

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIVERSAL REMOTE CONTROL, INC.
Petitioner

v.

UNIVERSAL ELECTRONICS, INC.
Patent Owner

Case IPR2013-00127
Patent 6,587,067 C1

Before HOWARD B. BLANKENSHIP, SALLY C. MEDLEY, and
WILLIAM V. SAINDON, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. BACKGROUND

Petitioner Universal Remote Control, Inc. filed a Petition¹ (Paper 6) (“Pet.”) requesting *inter partes* review of claims 1-6 (all the claims) of U.S. Patent No. 6,587,067 C1 (“the ’067 patent”) under 35 U.S.C. §§ 311-319. On July 16, 2013, the Board instituted an *inter partes* review of claims 1-6 on three asserted grounds of unpatentability. Paper 13 (“Dec. on Inst.”).

Subsequent to institution, Patent Owner Universal Electronics, Inc. filed a Patent Owner Response (Paper 18; “PO Resp.”). Petitioner filed a Reply to the Patent Owner Response. Paper 21 (“Pet. Reply”).

Oral hearing was held on April 8, 2014.²

The Board has jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1-6 of the ’067 patent are unpatentable.

The ’067 Patent

The ’067 patent (Ex. 1001)³ describes a universal remote control (Fig. 1) comprising a keyboard having pushbuttons, including a macro pushbutton, and a library of codes and data for use in transmitting operating commands to different home appliances of different manufacturers. *Id.* at Abstract. The macro pushbutton may be programmed to achieve a function

¹ We refer to the amended Petition filed February 6, 2013.

² The record includes a transcript of the oral hearing. Paper 32.

³ Petitioner provided a copy of the *ex parte* Reexamination Certificate (Ex. 1009 at 1-2).

that normally requires the actuation of several buttons. *Id.* at col. 14, ll. 14-18; Figs. 18A & 18B.

Illustrative Claims

1. In a universal remote control comprising a keyboard having a plurality of pushbuttons including a macro pushbutton and a library of codes and data for use in transmitting operating commands to a plurality of different home appliances of different manufacturers, a readable medium having instructions for performing steps comprising:

matching the universal remote control to a plurality of different home appliances of different manufacturers such that selected codes and data from the library are used to transmit operating commands to the matched home appliances in response to activation of selected pushbuttons of the keyboard, the pushbuttons of the keyboard being activated to directly identify each of the plurality of different home appliances of different manufacturers to which the universal remote control is to be matched; and

assigning to the macro pushbutton a subset of the selected codes and data from the library whereafter activation of the macro pushbutton causes the universal remote control to use the subset of selected codes and data from the library to transmit a plurality of operating commands to one or more of the matched home appliances.

2. The readable medium as recited in claim 1, wherein the instructions further perform the step of using activation of one or more pushbuttons of the keyboard to assign the subset of the selected codes and data from the library to the macro pushbutton.

Related Proceedings

The '067 patent is involved in a U.S. district court proceeding, *Universal Electronics Inc. v. Universal Remote Control, Inc.*, No. SACV 12-00329 AG (JPRx) (C.D. Cal.), filed on March 2, 2012. Pet. 1. The '067 patent was the subject of a prior appeal in an *ex parte* reexamination proceeding that resulted in all claims being confirmed (Certificate Issued February 15, 2011). See *Ex parte Universal Electronics*, Appeal No. 2009-011530 (BPAI 2010) (expanded panel) (Ex. 1009).

Asserted Grounds of Unpatentability

The Board instituted *inter partes* review on the following asserted grounds of unpatentability under 35 U.S.C. § 103(a) (Dec. on Inst. 22):

I. Claims 1, 3, 4, and 6 over Rumbolt (US 4,774,511) (Ex. 1002) and Magnavox⁴ (Ex. 1006);

II. Claims 2 and 5 over Rumbolt, Magnavox, and Evans (US 4,825,200) (Ex. 1004); and

III. Claims 1-6 over Wozniak (US 4,918,439) (Ex. 1003) and CORE⁵ (Ex. 1005).

II. ANALYSIS

Claim Construction

The '067 patent has expired and thus, as acknowledged by both Petitioner and Patent Owner, cannot be amended. For claims of an expired

⁴ PR Newswire, “*Magnavox Unveils Total Remote Tuning System and Second Generation Universal Remote Control*,” NAP CONSUMER ELECTRONICS CORP. (Apr. 1987) (“Magnovox”).

