case UEI served a subpoena on Hisense seeking documents and testimony related to Hisense's infringement of the '325 and '642 Patents.

134. On information and belief, Hisense had actual knowledge of the existence and relevance of the '325 and '642 Patents, or was willfully blind to their existence and relevance, prior to the filing of this Complaint, through UEI's prior lawsuit against Roku, *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), or through UEI's subpoena to Hisense in that case. Further, Hisense knew or was willfully blind that the Hisense Accused Products infringe the '325 and '642 Patents during normal operation based upon the allegations made in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal).

135. Further, Hisense has been on notice of its infringement of the '325, '642, '514, and '317 Patents since at least April 10, 2020, when UEI asserted the '325, '642, '514, and '317 Patents against Hisense in *Universal Electronics Inc. v. Hisense Co., Ltd. et al.*, Case No. 8:20-cv-00696 (C.D. Cal). On April 15, 2020, Hisense was formally served with a summons and copy of the Complaint in *Universal Electronics Inc. v. Hisense Co., Ltd. et al.*, Case No. 8:20-cv-00696 (C.D.

Cal), which explicitly accused Hisense of infringing '325, '642, '514, and '317 Patents. Moreover, courtesy copies of the Complaint in *Universal Electronics Inc. v. Hisense Co., Ltd. et al.*, Case No. 8:20-cv-00696 (C.D. Cal.) were delivered to Hisense Electronics Manufacturing Company of America Corporation d/b/a Hisense USA on April 13, 2020 and to Hisense International (HK) Co., Ltd. on April 14, 2020.

1. Infringement of U.S. Patent No. 9,911,325

136. Exhibit 113 includes a chart comparing the asserted independent claims of the '325 Patent to the Hisense Accused Products. Exhibit 113 shows that the Hisense Accused Products infringe at least these claims. Exhibit 113 shows that Hisense directly infringes the '325 Patent. Exhibit 113 also shows that Hisense indirectly infringes the '325 Patent by inducing and/or contributing to Hisense's customers and/or end users directly infringing the '325 Patent.

2. Infringement of U.S. Patent No. 7,589,642

137. Exhibits 115 and 17 each include a chart comparing the asserted independent claims of the '642 Patent to the Hisense Accused Products. Exhibits 115 and 17 show that the Hisense Accused Products infringe at least these claims. Exhibits 115 and 17 show that Hisense directly infringes the '642 Patent. Exhibits 115 and 17 also show that Hisense indirectly infringes the '642 Patent by inducing and/or contributing to Hisense's customers and/or end users directly infringing the '642 Patent.

3. Infringement of U.S. Patent No. 7,969,514

138. Exhibit 117 includes a chart comparing the asserted independent claims of the '514 Patent to the Hisense Accused Products. Exhibit 117 shows that the Hisense Accused Products infringe at least these claims. Exhibit 117 shows that Hisense directly infringes the '514 Patent. Exhibit 117 also shows that Hisense indirectly infringes the '514 Patent by inducing and/or contributing to Hisense's customers and/or end users directly infringing the '514 Patent.

4. Infringement of U.S. Patent No. 10,600,317

139. Exhibit 119 includes a chart comparing the asserted independent claim of the '317 Patent to the Hisense Accused Products. Exhibit 119 shows that the Hisense Accused Products infringe at least this claim. Exhibit 119 shows that Hisense directly infringes the '317 Patent. Exhibit 119 also shows that Hisense indirectly infringes the '317 Patent by inducing and/or contributing to Hisense's customers and/or end users directly infringing the '317 Patent.

D. Funai

140. The Funai Accused Products include the products listed in Table 4, as well as any Funai product that operates in a manner reasonably similar to the specific theory of infringement identified in the corresponding infringement claim charts.

141. Funai has been on notice of its infringement of '325, '642, '514, and '317 Patents prior to the filing of this Complaint.

142. On December 24, 2018, UEI served its Disclosure of Asserted Claims and Infringement Contentions in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), which explicitly accused Roku TVs, such as the Funai Accused Products of infringing the '325 and '642 Patents. Further, on October 21, 2019, in that same case UEI served a subpoena on Funai seeking documents and testimony related to Funai's infringement of the '325 and '642 Patents.

143. On information and belief, Funai had actual knowledge of the existence and relevance of the '325 and '642 Patents, or was willfully blind to their existence and relevance, prior to the filing of this Complaint, through UEI's prior lawsuit against Roku, *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal), or through UEI's subpoena to Funai in that case. Further, Funai knew or was willfully blind that the Funai Accused Products

infringe the '325 and '642 Patents during normal operation based upon the allegations made in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal).

144. Further, Funai has been on notice of its infringement of the '325, '642, '514, and '317 Patents since at least April 10, 2020, when UEI asserted the '325, '642, '514, and '317 Patents against Funai in *Universal Electronics Inc. v. Funai Electric Company, Ltd. et al.*, Case No. 8:20-cv-00700 (C.D. Cal). On April 14, 2020, Funai was formally served with a summons and copy of the Complaint in *Universal Electronics Inc. v. Funai Electric Company, Ltd. et al.*, Case No. 8:20-cv-00700 (C.D. Cal), which explicitly accused Funai of infringing '325, '642, '514, and '317 Patents. Moreover, courtesy copies of the Complaint in *Universal Electronics Inc. v. Funai Electric Company, Ltd. et al.*, Case No. 8:20-cv-00700 (C.D. Cal) were delivered to Funai Electric Co., Ltd. and Funai Corporation Inc. on April 13, 2020. On April 14, 2020, Funai (Thailand) Co., Ltd. refused to accept delivery of a courtesy copy of the Complaint in *Universal Electronics Inc. v. Funai Electric Company, Ltd. et al.*, Case No. 8:20-cv-00700 (C.D. Cal).

