

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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COMCAST CABLE COMMUNICATIONS, LLC,  
Petitioner

v.

ROVI GUIDES, INC.,  
Patent Owner

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Case IPR2017-00942  
Patent 8,566,871

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**PATENT OWNER'S NOTICE OF APPEAL**

Pursuant to 35 U.S.C. §§ 141, 142, and 319, and 37 C.F.R. §§ 90.2-90.3, notice is hereby given that Patent Owner Rovi Guides, Inc. appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board (“Board”) entered October 11, 2018 (Paper 38) in IPR2017-00942, and from all underlying orders, decisions, rulings, and opinions. A copy of the Final Written Decision is attached.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Patent Owner further indicates that the issues on appeal include, but are not limited to: (1) the Board’s determination that (i) claims 1–3, 5–14, 16–25, and 27–33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie; (ii) claims 1–3, 5–8, 10, 12–14, 16–19, 21, 23–25, 27–30, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander; (iii) claims 9, 11, 20, 22, 31, and 33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Alexander, and LaJoie; (iv) claims 1–8, 10, 12–19, 21, 23–30, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson; and (v) claims 9, 11, 20, 22, 31, and 33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Knudson, and LaJoie; (2) the Board’s claim construction analysis and determinations; (3) the Board’s decision denying-in-part Patent Owner’s motion to exclude; and (4) the Board’s decision denying Patent Owner’s motion to

supplement; and (5) the Board's authority, and all other issues decided adversely to Patent Owner in any order, decision, ruling or opinion underlying or supporting the Final Written Decision.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a), this Notice is being filed with the Director of the United States Patent and Trademark Office, and a copy of this Notice is being concurrently filed with the Patent Trial and Appeal Board. In addition, a copy of this Notice and the required docketing fees are being filed with the Clerk's Office for the United States Court of Appeals for the Federal Circuit via CM/ECF.

Dated: December 10, 2018

Respectfully submitted,

**ROPES & GRAY LLP**

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**CERTIFICATE OF FILING**

It is certified that, in addition to being filed electronically through the Patent Trial and Appeal Board's E2E System, a true and correct copy of the foregoing PATENT OWNER'S NOTICE OF APPEAL has been filed by hand on December 10, 2018, with the Director of the United States Patent and Trademark Office, at the following address:

Director of the United States Patent and Trademark Office  
c/o Office of the General Counsel  
10B20, Madison Building East,  
600 Dulany Street  
Alexandria, VA 22314-5793

Dated: December 10, 2018

Respectfully submitted,

By: /Mark Rowland/  
Mark D. Rowland

**CERTIFICATE OF FILING**

It is certified that a copy of the foregoing PATENT OWNER'S NOTICE OF APPEAL was filed electronically through the United States Court of Appeals for the Federal Circuit's CM/ECF system December 10, 2018 and one paper copy delivered by hand on December 10, 2018, with the Clerk of the Court of the Federal Circuit, at the following address:

Clerk of the Court  
717 Madison Place, N.W.  
Room 401  
Washington D.C. 20439

Dated: December 10, 2018

Respectfully submitted,

By: /Mark Rowland/  
Mark D. Rowland

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that this PATENT OWNER’S NOTICE OF APPEAL was served by filing through PTAB E2E, as well as providing a courtesy copy via e-mail to the following attorneys of record for Petitioner listed below:

|                  |   |
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Dated: December 10, 2018

By: */Mark Rowland/*  
Mark D. Rowland

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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COMCAST CABLE COMMUNICATIONS, LLC,  
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Case IPR2017-00942  
Patent 8,566,871 B2

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Before KARL D. EASTHOM, BARBARA A. BENOIT, and  
STACY B. MARGOLIES, *Administrative Patent Judges*.

MARGOLIES, *Administrative Patent Judge*.

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

## I. INTRODUCTION

In this *inter partes* review, instituted pursuant to 35 U.S.C. § 314, Comcast Cable Communications, LLC (“Petitioner”) challenges the patentability of claims 1–33 of U.S. Patent No. 8,566,871 B2 (Ex. 1001, “the ’871 patent”), owned by Rovi Guides, Inc. (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, Petitioner has shown by a preponderance of the evidence that claims 1–33 of the ’871 patent are unpatentable.

