

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIVERSAL ELECTRONICS, INC., GEMSTAR TECHNOLOGY
(QINZHOU) CO. LTD., GEMSTAR TECHNOLOGY (YANGZHOU) CO.
LTD., C.G. DEVELOPMENT LTD., UNIVERSAL ELECTRONICS BV,
UEI BRASIL CONTROLES REMOTOS LTDA., AND
CG MÉXICO REMOTE CONTROLS, S. DE R.L. DE C.V.,
Petitioner,

v.

ROKU, INC.,
Patent Owner.

IPR2022-00818
Patent 8,378,875 B2

Before KRISTEN L. DROESCH, SHARON FENICK, and
RUSSELL E. CASS, *Administrative Patent Judges*.

CASS, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision on Remand
Determining All Challenged Claims Unpatentable
35 U.S.C. §§ 144, 318(a)

I. INTRODUCTION

We issue this decision following the opinion of the United States Court of Appeals for the Federal Circuit in *Roku, Inc. v. Universal Electronics, Inc.*, Nos. 2024-01188, 1024-1241, 2025 WL 1692663 (Fed. Cir. June 17, 2025) (“*Roku*”), vacating the portion of our Final Written Decision finding that claim 11 of U.S. Patent No. 8,378,875 (Ex. 1001, the “’875 patent”) was not shown to be unpatentable and remanding for further proceedings. As discussed below, after considering the entirety of the record in light of the Federal Circuit’s directives in *Roku*, we find that Petitioner has shown by a preponderance of the evidence that challenged claim 11 is unpatentable.

II. PROCEDURAL HISTORY

Universal Electronics Inc., Gemstar Technology (Qinzhou) Co. Ltd., Gemstar Technology (Yangzhou) Co. Ltd., C.G. Development Ltd., Universal Electronics BV, UEI Brasil Controles Remotos Ltda., and CG México Remote Controls, S. de R.L. de C.V. (collectively “Petitioner”) filed a Petition requesting *inter partes* review of claims 1–5, 8–11, and 14 of the ’875 patent. Paper 2 (“Pet.”). Roku, Inc. (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 7, “Prelim. Resp.”), Petitioner filed a Preliminary Reply (Paper 9), and Patent Owner filed a Preliminary Sur-reply (Paper 10). We instituted trial on all claims and grounds set forth in the Petition. Paper 11 (“Inst. Dec.”). Following the institution decision, Patent Owner filed a Response (Paper 15, “PO Resp.”), to which Petitioner filed a Reply (Paper 18, “Pet. Reply”) and Patent Owner filed a Sur-reply (Paper 21, “PO Sur-reply”). An oral hearing was held with the parties, and a copy of the transcript was entered into the record. Paper 28 (“Tr.”).

On October 23, 2023, we issued a Final Written Decision holding that Petitioner had shown that claims 1–5, 8–10, and 14 were unpatentable over the prior art, and that Petitioner had not shown that claim 11 was unpatentable over the prior art. Paper 29 (“Final Written Decision” or “FWD”).

Patent Owner appealed the Final Written Decision to the Federal Circuit, and Petitioner filed a cross-appeal. Papers 31, 32. On June 17, 2025, the Federal Circuit issued an opinion affirming the Board’s decision holding unpatentable claims 1–5, 8–10, and 14 of the ’875 patent, but vacating the decision holding that claim 11 was not shown to be unpatentable. Paper 34 (“Federal Circuit Opinion”) at 13. Accordingly, the Federal Circuit vacated the Board’s Final Written Decision and remanded the case for the Board to reconsider the unpatentability of claim 11 in light of its decision. *Id.*

Following the Federal Circuit Opinion, the Board held a call with the parties on August 28, 2025 and issued an order allowing additional briefing. Paper 38. Accordingly, Petitioner filed a Remand Brief on October 3, 2025 (Paper 39, “Pet. Remand Br.”), and Patent Owner filed a Remand Brief on October 24, 2025 (Paper 40, “PO Remand Br.”).

III. BACKGROUND

A. The ’875 Patent

1. Overview

The ’875 patent “relates to a method of programming [a universal remote control], e.g., by using brand- and code-set identifiers.” Ex. 1001, 1:7–10. In summarizing the related art, the ’875 patent identifies three of “[t]he most popular ways” that were known for configuring a universal

remote control to work with consumer electronics equipment. *Id.* at 1:12–23. First, “[e]nter[ing] a code-set from the manual.” *Id.* at 1:24–39. With this technique, a user enters a programming mode by pressing some key combination on the universal remote control and enters a codeset identifier found in a manual for the user’s device brand and type. *Id.* at 1:26–34. If that codeset does not work satisfactorily, the user can try another codeset found in the manual for that device brand and type. *Id.* at 1:34–39.

Second, “[a]uto-scan.” *Id.* at 1:50–65. After entering a different key combination, the user optionally selects the device type to search for (such as by pressing the “TV” or “DVD” button on the universal remote control), and then presses a key that initiates an auto-scan. *Id.* at 1:53–56. The universal remote control then iterates through all codesets for the selected device until the target consumer electronics device reacts. *Id.* at 1:57–60. The user then presses or releases a button to accept the codeset. *Id.* at 1:60–63.

Third, “[b]rand-search.” *Id.* at 2:6–13. This technique is similar to auto-scan, but limited to certain brands of consumer electronics devices. *Id.* at 2:12–13. After the user presses a certain key to begin the procedure, the user enters a brand identifier, rather than entering a codeset identifier as in the manual process. *Id.* at 2:7–9. The user then presses the device button on the universal remote control, e.g. “TV, DVD, Sat, [or] AMP,” which initiates an auto-scan only for the codesets for the identified brand. *Id.* at 2:10–13.