⁵ Karr et al., “*Core Reference Manual*” (1987) (“CORE”).

patent, the Board's claim interpretation is similar to that of a district court. *See In re Rambus, Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-17 (Fed. Cir. 2005) (en banc)). However, there is a "heavy presumption" that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002).

A. "Directly Identify" the Appliances to Which the Universal Remote Control Device Is to be Matched

In the Decision on Institution, the Board noted that Patent Owner urged that we adopt claim construction relating to the term "directly identify" consistent with the District Court's construction in the related proceeding. With respect to how appliances are identified, the District Court construed the '067 patent's claim 1 limitation of "pushbuttons of the keyboard being activated to directly identify each of the plurality of different home appliances of different manufacturers to which the universal remote control is to be matched." The District Court determined that the limitation means that: "[p]ushbuttons are pressed to enter codes that directly identify each particular home appliance to which the universal remote control is to be matched." Ex. 2001 at 34. Corresponding language in each of claims 3 and 6 was construed similar to that of claim 1. Ex. 2001 at 26-35. We accept Patent Owner's proffered construction, as set forth by the District Court.

B. “Library of Codes and Data”

As indicated in the Decision on Institution, the phrase “library of codes and data” was at issue in the *ex parte* reexamination of the ’067 patent, after the patent had expired. Ex. 1009 at 24-26 (*Ex parte Universal Electronics*, slip op. at 14-16). An expanded panel of the Board, which included the Chief and two Vice Chief Administrative Patent Judges, acknowledged that the Examiner and Patent Owner submitted different interpretations for the word “data” in the context of the claims. The Examiner construed the term “data” to mean “information even when expressed with binary digits.” Ex. 1009 at 16. Patent Owner argued a narrower construction, where “data” referred to a “pattern of bits,” that is, zeros and ones that are to be sent from the universal remote control to the appliances. *Id.* The Board did not select between the competing definitions because the applied prior art failed to teach a library of codes and data under either interpretation of “data.” *Id.* With respect to “codes,” the Board, after considering the arguments and evidence before it, determined that the term referred to transmission schemes for relaying “data” to a controlled apparatus. *Id.* at 14-16.

For the meaning of “library of codes and data,” Patent Owner refers to the declaration statement of its expert (Patrick H. Hayes), as being consistent with the claims, specification, and prosecution history of the ’067 patent. PO Resp. 15-17. The declaration sets forth that, based on “the totality” of the specification of the ’067 patent, one of ordinary skill in the art would have understood the phrase “library of codes and data” to refer to a table programmed into the remote control, the table comprising a variety of

command codes corresponding to particular appliances of different manufacturers. Ex. 2006 ¶ 27. We accept Patent Owner’s construction of “library of codes and data,” with the understanding that “command codes” may include transmission schemes for relaying data.

Date of Invention

The ’067 patent’s earliest-claimed date for priority under 35 U.S.C. § 120 is October 14, 1987. Patent Owner alleges, however, that the date of invention for the subject matter of claims 1 through 6 is earlier, in the “fall/winter of 1986.” PO Resp. 2. Each ground of unpatentability on which trial was instituted relies on at least one patent or publication having a 35 U.S.C. § 102(a) or 102(e) date subsequent to 1986. Specifically, Magnavox, Evans, Wozniak, and CORE have effective dates earlier than the earliest-claimed § 120 priority date but later than 1986. Patent Owner submits, as evidence of prior invention, the declaration of co-inventor Richard Ellis (Ex. 2005) and supporting exhibits.