### A. *Procedural History*

Petitioner filed a Petition for *inter partes* review of claims 1–33 of the ’871 patent. Paper 2 (“Pet.”). Patent Owner filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). On October 13, 2017, we instituted an *inter partes* review of claims 1–33 of the ’871 patent on the following grounds:



| <b>References</b>                           | <b>Basis</b>                    | <b>Challenged Claims</b>          |
|---|---------------------------------|-----------------------------------|
| Browne <sup>1</sup> and LaJoie <sup>2</sup> | 35 U.S.C. § 103(a) <sup>3</sup> | 1–33                              |
| Browne and Alexander <sup>4</sup>           | 35 U.S.C. § 103(a)              | 1–8, 10, 12–19, 21, 23–30, and 32 |
| Browne, Alexander, and LaJoie               | 35 U.S.C. § 103(a)              | 9, 11, 20, 22, 31, and 33         |
| Browne and Knudson <sup>5</sup>             | 35 U.S.C. § 103(a)              | 1–8, 10, 12–19, 21, 23–30, and 32 |
| Browne, Knudson, and LaJoie                 | 35 U.S.C. § 103(a)              | 9, 11, 20, 22, 31, and 33         |

Paper 9 (“Inst. Dec.”), 32–33.

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 15, “PO Resp.”), to which Petitioner filed a Reply (Paper 18, “Reply”). Petitioner relies on the Declaration of Dr. Vernon Thomas Rhyne, III (Ex. 1022) and the Second Declaration of Vernon Thomas Rhyne, III (Ex. 1033, “Second Rhyne Declaration”). Patent Owner relies on the Declaration of Edward J. Delp III, Ph.D. (Ex. 2003).

Patent Owner filed a Motion to Exclude Evidence (Paper 22, “MTE”). Petitioner filed an Opposition to Patent Owner’s Motion to Exclude (Paper 23, “MTE Opp.”), to which Petitioner filed a Reply (Paper 25, “MTE

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<sup>1</sup> PCT Publication No. WO 92/22983, published Dec. 23, 1992 (Ex. 1016).

<sup>2</sup> U.S. Patent No. 6,772,443 B1, filed Nov. 3, 1998, issued Aug. 3, 2004 (Ex. 1020)

<sup>3</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), revised 35 U.S.C. § 103, effective March 16, 2013. Because the challenged patent was filed before March 16, 2013, we refer to the pre-AIA version of § 103 in this Decision.

<sup>4</sup> PCT Publication No. WO 99/04561, published Jan. 28, 1999 (Ex. 1021)

<sup>5</sup> U.S. Patent Application Publication No. US 2005/0240968 A1, filed June 8, 2005, issued Oct. 27, 2005 (Ex. 1024).

Reply”). Patent Owner also filed a Motion to Supplement Record (Paper 34, “MTS”), to which Petitioner filed an Opposition (Paper 36, “MTS Opp.”).

An oral hearing was held on July 25, 2018, and a transcript of the hearing has been entered into the record. Paper 37 (“Tr.”).

