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Paper 12
Date: April 1, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,
Petitioner,

v.

UNIVERSAL ELECTRONICS, INC.,
Patent Owner.

IPR2019-01613
Patent 8,004,389 B1

Before PATRICK M. BOUCHER, MINN CHUNG, and SHARON FENICK, *Administrative Patent Judges*.

BOUCHER, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

Roku, Inc. ("Petitioner") filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 2–5 and 7–15 of U.S. Patent No. 8,004,389 B1 (Ex. 1001, "the '389 patent"). Paper 2 ("Pet."). Universal Electronics, Inc. ("Patent Owner") filed a Preliminary

Response. Paper 6 ("Prelim. Resp."). Pursuant to our authorization, Paper 8, Petitioner filed a Reply and Patent Owner filed a Sur-Reply. Papers 10, 11. Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we grant the Petition and institute an *inter partes* review. The Board has not made a final determination regarding the patentability of any claim.

I. BACKGROUND

A. The '389 Patent

The '389 patent "relates generally to remote control devices and, more specifically, to relaying key code signals through a remote control device to operate an electronic consumer device." Ex. 1001, 1:15–18. Each of such key code signals "corresponds to a function of the selected electronic device, such as power on, power off, volume up, volume down, play, stop, select, channel up, channel down, etc." *Id.* at 1:33–36. A set of key codes associated with a particular electronic device is referred to as a "codeset." *Id.* at 1:31–33. The number of key code signals may be large, particularly when a single remote-control device is used to control multiple electronic devices. *Id.* at 1:46–54. Accordingly, the inventor of the '389 patent sought a system "for 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." *Id.* at 1:58–61.

Figure 1 of the '389 patent is reproduced below.

