UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,
Petitioner,

v.

UNIVERSAL ELECTRONICS, INC.,
Patent Owner.

IPR2019-01615
Patent 9,716,853 B2

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

FENICK, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

This is a Final Written Decision in an *inter partes* review challenging the patentability of claims 1, 3, 5, and 7 of Patent No. 7,895,532 B2 (Ex. 1001, "the '853 patent"). We have jurisdiction under 35 U.S.C. § 6(b)(4).

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Petitioner has the burden of proving unpatentability of a claim by a preponderance of the evidence. 35 U.S.C. § 316(e). Having reviewed the arguments of the parties and the supporting evidence, we find that Petitioner has not demonstrated by a preponderance of the evidence that claims 1, 3, 5, and 7 are unpatentable.

I. INTRODUCTION

A. Background

Roku, Inc. ("Petitioner") filed a Petition requesting *inter partes* review of claims 1, 3, 5, and 7 of the '853 patent. Paper 2 ("Pet."). Universal Electronics, Inc. ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp."). After we issued an order (Papers 7, 8) that granted authorization for additional briefing addressing the issue of discretionary denial under 35 U.S.C. § 325(d), Petitioner filed a Reply to the Preliminary Response (Paper 9) and Patent Owner filed a Sur-reply to the Reply (Paper 11). We instituted an *inter partes* review. Paper 12 ("Dec.").

During the trial, Patent Owner filed a Response (Paper 20, "PO Resp."), Petitioner filed a Reply (Paper 24, "Reply"), and Patent Owner filed a Sur-reply (Paper 25, "Sur-reply"). An oral hearing was held with the parties on January 25, 2021, and a copy of the transcript was entered into the record. Paper 32 ("Tr.").

B. Related Matters and Real Parties in Interest

Petitioner and Patent Owner each state that the '853 patent is involved in *Universal Electronics Inc. v. Roku, Inc.*, Case 8-18-cv-01580, in the Central District of California. Pet. 72; Paper 3 (Patent Owner's Mandatory Notices), 2. Patent Owner additionally identifies as related eight other *inter partes* review petitions filed by Petitioner requesting review of other patents owned by Patent Owner. Paper 3, 2.

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Petitioner identifies only itself as the real party in interest. Pet. 72.

Patent Owner also identifies only itself as the real party in interest. Paper 3,

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C. Overview of the '853 Patent

The '853 patent relates to a device that receives "a request from a

controlling device, such as a remote control, smart phone, or the like" to

"have one or more target devices perform one or more functional

operations." Ex. 1001, code (57). The device "responds to the request by

applying the optimum methodology to propagate one or more commands" to

the target device(s) to perform the functional operation(s). *Id.*

Figure 1 of the '853 patent, reproduced below, illustrates an

exemplary system in which a universal control engine (UCE) according to

the invention is used to issue commands to control various controllable
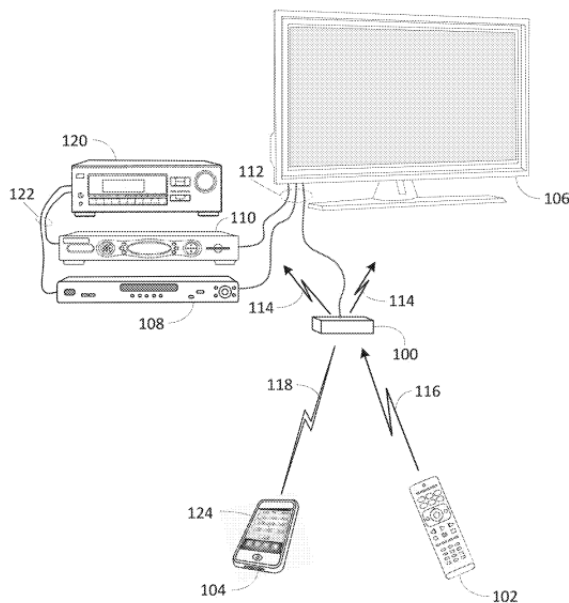
appliances. *Id.* at 3:39–41.

Figure 1

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In Figure 1, controllable appliances include television 106, cable set top box combined with digital video recorder 110, DVD player 108, and AV receiver 120. *Id.* at 3:41–44. Appliance commands are issued by UCE 100 in response to infrared ("IR") request signals 116 received from remote control device 102 or radio frequency ("RF") request signals 118 received from app 124 resident on smart device 104. *Id.* at 3:52–56. Transmission of commands from UCE 100 to the controllable appliances may take the form of wireless IR signals 114 or Consumer Electronic Control ("CEC") commands issued over wired HDMI interface 112 if available. *Id.* at 2:38–45, 3:58–4:4.

The '853 patent describes that the method, protocol, or medium for issuing commands to controllable appliances may vary by appliance and/or by function to be performed. *Id.* at 6:62–64, 7:5–7. "[I]n some instances a particular appliance may support receipt of an operational command via more than one path," such as via a CEC command or via an IR command. *Id.* at 7:8–12. A UCE may use a matrix including data cells, each corresponding to a specific command and a specific appliance, with the data content of the cell including "identification of a form of command/transmission to be used and a pointer to the required data value and formatting information for the specific command." *Id.* at 7:26–29, Fig. 7. Matrix 700 may contain a null entry if "a particular function is not available on or not supported by a specific appliance." *Id.* at 7:46–49. "In certain embodiments one or more secondary command matrices . . . may also be provisioned, allowing for the use of alternate command methods in the event it is determined by the UCE programming that a preferred command was unsuccessful." *Id.* at 7:42–46.