### *B. Related Matters*

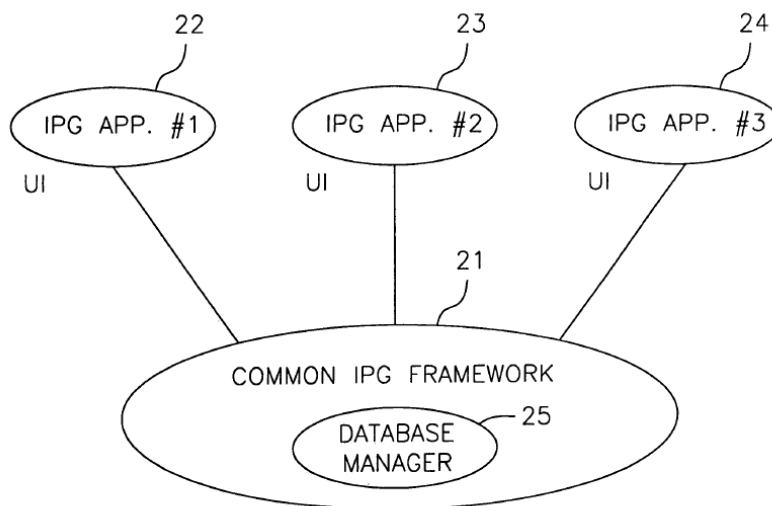
The parties identify the following pending matters, which may affect, or be affected by, a decision in this proceeding: (1) *Rovi Guides, Inc. v. Comcast Corporation*, 1:16-cv-09826 (S.D.N.Y.); (2) *Comcast Corporation v. Rovi Corporation*, 1:16-cv-03852 (S.D.N.Y.); and (3) *In the Matter of Certain Digital Video Receivers and Hardware and Software Components Thereof*, ITC Inv. No. 337-TA-1001. Pet. 1–2; Paper 5, 2; *see* 37 C.F.R. § 42.8(b)(2). Claims 1–33 of the ’871 patent also are at issue in IPR2017-00943, for which a final written decision is being issued concurrently with this Decision.

### *C. The ’871 Patent*

The ’871 patent is titled “Multiple Interactive Electronic Program Guide System and Methods.” Ex. 1001, [54]. The ’871 patent describes as background that electronic interactive program guides (“IPGs”) “require[] a set-top box or a computer,” and “in a household with several [television] sets, several set-top boxes are needed.” *Id.* at 1:43–45. In addition, according to the ’871 patent, “different users with different [television] watching tastes and habits do not have the flexibility of customizing an IPG to their needs.” *Id.* at 1:47–49. The ’871 patent explains that “there is a need for a multiple IPG system in a single set-top box or a single computer wherein the IPGs share some data and are capable of notifying users of any competing and conflicting resources.” *Id.* at 1:53–56.

The '871 patent describes a multiple IPG system that “provides different [television] programming and different IPGs to several different users respectively.” *Id.* at 1:62–64. The '871 patent discloses that “[e]ach IPG can be configured to allow users to tailor the program guides by selecting which channels to display in the guides and which channels the respective IPG device tunes to when the user channel surfs.” *Id.* at 4:48–51. For example, according to the '871 patent, a user can deselect channels that the user seldom watches, and those deselected channels are not displayed on the guide and are skipped over when the user presses channels up or down. *Id.* at 4:51–54, 4:63–65.

Figure 1C of the '871 patent, shown below, illustrates a block diagram of the software architecture:



**FIG. 1C**

*Id.* at 7:53–54. As illustrated in Figure 1C above, IPG data is stored and organized in common IPG framework 21, and the IPG data is shared between three IPG applications 22, 23, and 24. *Id.* at 7:54–56. Common

IPG framework 21 includes database manager 25, which responds to requests from IPG applications 22, 23, and 24. *Id.* at 7:56–59.

The '871 patent discloses that data for the multiple IPGs is stored in system RAM 8 (shown in Figure 1B). *Id.* at 7:26–28. According to the '871 patent, “[p]referably, common data to all IPGs is stored in a segment of the RAM that is accessible by all the IPGs” and “[d]ata specific to each IPG based on a particular user or a particular [television] set is stored in other segments of the RAM 8 and is accessible by respective IPGs.” *Id.* at 7:28–32.

The '871 patent also discloses a “scheduled events list,” an example of which is illustrated in Figure 31 below. *Id.* at 8:6–7.