1. Infringement of U.S. Patent No. 9,911,325

145. Exhibit 114 includes a chart comparing the asserted independent claims of the '325 Patent to the Funai Accused Products. Exhibit 114 shows that the Funai Accused Products infringe at least these claims. Exhibit 114 shows that Funai directly infringes the '325 Patent. Exhibit 114 also shows that Funai indirectly infringes the '325 Patent by inducing and/or contributing to Funai's customers and/or end users directly infringing the '325 Patent.

2. Infringement of U.S. Patent No. 7,589,642

146. Exhibits 116 and 17 each include a chart comparing the asserted independent claims of the '642 Patent to the Funai Accused Products. Exhibits 116 and 17 show that the Funai Accused Products infringe at least these claims. Exhibits 116 and 17 show that Funai directly infringes the '642 Patent. Exhibits 116 and 17 also show that Funai indirectly infringes the '642 Patent by

inducing and/or contributing to Funai's customers and/or end users directly infringing the '642 Patent.

3. Infringement of U.S. Patent No. 7,969,514

147. Exhibit 118 includes a chart comparing the asserted independent claims of the '514 Patent to the Funai Accused Products. Exhibit 118 shows that the Funai Accused Products infringe at least these claims. Exhibit 118 shows that Funai directly infringes the '514 Patent. Exhibit 118 also shows that Funai indirectly infringes the '514 Patent by inducing and/or contributing to Funai's customers and/or end users directly infringing the '514 Patent.

4. Infringement of U.S. Patent No. 10,600,317

148. Exhibit 120 includes a chart comparing the asserted independent claim of the '317 Patent to the Funai Accused Products. Exhibit 120 shows that the Funai Accused Products infringe at least this claim. Exhibit 120 shows that Funai directly infringes the '317 Patent. Exhibit 120 also shows that Funai indirectly infringes the '317 Patent by inducing and/or contributing to Funai's customers and/or end users directly infringing the '317 Patent.

VII. SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE

149. The Proposed Respondents sell for importation into the United States, import into the United States, and/or sell within the United States after importation certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof including, without limitation, the Accused Products.

A. Roku

150. The Roku Accused Products are manufactured abroad, sold for importation into the United States, imported into the United States, and/or sold after importation into the United States by Roku and/or its authorized agents. *See* Exhibits 37-44 and 67.

151. For example, Exhibit 38C at §B contains a receipt from Amazon.com showing the purchase of a Roku Ultra for delivery to an address in the United States. *See* Exhibit 37 at ¶3.

Exhibit 39 contains photograph(s) of this Roku Ultra and its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the Roku Ultra was imported into the United States. *Id.*

152. As an additional example, Exhibit 38C at §B contains a receipt from Amazon.com showing the purchase of a Roku Premiere for delivery to an address in the United States. *See* Exhibit 37 at ¶4. Exhibit 40 contains photograph(s) of this Roku Premier and its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the Roku Premiere was imported into the United States. *Id.*

153. As an additional example, Exhibit 38C at §B contains a receipt from Amazon.com showing the purchase of a Roku Streaming Stick+ for delivery to an address in the United States. *See* Exhibit 37 at ¶5. Exhibit 41 contains photograph(s) of this Roku Streaming Stick+ and its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the Roku Streaming Stick+ was imported into the United States. *Id.*

154. As an additional example, Exhibit 38C at §B contains a receipt from Amazon.com showing the purchase of a Roku Voice Remote for delivery to an address in the United States. *See* Exhibit 37 at ¶6. Exhibit 42 contains photograph(s) of this Roku Voice Remote and its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the Roku Voice Remote was imported into the United States. *Id.*

155. As an additional example, Exhibit 38C at §C contains a receipt from Amazon.com showing the purchase of a Roku Express HD for delivery to an address in the United States. *See* Exhibit 37 at ¶7. Exhibit 43 contains photograph(s) of this Roku Express HD and/or its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the Roku Express HD was imported into the United States. *Id.*

156. As an additional example, Exhibit 38C at §A contains a receipt from Roku.com showing the purchase of a Roku Enhanced Voice Remote for delivery to an address in the United States. *See* Exhibit 37 at ¶8. Exhibit 44 contains photograph(s) of this Roku Enhanced Voice Remote its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the Roku Enhanced Voice Remote was imported into the United States. *Id.*

157. As an additional example, Exhibit 38C at §G contains a receipt from Roku.com showing the purchase of a Roku Ultra, on April 2, 2020, after the issuance of all of the Asserted Patents, for delivery to an address in the United States. *See* Exhibit 37 at ¶9. Exhibit 124 contains photograph(s) of this Roku Ultra and its packaging, delivered to an address in the United States, indicating that Vietnam is the country of origin and that the Roku Ultra was imported into the United States. *Id.*

158. As an additional example and on information and belief, Exhibit 131 contains importation records from ImportGenius (<https://www.importgenius.com/>) showing that on March 28, 2020, Roku imported Roku Accused Products. Specifically, Exhibit 131 shows that on March 28, 2020, Roku imported over 3000 Roku Accused Products, including the Roku Smart Soundbar.

159. As an additional example and on information and belief, Exhibit 133 contains importation records from ImportGenius (<https://www.importgenius.com/>) showing that on April 12, 2020, Roku imported Roku Accused Products. Specifically, Exhibit 133 shows that on April 12, 2020, Roku imported over three separate shipments of “set top boxes”, which upon information and belief are Roku Accused Products.

B. TCL

160. The TCL Accused Products are manufactured abroad, sold for importation into the United States, imported into the United States, and/or sold after importation into the United States by TCL and/or its authorized agents. *See* Exhibits 37, 45, and 67.

