UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC., Petitioner,

v.

UNIVERSAL ELECTRONICS, INC., Patent Owner.

> Case No. IPR2019-01613 U.S. Patent 8,004,389

DECLARATION OF DR. SAMUEL H. RUSS

Mail Stop "PATENT BOARD"

Patent Trial and Appeal Board U.S. Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

DOCKET

Roku EX1003

A L A R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

TABLE OF CONTENTS

I.	I	ntroduction	1
II.	Ç	Qualifications	1
III.	N	Iaterials considered	4
IV.	R	Relevant legal standards	5
	А.	Level of ordinary skill	6
	В.	Claim construction	7
	1. "	Key code"	8
	2. "Keystroke indicator signal"		9
	3. "Key code signal"		
	4. "	Key code generator device"	10
	S	Means for receiving a key code from said RF receiver and for sending aid key code to said IR transmitter such that said key code is modulated nto an IR carrier signal"	
	C.	Obviousness	.12
V.	C	Overview of the '389 patent	.12
	A.	Embodiment 1 – Transmitting a Key Code from a Key Code Generator to a Remote Control Device	.14
VI.	E	Background of the Technology	.17
	A.	Infrared Remote Controls and Controlling Electronic Consumer Devices Were Well-Known	.18
	В.	Controlling Electronic Devices Using Key Codes Was Well- Known	.25
	C.	Transmitting Key Codes From Electronic Devices Other Than Remote Controls Was Well-Known	.30
	D.	Transmitting Key Codes Via Modulating Key Codes Onto Carrier Signals Was Well-Known	.40
	E.	"Blasters" Were Well-known Devices Used to Transmit Key Codes According to Modulation Parameters	.46
	F.	Using a Remote Control as a Relay Device was Well-known	.50

VII.		nd 3 of the '389 Patent are Unpatentable ver Mishra In view of Dubil and Van Ee52
A	Overview of Mishra	
В	Overview of Dubil	
C	Overview of Van Ee	
Ľ	Independent Claim 2	
1.	[2.P]: "A method compri	sing:"62
2.	wherein the keystroke in	oke indicator signal from a remote control device, dicator signal indicates a key on said remote has selected;"
3.	3. [2.2]: "generating a key code within a key code generator device us keystroke indicator signal, wherein said key code is part of a codese controls an electronic consumer device;"	
4.	[2.3]: "modulating said key code onto a carrier signal, thereby generat a key code signal; and"	
5.	-	key code signal from said key code generator
6.	control device, wherein s	odeset using input from a user of said remote aid codeset is identified when said user stops mote control device."
E	prompted by autosca	od of claim 2, wherein said user is n functionality to press said key on said e."
VIII.	under 35 U.S.C. § 103 O	nd 7-15 of the '389 Patent are Unpatentable ver Mishra In view of Dubil75
A		
1.	[4.P]: "A remote control	device comprising:"75
2.	key code signal is genera	eives a first key code signal, wherein said first ted by modulating a key code onto a first carrier ignal falling within a radio frequency band;" 76
3.	second key code signal i second carrier signal, sai	transmits a second key code signal, wherein said s generated by modulating said key code onto a d second carrier signal falling within an infrared

- ii -

DOCKET

4.	wh cor	8]: "a keypad that includes a key that corresponds to said key code, erein said key code corresponds to a function of an electronic nsumer device, and wherein said remote control device is contained hin a single structure."
E	8.	Claim 7: "The remote control device of claim 4, wherein said key code is part of a codeset, and wherein said codeset is not stored on said remote control device."
C		Claim 8: "The remote control device of claim 4, wherein said modulating to generate said first key code signal is performed according to a first codeset, and wherein said remote control device stores no codeset other than said first codeset."
E) .	Claim 9: "The remote control device of claim 4, wherein said key code is part of a codeset that includes a plurality of key codes, wherein each one of said plurality of key codes corresponds to a different function of the electronic consumer device, and wherein no more than a single one of said plurality of key codes is present on said remote control device at any given time."
E	2.	Claim 10: "The remote control device of claim 4, further comprising: a microcontroller that determines that a user of said remote control device has selected said key and that modulates said key code onto said second carrier signal."
F		Claim 11: "The remote control device of claim 4, wherein said modulating said key code onto said first carrier signal is performed by an electronic consumer device taken from the group consisting of: a television, a stereo radio, a digital video disk player, a video cassette recorder, a personal computer, a set-top cable television box and a set-top satellite box."
C	ð.	Claim 12
1.	[12	.P]: "A remote control device, comprising:"
2.	[12.1]: "a keypad;"90	
3.	-	.2]: "an RF receiver;"90
4.	[12	.3]: "an IR transmitter; and"90
5.	-	.4]: "means for receiving a key code from said RF receiver and for ding said key code to said IR transmitter such that said key code is

DOCKET

	code modulated thereon being transmi by said IR transmitter, wherein said re		dulated onto an IR carrier signal, said IR carrier signal with said key e modulated thereon being transmitted from said remote control device said IR transmitter, wherein said remote control device is contained hin a single structure."
	Н	[.	Claim 13: "The remote control device of claim 12, wherein said key code is not stored on said remote control device immediately prior to said means receiving the key code."
	I.		Claim 14: "The remote control device of claim 12, wherein said key code is part of a codeset, and wherein said codeset is not stored on said remote control device."
	J.		Claim 15: "The remote control device of claim 12, wherein said means is a microcontroller."
IX.			OUND 3: Claim 5 of the '389 Patent Is Unpatentable under 35 S.C. § 103 Over Mishra In view of Dubil And Lambrechts
	Α		Overview of Lambrechts
	В	•	Claim 5: "The remote control device of claim 4, wherein said remote control device is taken from the group consisting of: a learning remote control device, a cell phone, an RF-enabled personal digital assistant (PDA), an RF-enabled wrist watch, and an RF-enabled keyboard."
X.			OUND 4: Claims 2 and 3 of the '389 Patent are Unpatentable ler 35 U.S.C. § 103 Over Caris In view of Skerlos And Van Ee
	А		Overview of Caris
	В	•	Overview of Skerlos
	С	•	Independent Claim 2
	1.	[2.F	P]: "A method comprising:"
	2.	whe]: "receiving a keystroke indicator signal from a remote control device, erein the keystroke indicator signal indicates a key on said remote trol device that a user has selected;"
	3.	key	[]: "generating a key code within a key code generator device using the stroke indicator signal, wherein said key code is part of a codeset that trols an electronic consumer device;"
	4.]: "modulating said key code onto a carrier signal, thereby generating ey code signal;"

DOCKET

DOCKET A L A R M



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.