The figure shows a graphical user interface for a 'Scheduled Events List'. At the top, there are five menu buttons: 'Menu', 'PPV', 'Grid Guide', 'Themes', and 'What's New'. Below these is a large rectangular frame containing the title 'Scheduled Events List'. Inside this frame is a table with the following structure:

| EVENT    |                | SCHEDULE   | TIME     | DUR. |
|----------|----------------|------------|----------|------|
| Purchase | \$ Sphere      | Wed Sep 16 | 10:00 pm | 2:30 |
| Purchase | \$ Wag the Dog | Thu Sep 17 | 12:00 pm | 2:00 |

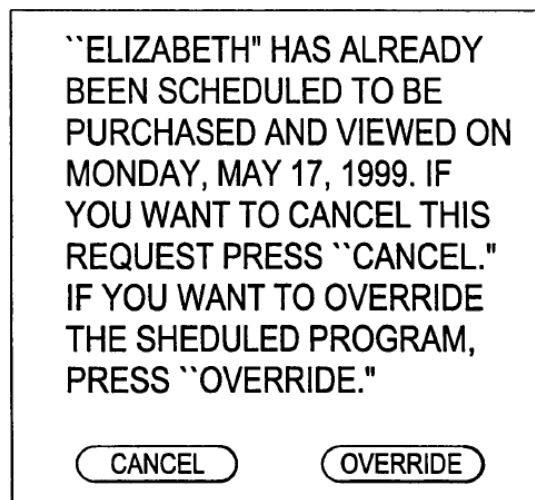
Below the table, there is a text label: 'This show is on ch. 152, VCD02'. The 'Wag the Dog' row in the table is shaded with diagonal lines.

**FIG. 31**

Figure 31 above illustrates a scheduled events list, which includes “an aggregate list for all individual recordings and series recordings, future [Pay-Per-View (“PPV”)] purchases, and scheduled tunes.” *Id.* at 8:4–6.

According to the ’871 patent, “[t]he scheduled events list is shared by all the users.” *Id.* at 8:12–13. The ’871 patent discloses that “[i]f a user cancels a scheduled purchase, the purchase is no longer displayed in any of the guides or any of the scheduled events lists.” *Id.* at 8:26–28. The ’871 patent also discloses that “all the competing and conflicting requests for limited resources, such as VCR scheduled recordings, are brought to the users’ attention and displayed or prompted by the system.” *Id.* at 5:50–53; *see also id.* at 2:5–7 (same). For example, “[i]n case of a conflict, the program in conflict is highlighted in this screen.” *Id.* at 8:34–35. Also, “a new pop up (prompt) screen may appear notifying the user about the conflict.” *Id.* at 8:35–37.

An example prompt is shown in Figure 32 below.



**FIG. 32**

Figure 32 above shows “an example of a prompt window for notifying a second user who is requesting a PPV purchase that has already been scheduled.” *Id.* at 8:38–40. The ’871 patent explains as follows:

In this example, unknown to the second user, a first user had requested to purchase “Elizabeth” as a PPV program to be viewed at a first time schedule. The system notifies the second user about the conflict and asks the second user if he/she wants to override the first user’s scheduled event. Only a user with higher password level than that of a first user can override the first user’s request for a conflicting resource. If the second user has a higher priority password, he/she can re-schedule the telecast time of “Elizabeth.”

*Id.* at 8:40–48. The ’871 patent also discloses that “if a first user schedules recording of a first program and a second user attempts to schedule recording of a second program that will be telecast at the same time, the system prompts the second user and displays the recording schedules stored by all the users.” *Id.* at 5:60–64.

#### *D. Illustrative Claims*

Among the challenged claims (claims 1–33), claims 1, 12, and 23 are independent. Claims 1, 2, and 4 are illustrative of the subject matter of the challenged claims and read as follows:

1. A method for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household, the method comprising:

receiving, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide;

receiving, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide;

storing the received first and second events in a memory accessible to the first and second interactive electronic program guides; and

generating a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides, wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household.

2. The method defined in claim 1, further comprising allowing a user to select a program for recording from a given interactive electronic program guide in the household.

4. The method defined in claim 2, further comprising alerting the user when the selected program for recording has already been selected to be recorded with a different interactive electronic program guide that is in the household.

*Id.* at 25:43–65, 26:4–7.

## II. DISCUSSION

### A. *Principles of Law*

To prevail in its challenge to Patent Owner’s patent claims, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). “In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). The burden of persuasion never shifts to Patent Owner. *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)) (discussing the burden of proof in *inter partes* review).