161. For example, Exhibit 38C at §D contains a receipt from Amazon.com showing the purchase of a TCL 32S327 Roku TV for delivery to an address in the United States. *See* Exhibit 37 at ¶10. Exhibit 45 contains photograph(s) of this TCL 32S327 Roku TV and its packaging, delivered to an address in the United States, indicating that China is the country of origin and that the TCL 32S327 was imported into the United States. *Id.*

162. As an additional example, Exhibit 38C at §J contains a receipt from the Best Buy in Tustin, California showing the in-store purchase of a TCL 43S425 Roku TV. *See* Exhibit 37 at ¶11. Exhibit 67 contains photograph(s) of this TCL 43S425 Roku TV and its packaging, purchased in-store at the Best Buy in Tustin, California, indicating that China is the country of origin and that the TCL 43S425 Roku TV was imported into the United States. *Id.*

163. As an additional example, Exhibit 38C at §K contains a receipt from the Best Buy in Tustin, California showing the in-store purchase of a TCL 43S325 Roku TV on April 4, 2020, after the issuance of all of the Asserted Patents. *See* Exhibit 37 at ¶12. Exhibit 125 contains photograph(s) of this TCL 43S425 Roku TV and its packaging, purchased in-store at Best Buy in Tustin, California, indicating that Vietnam is the country of origin and that the TCL 43S425 Roku TV was imported into the United States. *Id.*

164. As an additional example, Exhibit 128 contains importation records from ImportGenius (<https://www.importgenius.com/>) showing that on April 1, 2020, TCL imported TCL Accused Products. Specifically, Exhibit 128 shows that on April 1, 2020, TTE Technology

Inc. imported over 10,000 TCL Accused Products (including model numbers 40S325, 32S325, 43S425, and 43S525) from TCL Smart Device (Vietnam) Company, Ltd.

165. As an additional example, Exhibit 132 contains importation records from ImportGenius (<https://www.importgenius.com/>) showing that on April 9, 2020, TCL and Funai imported Accused Products. Specifically, Exhibit 132 shows that on April 9, 2020, TCL Moka International Limited shipped to Funai Corporation, Inc. over 1644 Funai Accused Products (including Sanyo branded Roku TVs).

C. Hisense

166. The Hisense Accused Products are manufactured abroad, sold for importation into the United States, imported into the United States, and/or sold after importation into the United States by Hisense and/or its authorized agents. *See* Exhibits 38 and 46.

167. For example, Exhibit 38C at §F contains a receipt from the Best Buy in Tustin, California showing the in-store purchase of a Hisense 43R7E Roku TV. *See* Exhibit 37 at ¶13. Exhibit 46 contains photograph(s) of this Hisense 43R7E Roku TV and its packaging, purchased in-store at the Best Buy in Tustin, California, indicating that Mexico is the country of origin and that the Hisense 43R7E Roku TV was imported into the United States. *Id.*

168. As an additional example, Exhibit 38C at §I contains a receipt from Amazon.com showing the in-store purchase of a Hisense 43R7E Roku TV on April 2, 2020, after the issuance of all of the Asserted Patents. *See* Exhibit 37 at ¶14. Exhibit 126 contains photograph(s) of this Hisense 43R7E Roku TV and/or its packaging indicating that Mexico is the country of origin and that the Hisense 43R7E Roku TV was imported into the United States. *Id.*

D. Funai

169. The Funai Accused Products are manufactured abroad, sold for importation into the United States, imported into the United States, and/or sold after importation into the United States by Funai and/or its authorized agents. *See* Exhibits 38, 47.

170. For example, Exhibit 38C at §E contains a receipt from the Walmart Supercenter in Irvine, California showing the in-store purchase of a Philips 32PFL4664/F7 Roku TV. *See* Exhibit 37 at ¶15. Exhibit 47 contains photograph(s) of this Philips 32PFL4664/F7 Roku TV and its packaging, purchased in-store at the Walmart Supercenter in Irvine, California, indicating that Thailand is the country of origin and that the Philips 32PFL4664/F7 Roku TV was imported into the United States. *Id.*

171. As an additional example, Exhibit 38C at §H contains a receipt from the Walmart Supercenter in Irvine, California showing the in-store purchase of a Philips 32PFL4664/F7 Roku TV on April 2, 2020, after the issuance of all of the Asserted Patents. *See* Exhibit 37 at ¶16. Exhibit 127 contains photograph(s) of this Philips 32PFL4664/F7 Roku TV and/or its packaging indicating that Thailand is the country of origin and that the Philips 32PFL4664/F7 Roku TV was imported into the United States. *Id.*

172. As an additional example, Exhibit 130 contains importation records from ImportGenius (<https://www.importgenius.com/>) showing that on April 2, 2020, Funai imported Funai Accused Products. Specifically, Exhibit 130 shows that on April 2, 2020, Funai Corporation Inc. imported over 8000 Funai Accused Products (including Philips and Sanyo branded Roku TVs) from Funai (Thailand) Co., Ltd.

VIII. HARMONIZED TARIFF SCHEDULE NUMBERS

173. Upon information and belief, the Accused Products have been imported into the United States under at least the following Harmonized Tariff Schedule numbers: 8525, 8525.50, and 8525.50.30.

IX. RELATED LITIGATION

174. Pursuant to 19 CFR 210.12(a)(5), UEI provides the following statement regarding whether the Asserted Patents have been the subject of any court or agency litigation, and, if so, include a brief summary of such litigation. UEI is not aware of any other litigation regarding the Asserted Patents.

A. District Court Litigation

175. The Asserted Patents are currently asserted against the Proposed Respondents in District Court. The '325, '642, and '853 Patents are currently asserted against Roku in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:18-cv-01580 (C.D. Cal.). The District Court issued a claim construction ruling attached as Exhibit 69 and this litigation is currently stayed.

176. The '514, '317 and '196 Patents are currently asserted against Roku in *Universal Electronics Inc. v. Roku, Inc.*, Case No. 8:20-cv-00701 (C.D. Cal). This case was filed on April 9, 2020.

177. The '325, '642, '514, and '317 Patents are currently asserted against TCL in *Universal Electronics Inc. v. TCL Electronics Holdings Ltd. et al.*, Case No. 8:20-cv-00704 (C.D. Cal). This case was filed on April 9, 2020.