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Figure 13 of the '853 patent, reproduced below, illustrates an exemplary series of steps performed by a UCE in issuing a function command to an appliance. *Id.* at 3:29–31, 11:40–47.
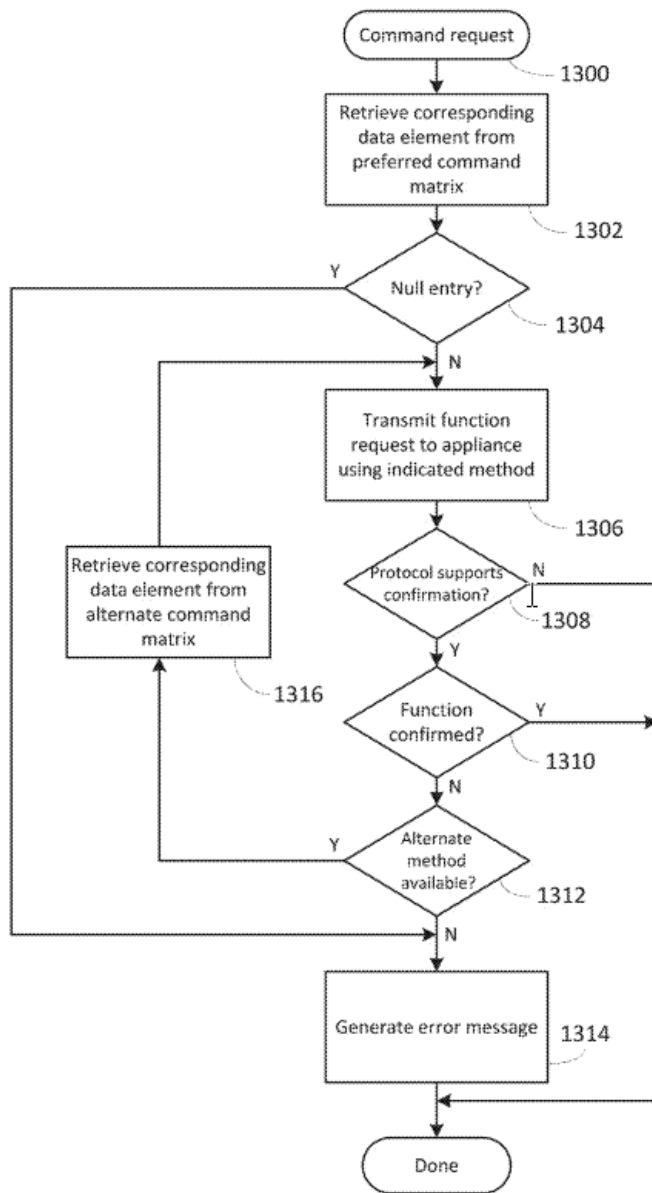

Figure 13

As shown in Figure 13, a command request is received (1300) and a corresponding data element, if one exists, is retrieved from a preferred

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command matrix and transmitted to the appliance (1302, 1304, 1306). *Id.* at

11:40–57, 12:4–10. In certain cases, when an expected confirmation of

successful transmission is not received (1308, 1310) and an alternate method

of issuing the command is available (1312), the data element from an

alternate command matrix is retrieved and transmitted (1316, 1306). *Id.* at

12:10–16, 12:21–35.

D. Illustrative Claims

Of the challenged claims, claim 1 is the sole independent claim, and

each of the remaining challenged claims depends directly from claim 1.

Claim 1 is reproduced below with bracketed notations, corresponding to

notations in the Petition, added for reference.

> 1. [1.P] A universal control engine, comprising:
> [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
> [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 [1.3] by
> using an identity associated with the intended
> target appliance to create a listing comprised of
> at least a first communication method and a
> second communication method different than
> the first communication method [1.4] for use in
> controlling each of at least a first functional
> operation and a second functional operation of
> the intended target appliance [1.5] and 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 [1.6] by causing a
> one of the first and second communication

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> 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.

Ex. 1001, 14:49–15:7.

E. Evidence Relied Upon

Reference		Date	Exhibit
Chardon et al. ("Chardon")	US 2012/0249890 A1	Oct. 4, 2012	1005
Stecyk	US 2009/0254500 A1	Oct. 8, 2009	1006
HDMI Licensing, LLC, High-Definition Multimedia Interface, Specification Version 1.3a (November 10, 2006) ("HDMI 1.3a")		2006	1010

Petitioner also relies upon the Declaration of Dr. Samuel H. Russ

(Ex. 1003).

F. Asserted Grounds

Petitioner asserts that the challenged claims are unpatentable on the

following grounds:

Claim(s) Challenged	35 U.S.C. §[1]	Reference(s)/Basis
1, 3, 5, 7	103(a)	Chardon
1, 3, 5, 7	103(a)	Chardon and HDMI 1.3a
1, 3, 5, 7	103(a)	Chardon and Stecyk
1, 3, 5, 7	103(a)	Chardon, HDMI 1.3a, Stecyk

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[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125
Stat. 284, 285–88 (2011), amended 35 U.S.C. § 103. Because the
application from which the '853 patent claims priority through a chain of
continuation applications to an application filed before March 16, 2013, the
effective date of the relevant amendment, the pre-AIA version of § 103
applies. Ex. 1001, code (63).

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II. ANALYSIS

A. Legal Standards

It is a petitioner's burden to demonstrate unpatentability. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)).

A claim is unpatentable as obvious if "the differences between" the claimed subject matter "and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a) (2012). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness.[2] *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

Even if prior art references disclose all claim limitations when combined, there must be evidence to support an explanation why a person of ordinary skill in the art would have combined the references to arrive at the claimed invention. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1366–67 (Fed. Cir. 2012) (citing *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 (Fed. Cir. 2008) (holding that "some kind of motivation must be shown from some source, so that the [trier of fact] can

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[2] No argument or evidence concerning secondary considerations has been adduced.