According to the ’875 patent, there were disadvantages with each of these prior-art techniques, including the tediousness of manual lookups and

the length of time to complete an auto-scan. *Id.* at 1:40–49, 1:66–2:3, 2:15–30. “The main improvement” described by the ’875 patent to avoid such disadvantages “is to combine the ‘Brand-id’ (as used in the Brand-search method) with the ‘Code-set-id’ (as used in the ‘manual code-set-id selection’ method).” *Id.* at 2:66–3:1.

Figure 5 of the ’875 patent is reproduced below.

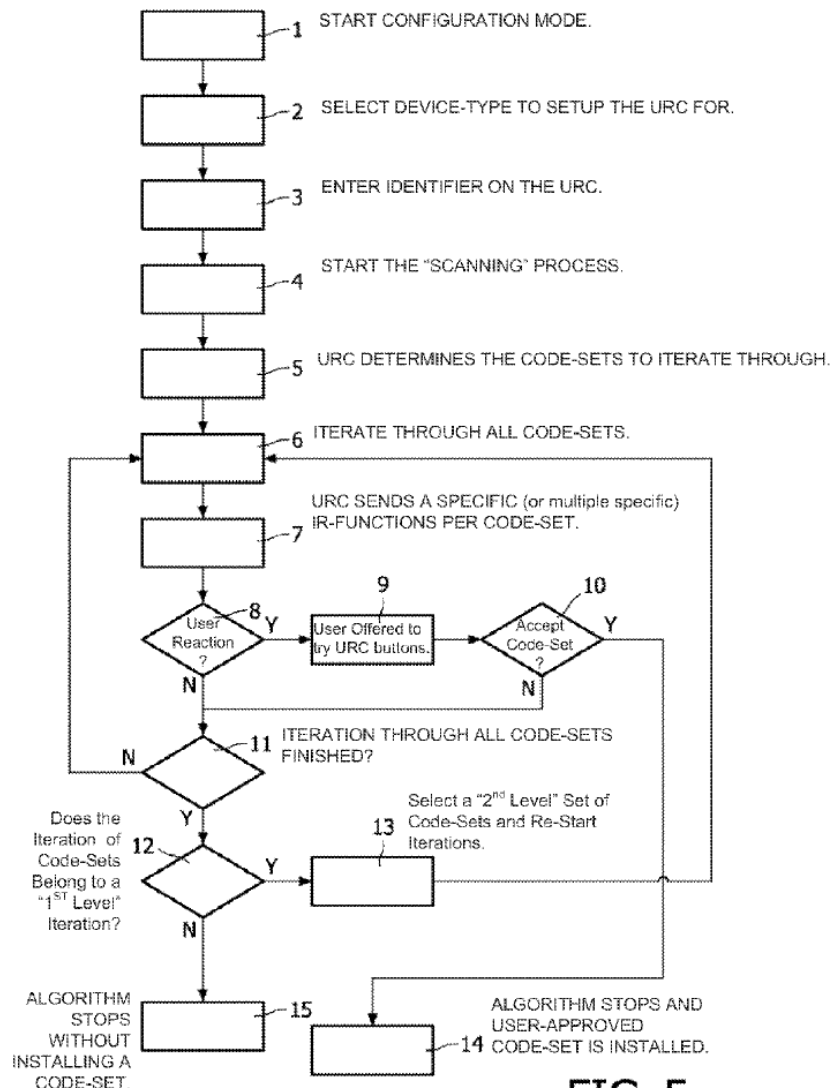


Figure 5 is a flow diagram for a method of configuring a universal remote control as described by the ’875 patent. *Id.* at 5:21–22. After entering a

configuration mode at step 1 by pressing a setup key or pressing certain multiple keys simultaneously, the user selects the device type for the equipment to be set up, such as “TV, VCR, DVD, Sat, Amp, ...” *Id.* at 6:7–15. The user looks up the brand-id or the single code-set-id in the instructions for use of the universal remote control at step 3. *Id.* at 6:21–23. “[T]o the user all these appear to be ‘Brand-ids’” because “the brand-ids . . . are actually a pointer to a list of code-set-ids for a certain brand/device-type combination” while other identifiers “are actually code-set-ids.” *Id.* at 6:23–24, 5:34–38.

After the user starts the scanning process at step 4 by pressing a button on the universal remote control, the universal remote control determines which codesets to iterate through at step 5. *Id.* at 6:28–32. If the identifier entered by the user was a pointer to a set of codesets, the software iterates through all of those codesets at step 6; or if the identifier was a specific codeset only, the method proceeds with only that single codeset. *Id.* at 6:32–35. “During the iteration, the universal remote control sends specific (or multiple specific) IR-functions per code-set” at step 7. *Id.* at 6:35–37. If there is a user reaction, as checked at step 8, the user is offered to try the buttons of the universal remote control at step 9, such that steps 7–9 “together form the step of testing said remote control code-sets.” *Id.* at 6:37–38, 6:46–49. If the user indicates at step 10 that the current codeset is accepted, that codeset is installed at step 14. *Id.* at 6:50–52. If there is no user reaction, or if the user does not accept the codeset at step 10, the scanning process continues by going to step 11 until all codesets have been tried. *Id.* at 6:40–41, 6:52–54. The remaining portions of the flow

diagram may perform a further iteration with a “second-level” set of codesets if no codeset was found. *Id.* at 6:55–67.

The ’875 patent notes that, “[o]ften, the scanning process will find multiple code-sets that trigger a reaction on the [consumer electronics] equipment.” *Id.* at 7:38–39. This is a result of overlap between multiple codesets, with the patent providing an example of “for code-set X the Power, digits and Teletext works ok, but volume does not, while for code-set Y the Power, digits and volume work but Teletext does not.” *Id.* at 7:39–43. Accordingly, it is “very practical” for a user to indicate, for a given codeset, which codes work and which do not. *Id.* at 7:43–45. This allows the universal remote control to “combine the working codes of multiple code-sets into a new ‘custom configuration’ code set, which contains functions from multiple code-sets.” *Id.* at 7:45–48.