178. The '325, '642, '514, and '317 Patents are currently asserted against Hisense in *Universal Electronics Inc. v. Hisense Co., Ltd. et al.*, Case No. 8:20-cv-00696 (C.D. Cal). This case was filed on April 9, 2020.

179. The '325, '642, '514, and '317 Patents are currently asserted against Funai in *Universal Electronics Inc. v. Funai Electric Company, Ltd. et al.*, Case No. 8:20-cv-00700 (C.D. Cal.). This case was filed on April 9, 2020.

180. The '642 Patent was also previously asserted in *Universal Electronics Inc. v. Logitech Inc., et al.*, Case No. 8:11-cv-01056 (C.D. Cal.), *Universal Electronics, Inc. v. Universal Remote Control, Inc.*, Case No. 8:13-cv-00984 (C.D. Cal.), *Universal Electronics Inc v. Peel Technologies, Inc.*, Case No. 8:13-cv-01484 (C.D. Cal.), and *Universal Electronics, Inc v. Universal Remote Control, Inc. et al.*, Case No. 8:16-cv-01666 (C.D. Cal.).

181. The claim construction order from *Universal Electronics Inc v. Peel Technologies, Inc.*, Case No. 8:13-cv-01484 (C.D. Cal.) is attached as Exhibit 123.

B. *Inter Partes* Reviews

182. *Inter Partes* Reviews are pending against the '325, '642, and '853 Patents, but the *Inter Partes* Reviews do not include all of the claims asserted in this Complaint. *Roku, Inc. v. Universal Electronics Inc.*, IPR Nos. 2019-01614 (PTAB) ('352 Patent), 2019-01612 (PTAB) ('642 Patent), 2019-01615 (PTAB) ('853 Patent). Thus, the pending *Inter Partes* Reviews cannot resolve the dispute between the Parties.

183. In IPR No. 2019-01614 (PTAB) ('352 Patent) Roku petitioned for review of only claims 1-5 and 7 of the '325 Patent. Thus, the pending IPR will not address the Proposed Respondents' infringement or the technical prong of domestic industry as it relates to asserted claims 6, 8, 9, and 11-16.

184. In IPR No. 2019-01612 (PTAB) ('642 Patent) Roku has petitioned for review of only claims 1-4, 6, 8, 9, and 22-25 of the '642 Patent. Thus, the pending IPR will not address the Proposed Respondents' infringement or the technical prong of domestic industry as it relates to asserted claims 7 and 20.

185. Moreover, the validity of the '642 Patent was previously upheld in *Universal Remote Control, Inc. v. UEI Cayman Inc.*, IPR2014-01082 (PTAB). In that *Inter Partes* Review, the PTAB declined to institute because the petitioner failed to show that there was a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of the challenged claims.

186. In IPR No. 2019-01615 (PTAB) ('853 Patent) Roku has petitioned for review of only claims 1, 3, 5, and 7 of the '853 Patent. Thus, the pending IPR will not address the Proposed Respondents' infringement or the technical prong of domestic industry as it relates to asserted claims 2, 6, and 8.

X. DOMESTIC INDUSTRY

187. A domestic industry as required by Section 337(a)(2) and as defined by Section 337(a)(3) exists in the United States. UEI and UEI's licensees have made significant investments in plant and equipment, employed significant labor and capital, and made substantial investments in engineering, research and development related to products and services that embody the Asserted Patents.

188. For example, UEI has invested millions of dollars domestically to create, develop, test, and support QuickSet. *See* Exhibit 53C. QuickSet is UEI's software product family and the de facto solution for simplifying universal discovery, control, and interaction of devices within the home. *See* Exhibits 59-63. UEI's QuickSet solution is a widely deployed technology powering major consumer electronic brands including set-top boxes, televisions, gaming consoles, smartphones, and tablets to enable effortless configuration and control of nearly any connected home entertainment device as well as an expanding range of popular home automation devices. *Id.*

189. Further, UEI has invested millions of dollars domestically to create, develop, test, and support remote controls that practice the '642 Patent. *See* Exhibit 53C.

190. Additionally, the domestic activities and investments of UEI’s licensees, Samsung, Sony, and/or Microsoft independently satisfy the domestic industry requirement.

A. Technical Prong

1. Summary of the Domestic Industry Products

191. The following table provides a summary of the Asserted Patents and the claims being practiced by the Domestic Industry Products:

U.S. Patent No.	Domestic Industry Products ⁵				
	UEI DI Products	QuickSet Domestic Industry Products ⁶			
		Samsung DI Products		Sony DI Products	Microsoft DI Products
		Samsung IR/RF remotes	Samsung TVs		
9,911,325	-	-	1, 2, 4, 7-9, 11-13, 15, 16	1-5, 7-9, 11-13, 15, 16	1-9, 11-16
7,589,642	12, 14, 19	12, 14, 19	1-7, 20, 22-25	2, 5, 22-25	2, 5, 22-25
7,969,514	-	-	1-6, 20	1-6, 20	1-6, 20
10,600,317	-	-	1, 3-11	1, 4-11	1, 4-11
10,593,196	-	-	1-22	-	-
9,716,853	-	-	1-3, 5-8	-	-

Table 6

2. The QuickSet Domestic Industry Products

192. QuickSet is a widely deployed technology already in over 150 million devices in the United States including set-top boxes, televisions, game consoles, smartphones, and tablets to enable effortless configuration and control of nearly any connected home entertainment device. *See, e.g.*, Exhibits 59-63. For example, Licensees of QuickSet include service providers such as

⁵ “Domestic Industry Products” collectively refers to the QuickSet Domestic Industry Products and the UEI Domestic Industry Products.

⁶ “QuickSet Domestic Industry Products” collectively refers to the Samsung Domestic Industry Products, the Sony Domestic Industry Products, and the Microsoft Domestic Industry Products each of which is defined below.