Rule 131, which governs antedating a reference during patent prosecution, by its terms does not apply in an *inter partes* review. See 37 C.F.R. § 1.131(a) (One may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference when “any claim of *an application or a patent under reexamination* is rejected” over a reference that is not claiming the same patentable invention and does not represent a statutory bar (emphasis added)). An *inter partes* review proceeding is not an examination

proceeding but is more adjudicative in nature.⁶ Antedating a reference in the context of an *inter partes* review proceeding is similar to establishing certain facts to prove an earlier date of invention in response to a challenge of validity.

In the United States, the person who first reduces an invention to practice is “prima facie the first and true inventor.” *Christie v. Seybold*, 55 F. 69, 76 (6th Cir.1893) (Taft, J.). However, the person “who first conceives, and, in a mental sense, first invents . . . may date his patentable invention back to the time of its conception, if he connects the conception with its reduction to practice by reasonable diligence on his part, so that they are substantially one continuous act.” *Id.* Stated otherwise, priority of invention “goes to the first party to reduce an invention to practice unless the other party can show that it was the first to conceive the invention and that it exercised reasonable diligence in later reducing that invention to practice.” *Price v. Symsek*, 988 F.2d 1187, 1190 [] (Fed.Cir.1993).

Mahurkar v. C.R. Bard, Inc., 79 F.3d 1572, 1577 (Fed. Cir. 1996).

Further, a showing of prior invention requires corroboration.

⁶ See, e.g., Senator Kyl’s statement that:

In the present bill, section 316(a)(4) gives the Office discretion in prescribing regulations governing the new proceeding. The Office has made clear that it will use this discretion to convert *inter partes* into an adjudicative proceeding.

157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011).

This court has developed a rule requiring corroboration where a party seeks to show conception through the oral testimony of an inventor. *Price*, 988 F.2d at 1195. This requirement arose out of a concern that inventors testifying in patent infringement cases would be tempted to remember facts favorable to their case by the lure of protecting their patent or defeating another's patent.

Mahurkar v. C.R. Bard, Inc., 79 F.3d at 1577.

It has long been the case that an inventor's allegations of earlier invention alone are insufficient -- an alleged date of invention must be corroborated. *Medichem S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1170 (Fed. Cir. 2006); *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1371 (Fed. Cir. 1998). "[E]vidence is assigned probative value and collectively weighed to determine whether reduction to practice has been achieved." *Medichem*, 437 F.3d at 1170. "Sufficiency of corroboration is determined by using a 'rule of reason' analysis, under which all pertinent evidence is examined when determining the credibility of an inventor's testimony." *Id.*

In re NTP, Inc., 654 F.3d 1279, 1291 (Fed. Cir. 2011).

Although Mr. Ellis testifies in his declaration that he, with the help of others, "conceived of" a universal remote control in 1986 (Ex. 2005 ¶¶ 6, 10), Patent Owner does not allege that the inventors were the first to conceive the invention and exercised reasonable diligence in reducing that invention to practice. *See Mahurkar*, 79 F.3d at 1577. In particular, Patent Owner does not allege, let alone show, there was a period of reasonable diligence in reducing the invention to practice following conception of that invention. The question of whether Patent Owner has antedated any of Magnavox, Evans, Wozniak, and CORE, thus, reduces to the question of

whether Patent Owner has demonstrated a reduction to practice before the effective dates of the references.

“To show actual reduction to practice, an inventor must demonstrate that the invention is suitable for its intended purpose.” *Mahurkar*, 79 F.3d at 1578 (citing *Scott v. Finney*, 34 F.3d 1058, 1061 (Fed.Cir.1994)). Mr. Ellis testifies in his declaration that a “prototype” of a universal remote control was “tested” and found “to be working and suitable for its intended purpose.” Ex. 2005 ¶ 15. Another “prototype” was “tested” and “found to be working and suitable for its intended purpose.” *Id.* ¶ 17. A “pre-production model” was “tested” and found “to be working and suitable for its intended purpose.” *Id.* ¶ 30. The first two “prototypes” and the “pre-production model” are alleged to have been made in the fall of 1986, in the winter of 1986-87, and in March/April of 1986, respectively, but the declaration does not say when the prototypes and model were “tested” and found to be suitable for their intended purposes.