2. *Claim 11*

Independent claim 11, which is at issue in this remand, is reproduced below, with limitation identification added.

11[pre] A method for setting up a Remote Control that includes a keyboard, a processor, a memory, and a transmitter, the method comprising the steps of:

11[a] entering, via the keyboard and processor, a configuration mode;

11[b] scanning, via the processor and memory, though [sic] remote control code-sets in a database stored in the memory of the Remote Control;

11[c] testing, via the keyboard, if individuals [sic] keys of a code set send, via the transmitter, correct codes and receiving, via the keyboard, user-feedback on the correct and/or incorrect working of the tested keys;

11[d] replacing, via the processor and memory, non-working codes with codes from at least a further remote control code-set; and

11[e] combining, via the processor and memory, correct working codes from the scanned remote control code-sets into a new custom configuration code set and installing, via the processor and memory, the combined correct working codes of the new custom configuration code set for use by the remote control.

Ex. 1001, 10:28–48.

B. Evidence

For this remand, the following references relied on by Petitioner are at issue:

Wouters	WO 03/083801	Oct. 9, 2003	Ex. 1009
Verzulli	WO 00/70577	Nov. 23, 2000	Ex. 1010

Pet. 16–19, 22.

In addition, Petitioner relies on two Declarations by Henry Houh, Ph.D, the first submitted with the Petition and the second submitted with Petitioner’s Reply. Exs. 1002, 1027. Dr. Houh was cross-examined by Patent Owner, and a transcript of his deposition was entered into the record. Ex. 2015. Patent Owner relies on two Declarations by Ravin Balakrishnan, Ph.D. Exs. 2002, 2012. Dr. Balakrishnan was cross-examined by Petitioner, and a transcript of his deposition was entered into the record. Ex. 1062.

C. Instituted Ground of Unpatentability

The following ground is at issue on remand:

Claim(s) Challenged	35 U.S.C. §	References
11	103(a)	Wouters, Verzulli

Pet. 22; Federal Circuit Opinion 13.

D. Real Parties in Interest

The parties identify only themselves as real parties in interest.

Pet. 74–75; Paper 4, 2.

E. Related Matters

Both parties identify the following related matters as involving the '875 patent: (1) *Roku, Inc. v. Universal Electronics Inc.*, No. 8:21-cv-00658 (C.D. Cal.); and (2) *Certain Televisions, Remote Controls, and Components Thereof*, Inv. No. 337-TA-1263 (USITC) (“the related ITC Investigation”). Pet. 75; Paper 4, 2.

IV. ANALYSIS

A. Legal Principles

A claim is unpatentable for obviousness under 35 U.S.C. § 103 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.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). 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) when in evidence, objective indicia of nonobviousness, i.e., secondary considerations.¹ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

¹ The parties do not address objective indicia of nonobviousness, which accordingly do not form part of our analysis.

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); see *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

B. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. We considered the level of ordinary skill in our Final Written Decision, and adopted Patent Owner’s assessment that one of ordinary skill “would have had a bachelor’s degree in electrical engineering, computer science, or equivalent degree with two years of work experience relating to communications or consumer electronics.” FWD 12. We also noted that “we would reach the same ultimate conclusion that Petitioner shows, by a preponderance of the evidence, that all challenged claims are unpatentable were we to adopt Petitioner’s proposal instead.” *Id.* The parties do not challenge the level of ordinary skill in their remand briefing. Papers 39, 40. Therefore, we adhere to the level of ordinary skill applied in our Final Written Decision, and note that our decision in this remand would not change if we instead applied Petitioner’s proposal for the level of ordinary skill. See FWD 12.

C. Claim Construction

The Board uses “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b) (2019); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

In our Final Written Decision, we adopted constructions of certain claim terms made in the related ITC investigation. FWD 13–16. We did not construe any other terms in claim 11 in our Final Written Decision. The parties do not propose any express constructions of terms in claim 11 in their remand briefing. Papers 39, 40. We do not find it necessary to construe any additional terms from claim 11 for purposes of this remand. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Scope and Content of the Prior Art

1. Wouters

Wouters “relates to a remote control device” that “enable[s] the user to control functions of a device to be controlled via the remote control.” Ex. 1009, 1:2–5. Wouters explains that, “[d]ue to limited code set storage possibilities, numerous look-a-like device code sets are combined into one remote control code set,” such that “the user is confronted with certain buttons (object keys) of a code set that might not have the desired effect on

the device (no effect or wrong behavior).” *Id.* at 1:18–22. A user therefore “has the possibility to try out, using the remote control, all of the proposed preset code sets and pick the one that fits best.” *Id.* at 1:24–25. But in some instances “none of the proposed preset code sets includes all IR or RF codes for all features of the device and, as a result, the user cannot make full use of the capabilities of the device he/she is trying to control while using the remote control.” *Id.* at 1:25–28. Wouters accordingly discloses a remote control that “enables a user to pick IR or RF codes from different code sets to be combined in a single mode” so that the “user himself compiles a code set in such a way that all of the features of his device . . . can be controlled.” *Id.* at 2:18–21.

Figure 1 of Wouters is reproduced below.