A claim is unpatentable under 35 U.S.C. § 103(a) 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 of the invention to a person having ordinary skill in the art. *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 the following: (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 ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (citations omitted). “This requirement is in recognition of the fact that each of the *Graham* factors helps inform the ultimate obviousness determination.” *Id.*

#### *B. Level of Ordinary Skill in the Art*

In determining whether an invention would have been obvious at the time it was made, 35 U.S.C. § 103 requires us to resolve the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The person of ordinary skill in the art is a hypothetical person who is presumed



to have known the relevant art at the time of the invention. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.* Generally, it is easier to establish obviousness under a higher level of ordinary skill in the art. *Innovation Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1323 (Fed. Cir. 2011) (“A less sophisticated level of skill generally favors a determination of nonobviousness . . . while a higher level of skill favors the reverse.”).

Petitioner, relying on the testimony of its declarant, Dr. Rhyne, asserts that one of ordinary skill in the art would have had “at least a bachelor’s degree in electrical engineering, computer engineering, or computer science, and at least two years of experience or familiarity with electronic program guides, television video signal processing, graphical user interfaces, and associated computer software.” Pet. 11 (citing Ex. 1022 ¶ 26). Petitioner also asserts that, alternatively, a person of ordinary skill “would have had equivalent experience either in industry or research, such as designing, developing, evaluating, testing, or implementing the technologies listed above.” *Id.* (citing Ex. 1022 ¶ 26).

Patent Owner, relying on the testimony of its declarant, Dr. Delp, asserts that one of ordinary skill at the time of the invention would have had “a bachelor’s degree in electrical engineering, computer engineering, or computer science, and two to three years of experience relating to electronic content delivery, such as experience with cable or satellite television systems, set-top boxes, multimedia systems or electronic program guides, or

any equivalent knowledge, training and/or experience.” PO Resp. 13–14. Patent Owner additionally asserts that “[a]dditional graduate education could substitute for professional experience, or significant experience could substitute for formal education.” *Id.* at 14.

We do not ascertain a meaningful difference between the declarants’ proposals as applied to this case and the parties do not argue that any issue in the case turns on such a difference. *See* Tr. 17:21–18:4, 77:21–78:7. We determine that the level of ordinary skill proposed by Petitioner and Dr. Rhyne is consistent with the challenged patent and the asserted prior art and we therefore adopt that level for the purposes of the analysis below.

### *C. Claim Construction*

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor may provide a meaning for a term that differs from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In the Petition, Petitioner proposes constructions for “user television equipment devices,” “interactive electronic program guide,” “first” and

“second” interactive electronic program guides, “event,” and “first type” and “second type” of event. Pet. 9–11. In response, Patent Owner proposes different constructions from that of Petitioner for “interactive electronic program guide” and “first and second interactive electronic program guides” and argues that the remaining terms do not need to be construed. PO Resp. 25–36. In its Reply, Petitioner also proposes that “alerting” should be given its plain and ordinary meaning, citing a dictionary definition in support. Reply 5 (citing Ex. 1036).

We determine that no claim term requires express construction to resolve the issues raised by the patentability grounds addressed below.

*D. Asserted Obviousness over Browne and LaJoie*

Petitioner contends that claims 1–33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. Pet. 8, 18–41. Relying in part on the testimony of Dr. Rhyne, Petitioner explains how the references teach or suggest the claim limitations and provides reasoning for combining the teachings of the references as claimed. *Id.* at 18–41.