In general, proof of actual reduction to practice requires a showing that the apparatus actually existed and worked for its intended purpose unless the device is so simple that a mere construction of the device is all that is necessary to constitute reduction to practice. *See In re Asahi/Am., Inc.*, 68 F.3d 442, 445 (Fed. Cir. 1995). In *Asahi*, the Court held that mere construction of a restraint coupling was sufficient to demonstrate an actual reduction to practice. *Id.* at 445-47. In this case, the invention of the '067 patent is not as simple as a restraint coupling or an electric switch box with a lid (*see id.* at 445-46) such that mere construction demonstrates a reduction to practice. The exhibits that Mr. Ellis' Declaration relies upon to show construction of the models are photocopies of casings, circuit diagrams, and

printed circuit board artwork. Although the exhibits indeed might tend to show that something was constructed, they do not show testing of any of the models to verify that any worked for its intended purpose.

Mr. Ellis also refers to manuals dated February 18, 1987 (Ex. 2005 ¶ 21) and March 8, 1987 (*id.* ¶ 26) as evidence of reduction to practice. The invention, however, continued to be under development during February and March of 1987. Declarant testifies that the inventors “began designing” the printed circuit board for the device in the “winter and spring of 1987.” *Id.* ¶ 29. Mr. Ellis does not allege, directly, that a “working prototype that was suitable for its intended purpose” existed prior to design and construction of the sample printed circuit boards. Nor does Declarant indicate how a “working prototype” (*id.*) might prove that the yet-to-be-constructed devices containing the final printed circuit boards worked for their intended purposes. In any event, Declarant does not point to any corroborating evidence that a “working prototype” (*id.*) was constructed prior to the winter and spring of 1987. Moreover, Declarant alleges that printed circuit board design and development was ongoing at least as late as August 6, 1987. Ex. 2005 ¶ 46; Decl. Ex. T (copy of printed circuit board artwork).

Mr. Ellis further refers to assembly language source code (Decl. Ex. L, dated Apr. 30, 1987) and alleges that the code shows the remote control device was “capable of” performing certain functions. Ex. 2005 ¶¶ 34-36. The declaration and supporting exhibits, however, do not allege, let alone show, that the source code was compiled and loaded into the electronic memory of a remote control device, and that the resulting combination of hardware and software was tested and determined to work for its intended purpose.

We have considered all of Patent Owner's arguments and evidence provided in its Response in support of the effort to antedate references. We find insufficient corroboration to demonstrate, by a preponderance of the evidence, a reduction to practice prior to the earliest-claimed patent priority date of October 14, 1987. Accordingly, references having effective dates earlier than October 14, 1987 constitute prior art in this proceeding. None of Magnavox, Evans, Wozniak, and CORE has been antedated.

Section 103(a) Patentability

A. Claims 1, 3, 4, and 6 over Rumbolt and Magnavox

Although Petitioner challenged claims 1-6 over Rumbolt and Magnavox, the Board instituted trial on that basis only as to claims 1, 3, 4, and 6. Dec. on Inst. 14-16. We noted that Petitioner relies on Magnavox as teaching the claim 1 and claim 4 limitations of pushbuttons to directly identify each of the plurality of different home appliances of different manufacturers to which the universal remote control is to be matched, and similar limitations in claims 3 and 6.

In particular, Magnavox describes:

While the new 36-button Universal Remote is more technologically advanced than its predecessor, the identification process has been simplified. Each VCR and cable brand is listed in the front of the operating manual with an assigned number. For instance, GE is 01, RCA is 03, Zenith is 15. To identify a particular VCR, a viewer simply presses the REC button on the remote, presses the on/off button on the VCE or cable box and enters the appropriate code.

Ex. 1006 at 2.