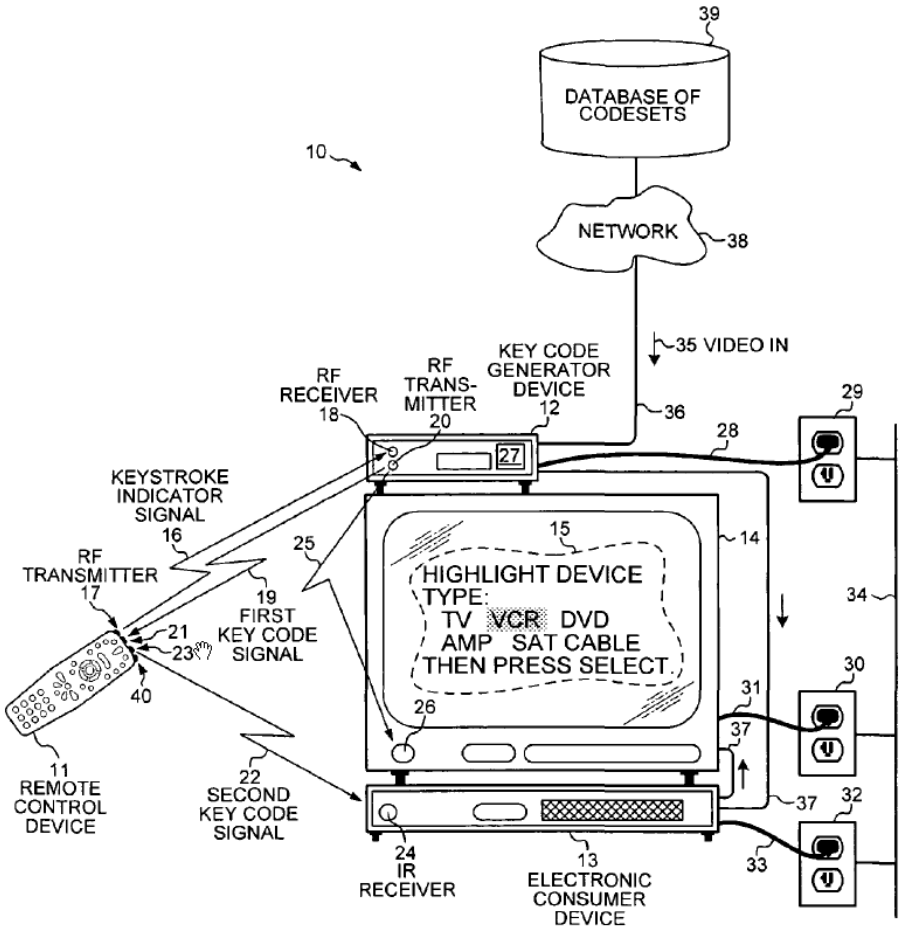


FIG. 1

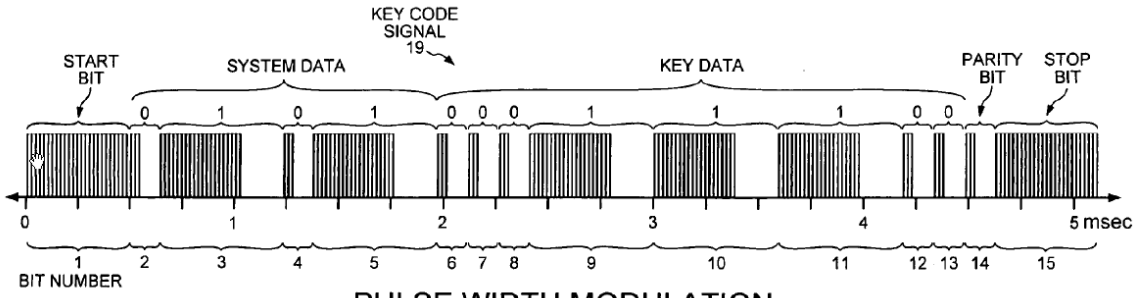
Figure 1 illustrates a system for relaying a key code through a remote control device to an electronic consumer device. *Id.* at 3:9–11. System 10 includes remote control device 11, key code generator device 12 (shown as a set-top box), first electronic consumer device 13 (shown as a video cassette recorder ("VCR")), and second electronic consumer device 14 (shown as a television set). *Id.* at 3:13–16, 3:26–29, 3:35–36. With remote control device 11, a user responds to on-screen displays 15 of television set 14, generated by key code generator device 12, "to step through a sequence of menu screens to identify the codeset corresponding to the device that is to be controlled." *Id.*

at 3:20–24, 3:35–41. For example, system 10 may, in this way, identify the appropriate codeset to enable remote control device 11 to communicate with VCR 13 and television set 14. *Id.* at 3:35–43.

An alternative embodiment uses an "autoscan functionality" in which the user is "prompted by successive screens on display 15 to push the power-on key of remote control device 11 multiple times." *Id.* at 8:1–7. As the user repeatedly presses the power-on key, "key code generator device 12 in turn generates key codes using different codesets until the electronic consumer device performs a desired function," such as turning on. *Id.* at 8:14–18. The user is prompted to stop pressing the power-on key once the user sees the desired function being performed by first electronic consumer device 13. *Id.* at 8:18–21. "When the user stops pressing the power-on key, then the key code generator device 12 identifies the codeset of the last transmitted key code to be the codeset used by the electronic consumer device." *Id.* at 8:23–26.

The '389 patent explains that, in some instances, key code generator device 12 is capable of communicating with remotely maintained database of codesets 39 over network 38, which may be the Internet. *Id.* at 8:40–43. A new codeset, such as may be associated with a new electronic consumer device introduced into the market, may thus be distributed from database 39 via network 38 and stored on a mass-storage hard disk within key code generator device 12. *Id.* at 8:43–51.

After generating a key code, key code generator device 12 modulates the key code onto a carrier signal, such as an RF signal, to generate "first key code signal 19." *Id.* at 4:43–45. Figure 5 of the '389 patent is reproduced below.



PULSE WIDTH MODULATION

FIG. 5

Figure 5 illustrates a twelve-bit key code modulated onto first key code signal 19 using pulse-width modulation. *Id.* at 5:7–8. Remote control device 11 receives first key code signal 19 on an RF transmission from key code generator device 12, and relays the key code to the appropriate electronic consumer device, such as VCR 13, in the form of second key code signal 22. *Id.* at 5:45–52. The electronic consumer device receives second key code signal 22, recovers the key code, and, if the key code is correct for the device, performs the function desired by the user. *Id.* at 6:5–9, 8:14–26.

B. Illustrative Claim

Independent claims 2, 4, and 12 are illustrative of the challenged claims and are reproduced below.

> 2. A method comprising:
>
> (a) receiving a keystroke indicator signal from a remote control device, wherein the keystroke indicator signal indicates a key on said remote control device that a user has selected;
>
> (b) generating a key code within a key code generator device using the keystroke indicator signal, wherein said key code is part of a codeset that controls an electronic consumer device;
>
> (c) modulating said key code onto a carrier signal, thereby generating a key code signal;
>
> (d) transmitting said key code signal from said key code generator device; and

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