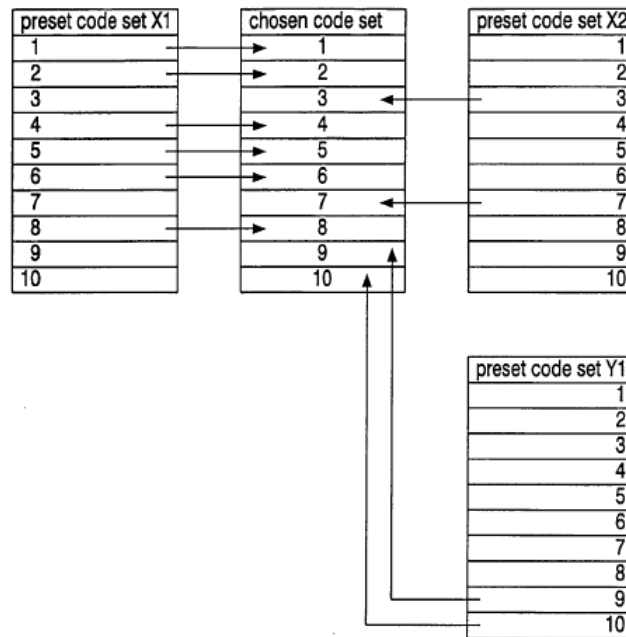


FIG. 1

Figure 1 schematically illustrates that the remote control includes several preset IR or RF codesets, namely codesets X1, X2, and Y1. *Id.* at 6:29–32.

After a process for combining data from multiple preset codesets into a single codeset (the “chosen code set”), “the object keys 1, 2, 4, 5, 6 and 8 are linked to data (commands) from the preset code set X1, the object keys 3 and 7 are linked to data (commands) from the code set X2, and the object keys 9 and 10 are linked to data (commands) from the code set Y1.” *Id.* at 7:7–11. The “chosen code set” is thus “a compilation, compiled by the user, in which data from the preset code sets X1, X2 and Y1 are combined in a single code set.” *Id.* at 7:11–13.

Wouters describes an interactive procedure in which the user can install or activate particular buttons or object keys in a chosen codeset. Ex. 1009, 9:12–10:16. Wouters also describes the use of a “fixer” to name and save the chosen code set and a process for reinstalling the chosen codeset if the remote control malfunctions or the batteries fail:

After activation of all object keys (or as many object keys as the user wishes to install), the chosen code set is finished. Preferably, the remote control device comprises a fixer (which may be hardware or software or a combination thereof) to fix the chosen code set (i.e. enter it into the RC code set data base) and give it a name (“user1”, for instance). When the remote control malfunctions (for instance, when the batteries have been exhausted), the user may easily reinstall the chosen code set by choosing “user1” from the proposed list or immediately selecting “user1”. When reinstalling, the remote control will preferably start the process by proposing the previously chosen code sets (user1, user2, etc.).

Ex. 1009, 10:16–24 (emphasis added).

2. *Verzulli*

Verzulli “relates generally to a programmable, universal remote control, and more particularly to a programmable, universal remote control in which manufacturer and model numbers of electronic devices to be

controlled are stored in the remote control.” Ex. 1010, 1:9–12. Figure 3 of Verzulli is reproduced below.

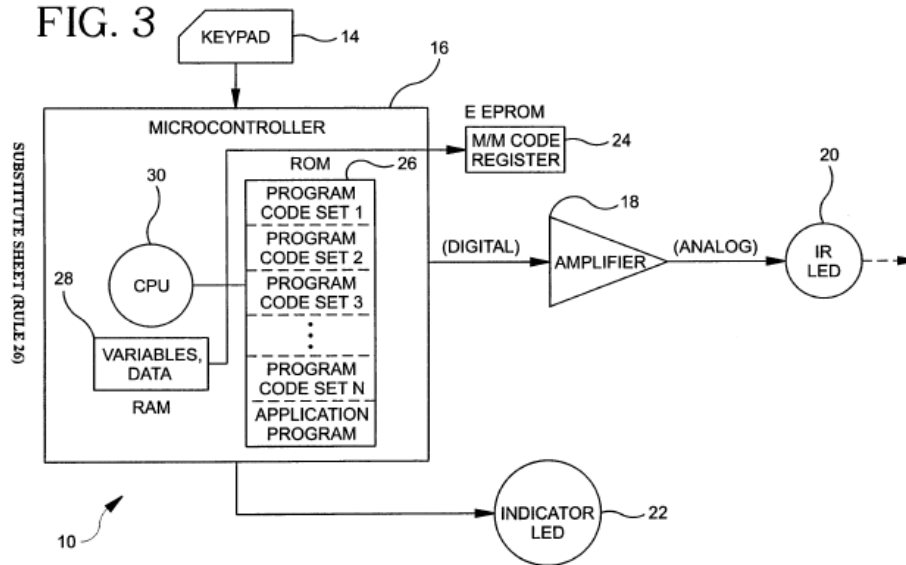


Figure 3 is “a block diagram of a programmable, universal remote control” that includes, among other components, keypad 14; “a processing circuit, microprocessor, application specific integrated circuit (ASIC), programmable logic device, or microcontroller 16”; read-only memory (EEPROM) 24; random-access memory 28; central processing unit 30; and infrared light emitting diode 20. *Id.* at 7:3–4, 9:1–5.

E. The Discussion of Claim 11 in the Board’s Final Written Decision and the Federal Circuit Opinion

In the Final Written Decision, the Board noted that the parties do not dispute that one of ordinary skill would have understood that Wouters remote control includes the claimed “keyboard,” “processor,” “memory,” and “transmitter” elements of the claimed “remote control.” FWD 52. The Board also noted that the parties do not dispute that Wouters discloses the “entering,” “scanning,” and “testing” limitations of claim 11. *Id.*

However, the Board noted that Patent Owner does dispute Petitioner’s showing with respect to the “replacing” and “combining”/”installing” steps of claim 11[e]. FWD 53. The Board focused its analysis on the “combining”/”installing” step, which requires “combining, via the processor and memory, correct working codes from the scanned remote control code-sets into a new custom configuration code set and installing, via the processor and memory, the combined correct working codes of the new custom configuration code set for use by the remote control.” *Id.* The Board noted that Petitioner relies on the portion of Wouters that states that:

After activation of all object keys (or as many object keys as the user wishes to install), the chosen code set is finished.
Preferably, the remote control device comprises a fixer . . . to fix the chosen code set (i.e. enter it into the RC code set data base) and give it a name.