Notwithstanding the fact that Magnavox describes a 36-button universal remote whereby the user enters a numeric code to match the remote to a particular appliance, Patent Owner advances the theory that the codes are not entered by pressing keys on the keyboard. Patent Owner submits that it is “just as plausible” that the codes are entered via other means such as dual in-line package (DIP) switches or thumb switches. PO Resp. 21. Patent Owner does not, however, point to where Magnavox might refer to DIP switches, thumb switches, or any other mechanism other than the described pushbuttons by which a user might enter numeric codes.

Patent Owner alleges that Rumbolt and Magnavox describe the same or a similar remote, suggesting that “the more reasonable inference” is that the manner of code entry in Magnavox is the same as that in Rumbolt; that is, Magnavox uses DIP switches in the same manner as described by Rumbolt. PO Resp. 21-22. The argument fails to account, however, for Magnavox’s disclosure that the 36-button remote is more technologically advanced than its predecessor, and that “the identification process has been simplified.” Ex. 1006 at 2. The argument also fails to consider the nearly two-year allowance for research, development, and improvements between the filing of Rumbolt (May 30, 1985) and the publication of Magnavox (Apr. 9, 1987).

Patent Owner argues, further, that replacing the DIP switches used by Rumbolt with pushbutton code entry (as taught by Magnavox) would not have been obvious because doing so would require a Random Access Memory (RAM), such that the code entries would not be preserved in memory when batteries were replaced, necessitating re-entry of the codes.

PO Resp. 22-24. The argument is premised, however, on the testimony of Patent Owner's expert that:

If retaining the programming of the remote control during battery replacement was an important consideration of the remote control in Magnavox, one of ordinary skill in the art who was familiar with the Rumbolt patent may have preferred such rotary digit switches over pushbuttons to avoid the added cost of backup batteries and additional software for enabling multi-modal pushbuttons.

Ex. 2006 ¶ 18 (emphasis added). “Yes, and if the court had a brother, he might like buttermilk.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005). In other words, Patent Owner has not established that retaining programming of the remote control during battery replacement was “an important consideration” in the design of a universal remote control at the time of invention, sufficient to discourage the artisan from the design of pushbutton entry of appliance codes.⁷ Mr. Hayes submits that “in the mid 1980s, one of the key reasons for using DIP switches was to preserve the stored identities of appliances when the batteries were removed (to allow them to be replaced).” Ex. 2006 ¶ 22. Declarant, however, does not point to any evidence in the record in support of the allegation. Such unfounded testimony is entitled to little or no weight. 37 C.F.R. § 42.65(a).

Further, both the allegation that DIP switches were necessary to preserve data when batteries were replaced and the suggestion that provision

⁷ Similarly, Declarant submits that if “pressing the ‘REC’ button” in Magnavox invokes the setup mode, “it is unclear how a user issues a routine ‘record’ command request to the VCR without inadvertently switching the remote control to setup mode.” Ex. 2006 ¶ 19. The observation is premised on the assumption that “REC” refers to a record command, rather than another operation (such as receiving entry of the codes).

of a battery for preserving remote control codes in memory would have been prohibitively expensive (Ex. 2006 ¶ 23) are not supported by the record. The '067 patent does not purport that providing a battery to render RAM non-volatile represented an advance over the prior art. On the contrary, the patent refers to U.S. Patent No. 4,623,887 (“Welles”; Ex. 3001) and U.S. Patent No. 4,626,848 (“Ehlers”; Ex. 3002) as disclosing reconfigurable, learning remote control transmitter devices that include scratch pad random access memory and “a non-volatile random access memory.” Ex. 1001, col. 2, ll. 1-9. Welles, for example, discloses scratch pad memory 40 and non-volatile RAM 38, which maintains learned code data due to lithium back-up battery 45. Ex. 3001, col. 4, ll. 48-58, col. 6, ll. 14-16; Fig. 4d.

Patent Owner’s expert also submits that combining Rumbolt and Magnavox “would require a substantial amount of new software to manage and keep track of the current mode of operation, because each keystroke must be interpreted in the context of the remote’s current state, rather than simply as a fixed function.” Ex. 2006 ¶ 24. Again, however, Declarant does not point to any evidence in support of the allegation, or anything else that might tend to show a need for substantial additional software. On the contrary, it appears there would be only two states for which to account—an appliance identification state and a remote control state. Nor does Declarant provide an example of additional software coding that might be necessary to go beyond, simply, determining that a key entry is for identifying an appliance (state 1) or for sending a remote control signal (state 2).