Verizon, Comcast, AT&T and Echostar Technologies; smart TV manufacturers such as Sony, Samsung, and LG Electronics; and leading game console manufacturer Microsoft on its Xbox One game system. *See, e.g.*, Exhibits 59, 60, 62. As shown below, devices with Quickset practice the Asserted Patents.

193. For purposes of this Complaint, UEI submits that the Samsung UN55RU800FXZA television is representative of the Samsung televisions that practice the Asserted Patents. The Samsung Domestic Industry Products include Samsung televisions using Quickset, including, but not limited to model numbers: QN43Q60RAFXZA, QN49Q60RAFXZA, QN55Q60RAFXZA, QN65Q60RAFXZA, QN75Q60RAFXZA, QN82Q60RAFXZA, QN49Q70RAFXZA, QN55Q70RAFXZA, QN65Q70RAFXZA, QN75Q70RAFXZA, QN82Q70RAFXZA, QN85Q70RAFXZA, QN55Q80RAFXZA, QN65Q80RAFXZA, QN75Q80RAFXZA, QN82Q80RAFXZA, QN65Q90RAFXZA, QN75Q90RAFXZA, QN82Q90RAFXZA, QN55Q900RBFXZA, QN65Q900RBFXZA, QN75Q900RBFXZA, QN82Q900RBFXZA, QN85Q900RBFXZA, QN95Q900RBFXZA, UN43RU7100FXZA, UN50RU7100FXZA, UN55RU7100FXZA, UN58RU7100FXZA, UN65RU7100FXZA, UN75RU7100FXZA, UN49RU8000FXZA, UN55RU8000FXZA, UN58RU8000FXZA, UN65RU8000FXZA, UN75RU8000FXZA, UN82RU8000FXZA, UN55RU7300FXZA, UN65RU7300FXZA. Additionally, for purposes of this Complaint, UEI submits that the Samsung BN59-01266A/RMCSPM1AP1 remote is representative of the Samsung remote controllers that practice claims 12, 14, and 19 of the '642 Patent. For claims 12, 14, and 19 of the '642 Patent, the Samsung Domestic Industry Products include IR and RF remote controls, including, but not limited to model numbers: BN59-01312G/RMCSPM1AP1, BN59-01312A, and BN59-01315A. Information regarding the representative Samsung Domestic Industry Products such as photographs and specifications is included in Exhibits 88-93.

194. For purposes of this Complaint, UEI submits that the Sony XBR49X800G is representative of the Sony Domestic Industry Products. The Sony Domestic Industry Products include Sony televisions using Quickset, including, but not limited to model numbers: XBR55A8F, XBR65A8F, XBR55A8G, XBR65A8G, XBR65A9F, XBR55A9G, XBR65A9G, XBR77A9G, XBR-55X950G, XBR-65X950G, XBR-75X950G, XBR-85X950G, XBR-55X850G, XBR-65X850G, XBR-75X850G, XBR-85X850G, XBR-43X800H, XBR-49X800H, XBR-55X800H, XBR-65X800H, XBR-75X800H, XBR-85X800H, XBR43X800G, XBR49X800G, XBR55X800G, XBR65X800G, XBR75X800G, XBR-49X900F, XBR-55X900F, XBR-65X900F, XBR-75X900F, XBR-85X900F, XBR-65X850F, XBR-75X850F, XBR-85X850F. Information regarding the representative Sony Domestic Industry Products such as photographs and specifications is included in Exhibits 94-97.

195. For purposes of this Complaint, UEI submits that the Microsoft Xbox One X is representative of the Microsoft Domestic Industry Products that practice the Asserted Patents. The Microsoft Domestic Industry Products include Microsoft Xbox gaming systems using Quickset, including, but not limited to the: Xbox One, Xbox One S, Xbox One X. Information regarding the representative Microsoft Domestic Industry Products such as photographs and specifications is included in Exhibits 98-101.

196. Exhibits 72, 75, 76, 80, 83, 86 and 87 contain claim charts that applies an exemplary claim of each Asserted Patent to a representative Samsung Domestic Industry Product.

197. Exhibits 73, 77, 81, and 84 contain claim charts that applies an exemplary claim of the '325, '642, '514, and '317 Patents to a representative Sony Domestic Industry Product.

198. Exhibits 74, 78, 82, and 85 contain claim charts that applies an exemplary claim of the '325, '642, '514, and '317 Patents to a representative Microsoft Domestic Industry Product.

199. UEI knowingly and intentionally induces UEI's customers, *e.g.*, Samsung, Sony, and Microsoft, as well as the end users of the QuickSet Domestic Industry Products to directly practice claims of the Asserted Patents, by encouraging, instructing, and aiding one or more persons in the United States to manufacture, test, use, sell or offer to sell the QuickSet Domestic Industry Products that incorporate UEI's Quickset software in a manner that practices the Asserted Patents. Further, UEI's testing and use of the QuickSet Domestic Industry Products satisfies the technical prong of domestic industry.

200. Further, UEI knowing and intentionally contributes to UEI's customers, *e.g.*, Samsung, Sony, and Microsoft, as well as the end users of the QuickSet Domestic Industry Products to directly practice claims of the Asserted Patents. The components of the QuickSet Domestic Industry Products that perform the accused functionalities identified in the accompanying claim charts are not staple articles of commerce, and are not capable of substantial non-infringing use. To the contrary, these components are especially built to perform the accused functionalities. Further, UEI's testing and use of the QuickSet Domestic Industry Products satisfies the technical prong of domestic industry.

3. The UEI Domestic Industry Products

201. UEI is a world leader in the design, development, and manufacture easy-to-use, pre-programmed universal IR and radio frequency ("RF") remote controls. As shown, below many of UEI's IR and RF remote controls practice claims of the '642 Patent.