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understand why a person of ordinary skill would have thought of either combining two or more references or modifying one to achieve the patented [invention]”)). An invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Rather, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

An obviousness determination “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* (*quoting In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *see In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

B.   Level of Ordinary Skill in the Art

Petitioner argues that one of ordinary skill in the art

> would have had general knowledge of home theater systems, control of devices within the home theater systems, and remote control devices as of October 28, 2011. Further, a POSA would have had: (1) at least a bachelor's degree in an electrical engineering, computer engineering, or equivalent coursework, and (2) at least one year of experience researching or developing structure and operating principles of common digital content reproduction and related appliances, contemporary television and home theater standards, and specifications of consumer digital reproducing devices of the time.

Pet. 13. Patent Owner proposes a different standard:

> [A person of ordinary skill in the art] would have had a bachelor's degree which involved software design and development coursework, for example, electrical engineering, computer engineering, computer science, cognitive science,

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> industrial engineering, information systems, information studies,
> or a similar degree, and at least one year of work experience in
> software programming, development, or design of consumer
> applications. Additional education might substitute for some of
> the experience, and substantial experience might substitute for
> some of the educational background.

PO Resp. 4–5 (internal citations omitted). The '853 patent specifically
relates to remote control devices, so we adopt Petitioner's standard that
includes general knowledge consistent with the field of the invention, and,
additionally, is consistent with the prior art presented. *See* Ex. 1001, 1:63–
2:3; *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior
art may reflect an appropriate level of skill in the art).

Patent Owner's expert testified that his analysis was not affected by
the definition adopted. *See* PO Resp. 6; Ex. 2002 (Expert report of Dr. Don
Turnbull), ¶¶ 37–38. Adopting Patent Owner's definition would not affect
our analysis here.

C. Claim Construction

We apply the same claim construction standard that is applied in civil
actions under 35 U.S.C. § 282(b), which is articulated in *Phillips v. AWH
Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) and its progeny. *See* 37
C.F.R § 42.100(b) (2019). Under *Phillips*, claim terms are afforded "their
ordinary and customary meaning." *Phillips*, 415 F.3d at 1312 (quoting
Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)).
"[T]he ordinary and customary meaning of a claim term is the meaning that
the term would have to a person of ordinary skill in the art in question at the
time of the invention. . . ." *Id.* at 1313. "Claim construction begins with the
words of the claim, which 'must be read in view of the specification, of

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which they are a part.'" *Wi-Lan, Inc. v. Apple, Inc.*, 811 F.3d 455, 462 (Fed. Cir. 2016) (quoting *Phillips*, 415 F.3d at 1312–15).

Petitioner proposes only one claim construction, for limitation [1.4], which specifies that the first and second communication methods are "for use in controlling each of at least a first functional operation and a second functional operation of the intended target appliance." Pet. 14–17. In our Decision on Institution, we found that no specific construction was necessary. Dec. 17. Post-institution, the parties' arguments did not involve the construction of this term, and no express construction is necessary for us to reach our conclusion. *See* PO Resp. 10 (Patent Owner stating that no construction is required).

We determine that no specific construction is required to resolve the controversy before us, and thus decline to construe this limitation. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

D. Obviousness over Chardon, alone or in view of HDMI 1.3a and/or Stecyk

Petitioner argues that claims 1, 3, 5, and 7 would have been obvious "over Chardon (EX1005), alone or in view of HDMI Specification (EX1010), and Stecyk (EX1006)." Pet. 36.

1. Overview of Chardon

Chardon, published on October 4, 2012, is a U.S. Patent Application Publication of an application filed March 31, 2011.[3] Ex. 1005, codes (43),

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[3] Petitioner contends that Chardon qualifies as prior art under pre-AIA 35 U.S.C. §§ 102(a) and (e). Pet. 4. In the Preliminary Response, Patent Owner argued that Chardon is not prior art under pre-AIA 35 U.S.C. § 102(a), but did not dispute that Chardon qualifies as prior art under pre-AIA 35 U.S.C. § 102(e). Prelim. Resp. 14–15. In the Decision on Institution, we determined for the purposes of institution that Chardon is

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(22). Chardon relates to configuring a remote-control system including by querying a display for identification data for the display and storing the display's identification data and command codes configured for controlling the display. *Id.* at code (57), ¶ 7. Chardon describes an entertainment system with a set of HDMI appliances including, for example, an HDMI display and speakers, and HDMI sources such as a cable or a satellite set-top-box, a personal video recorder, a DVD player, and a personal computer, among others. *Id.* ¶¶ 30, 37, Fig. 1. A multi-media gateway having a remote-control engine may be included in the entertainment system. *Id.* ¶¶ 30–32, 44. The entertainment system also supports access, for example via a connection to a remote server, to a database that stores sets of command codes, such as sets of IR command codes and CEC command codes. *Id.* ¶¶ 30–35. For example, the remote database may store sets of command codes such as sets of IR and CEC command codes, and a link that associates a given appliance with the set of command codes configured to control that appliance. *Id.* ¶ 33.

The remote control system includes a memory and processor to store and operate a remote-control engine application. *Id.* ¶¶ 39, 43. Sets of command codes including IR and CEC command codes may be stored in memory of the remote control. *Id.* ¶¶ 39, 43. The remote control also may include an IR transceiver, an RF transceiver, and a bus that includes a CEC bus or communication port over which CEC command codes may be communicated to HDMI appliances. *Id.* ¶¶ 38–40, 43.

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prior art at least under pre-AIA 35 U.S.C. § 102(e). Dec. 17 n.4. Neither party has made further arguments on this issue.