We are persuaded by a preponderance of the evidence that the subject matter of claims 1, 3, 4, and 6 would have been obvious over Rumbolt and Magnavox.

B. Claims 2 and 5 over Rumbolt, Magnavox, and Evans

Claim 2 of the '067 patent further limits the subject matter of claim 1 by requiring the use of one or more pushbuttons to assign the subset of the selected codes and data from the library to the macro pushbutton. Claim 5 recites similar limitations.

Evans teaches a macro function, and that such a “program sequence is learned or stored in the controller by setting run/learn switch 40 [Fig. 1] to its learn position” (Ex. 1004, col. 8, ll. 20-22). Evans further teaches storing infrared codes and data in RAM 112, which are stored in a “learning remote” protocol whereby the codes and data are captured from the source infrared controller device (e.g., a TV controller). *Id.* at col. 6, ll. 8-68. A sequence of infrared codes and data, perhaps from different devices, may be stored in a “programming sequence.” *Id.* at col. 7, l. 61 - col. 9, l. 8. During normal use, the program (or function) sequences stored in RAM 112 are retrieved and the proper infrared signals are generated when the macro function is selected by operation of keys on the universal remote. *See, e.g., id.* at col. 11, ll. 45-52; col. 12, ll. 15-24; *see also id.* at col. 7, ll. 17-29.

Patent Owner submits, however, that because Evans teaches a “learning remote,” the reference does not teach a “library of codes and data.” PO Resp. 28. Patent Owner does not explain how Evans might fail to teach a table programmed into the remote control, comprising a variety of command codes corresponding to particular appliances of different manufacturers. *See id.* at 15. The only hint as to why Patent Owner might argue Evans fails to do so is the reference by Mr. Hayes to a “pre-existing library.” Ex. 2006 ¶ 30. Claims 2 and 5, however, do not contain the word

“pre-existing,” or any other temporal indicator as to when the codes and data are entered into memory. Nor is it clear at what point codes and data may be considered “pre-existing.” Patent Owner, thus, appears to advance the view that the claims somehow distinguish over command codes that have been stored in a “learning remote” mode. Claims 2 and 5, however, place no limitation on *how* or *when* the command codes are programmed.

Nor does the ’067 patent support Patent Owner’s position. The patent refers to Welles and Ehlers as disclosing reconfigurable remote control devices that have the ability to “learn, store and repeat remote control codes from any other infrared transmitter.” Ex. 1001, col. 2, ll. 1-14. The transmission schemes that Welles may store are depicted in Figure 1 of Welles. Figure 1 of Ehlers is identical to Figure 1 of Welles. Figure 11 of the ’067 patent is identical to Figure 1 of Welles and Figure 1 of Ehlers. “The infrared codes to be learned include a wide range of different codes for operating different electrical apparatus manufactured by the same or different manufacturers. In FIG. 11, *which is identical to FIG. 1 in U.S. Pat. No. 4,623,887 [Welles]*, there are illustrated several modulation schemes for infrared codes.” Ex. 1001, col. 9, ll. 14-19 (emphasis added). This “code data” may also “*be obtained from vendor information sheets and specifications. . . .*” *Id.* at col. 9, ll. 41-44 (emphasis added). The codes and data taught by Welles, Ehlers, and the ’067 patent are no different from that taught by Evans. Evans discloses:

[P]rogrammable reconfigurable remote control transmitters have been developed which, when in a learning mode, are adapted to receive the infrared coded signals transmitted by two or more remote transmitters and to store compacted representations of these coded signals. Once the transmitter has been programmed, it may be utilized as a

universal controller for the products it has been programmed to operate. One such reconfigurable remote control transmitter is described in U.S. Pat. No. 4,626,848 entitled “Programmable Functions for Reconfigurable Remote Control” issued to Raymond G. Ehlers on Dec. 2, 1986 [Ehlers].