FWD 54 (emphasis omitted) (quoting Pet. Reply 5 (quoting Ex. 1009, 10:16–20)).

In the Final Written Decision, the Board determined that “Petitioner’s reliance on Wouters’s ‘fixer’ as meeting the requirement of ‘installing . . . the combined correct working codes of the new custom configuration code set’ is insufficiently supported” by the record. FWD 54. The Board stated that, in Wouters, “operation of the ‘fixer’ occurs after all keys (or at least as many as the user wishes) are installed, and that the ‘fixer’ has two functions—to enter the chosen codeset into a database and to name it.” *Id.* at 55. The Board agreed with Patent Owner “that this insufficiently supports Petitioner’s implication that the ‘fixer’ performs the recited installation of the working codes of the new custom configuration codeset” because “[n]either of the two functions Wouters identifies as performed by the ‘fixer’ amounts to an installation, which would, in any event, appear superfluous

after installing all of the working codes of the new custom configuration codeset on an individual basis.” *Id.* (citing PO Sur-reply 4).

The Federal Circuit explained that, on appeal, Petitioner argued that “the Board improperly overlooked the ‘reinstallation’ functionality of Wouters’s ‘fixer,’ which can be used to reinstall a custom code set when the remote control malfunctions (*e.g.*, when its batteries die).” Federal Circuit Opinion 12. The Federal Circuit “agree[d] with [Petitioner] to the extent that the Board’s decision is silent with respect to Wouters’s reinstallation function.” *Id.* “However,” the Federal Circuit explained, “the four lines of Wouters on which [Petitioner] relies for that functionality were never quoted or discussed in [the] Petition.” *Id.* “That being said,” according to the Federal Circuit, Petitioner “did appear to expound upon that functionality at the oral hearing before the Board, to which [Patent Owner] did not object,” and the Federal Circuit cited portions of the oral argument and Petitioner’s Reply Brief supporting its statement. *Id.* at 12–13. “Indeed,” the Federal Circuit stated, Patent Owner “appears to have addressed that argument on the merits in its oral-hearing rebuttal.” *Id.* at 13.

The Federal Circuit went on to explain that “[o]rdinarily, arguments not presented to the Board are forfeited,” but that “[t]he problem here is that we are unable to determine from the decision before us whether the Board entirely overlooked [Petitioner’s] reinstallation argument, whether the Board considered and rejected that argument on the merits, or whether the Board deemed that argument forfeited as untimely presented.” Federal Circuit Opinion 13. For that reason, the Federal Circuit “vacate[d] the Board’s decision with respect to claim 11 and remand[ed] for the Board to provide a

more thorough explanation regarding its treatment of [Petitioner's] reinstallation argument based on Wouters.” *Id.*

F. The Parties’ Arguments on Remand

In its Remand Brief, Petitioner argues that Wouters discloses the “combining” and “installation” steps of limitation 11[e] via its discussion of “reinstallation” functionality in the paragraph on page 10, lines 14–24, which states as follows:

This iterative procedure will lead to activation (installing) of all object keys, or at least as many objects keys as the user wishes to install, said object keys also having the functions the user wishes said keys to have. After activation of all object keys (or as many object keys as the user wishes to install), the chosen code set is finished. Preferably, the remote control device comprises a fixer (which may be hardware or software or a combination thereof) to fix the chosen code set (i.e. enter it into the RC code set data base) and give it a name (‘user1,’ for instance). ***When the remote control malfunctions (for instance, when the batteries have been exhausted), the user may easily reinstall the chosen code set by choosing ‘user1’ from the proposed list or immediately selecting ‘user1’. When reinstalling, the remote control will preferably start the process by proposing the previously chosen code sets (user1, user2, etc.).***

Pet. Remand Br. 2 (quoting Ex. 1009, 10:14–24) (emphasis added in original).

Petitioner argues that, in this paragraph, “Wouters teaches (i) combining the codes into a custom codeset and naming it (e.g., user1) and (ii) saving it in a database so that the named codeset (e.g., user1) can be reinstalled when the remote malfunctions or the remote’s batteries are exhausted.” Pet. Remand Br. 2. According to Petitioner, “[t]his is all that is required of limitation 11[e].” *Id.*

Petitioner disagrees with Patent Owner’s argument that “[a]t no point is there any ‘combining’ of codes into a ‘new custom configuration code set,’ follow[ed] by ‘installing’ the combined code-set—the codes are installed one at a time.” Pet. Remand Br. 2–3 (citing PO Resp. 23). Petitioner contends that this argument “ignores that Wouters explicitly states the ‘fixer’ is used to *reinstall* the custom code set when the remote control malfunctions (such as when the remote control’s batteries are exhausted).” *Id.* at 3 (citing Ex. 1009, 10:14–24). According to Petitioner, “[t]he exact purpose of the ‘fixer’ is to ‘fix’ a custom codeset, e.g., save custom codeset user1, so that custom codeset user1 can be reinstalled later if the remote malfunctions or the batteries are exhausted.” *Id.* at 3.

Petitioner also argues that it sufficiently raised Wouters’s re-installation functionality in the Petition and during the trial. Pet. Remand Br. 4–10. Petitioner asserts that the Petition alleged that “Wouters’s ‘fixer’ satisfies limitation 11[e],” and that its expert, Dr. Houh, “identified the exact passage now in dispute in his initial declaration,” including the discussion of reinstallation, as satisfying limitation 11[e]. *Id.* at 4 (citing Pet. 34–37; Ex. 1003 ¶¶ 167–170). Petitioner also contends that its Reply and accompanying Declaration further explained why Wouters’s “fixer” discloses limitation 11[e] by reinstalling the codeset. *Id.* at 6–7 (citing Pet. Reply 5–7; Ex. 1027 ¶¶ 93–103). Additionally, according to Petitioner, Patent Owner responded to this argument in its Reply, and Petitioner raised this argument during the hearing. *Id.* at 7 (citing PO Sur-reply 21; Paper 26 (Petitioner’s Demonstratives) at 78–81; Tr. 30:25–32:2).