202. For purposes of this Complaint, UEI submits that the Dish Series 54.0 Remote, *e.g.*, model number Z32027BA00-00001, is representative of the UEI Domestic Industry Products that practice the '642 Patent. The UEI Domestic Industry Products include UEI's IR and RF remotes, including, but not limited to model numbers: R35602B00-00001, R35602BA00-00004, R35602BA00-00005, R11160B00-00004, R31160B00-00003, R31160BA00-00004,

R31160BA00-00005, R32068B00-00005, R32068B00-00032, R32068BA00-00051, R32068BA00-00055, R34269B00-00004, R34269B00-00009, R34269BA00-00012, R34351B00-00001, R34351B00-00003, R34352B00-00001, R34352B00-00002, R34352BA00-00003, R34352BA00-00005, R34352BA00-00007, R34352BA00-00008, R34352BA00-00009, R34354BA00-00001, Z34350B00-00001, Z34351B00-00002, Z34352BA00-00001, R33220B00-00004, R33220B00-00005, R34350B00-00003, R34351B00-00010, R34351BA00-00016, R34352BB00-00004, Z34350BA00-00002, Z34351BA00-00003, Z34351BA00-00005, R13013X00-00004, R13013XA00-00007, R33004X00-00002, R33006X00-00002, R33009X00-00001, R33009X00-00003, R33009XA00-00007, R33010X00-00001, R33010X00-00002, R33013X00-00003, R32027BA00-00010, R32027BA00-00013, Z32008M00-00001, Z32008M00-00002, Z32010M00-00001, Z32010M00-00002, Z32010MA00-00009, Z32010MA00-00010, Z32010MA00-00011, Z32015A00-00001, Z32015A00-00002, Z32015A00-00003, Z32015A00-00004, Z32015A00-00006, Z32024BA00-00002, Z32027BA00-00001, R12007M00-00006, R12021B00-00001, R32004B00-00001, R32010A00-00002, R32024B00-00008, R32024B00-00011, R32027B00-00001, R32027BA00-00002, R32027BA00-00003, R32027BA00-00004, R32027BA00-00007, R32027BA00-00008, R32027BA00-00009, R32027BA00-00012, R32040AA00-00007, R32140BA00-00001, and R32140BA00-00002.

203. Information regarding the representative UEI Domestic Industry Products such as photographs and specifications is included in Exhibits 102-105.

204. Exhibit 79 contains a claim chart that applies an exemplary claim of the '642 Patent to a representative UEI Domestic Industry Product.

205. UEI knowingly and intentional induces UEI's customers and the end users of the UEI Domestic Industry Products to directly practice claims of the '642 Patent, by encouraging,

instructing, and aiding one or more persons in the United States to manufacture, test, use, sell or offer to sell the UEI Domestic Industry Products in a manner that practices the Asserted Patents.

206. Further, UEI knowing and intentionally contributes to UEI's customers and the end users of the UEI Domestic Industry Products to directly practice claims of the '642 Patent. The components of the UEI Domestic Industry Products that perform the accused functionalities identified in the accompanying claim charts are not staple articles of commerce, and are not capable of substantial non-infringing use. To the contrary, these components are especially built to perform the accused functionalities.

B. Economic Prong

207. As required by Section 337, a domestic industry exists both through UEI's investments in the United States, as well as through each of its licensees' domestic investments either considered alone or in combination with UEI's investments. These investments include UEI and/or UEI's licensee's (i) significant investments in plant and equipment, (ii) significant employment of labor or capital, and/or (iii) substantial investment in the exploitation of the Asserted Patents through the engineering and research and development of products that practice the Asserted Patents. As detailed below and in Exhibit 53C, these investments are significant and substantial in any context. For example, the majority of UEI's engineering and research and development investments for UEI's advance platform products, such as QuickSet, are made in the United States.

1. UEI's Domestic Investments Relating to Products that Practice the Asserted Patents

a) Investments related to QuickSet Domestic Industry Products

208. UEI has made, and continues to make, significant and substantial investments in the United States to create and support QuickSet and products that use QuickSet. The confidential declaration of Ramzi Ammari, attached as Exhibit 53C, details the domestic plant, equipment,

labor, capital, engineering, and research & development related to the QuickSet and products that use QuickSet, *i.e.*, the QuickSet Domestic Industry Products.

209. UEI has expended considerable resources on plant and equipment, labor and capital, and engineering and research and development to support the QuickSet Domestic Industry Products in the United States. A discussion of both current and future representative expenditures is set forth below.

i) Significant Investment in Plant and Equipment

210. UEI has spent, and continues to spend, significant sums on its domestic facilities supporting the products that practice the Asserted Patents. *See* Exhibit 53C.

211. For example, UEI has several facilities in the United States, including Scottsdale, Arizona; Santa Ana, California; and San Mateo, California. *See* Exhibit 53C. UEI's employees at these sites perform a variety of tasks related to QuickSet and products that use QuickSet. *Id.* UEI has made, and continues to make, substantial investments in these facilities. *Id.*

212. UEI has also made, and continues to make, significant domestic investments in equipment used in the development, support, and maintenance of QuickSet and products that use QuickSet. *See* Exhibit 53C.

ii) Significant Employment of Labor and Capital

213. UEI has engaged in, and continues to engage in, significant employment of labor and capital in the United States. *See* Exhibit 53C.

214. UEI also invests significant amounts of capital in the research and development or ongoing product maintenance and support of QuickSet and products that use QuickSet. *See* Exhibit 53C.

iii) Substantial Investments in Engineering, Research, and Development

215. UEI has made, and continues to make, substantial investment in engineering, research, and development activities that support QuickSet and products that use QuickSet in the United States. *See* Exhibit 53C.

b) Investments related to the UEI Domestic Industry Products

216. UEI has spent, and continues to spend, significant sums on its domestic facilities supporting the UEI Domestic Industry Products that practice the '642 Patent. *See* Exhibit 53C.

iv) Significant Investment in Plant and Equipment

217. For example, UEI has several facilities in the United States, including Scottsdale, Arizona, Santa Ana, California, San Mateo, California, and Poway, California. *See* Exhibit 53C. UEI's employees at these sites perform a variety of tasks related to UEI Domestic Industry Products. *Id.* UEI has made, and continues to make, substantial investments in these facilities. *Id.*

218. UEI has also made, and continues to make, significant domestic investments in equipment used in the development, support, and maintenance of the UEI Domestic Industry Products. *See* Exhibit 53C.

v) Significant Employment of Labor and Capital

219. UEI has engaged in, and continues to engage in, significant employment of labor and capital in the United States. *See* Exhibit 53C.