Ex. 1004, col. 1, ll. 31-42. Evans’s advance over the prior art was not in providing command codes different from the prior art, but in the addition of a macro function to overcome the requirement of selecting multiple keys in sequence for performing common functions such as turning on a cable box, turning on a television, and selecting a cable input channel on the television. *Id.* at col. 1, l. 43 - col. 2, l. 7.

Thus, when a universal remote control transmitter retrieves stored command codes from memory to control particular appliances (as in Evans), it does not matter how or when the codes were entered into the memory. Patent Owner has not established that the *when* or the *how* of storing the command codes in memory makes any difference in the steps recited in, for example, claim 2 (and base claim 1).⁸ The claims are not limited to first deciphering the infrared codes and then using a computer to store the codes

⁸ Patent Owner’s representative at the oral hearing argued that a “learning” remote stores only a “waveform,” as opposed to decoding the waveform and storing data to reproduce the appropriate command codes. Hearing Transcript 21:15 - 22:2. We do not find the argument in Patent Owner’s Response. We do not consider arguments advanced for the first time at a trial hearing because to do otherwise would be prejudicial to the other party (or parties). In any event, Welles demonstrates that in a learning remote command codes are received, decoded, may be compressed, and when reproduced the operation “requires that the transmitter recall, expand and transmit the required code.” Ex. 3001, col. 1, ll. 1-9; col. 6, ll. 14-16, 35-38; col. 8, ll. 37-40; Fig. 8 (tabular representation of the compressed learned code).

and data into remote controller memory (Ex. 1001, col. 8, ll. 33-45). If the command codes differed depending on how or when they were stored in memory, a television might turn off when receiving the signal from a remote controller having computer-programmed memory but not when receiving the (same) signal from a remote controller having learning-remote programmed memory, or vice versa. But the television turns off, regardless, upon reception of the power-off signal.

We are persuaded by a preponderance of the evidence that the subject matter of claims 2 and 5 would have been obvious over Rumbolt, Magnavox, and Evans.

C. Claims 1-6 over Wozniak and CORE

The Board instituted trial as to the obviousness of claims 1-6 over Wozniak and CORE. Dec. on Inst. 18-20. CORE indicates that the CORE controller provides the user with pre-stored commands for some remote controllers. For operation of the pre-stored commands, the user has insert sheets labeled PAGE 1, PAGE 2, etc., with PAGE 8 labeled TV. Ex. 1005 at 5. A diagram corresponding to the CORE keyboard resides on the left-hand side of PAGE 8, and a list of commands resides on the right-hand side. The user presses the “PAGE” key and then the “8” key to execute commands on page 8. A particular key identified from the insert sheet is pressed next to send, for example, the TV power signal. *Id.* One may then press the key sequence for PAGE 9, and then the key corresponding to the VCR command to execute. *Id.* at 6.

Patent Owner argues that the combination of Wozniak and CORE fails to suggest “the pushbuttons of the keyboard being activated to directly

identify each of the plurality of different home appliances of different manufacturers to which the universal remote control is to be matched,” as recited in claims 1, 2, 4, and 5, or “using activation of one or more pushbuttons of the keyboard to directly identify each of the plurality of different home appliances of different manufacturers,” as recited in claims 3 and 6. PO Resp. 33-36. Patent Owner refers to the Hayes Declaration for support. *Id.* at 36.

Mr. Hayes testifies that the CORE remote controller is incapable of having its pushbuttons activated to directly identify an appliance. Ex. 2006 ¶ 33. “Rather, the function of the pushbuttons of the CORE remote can be switched between various ‘pages’ in its memory corresponding to physical [pages] in a journal provided with the remote.” *Id.* According to CORE, the journal is a book that comes with the device, in which the user writes a record of the commands, sequences, and timed operations assigned by the user to each key. Ex. 1005 at 6. The product also includes a “Factory Presets” insert sheet describing the pre-programmed remote controller commands. *Id.*

In any event, Patent Owner’s expert submits, further, that switching between the pages of the CORE remote does not directly identify any particular device because “[the] pages may be entirely empty. It is also possible for a single page to include commands for multiple appliances. Still further, it is possible for some of the commands for a particular appliance to be stored on one ‘page’ and other commands to be stored on another ‘page.’” Ex. 2006 ¶ 33. Declarant does not cite to any disclosure in CORE, or elsewhere in the record, in support of the allegations. CORE discloses, for example, that VCR commands are stored on PAGE 9. Ex. 1005 at 9.