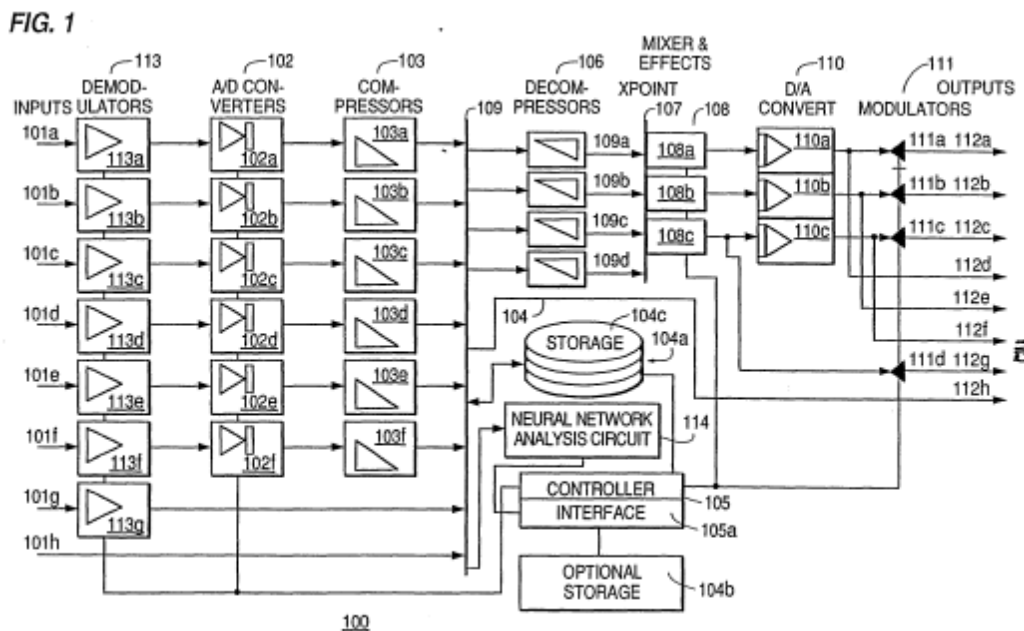
We have reviewed Petitioner’s and Patent Owner’s arguments and evidence of record. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–3, 5–14, 16–25, and 27–33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. We do not address here the patentability of claims 4, 15, and 26, which we find unpatentable as obvious over Browne and Knudson. *See supra* Section II.G.2.g. In addressing the grounds involving Knudson, we have addressed all challenged claims. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”). We

also have found all challenged claims unpatentable as obvious based on the Knudson grounds. *See supra* Sections II.G., II.H. We therefore need not reach the patentability of claims 4, 15, and 26 based on Browne and LaJoie. *See In re Gleave*, 560 F.3d 1331, 1338 (Fed. Cir. 2009) (“Therefore, we affirm the Board’s rejection of claims 1, 4, 15, and 18–21 of the ’493 application under § 102(b). We need not reach the § 103 obviousness rejection.”).

### 1. Summary of Browne

Browne is a PCT patent application titled “Large Capacity, Random Access, Multi-Source Recorder Player.” Ex. 1016, [54]. Browne discloses a system that “can be controlled by user input to allow for automatic recording of selected programs simultaneously input from multiple sources.” *Id.* at Abstract.

Figure 1 of Browne, below, illustrates the multi-source recorder player:



*Id.* at 8:21–22.<sup>6</sup> As illustrated in Figure 1 above, multi-source recorder player 100 has multiple input connections, each of which “may receive an input signal[s] 101a–101f from air and ground based broadcast sources, cable feeds, or digital distribution sources.” *Id.* at 8:1–4. The multi-source recorder player also has multiple outputs 112a–112h such that “different users can be playing the same program from the multi-source recorder player 100 at different receivers.” *Id.* at 17:20–25.

Browne discloses an embodiment in which the plurality of outputs “can each be connected to multiple televisions.” *Id.* at 19:16–18. Browne discloses that, in a multi-user application, “multiple controllers 105 preferably respond to and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Figures 4A–4C and 5A–5E illustrates control screens for setting the record time, channel, source, and frequency for a desired program. *Id.* at 24:7–13, 25:1–26:17.

Figure 6, below, illustrates a stored program list screen. *Id.* at 18:15–18.

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<sup>66</sup> Following the citation convention used in the Petition, page citations for Browne refer to the page numbers at the bottom of the page added by Petitioner.