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In one embodiment, "the remote-control engine operating on the remote-control system of the multimedia gateway is configured to collect the Extended Display Identification Data (EDID) of an HDMI display." *Id.* ¶ 44. This may occur "if the multi-media gateway and HDMI display are coupled by an HDMI cable." *Id.* "The remote-control engine of the multi-media gateway or the remote control device may query the HDMI display via a two-way IR or RF communication to collect the EDID." *Id.*; *see also id.* ¶ 47. "The multi-media gateway or the remote-control device may be configured to 'link' the EDID for the HDMI display with the locally stored set of command codes (IR command codes and/or CEC command codes) for the HDMI display." *Id.* ¶ 44.

In operation, the remote control engine sends a CEC command code to an HDMI appliance to be executed. *Id.* ¶ 58, Fig. 5, element 500. If a response is not received indicating that the command code has been received and executed, an IR command code is sent to the HDMI appliance. *Id.* ¶ 58, Fig. 5, elements 510, 530, 540; *see also id.* ¶ 62, Fig. 6.

2. *Overview of HDMI 1.3a*

HDMI 1.3a is version 1.3a of the High-Definition Multimedia Interface specification. Ex. 1010, 17. "The High-Definition Multimedia Interface is provided for transmitting digital television audiovisual signals from DVD players, set-top boxes and other audiovisual sources to television sets, projectors and other video displays." *Id.* HDMI carries audio, video, control, and status information. *Id.* HDMI 1.3a describes transmitting the audiovisual signals from an audiovisual source (a device with HDMI output) to an HDMI sink (a device with an HDMI input) such as television sets, projectors, and other video displays. *Id.* at 17, 21. HDMI 1.3a describes an

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optional CEC line "for high-level user control of HDMI-connected devices." *Id.* at 139; *id.* at 24, 128.

HDMI 1.3a describes a physical address discovery algorithm that allocates physical addresses for each device upon power-up or "whenever a new device is added" to an HDMI cluster, indicated by a change in the HPD ("Hot Plug Detect") signal. *Id.* at 139–142. An HDMI source can access an HDMI sink's Enhanced Extended Display Identification Data ("E-EDID"), which contains an EDID structure, to discover the configuration or capabilities of the sink. *Id.* at 25, 128, 134. A high voltage level for the HPD signal indicates that the E-EDID for a sink is readable. *Id.* at 139.

3.   *Overview of Stecyk*

Stecyk relates to a home theater network system including a control system providing centralized control of the devices in the home theater network system. Ex. 1006 ¶¶ 1, 47, 70. A digital module ("DM") allows a user to operate the devices of the home theater network. *Id.* ¶ 71. The digital module includes a device management system module that, in turn, maintains a device container list and a device interconnect list. *Id.* ¶¶ 74, 77. The device container list "is a list, or database, of all the supported devices" of the home theater network, with information about each device placed into a device container object in memory. *Id.* ¶ 78. A device container object includes, for a device, a logical device ID, model number ID, and IR code file (for IR-signal controlled devices) containing IR codes for each supported remote control device key for the device. *Id.* ¶¶ 78, 85–87.

Stecyk discloses that, when an audiovisual receiver device is detected in the system, "the user is prompted to identify the device in the control system from a list of known devices." *Id.* ¶¶ 7–8, 45. If the user indicates that the device is not a known device, the user may be presented with a

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learning mode by which the system learns the control codes for the device. *Id.* ¶¶ 45, 99, 102–104, Figs. 9B, 10C, 10D.

4. Claim 1

Petitioner argues that claim 1 is unpatentable as obvious over Chardon, or alternatively, over Chardon and Stecyk and/or HDMI 1.3a. Pet. 2–3, 36–63.

a) Preamble, limitation 1.1

While not arguing that the preamble ("[a] universal control engine . . .") is limiting, Petitioner asserts that Chardon teaches or suggests a universal control engine in Chardon's multi-media gateway that includes a remote control system and a remote control engine, and that uses stored command codes to control connected devices in a home theater system. Pet. 38–40 (citing Ex. 1005 ¶¶ 7, 30, 36, 43, Fig. 1; Ex. 1003 ¶¶ 163–165). Alternatively, Petitioner argues that Stecyk describes a universal control engine. *Id.* at 32–33, 40 (citing Ex. 1006 ¶¶ 5, 50; Ex. 1003 ¶¶ 166–168).

With respect to limitation 1.1 ("a processing device; and a memory device having stored thereon instructions executable by the processing device . . ."), Petitioner asserts that Chardon's remote control system has a processor and a memory with stored executable instructions. Pet. 40–42 (citing Ex. 1005 ¶¶ 36, 38, 39, 88, Fig. 2, elements 205, 210; Ex. 1003 ¶¶ 170, 171). Petitioner further argues that Chardon's disclosure that the stored instructions are used to configure the UCE to communicate command codes to the HDMI appliances teaches that the executable instructions cause the universal control engine to store command codes and to cause them to be executed. *Id.* at 41–42 (citing Ex. 1005 ¶¶ 34, 38–40, 43, 46; Ex. 1003 ¶ 171).

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Patent Owner does not present any arguments regarding the teachings of Chardon or Stecyk with respect to these limitations.

b) Limitations 1.2, 1.3, and 1.4

(1) Petitioner's Contentions

With respect to limitation 1.2 (the stored instructions causing the universal control engine "to respond to a detected presence of an intended target appliance . . ."), Petitioner asserts that Chardon teaches the "logical topography of controllable appliances" in the description of controllable appliances such as HDMI display and HDMI sources that each are connected via HDMI cables and can remotely control each other. Pet. 43–46 (citing Ex. 1005 ¶¶ 3, 30, 44, Fig. 1 elements 105a, 105b; Ex. 1003 ¶¶ 177, 178, 180, 181). Petitioner argues that Chardon's remote control system responds to the detected presence of an appliance by linking a received EDID from an HDMI display with stored command codes used to control the display. *Id.* at 46 (citing Ex. 1005 ¶ 44; Ex. 1003 ¶¶ 178, 180).