220. As of the date of this Complaint, UEI has over 60 employees in the United States who are dedicated, or work in significant part, on domestic activities related to the UEI Domestic Industry Products.

221. UEI also invests significant amounts of capital in the research and development or ongoing product maintenance and support of the UEI Domestic Industry Products. *See* Exhibit 53C.

vi) Substantial Investments in Engineering, Research, and Development

222. UEI has made, and continues to make, substantial investment in engineering, research, and development activities that support the UEI Domestic Industry Products in the United States. *See* Exhibit 53C.

2. UEI's Licensee Samsung's Domestic Investments Relating to Products that Practice the Asserted Patents

223. UEI further relies upon the Samsung Domestic Industry Products to establish domestic industry. *Supra.*

224. The Samsung Domestic Industry Products practice the claims listed in Table 6. *Supra.*

225. UEI has licensed QuickSet to Samsung and authorized Samsung to practice the Asserted Patents when using QuickSet. *See* Exhibit 49C.

226. UEI's domestic industry based upon the investments of Samsung is comprised of, for example, the development, ready-for-market, testing, deployment, and support of the Samsung Domestic Industry Products in the United States.

227. On information and belief, Samsung has expended and continues to expend considerable resources on plant and equipment, labor and capital, and engineering and research and development to support the Samsung Domestic Industry Products in the United States.

a) Significant Investment in Plant and Equipment

228. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists in the United States with respect to the Samsung Domestic Industry Products via Samsung's significant investment in plant and equipment.

229. For example, in 2017 and 2018 Samsung spent billions of dollars on "property, plant and equipment." *See* Exhibit 54 at 16, 64-65. Upon information and belief, Samsung, or its

subsidiaries have several facilities in the United States, including for example, in Ridgefield Park, New Jersey, Pine Brook, New Jersey, San Jose, California, and Austin, Texas. Upon information and belief, some if not all of these domestic facilities are used to support the Samsung Domestic Industry Products.

b) Significant Employment of Labor and Capital

230. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the Samsung Domestic Industry Products via Samsung's significant employment of labor and/or capital.

231. Upon information and belief, Samsung's United States based personnel provide product planning, research and development, and engineering to help ensure that the Samsung Domestic Industry Products will work in the United States market. Additionally, upon information and belief, Samsung invests in United States based personnel who provide product packaging, testing, compliance, quality control related to the Samsung Domestic Industry Products. Further, upon information and belief, Samsung invests in United States based personnel who provide technical support, service, warranty, and repair related to the Samsung Domestic Industry Products.

232. On information and belief, Samsung invests significant sums in domestic labor and capital relating to the Samsung Domestic Industry Products at its many domestic facilities, set forth above. For example, Samsung routinely spends over 20 trillion Korean won (over 15 billion U.S. dollars) on wages and salaries. *See* Exhibit 54 at 79.

c) Substantial Investments in Engineering, Research, and Development

233. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(C) exists in the United States with respect to the Samsung Domestic Industry Products via Samsung's substantial investment in its engineering, research, and development directed to the

Samsung Domestic Industry Products that practice and the Asserted Patents for the reasons stated above. *See also* Exhibit 54.

3. UEI's Licensee Sony's Domestic Investments Relating to Products that Practice the Asserted Patents

234. UEI further relies upon the Sony Domestic Industry Products to establish domestic industry. *Supra*

235. The Sony Domestic Industry Products practice the claims listed in Table 6. *Supra*.

236. UEI has licensed QuickSet to Sony and authorized Sony to practice the Asserted Patents when using QuickSet. *See* Exhibit 51C.

237. UEI's domestic industry based upon the investments of Sony is comprised of, for example, the development, ready-for-market, testing, deployment, and support of the Sony Domestic Industry Products in the United States.

238. On information and belief, Sony has expended and continues to expend considerable resources on plant and equipment, labor and capital, and engineering and research and development to support the Sony Domestic Industry Products in the United States.

a) Significant Investment in Plant and Equipment

239. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists in the United States with respect to the Sony Domestic Industry Products via Sony's significant investment in plant and equipment.

240. For example, "Sony invests heavily in production facilities and equipment in its electronics businesses." Exhibit 56 at 8. Upon information and belief, Sony, or its subsidiaries, have several facilities in the United States, including for example, New York, New York, San Diego, California, and San Mateo, California. Upon information and belief, some if not all of these domestic facilities are used to support the Sony Domestic Industry Products.

b) Significant Employment of Labor and Capital

241. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the Sony Domestic Industry Products via Sony's significant employment of labor and/or capital.

242. Upon information and belief, Sony's U.S. based personnel provide product planning, research and development, and engineering to help ensure that the Sony Domestic Industry Products will work in the United States market. Additionally, upon information and belief, Sony invests in United States based personnel who provide product packaging, testing, compliance, quality control related to the Sony Domestic Industry Products. Further, upon information and belief, Sony invests in United States based personnel who provide technical support, service, warranty, and repair related to the Sony Domestic Industry Products.

243. On information and belief, Sony invests significant sums in domestic labor and capital relating to the Sony Domestic Industry Products at its many domestic facilities, set forth above.

c) Substantial Investments in Engineering, Research, and Development

244. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(C) exists established in the United States with respect to the Sony Domestic Industry Products via Sony's substantial investment in its engineering, research, and development directed to the Sony Domestic Industry Products that practice the Asserted Patents for the reasons stated above. *See also* Exhibit 56.

