UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.
Petitioner

v.

UNIVERSAL ELECTRONICS INC.
Patent Owner

Case No. IPR2020-00952
U.S. Patent 9,716,853

DECLARATION OF DR. SAMUEL H. RUSS

Mail Stop "PATENT BOARD"
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

TABLE OF CONTENTS

I. INTRODUCTION 1
II. QUALIFICATIONS 1
III. MATERIALS CONSIDERED 4
IV. RELEVANT LEGAL STANDARDS 6
A. Level of ordinary skill 7
B. Claim construction 8
1. "for use in controlling each of at least a first functional operation and a second functional operation of the intended target appliance" 9
2. Other terms 11
C. Obviousness 12
V. BACKGROUND OF THE TECHNOLOGY 12
A. In-Home Entertainment System Topography Was Well-Known 15
B. Infrared Remote Controls and Commands Were Well-Known 18
C. Selecting Remote-Control Commands: Scanning, Receiving, and Dialog Boxes Were Well-Known 20
D. Remote-Control Conversion 27
1. IR Blasters 27
2. Firewire and CEA-931 30
3. HDMI CEC 32
4. Other Protocols 42
E. Devices with Multiple Communication Methods Were Well-Known 43
F. Lists, Tables, and Data Structures Were Well-Known 44
VI. THE CHALLENGED PATENT 51
A. The Described Invention 51
B. The Reviewed Claims from Roku's First Petition: 55
1. Independent Claim 1 55
2. Dependent Claim 3 57

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

3. Dependent Claim 5 57
4. Dependent Claim 7 57

VII. THE ASSERTED PRIOR ART 58

A. Overview of Chardon (EX1005) 58
B. Overview of the HDMI Specification (EX1010) 64
C. Overview of Stecyk (EX1006) 69

VIII. CHALLENGED CLAIMS ARE UNPATENTABLE 72

A. Ground 1: Claims 1, 2, 3, 5, 6, 7, and 8 are Rendered Obvious by Chardon in view of HDMI and Stecyk 73

1. Independent Claim 1 75

a) "[1.P] A universal control engine, comprising:" 75

b) "[1.1] a processing device; and a memory device having stored thereon instructions executable by the processing device, the instructions, when executed by the processing device, causing the universal control engine…" 77

c) "[1.2] to respond to a detected presence of an intended target appliance within a logical topography of controllable appliances which includes the universal control engine" 79

d) "[1.3] by using an identity associated with the intended target appliance to create a listing" 83

e) "[1.4] comprised of at least a first communication method and a second communication method different than the first communication method for use in controlling each of at least a first functional operation and a second functional operation of the intended target appliance and" 92

f) "[1.5] to respond to a received request from a controlling device intended to cause the intended target appliance to perform a one of the first and second functional operations" 95

g) "[1.6] by causing a one of the first and second communication methods in the listing of communication methods that has been associated

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

with the requested one of the first and second functional operations to be used to transmit to the intended target appliance a command for controlling the requested one of the first and second functional operations of the intended target appliance." 97

2. Dependent Claim 3 99

a) "[3.P] The universal control engine as recited in claim 1, wherein the instructions cause the universal control engine to" 99

b) "[3.1] initiate a detection of the presence of the intended target appliance within the logical topography of controllable appliances." 100

3. Dependent Claim 5 101

a) "[5.P] The universal control engine as recited in claim 1, wherein the instruction [sic] cause the universal control engine to cause" 101

b) "[5.1] a prompt to be displayed in a display associated with the universal control engine in response to a detected presence of the intended target appliance within a logical topography of controllable appliances, the prompt requesting a user to provide data indicative of the identity associated with the intended target appliance." 101

4. Dependent Claim 7 105

a) "[7.P] The universal control engine as recited in claim 1, wherein the instructions cause the universal control engine to" 105

b) "[7.1] initiate an interrogation of the intended target appliance to determine which of a plurality of communication methods are supported by the appliance for use in receiving a command for controlling at least one of the first and second functional operations and using results obtained from the interrogation to create the listing." 105

5. Dependent Claim 2 107

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

a) "The universal control engine as recited in claim 1, wherein the instructions cause the universal control engine to"....108

b) "respond to the request by causing a highest prioritized one of the first and second communication methods in the listing of communication methods that has been associated with the requested one of the first and second functional operations to be used to transmit to the intended target appliance a command for controlling the requested one of the first and second functional operations of the intended target appliance." 108

6. Dependent Claim 6....110

a) "The universal control engine as recited in claim 2, wherein the instructions cause the universal control engine to"....110

b) "use at least one characteristic associated with each of the plurality of communication methods in the listing to prioritize the first and second communication methods in the listing."....110

7. Dependent Claim 8....115

a) "[8.P] The universal control engine as recited in claim 1, wherein the instructions cause the universal control engine to"....115

b) "[8.1] initiate a transmission of a test communication for controlling at least one of the first and second functional operations of the intended target appliance via use of at least one test communication method and" 116

c) "[8.2] to cause the universal control engine to omit the at least one test communication method from the listing of communication methods for use in controlling the at least one of the first and second plurality of functional operations of the intended target appliance when the at least one test communication method fails to elicit a performance by the intended target appliance of

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.