Petitioner further contends that one of ordinary skill in the art "would have recognized that such a logical topography where all HDMI-compatible devices can communicate with each other is an important feature of HDMI['s] CEC [standard]," and that the appliances in Chardon would be controlled as explained in HDMI 1.3a. *Id.* at 43–45 (citing Ex. 1005 ¶¶ 1, 3, 30, Fig. 1; Ex. 1010, 25, 139, 142[4], 195; Ex. 1003 ¶¶ 73–76, 177–179). Specifically, Petitioner argues that one of ordinary skill would have recognized that the collection of the EDID data of the HDMI display (the

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[4] The Petition cites to page 126 of Ex. 1010 for the "physical address discovery algorithm," however this algorithm appears on page 142 of the document, internally paginated as 126 of 156 in one subsection of the document.

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"intended target appliance") could have, for example, been accomplished via HDMI's HPD as described in HDMI 1.3a. *Id.* at 45 (citing Ex. 1010, 139; Ex. 1003 ¶ 179).

With respect to limitation 1.3 (specifying the response to the detected presence of an intended target appliance is "using an identity associated with the intended target appliance to create a listing comprised of at least a first communication method and a second communication method different than the first communication method"), Petitioner argues that Chardon creates a database of IR and CEC command codes, including identifying and storing previously unrecognized CEC command codes, and applying similar identification and storage techniques to IR command codes. Pet. 47–50 (citing Ex. 1005 ¶¶ 20, 33, 39, 48, 52, 53, 55, 56, 88; Ex. 1003 ¶¶ 182–189). Petitioner further describes Chardon's creation of a link between EDID information for HDMI appliances and this database of command codes. *Id.* at 50–52 (citing Ex. 1005 ¶¶ 7, 44, 51; Ex. 1003 ¶¶ 190–196); *id.* at 21–24 (citing Ex. 1005 ¶¶ 4, 43, 46, 49, 53, 55, 57, 58; Ex. 1003 ¶¶105–110, 133–138). Petitioner argues that, when this link is created, the result is a linked database of command codes, where the command codes are linked to the EDID or other identifying information. *Id.* at 22–23 (citing Ex. 1005 ¶¶ 44, 49; Ex. 1003 ¶¶ 136–137), 46 (citing Ex. 1005 ¶ 44; Ex. 1003 ¶¶ 178–180); 47–52; Reply 3–4.

Chardon describes, after the collection of EDID from a display, the linking of the EDID "with the locally stored set of command codes (IR command codes and/or CEC command codes) for the HDMI display." Ex. 1005 ¶ 44. Chardon further describes that "[t]he link may be an entry in a local memory in a file, database, etc. where the EDID is stored with the sets of command codes." *Id.* Petitioner argues that, while Chardon does not

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use the word "listing," one of ordinary skill would have understood that the database of Chardon constitutes such a listing. Pet. 53 (citing Ex. 1003 ¶¶ 194–196).

Petitioner further argues with reference to limitation 1.3 that the combination of Chardon and Stecyk also would have taught or suggested the "modi[fication of] Chardon's building of command code databases to include the claimed 'listing.'" Pet. 55–56. Petitioner argues that Stecyk discloses a device container *list* ("DCL") that is a list of all supported devices in a home theater network system. *Id.* at 55 (citing Ex. 1006 ¶ 78; Ex. 1003 ¶ 199). The DCL contains a device container object ("DCO") for each device that contains model number ID and, where relevant, an IR code file. *Id.* (citing Ex. 1006 ¶ 78, 95; Ex. 1003 ¶ 200).

With respect to limitation 1.4, Petitioner argues that the command codes in Chardon's database can be used to control functional applications of the target appliance. Pet. 56–58. Petitioner cites Chardon's use of "its EDID-linked, command-code database to send a CEC command code over HDMI to an HDMI appliance using a first communication method" as teaching this limitation. *Id.* at 57 (citing Ex. 1005 ¶¶ 12, 58).

(2) Patent Owner's Contentions

Patent Owner presents a number of arguments regarding Petitioner's showing for limitations 1.2, 1.3, and 1.4 of claim 1. PO Resp. 13–31. Among these arguments, Patent Owner argues that Petitioner does not show how the command codes Petitioner points to in the EDID-linked command code database teach or suggest communication methods, as required by these limitations, which require the creation of "a listing comprised of at least a first communication method and a second communication method different than the first communication method." *Id.* at 20–28.

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Patent Owner argues that the '853 patent teaches a "communication method" is a medium or protocol, such as CEC, IR, or RF. PO Resp. 21–22 (citing Ex. 1001 2:4–16, 6:25–28, 6:62–67, 14:20–24; also citing similar statements by Petitioner and Petitioner's Expert (Pet. 1–2, 5, 8, 47, 71; Ex. 1003 ¶¶ 29, 30, 36, 106, 109, 113, 114, 120, 234)). Patent Owner argues that one of ordinary skill in the art would have understood that a listing of command codes is not a listing of communication methods. *Id.* at 22–23 (citing Ex. 2002 ¶¶ 71–72); Sur-reply 12–13 ("[U]sing a database comprised of command codes is not the same thing as creating a database comprised of communication methods."). Patent Owner asserts that Petitioner and Petitioner's expert also distinguish a command code, sent using a communication method, from the communication method itself. PO Resp. 25–26 (citing Pet. 57; Ex. 2003, 49:12–16, 48:12–49:10).