FIG. 6

600

|   |                                     |                 |        |         |              |              |        |                  | FREE PROGRAM MEMORY                 | 4.75 HRS |
|---|-------------------------------------|-----------------|--------|---------|--------------|--------------|--------|------------------|-------------------------------------|----------|
| # | LOCKED                              | TITLE           | SOURCE | CHANNEL | TIME         | DATE         | LENGTH | NOTES            | VIEWED                              |          |
| 1 | <input type="checkbox"/>            | -- NOT YET --   | VHF    | 4       | 4:00 - 4:30  | MAY 17, 1991 | 0.5    | NOT YET RECORDED | <input type="checkbox"/>            |          |
| 2 | <input type="checkbox"/>            | --              | FM     | 99.5    | 1:12 - 1:20  | MAY 15, 1991 | 0.12   |                  | <input checked="" type="checkbox"/> |          |
| 3 | <input type="checkbox"/>            | NIGHTLY NEWS    | VHF #  | 4       | 6:00 - 8:00  | MAY 13, 1991 | 2.0    |                  | <input type="checkbox"/>            |          |
| 4 | <input checked="" type="checkbox"/> | BATMAN          | CABLE  | 29      | 8:00 - 10:00 | DEC 28, 1990 | 2.0    | KEEP FOR WENDY   | <input type="checkbox"/>            |          |
| 5 | <input type="checkbox"/>            | THE ASTRONOMERS | VHF    | 13      | 6:30 - 7:30  | MAY 13, 1991 | 1.0    |                  | <input type="checkbox"/>            |          |

As illustrated above, Figure 6 includes a list of all stored programs and programs set to be recorded and stored. *Id.* at 26:25–29. According to Browne, the stored program list “may also include information such as title, source, channel, time of recording, the length of the program, and the date the program was recorded or is set to be recorded.” *Id.* at 26:26–29.

Browne also discloses that a user can “restrict the list of programs output on the stored program list 600 to those of interest to a single viewer.” *Id.* at 28:5–8. According to Browne, “[i]f there are two users of the multi-source recorder player 100, it is possible for each to view only his or her own listings and not those of the other person.” *Id.* at 28:8–10.