Patent Owner responds that Petitioner forfeited its “reinstallation” argument because it “made no mention of the ‘reinstallation’ argument in its

petition, and spent less than half of one sentence of its reply brief hinting at this argument.” PO Remand Br. 5 (citing Pet. Reply 18). Patent Owner asserts that, because this argument was not raised in the Petition, Patent Owner “raised no argument regarding reinstallation in its patent owner response,” and therefore Petitioner’s “reinstallation” argument was not a proper reply argument. *Id.* at 6 (citing PO Resp. 21–23). Patent Owner further contends that the Declaration of Dr. Houh that accompanied Petitioner’s Reply does not help Petitioner because an expert declaration cannot be used to present arguments not adequately set forth in a brief. *Id.* at 7. Finally, Patent Owner argues that Petitioner’s discussion of reinstallation at oral argument was too late, and the Federal Circuit’s statement that Patent Owner “appears to have addressed that [reinstallation] argument on the merits in its oral-hearing rebuttal” was incorrect because Patent Owner’s counsel was addressing a different limitation of claim 11. *Id.* at 7–8 (citing Federal Circuit Opinion 13; Tr. 58:22; Paper 25 (Patent Owner’s Demonstratives) at 53).

Patent Owner further argues that Petitioner’s reinstallation argument fails on the merits. PO Remand Br. 8–10. Patent Owner asserts that the portion of Wouters at page 10, lines 20 through 24 “provides little information regarding how the chosen code-set is reinstalled,” and that this information is “certainly insufficient to disclose whether Wouters[’s] ‘reinstallation’ satisfies the ‘combining’/‘installing’ steps of claim 11.” *Id.* at 9 (citing Ex. 1009, 10:20–24). According to Patent Owner, “[t]he only detailed description of the installation of a code-set in Wouters is what is found at” page 7, line 24 to page 10, line 17, where the user tests and installs codes one at a time. *Id.* (citing Ex. 1009, 7:24–10:17). Patent Owner

contends that, “because this is the only detailed description of installation disclosed in Wouters, a reader would expect that any installation (or any reinstallation) would follow this disclosed installation procedure, and therefore it would not meet limitation 11[e].” *Id.* at 10.

G. Analysis

We have reviewed the full trial, appeal, and remand record, and find that Petitioner has sufficiently shown that Wouters discloses limitation 11[e], and that Petitioner did not forfeit this argument.

Turning to the first issue, we agree with Petitioner that Wouters teaches limitation 11[e]. The relevant portion of Wouters is reproduced below:

This iterative procedure will lead to activation (installing) of all object keys, or at least as many objects keys as the user wishes to install, said object keys also having the functions the user wishes said keys to have. After activation of all object keys (or as many object keys as the user wishes to install), the chosen code set is finished. ***Preferably, the remote control device comprises a fixer (which may be hardware or software or a combination thereof) to fix the chosen code set (i.e. enter it into the RC code set data base) and give it a name (“user1”, for instance). When the remote control malfunctions (for instance, when the batteries have been exhausted), the user may easily reinstall the chosen code set by choosing “user1” from the proposed list or immediately selecting “user1”. When reinstalling, the remote control will preferably start the process by proposing the previously chosen code sets (user1, user2, etc.).***

Ex. 1009, 10:14–24 (emphasis added).

We agree with Petitioner that the above-quoted paragraph of Wouters teaches “combining . . . correct working codes from the scanned remote control code-sets into a new custom configuration code set” using Wouters’s

“fixer,” which combines the codes into a custom codeset, gives it a name, such as “user1,” and stores it in a memory (the “RC code set data base”). *See* Pet. Reply 2; Ex. 1009, 10:18–20. This custom codeset includes a combination of the working codes previously tested and installed by the user. Ex. 1009, 10:18–20. We also find that the above-quoted paragraph of Wouters teaches “installing . . . the combined correct working codes of the new custom configuration code set for use by the remote control.”

Specifically, Wouters teaches that, when the remote control’s batteries die, “the user may easily *reinstall* the chosen code set by choosing ‘user1’ from the proposed list or immediately selecting ‘user1.’” Ex. 1009, 10:20–22 (emphasis added). This reinstallation is of the combined correct working codes of a new custom configuration codeset previously stored and named by the fixer, such as the “user1” codeset. *Id.* at 10:20–24.

We find that Wouters’s “reinstallation” of the chosen code set (e.g., the “user1” codeset) is an “installation” of that codeset. The claim merely recites “installing” the codeset, and does not distinguish between an initial installation and a re-installation, such as after the batteries of the remote control die. Ex. 1001, 10:45. Patent Owner also does not point to anything in the ’875 patent Specification or the other intrinsic evidence that would limit the “installing” in limitation 11[e] to an initial installation, or that would exclude a re-installation after the remote control’s batteries die. Consequently, we find that Wouters’s reinstallation of the codeset after the batteries die is an “install[ation]” as required by limitation 11[e]. We further agree with Petitioner that the Wouters-Verzulli combination discloses that these operations would be performed using a processor and memory, which Patent Owner does not appear to dispute. FWD 52; Pet. 24–27, 37; PO

Resp. 21–25; PO Sur-reply 4–5; Ex. 1002 ¶¶ 128, 130–139, 170–171; Ex. 1009, 5:27–29; Ex. 1010, 9:1–7, 9:29–10:8, Fig. 3.

We do not agree with Patent Owner’s argument that Wouters merely “tests and installs codes one at a time.” PO Remand Br. 9–10. Although Wouters does disclose testing and installing codes one at a time on page 7, line 24 through page 10, line 17, this is not the disclosure Petitioner relies on to meet the “installing” language of limitation 11[e]. Ex. 1009, 7:24–10:17; Pet. Remand Br. 2–3. Rather, as discussed above, Petitioner relies on the activities of Wouters’s “fixer” and the disclosure of “reinstalling” the chosen code set after the batteries die. Pet. Remand Br. 2.