Patent Owner shows that the command matrix described in the '853 patent Specification includes indicators of communication methods to be used for specific functions on specific appliances. *Id.* at 23 (citing Ex. 1001, Fig. 7, 7:19–24, 7:26–28). This disclosure is contrasted by Patent Owner with the '853 patent's disclosure that command codes to be transmitted via these communication methods are found elsewhere in memory, not in this matrix. *Id.* at 24 (citing Ex. 1001, 7:37–42, 9:52–59; Ex. 2002 ¶¶ 71–72).

Patent Owner additionally argues that the Petition is faulty as claim 1 requires, separately, a communication method (as recited in limitations 1.2 and 1.6), a response to a received request (as recited in limitations 1.5 and 1.6), and a transmitted command (limitation 1.6), and Petitioner has not adequately described how each of these is taught or suggested by Chardon's command codes. PO Resp. 27.

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(3) Analysis

Our analysis focuses on the question of whether Petitioner has shown by a preponderance of the evidence that Chardon teaches or suggests a database (the "listing" of claim 1) that is "comprised of at least a first communication method and a second communication method different than the first communication method," which methods are "used to transmit to the intended target appliance a command for controlling" a functional operation of a target appliance, as required by claim 1. We find that Petitioner has not sufficiently adduced that a database "comprised of" CEC and IR command codes would teach or suggest claim 1's listing.

Petitioner states in the Petition that Chardon's database of command codes linked to the EDIDs for the target devices teaches this listing. Pet. 47 ("Chardon's listing is a[n] EDID-linked database of CEC and IR *command codes*," (emphasis added), "Chardon creates a database of IR and CEC *command codes*" (emphasis added)). Petitioner describes Chardon as "disclos[ing] a plurality of ways to create a database . . . of function information and CEC *command codes* associated with the function information . . . [and] also explain[ing] that the same database building process may be used for other communication methods like IR." *Id.* at 50 (emphasis added). Petitioner continues by quoting Chardon's explanation that "embodiments that are described with respect to sets of CEC command codes may be equally applied to other sets of command codes." *Id.* (quoting Ex. 1005 ¶ 20). Here and elsewhere, the Petition specifically equates "a first communication method" with "CEC command codes" and "a second communication method different from the first communication method" with "IR command codes." *Id.* at 50, 52 ("Chardon discloses . . . creat[ing] a listing . . . of at least a first communication method (e.g., CEC

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command codes) and a second communication method different from the first communication method (e.g., IR command codes)."), 57–58 (describing a "command-code database" as having "listed communication methods").

Given these arguments by Petitioner and Chardon's description of an EDID-linked database containing sets of command codes, we therefore evaluate whether command codes in Chardon's database teach or suggest the listing of communication methods of claim 1. Chardon describes that its remote database 135 stores sets of command codes, that these may include both "a set of CEC command codes" and "a set of IR command codes," and that these may be linked to a device ID. Ex. 1005 ¶¶ 48–51. Petitioner argues that "[c]orrectly understood, Chardon's EDID-linked databases disclose at least two different transmission mediums that convey at least two different sets of command codes. The identified listing thus comprises at least two different communication methods." Reply 10. Petitioner further argues that "Chardon's linked databases . . . are used to control the functional operations of the intended target appliance to which they have been linked," and that they do so because, "depending on the contents of the database for a given appliance, the remote control engine may preferentially try CEC first for that appliance and use IR as a secondary communication method." *Id.* at 11 (citing Ex. 1005 ¶ 58, Fig. 5); Pet. 57–58 (citing Ex. 1005 ¶¶ 12, 58); Tr. 17:16–24:6; *see* Ex. 1003 ¶ 205.

However, Petitioner's argument that the method of transmission is dependent on the contents of the database is not supported by its citations to Chardon. In Chardon's Figure 5, described in paragraph 58, the remote-control transmits a CEC command code first, and only transmits an IR command code if no response is received indicating that the CEC command code was received and executed by the targeted appliance. Ex. 1005 ¶¶ 58–

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59, Fig. 5. Petitioner additionally argues that "depending on the contents of the database for that appliance, the remote control engine may instead 'by default send IR command codes to the given HDMI appliance.'" Reply 11 (quoting Ex. 1005 ¶ 60). However, Chardon does not describe deciding whether to send an IR code based on consulting an EDID-linked database of command codes. Rather, Chardon either "determin[es] from the remote server that a given HDMI appliance is not configured to receive CEC command codes," or always sends an IR command code first, followed by a CEC code if no response is detected. Ex. 1005 ¶ 60. Petitioner does not cite Chardon to support how a communication method is selected "depending on the contents of the database for a given appliance" (Reply 11) or provide expert testimony to explain this suggestion. We therefore agree with Patent Owner that "Petitioner provides no analysis or expert testimony to show that the alleged use of Chardon's 'linked database' of command codes to transmit commands over two different communication methods is sufficient to disclose the claimed listing that is comprised of at least two different communication methods." Sur-reply 12 (emphasis omitted).

Petitioner argues that there is no requirement that "literal *names* of different command transmission mediums . . . appear in the text of the listing." Reply 11; Tr. 18:16–26. This is true; however, as described, the record falls short of providing evidence that one of ordinary skill in the art would have understood stored command codes to act as an identification of communication methods to be used, rather than a reference for codes to be used once the communication method to be used is determined in some other way. Therefore, Petitioner has not shown that one of ordinary skill in the art would have understood Chardon's EDID-linked sets of command codes

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specific to certain communication methods would teach or suggest a listing comprised of at least two different communication methods.