4. UEI's Licensee Microsoft's Domestic Investments Relating to Products that Practice the Asserted Patents

245. UEI further relies upon the Microsoft Domestic Industry Products to establish domestic industry. *Supra*

246. The Microsoft Domestic Industry Products practice the claims listed in Table 6. *Supra.*

247. UEI has licensed QuickSet to Microsoft and authorized Microsoft to practice the Asserted Patents when using QuickSet. *See* Exhibit 52C.

248. UEI's domestic industry based upon the investments of Microsoft is comprised of, for example, the development, ready-for-market, testing, deployment, and support of the Microsoft Domestic Industry Products in the United States.

249. On information and belief, Microsoft has expended and continues to expend considerable resources on plant and equipment, labor and capital, and engineering and research and development to support the Microsoft Domestic Industry Products in the United States.

a) Significant Investment in Plant and Equipment

250. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists established in the United States with respect to the Microsoft Domestic Industry Products via Microsoft's significant investment in plant and equipment.

251. For example, Microsoft owns or leases 32 facilities in the United States. Exhibit 57 at 27. Microsoft's domestic facilities include "15 million square feet of space located in King County, Washington that is used for engineering, sales, marketing, and operations, among other general and administrative purposes." *Id.* Microsoft's domestic facilities also include its corporate headquarters in Redmond, Washington, which comprises 10 million square feet of owned space and approximately five million square feet of leased space. *Id.* Microsoft also has domestic product development facilities. *Id.* Upon information and belief, some if not all of these domestic facilities are used to support the Microsoft Domestic Industry Products.

b) Significant Employment of Labor and Capital

252. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the Microsoft Domestic Industry Products via Microsoft's significant employment of labor and/or capital.

253. Upon information and belief, Microsoft's United States based personnel provide product planning, research and development, and engineering to help ensure that the Microsoft Domestic Industry Products will work in the United States market. Additionally, upon information and belief, Microsoft invests in United States based personnel who provide product packaging, testing, compliance, quality control related to the Microsoft Domestic Industry Products. Further, upon information and belief, Microsoft invests in United States based personnel who provide technical support, service, warranty, and repair related to the Microsoft Domestic Industry Products.

254. On information and belief, Microsoft invests significant sums in domestic labor and capital relating to the Microsoft Domestic Industry Products at its many domestic facilities, set forth above. For example, as of June 30, 2019 Microsoft employed 85,000 people in the United States. *See Exhibit 57 at 15.* These employees' primary job function included operations, manufacturing, distribution, product support, consulting, product research and development, sales, marketing, and general administration. *Id.*

c) Substantial Investments in Engineering, Research, and Development

255. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(C) exists in the United States with respect to the Microsoft Domestic Industry Products via Microsoft's substantial investment in its engineering, research, and development directed to the Microsoft Domestic Industry Products that practice the Asserted Patents for the reasons stated above. *See also Exhibit 57.*

256. For example, Microsoft's 10-k shows that its research and development costs in 2019 were \$16.9 billion, in 2018 were \$14.7 billion, and in 2017 were \$13 billion. *Id.* at 36. Further, in 2019 Microsoft's research and development costs increased \$2.2 billion or 15 percent driven in part by "Gaming," which upon information and belief includes the Microsoft Domestic Industry Products. *Id.* at 32.

XI. REQUEST FOR RELIEF

257. Complainant requests that the U.S. International Trade Commission:

- a. Institute an immediate investigation, pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to violations of Section 337 based upon the sale for importation into the United States, the importation into the United States, and/or the sale within the United States after importation of the Proposed Respondents' certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof that infringe one or more claims of the Asserted Patents;
- b. Determine that there has been a violation of Section 337 by each of the Proposed Respondents;
- c. Issue a permanent limited exclusion order, pursuant to 19 U.S.C. § 1337(d), prohibiting entry into the United States of all of the Proposed Respondents' certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof that infringe one or more claims of the Asserted Patents;
- d. Issue permanent cease and desist orders, pursuant to 19 U.S.C. § 1337(f), prohibiting the Proposed Respondents, or their parents, subsidiaries, related

companies, other affiliates, or agents, from importing, admitting or withdrawing from a foreign trade zone, marketing, advertising, demonstrating, warehousing inventory of, distributing, offering for sale, selling, transferring (except for exportation), licensing, repairing, programming, updating the Proposed Respondents' certain electronic devices, including streaming players, televisions, set top boxes, remote controllers, and components thereof that infringe one or more claims of the Asserted Patents; and

- e. Grant such other and further relief as the Commission deems just and proper based on the facts determined by the investigation and the authority of the Commission.

Dated: April 16, 2020

Respectfully submitted,

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**U.S. INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**Certain Electronic Devices, Including
Streaming Players, Televisions, Set Top
Boxes, Remote Controllers, and
Components Thereof**

Investigation No. 337-TA-____

VERIFICATION OF COMPLAINT

I, Richard A. Firehammer, Jr., do hereby declare and state:

1. I am Sr. Vice President and General Counsel at Universal Electronics Inc. and

I am duly authorized to verify this complaint;

2. I submit this verification in accordance with 19 C.F.R. §§ 210.4 and 210.12(a);

3. I have read the complaint and am aware of its contents;

4. The complaint is not being presented for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of the investigation or related proceeding;

5. To the best of my knowledge, information and belief founded upon reasonable inquiry, the claims and legal contentions of this complaint are warranted by existing law or a non-frivolous argument for the extension, modification, or reversal of existing law or the establishment of new law; and

6. To the best of my knowledge, information and belief founded upon reasonable inquiry, the allegations and other factual contentions in the complaint have evidentiary support

or, if specifically so identified, are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery.

Executed on April 16, 2020.



Richard A. Firehammer, Jr.