Similarly, we do not agree with Patent Owner’s argument that, because the testing and installation of codes one at a time “is the only detailed description of installation disclosed in Wouters, a reader would expect that *any* installation (or *any* reinstallation would follow this disclosed installation procedure.” PO Remand Br. 10 (emphasis added). Patent Owner cites no evidentiary support for this assertion, and it is contrary to the plain import of Wouters. *Id.* Wouters explains that the fixer enters the chosen codeset, which includes “all object keys (or as many object keys as the user wishes to install),” into the memory with a name (e.g., “user1”), and that the reinstallation may be easily performed “by choosing ‘user1’ from the proposed list or immediately selecting ‘user1,’” which will “start the process by proposing the previously chosen code sets (user1, user2, etc.).” *Id.* at 9. We find that a person of ordinary skill in the art reading this passage would understand that what is reinstalled is the chosen codeset “user1,” and that the user need not repeat the process of trying and installing each of the codes one at a time. *See* Ex. 1009, 10:17–24. Indeed, avoiding

the need for the user to repeat the process of trying each code one at a time appears to be the entire purpose of Wouters’s reinstallation functionality. *See id.*

We also disagree with Patent Owner’s argument that “Wouters’[s] entire disclosure regarding reinstalling a chosen code-set is found in . . . two sentences” and “provides little information regarding how the chosen code-set is reinstalled.” PO Remand Br. 9. Limitation 11[e] does not set forth any particular requirement for *how* the chosen code-set is installed (or reinstalled), other than that the processor and memory are involved. Ex. 1001, 10:45–48; PO Remand Br. 9. And, Patent Owner does not explain what more is required by limitation 11[e] other than installation of the codeset or why, other than length, the description on page 10 of Wouters is deficient. Patent Owner also does not argue that Wouters is not an enabling reference. PO Remand Br. 8–10. We find that the description on page 10, lines 17–24 describes the reinstallation of the codeset for use by the remote control after its batteries die in sufficient detail to satisfy the “installation” language of limitation 11[e].

We also find that Petitioner has not forfeited its argument that Wouters’s fixer and reinstallation functionality satisfies limitation 11[e]. The Petition pointed to Wouters’s “fixer” for limitation 11[e], and cited Dr. Houh’s Declaration specifically identifying and quoting Wouters’s disclosure of reinstallation at page 10, lines 14 through 24. Pet. 35 (quoting Ex. 1009, 10:14–20) (citing Ex. 1002 ¶ 167); Ex. 1003 ¶ 167 (quoting Ex. 1009, 10:14–24). We find that a person of ordinary skill in the art reading the Petition and its cited evidence (including paragraph 167 of Dr. Houh’s first Declaration) would be apprised that Petitioner was relying

on the portion of Wouters describing the “fixer” and reinstallation functionality.

Even were we to determine that the Petition and accompanying Declaration did not sufficiently raise the argument, we find that Petitioner’s argument based on Wouters’s “fixer” and reinstallation functionality in its Reply was not improper and was sufficient to raise the issue. *See* Pet. Reply 5–7. In the Preliminary Response, Patent Owner argued that Wouters does not combine the working codes into a new custom configuration code set *before* installing them, as required by limitation 11[e], but rather installs the codes one code at a time. Prelim. Resp. 20–21 (citing Ex. 2002 ¶¶ 56–57; Ex. 1009, 9:14–16, 9:22–26). In the Institution Decision, the Board noted the parties’ arguments on this point and suggested that “the record would benefit from further development on this issue during trial.” Inst. Dec. 35–36 (citing Pet. 35–36; Prelim. Resp. 18, 21; Ex. 1002 ¶¶ 167–170; Ex. 2002 ¶¶ 54–57). In doing so, we specifically cited paragraph 167 of the Houh Declaration which discusses and quotes the portion of Wouters describing the “fixer” and the reinstallation process. *Id.* at 36 (citing Ex. 1002 ¶¶ 167–170). The Patent Owner Response picked up on this argument and again asserted that Wouters did not disclose “‘combining’ of ‘correct working codes into a new custom configuration code set,’ followed by ‘installing’ the combined working codes” because “the user tests and installs correct working codes one at a time.” PO Resp. 23 (citing Ex. 2012 ¶ 63; Ex. 1009, 9:14–16).

In response to Patent Owner’s argument and the suggestion in the Institution Decision, Petitioner’s Reply pointed to Wouters’s reinstallation feature to show installation of the combined working codes after the remote

malfunctions or its batteries die. Pet. Reply 6–7. More specifically, Petitioner argued that “Wouters clearly discloses that the chosen codeset is the active codeset, and that ***if the remote control ever malfunctions, the codeset can be installed again***,” citing Wouters’s disclosure of reinstallation after the remote’s batteries die as well as Dr. Houh’s second Declaration. *Id.* at 7 (citing Ex. 1009, 10:10–24; Ex. 1027 ¶¶ 102–103) (emphasis added). We disagree with Patent Owner’s contention that this statement in the Reply brief was insufficient because it was merely “a throw-away phrase” that was “less than half of one sentence.” PO Remand Br. 5. We find that this statement, in conjunction with the citation to the relevant portions of Wouters and Dr. Houh’s second Declaration (discussed below), was sufficient to raise the argument, and that the length of the argument does not control whether that argument has been sufficiently raised. *See* Pet. Reply 7 (citing Ex. 1009, 10:10–24; Ex. 1027 ¶¶ 102–103).