We therefore determine that the preponderance of the evidence does not support Petitioner's argument that Chardon teaches or suggests the claimed "listing" in claim 1.

Petitioner's contentions for each of the asserted grounds rely on Chardon's teachings or suggestions. While Petitioner combines Chardon with Stecyk, Stecyk is used "in case Patent Owner attempted to argue that Chardon's EDID-linked databases do not qualify as 'listings.'" Reply 21; Pet. 32. Petitioner describes Stecyk as also storing "command codes, such as IR command codes and other command codes," and does not otherwise describe any assertions of Stecyk teaching or suggesting a listing comprised of at least two communications methods. Pet. 35–36, 54–56.

(4) Conclusion

For these reasons Petitioner has not shown by a preponderance of the evidence that claim 1 is unpatentable as obvious over Chardon, alone or in combination with Stecyk and/or HDMI 1.3a.

5. Claims 3, 5, and 7

The Petition's assertions of unpatentability of claims 3, 5, and 7 rely on its arguments with respect to claim 1. Pet. 63–71. Thus, for the same reasons discussed above with respect to claim 1, Petitioner has not shown by a preponderance of the evidence that claims 3, 5, or 7 are unpatentable as obvious over Chardon, alone or in combination with Stecyk and/or HDMI 1.3a.

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III. CONCLUSION

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1, 3, 5, 7	103	Chardon		1, 3, 5, 7
1, 3, 5, 7	103	Chardon, HDMI 1.3a		1, 3, 5, 7
1, 3, 5, 7	103	Chardon, Stecyk		1, 3, 5, 7
1, 3, 5, 7	103	Chardon, Stecyk, HDMI 1.3a		1, 3, 5, 7
Overall Outcome				1, 3, 5, 7

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has not established by a preponderance of the evidence that any of claims 1, 3, 5, or 7 of the '853 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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UNITED STATES PATENT AND TRADEMARK OFFICE
_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD
_____

ROKU, INC.,
Petitioner,

v.

UNIVERSAL ELECTRONICS, INC.,
Patent Owner.

_____

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_____

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

FENICK, *Administrative Patent Judge*.

DECISION
Denying Petitioner's Request for Rehearing
37 C.F.R. § 42.71(d)

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I.   INTRODUCTION

Roku, Inc. ("Petitioner") filed a Request for Rehearing (Paper 34, "Request" or "Reh. Req.") of our Final Written Decision (Paper 33, "Final Written Decision" or "Dec.") in which we determined that Petitioner did not demonstrate that claims 1, 3, 5, and 7 of U.S. Patent No. 9,716,853 B2 (Ex. 1001, "the '853 patent") are unpatentable. We deny Petitioner's Request for Rehearing.

II.   DISCUSSION

On request for rehearing, "[t]he burden of showing a decision should be modified lies with the party challenging the decision." 37 C.F.R. § 42.71(d). "The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, an opposition, reply, or a sur-reply." *Id.* We have reviewed Petitioner's Request and carefully considered all of the arguments presented. We are not persuaded that we misapprehended or overlooked any arguments or evidence, and thus we decline to modify the Decision.

Petitioner contends the Board erred in two ways: 1) "in implicitly and narrowly construing independent claim 1 to require consultation of the claimed listing to determine which communication method to use"; and 2) "in implicitly and narrowly construing the term 'communication method.'" Reh. Req. 5, 13 (emphases omitted). We address Petitioner's second contention first, as the Final Written Decision turned on whether Petitioner demonstrated that Chardon (Ex. 1005) teaches or suggests the creation of "a

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listing comprised of at least a first communication method and a second communication method." *See* Dec. 20–23.

A.   Alleged implicit construction of claim 1 with respect to "communication method"

In the Final Written Decision, we noted that Petitioner equated the "first communication method" and "second communication method" recited in claim 1 with Chardon's "CEC command codes" and "IR command codes," respectively, where Chardon's command codes are stored in a database linked to the Extended Display Identification Data (EDID) for target devices. Dec. 20–21. We thus evaluated whether command codes in an EDID-linked database teach or suggest the claimed listing comprised of at least a first communication method and a second communication method, and determined that "the record falls short of providing evidence that one of ordinary skill in the art would have understood stored command codes to act as an identification of communication methods to be used." *Id.* at 21–22.

In the Request, Petitioner argues the Board erred by implicitly construing "communication method" as limited to a "method of transmission" or a "command transmission medium." Reh. Req. 13. Petitioner asserts that "communication method" more broadly encompasses "the control protocols used to transmit a command—e.g., IR protocols and CEC protocols." *Id.* at 14. "There can also be no dispute," Petitioner asserts, "that a CEC command code at least indicates that the CEC protocol and its associated hardware are used, and that an IR command code at least indicates that IR protocols and its associated hardware are used." *Id.* at 14–15. We disagree that we implicitly construed "communication method" to exclude protocols, as Petitioner asserts, and in any case, our Decision would

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not have been any different even if we had explicitly construed "communication method" to include protocols.

First, the Decision did not make the alleged implicit construction that "communication method" is limited to a "method of transmission" or a "command transmission medium," and excludes protocols. *See* Reh. Req. 13–15. The portions of the Decision Petitioner points to as showing such implicit construction (*id.* at 13 (citing Dec. 21–22)) do not actually do so. Specifically, we stated that "Petitioner's argument that the method of transmission is dependent on the contents of the database is not supported by its citations to Chardon." Dec. 21. Here, we simply disagreed with Petitioner's characterization of Chardon, and did not opine on what claim 1 requires. We further stated that "Petitioner argues that there is no requirement that 'literal *names* of different command transmission mediums . . . appear in the text of the listing.' . . . This is true . . . ." *Id.* at 22 (quoting Reply 11). Thus, we agreed with Petitioner's arguments against adopting a particular narrow interpretation of claim 1, and did not impose this limit on the scope of claim 1.