More important, however, Declarant does not indicate or explain why the proposed hypothetical possibilities, even if taught by CORE, would demonstrate that the CORE controller does not directly identify a particular device based on activation of pushbuttons of the keyboard.

Patent Owner's expert concludes that "[p]ut simply, CORE does not disclose any manner by which a user can direct the remote to match to a particular appliance—for example, Sony TV model ABC-123—via its pushbuttons." Ex. 2006 ¶ 33. The reference, however, does disclose the manner by which a user can direct the remote to match to a particular appliance, for example, by pressing keys to match the remote controller to a particular VCR model. "The VCR commands are stored on PAGE 9. Simply press [PAGE], then [9], and then the key corresponding to whatever VCR command you want to execute." Ex. 1005 at 9. We reiterate that we interpret "directly identify" in the exact terms that Patent Owner submits "directly identify" should be construed: "'pushbuttons are pressed to enter codes that directly identify each particular home appliance to which the universal remote control is to be matched.'" PO Resp. 35-36. For example, the entry of the code "9" by pressing "PAGE" and then "9" on the CORE controller keyboard directly identifies the particular VCR model to which the controller is to be matched. The entry of the code "8" by pressing "PAGE" and then "8" directly identifies the particular TV model to which the controller is to be matched. Ex. 1005 at 8-9.

Patent Owner argues that Petitioner's expert, Dr. Alan J. Herr, indicated in cross-examination testimony that CORE does not teach directly identifying a target device because the manual does not disclose the user entering the manufacturer's code and ID (or model) number to identify the

device. PO Resp. 31-33. That Dr. Herr might express the opinion that an engineer would understand “directly identify” to refer to entry of particular codes (*id.* at 33) does not affect the present analysis because that perspective is not consistent with proper construction of the term. We agree with Patent Owner that the term “directly identify,” in the context of the claims, is not limited to entry of codes that consist of a manufacturer’s code and an ID or model number. See PO Resp. 35-36 (“[P]ushbuttons are pressed to enter codes that directly identify each particular home appliance to which the universal remote control is to be matched.”).

Further, even if the term “directly identify” were to require that device-specific codes be “pre-programmed” into the library of the remote control, the codes being predisposed to operate each particular home appliance (*id.* at 36), CORE teaches that. Ex. 1005 at 6 (“‘Factory Presets’ is an insert sheet describing the remote controller commands that come pre-programmed with CORE.”).

We are persuaded by a preponderance of the evidence that the subject matter of claims 1-6 would have been obvious over Wozniak and CORE.

Patent Owner’s Motion to Exclude

Patent Owner moves to exclude, under 37 C.F.R. § 42.64(c), deposition testimony of Dr. Herr during redirect examination and reliance on the testimony in Petitioner’s Reply to Patent Owner’s Response. Paper 22.

We have considered the merits of the cross-examination testimony of Dr. Herr that was the basis for the alleged leading questions by Petitioner’s counsel during redirect examination. See our discussion of the claims in view of Wozniak and CORE, *supra*. This final written decision does not

rely on the redirect examination of Dr. Herr, nor does it rely on any arguments regarding such testimony in Petitioner's Reply. Accordingly, we *dismiss* Patent Owner's motion to exclude as moot.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that: claims 1, 3, 4, and 6 are unpatentable over Rumbolt and Magnavox; claims 2 and 5 are unpatentable over Rumbolt, Magnavox, and Evans; and claims 1-6 are unpatentable over Wozniak and CORE.

IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1-6 of the '067 patent are *unpatentable*;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed*; 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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