Moreover, as noted, Petitioner expanded upon this argument in Dr. Houh’s second Declaration, which cited Wouters’s reinstallation disclosure and asserted that:

Wouters also discloses that at a later time after the new configuration codeset was created (satisfying ‘combining’), ***if the remote control malfunctions or the batteries fail, the user can again install the new custom configuration codeset*** for use by the remote control.

Ex. 1027 ¶ 102 (emphasis added) (citing Ex. 1009, 10:20–24). We find that Petitioner’s argument based on Wouters’s “reinstallation” functionality in its Reply and in Dr. Houh’s second Declaration is a permissible further explanation of the more summary discussion of Wouters’s “fixer” and “reinstallation” functionality in the Petition and Dr. Houh’s first Declaration. We also find that Petitioner’s Reply “reinstallation” argument properly

responds to Patent Owner's assertion that Wouters does not disclose an installation after the codeset is combined, because Petitioner's Reply argument explains that the "reinstallation" is a second "installation" of the chosen codeset (e.g., the one previously saved by the fixer as "user1") after the remote malfunctions or the batteries die. Prelim. Resp. 20–21; PO Resp. 23. Additionally, we find that Petitioner's argument concerning Wouters's reinstallation functionality properly responds to the suggestion in the Institution Decision that the parties further develop this issue during the trial. Prelim. Resp. 20–21; Inst. Dec. 36; PO Resp. 23).

We also find, as the Federal Circuit noted, that the parties raised the "reinstallation" argument during the oral hearing. Specifically, slide 81 of Petitioner's demonstratives quoted Wouters's reinstallation disclosure and specifically underlined the words "reinstall" and "reinstalling":

Limitation 11[e] is Disclosed by Wouters

11[e] combining, via the processor and memory, correct working codes from the scanned remote control code-sets into a new custom configuration code set and installing, via the processor and memory, the combined correct working codes of the new custom configuration code set for use by the remote control.

This iterative procedure will lead to activation (installing) of all object keys, or at least as many objects keys as the user wishes to install, said object keys also having the functions the user wishes said keys to have. After activation of all object keys (or as many object keys as the user wishes to install), the chosen code set is finished. Preferably, the remote control device comprises a fixer (which may be hardware or software or a combination thereof) to fix the chosen code set (i.e. enter it into the RC code set data base) and give it a name ('user1', for instance). When the remote control malfunctions (for instance, when the batteries have been exhausted), the user may easily reinstall the chosen code set by choosing 'user1' from the proposed list or immediately selecting 'user1'. When reinstalling, the remote control will preferably start the process by proposing the previously chosen code sets (user1, user2, etc.).

EX1009 at 10:14-24

Paper 26, slide 81. Petitioner expanded on this argument during the hearing:

They say Wouters fixer does not perform a second installation. They say Wouters certainly does not refer to using

the fixer as an installation or activation. And then they claim that we don't provide any reason why a code would need to be installed twice. Indeed, it makes no sense for a code that's already installed to be installed again. On my final slide, Your Honor, slide 81, all of this is demonstrably false.

We're looking at *Wouters at column 10, line 14 to 24*, this is about the fixer. And let's take a look at the second to last sentence. *When the remote control malfunctions, for instance when the batteries have been exhausted, the user may easily reinstall the chosen code set by choosing user one from the proposed list, or immediately selecting user two. When reinstalling, the remote control will preferably start the process by proposing the previously chosen code sets, users one, user two, etcetera.*

This is exactly, this responds directly to Roku's criticisms, and shows that Wouters does in fact, and the fixer does disclose combining and then reinstalling.

Tr. 31:11–32:1 (emphasis added). Patent Owner did not object to this argument or Petitioner's slide 81 before or during the oral hearing and, in fact, responded to it, as the Federal Circuit noted. *Id.* at 60:5–18 (explaining that “Petitioners have no explanation for why you install the codes, and install them again except for that – unless there was some problem with the code set, you have to reinstall it in that case”); Federal Circuit Opinion 13 (“Indeed, [Patent Owner] appears to have addressed [the reinstallation] argument on the merits in its oral-hearing rebuttal.”).

Based on this record, we find that Petitioner sufficiently raised Wouters's fixer and reinstallation functionality during the trial, including by: (1) referring to the fixer in the Petition; (2) identifying and quoting the reinstallation functionality in a portion of Dr. Houh's first Declaration cited in the Petition; (3) relying on and citing the reinstallation functionality in the Reply in response to Patent Owner's arguments in the Preliminary Response

and Patent Owner Response and the Board's direction in the Institution Decision; and (4) further expanding on the reinstallation functionality in Dr. Houh's second Declaration. Bolstering our conclusion is the fact that Petitioner raised Wouters's reinstallation functionality in its demonstratives and at the oral hearing without objection by Patent Owner. *See* Paper 26, slide 81; Tr. 31:11–32:1. And, Patent Owner was given a further opportunity to address this argument on remand. Paper 38; PO Remand Br. For these reasons, we find that Petitioner has not forfeited this argument, and that Patent Owner has had an adequate opportunity to respond to and address it.

Consequently, after reviewing and considering all of the evidence of record, we find that Petitioner has proven by a preponderance of the evidence that claim 11 is unpatentable over the combination of Wouters and Verzulli.

V. CONCLUSION

The table below summarizes our conclusions as to the challenged claim² at issue in this remand proceeding.³

² Because the Federal Circuit affirmed our final written decision finding claims 1–5, 8–10, and 14 unpatentable, we do not consider those claims in this remand decision. *See* Federal Circuit Opinion 11, 13.

³ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding after the issuance of this Final Written Decision, we draw Patent Owner's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R.

Claim(s)	35 U.S.C. §	References	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
11	103	Wouters, Verzulli	11	

VI. ORDER

It is

ORDERED that claim 11 of U.S. Patent No. 8,378,875 B2 has been shown, by a preponderance of the evidence, to be unpatentable; and

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

§§ 42.8(a)(3), (b)(2).

IPR2022-00818
Patent 8,378,875 B2

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