Second, even if we had explicitly construed "communication method" to include protocols, the outcome of our Decision would have been no different. Petitioner points out that the parties agreed that "communication method" encompasses protocols. *See* Reh. Req. 13–14 (citing Resp. 22; Sur-Reply 9). But despite this agreement on the meaning of "communication method," there was still a dispute as to whether Chardon's command codes teach communication methods. For example, Patent Owner argued that "the 'command codes' in the alleged 'listing' of Chardon are not 'communication

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methods' and Chardon's alleged 'listing' does not comprise 'communication methods.'" Resp. 20. Patent Owner's expert testified that "[t]he '853 patent expressly distinguishes between a listing of communication methods and a database of command codes." Ex. 2002 ¶ 71. Petitioner argued the following: "Chardon's EDID-linked databases disclose at least two different transmission mediums that convey at least two different sets of command codes. The identified listing thus comprises at least two different communication methods." Reply 10. Petitioner's expert testified that "Chardon's EDID-linked, command-code data base (i.e. its listing) discloses 'a listing comprised of at least a first communication method (e.g., CEC command codes) and a second communication method (e.g., IR command codes) different than the first communication method.'" Ex. 1003 ¶ 203.

The hearing transcript reflects this dispute. We asked Patent Owner "[i]f a communication code indicates which communication method should be used, then why wouldn't a database comprising those communication codes also comprise the communication methods that would be used with them?" Tr. 33:4–7. Patent Owner responded that "command codes are different than communication methods." *Id.* at 33:15–16. Patent Owner continued, "You can't just look at a command code and determine the method." *Id.* at 33:16–17. On rebuttal, Petitioner conceded "I don't know whether a person of ordinary skill in the art, if you put a generic command code in the front of them, would be able to say, oh, yeah, I recognize this as a CEC command code, I recognize this as an IR command code." *Id.* at 59:20–24. But, Petitioner asserted the following: "Chardon is not talking about a generic command code database. Chardon is talking about a very

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specific list of CEC command codes and a very specific list of IR command codes . . . ." *Id.* at 61:11–14. Petitioner further asserted that "to suggest that Chardon's multimedia gateway can't figure out for a CEC command code, you know, which interface to send that command just . . . defies belief." *Id.* at 61:24–26.

In short, the record shows that the issue of whether a command code teaches a communication method was in dispute—even with the parties agreeing that "communication method" encompasses protocols—and we decided in favor of Patent Owner on this issue. *See* Dec. 20–23. We note that a request for rehearing is not an opportunity to challenge the Board's assessment of the arguments or weighing of the evidence, but is instead limited to identifying a point the Board misapprehended or overlooked. *See* 37 C.F.R. § 42.71(d).

B.   *Alleged implicit construction of claim 1 to require consultation of the claimed listing to determine which communication method to use*

In the Request, Petitioner argues "[t]o the extent that the Board held the claims patentable because Chardon's system allegedly does not consult its EDID-linked command code databases to determine *which* communication method should be used, the Board made two dispositive errors." Reh. Req. 5. First, Petitioner asserts that claim 1 does not require the selection of a communication method to depend on the claimed listing, nor does it require consulting the claimed listing to determine which communication method to use. *Id.* Rather, Petitioner asserts, claim 1 more broadly recites responding to a request from a controlling device "*by causing a one of the first and second communication methods in the listing of communications methods . . . to be used to transmit to the intended target*

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appliance a command." *Id.* at 6. In other words, claim 1 "simply does not specify *any* particular means of causation, let alone a specific requirement that the selection of *which* communication method to use depends on the contents of the created listing." *Id.* Second, Petitioner argues that, "[e]ven if the selection of the communication method to be used is dependent on the contents of the created listing (which it is not), the Board still erred in determining that Chardon does not meet this limitation." *Id.* at 10. We disagree with Petitioner that we implicitly construed claim 1 to require consultation of the claimed listing to determine which communication method to use.

In the Final Written Decision, we stated that "Petitioner's argument that the method of transmission is dependent on the contents of the database is not supported by its citations to Chardon." Dec. 21. We further stated that "Chardon does not describe deciding whether to send an IR code based on consulting an EDID-linked database of command codes." *Id.* at 22. These statements address Petitioner's arguments with respect to the claim 1 limitation of creating "a listing comprised of at least a first communication method and a second communication method." *See id.* at 21 ("[W]e therefore evaluate whether command codes in Chardon's database teach or suggest the listing of communication methods of claim 1"). They do not show an implicit construction of claim 1 to require consultation of the claimed listing to determine which communication method to use. In fact, the Decision did not consider what was required by the claim 1 limitation of "causing a one of the first and second communication methods . . . to be used," because we did not specifically address this limitation vis-à-vis the

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prior art relied upon in the asserted ground. *See* Dec. 20–23. Rather, as stated above, the Decision turned on whether Chardon teaches or suggests the claim 1 limitation of creating "a listing comprised of at least a first communication method and a second communication method." *See id.* Thus, we need not address Petitioner's alternative argument that Chardon teaches "causing a one of the first and second communication methods . . . to be used" under the narrow construction Petitioner alleges we implicitly applied. *See* Reh. Req. 10–13.

III.   CONCLUSION

We have reviewed and considered the arguments in Petitioner's Rehearing Request and conclude that Petitioner has not carried its burden of demonstrating that the Board misapprehended or overlooked any matters in rendering the Final Written Decision. 37 C.F.R. § 42.71(d). Thus, Petitioner's challenge does not meet the standard set forth for a request for rehearing.

The Request for Rehearing is *denied*.

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