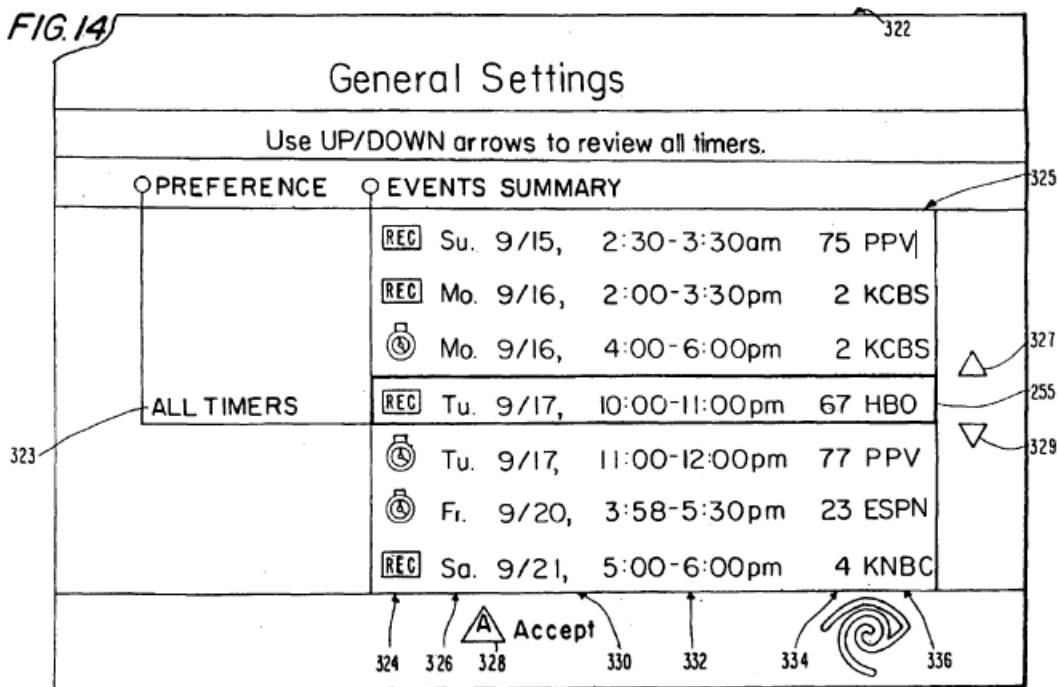
## 2. Summary of LaJoie

LaJoie is a U.S. patent titled “Interactive Program Guide for Designating Information on an Interactive Program Guide Display.” Ex. 1020, [54]. LaJoie describes the operation of application software for a set-top terminal. *Id.* at 12:61–62, 14:66–15:1.

LaJoie discloses an interactive program guide that “facilitates rapid navigation to programs selected by a subscriber.” *Id.* at 7:3–5. According to LaJoie, “[o]nce the subscriber has found a desired program in the interactive

program guide, the subscriber can, by pressing a single key, switch to the program if it is currently being transmitted, set a timer to remind the subscriber of its scheduled transmission, or record the program, either now if currently transmitted or at its scheduled transmission time.” *Id.* at 7:5–11.

Figure 10 of LaJoie illustrates a screen display of a General Settings menu, and Figure 14, below, illustrates a screen display of the all timers setting of the General Settings menu. *Id.* at 8:55–57, 20:22–24, 22:61–62.



As illustrated in Figure 14 above, selecting the all timers setting within the General Settings menu generates a list (325 in the above figure) “of type 324, day 326, date 330, time 332, channel number 334, and channel call sign 336 for each active timer in set-top terminal 6 to be displayed.” *Id.* at 22:61–66.

3. *Analysis*

a. *Reason to combine*

Petitioner relies on Browne for teaching a recorder player with multiple sets of control screens to allow multiple users to schedule recordings and share a list of recorded and to-be-recorded programs. Pet. 18–19. Petitioner relies on LaJoie for teaching an interactive program guide that allows a user to set timers to record a program airing in the future (VCR timers) and timers to reminder the user when a program is starting (reminder timers). *Id.* at 19.

Petitioner provides persuasive evidence for why a person of ordinary skill in the art would have combined the teachings of Browne and LaJoie in the manner claimed (as recited in claims 1–33). Pet. 18–21; Ex. 1022 ¶¶ 200–209. A person of ordinary skill in the art would have combined Browne’s recorder player with LaJoie’s interactive program guide for the purpose of allowing the multiple users to easily and intuitively select multiple television programs for watching and/or recording programs from multiple televisions. Ex. 1022 ¶ 205. Incorporating LaJoie’s interactive program guide would have added the benefits of rapid navigation to, and direct selection of, programs that a user wishes to watch and/or record to Browne’s system of simultaneous viewing and interaction from multiple locations. *Id.* ¶ 206. Even though Browne discloses control screens for scheduling recordings on multiple televisions, LaJoie’s disclosed interactive program guide provides a simpler and more intuitive and efficient mechanism for scheduling recordings as well as for providing reminders of upcoming programming. *Id.* ¶¶ 97, 204, 207; Ex. 1020, 6:13–26, 7:3–11.



*b. Independent claim 1*

*i. Limitations of claim 1*

The combination of Browne and LaJoie teaches “[a] method for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household,” as recited in claim 1. Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne also discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Browne thus teaches that recorder player 100 can be connected to multiple televisions for simultaneously viewing programs at different locations in a household and that the recorder player may be controlled by using multiple controllers that respond to interactions with different users via multiple control screens. Ex. 1022 ¶¶ 211–212.

LaJoie discloses an interactive program guide that allows a user to navigate through television program listings. Ex. 1020, 6:13–17. As illustrated in Figure 16, LaJoie discloses that the interactive program guide has a time mode in which television program information is displayed in a

grid arrangement. *Id.* at Fig. 16, 6:20–25. LaJoie discloses that a user navigates the television program information presented in the guide by positioning a cursor (394 in Figure 16) at a desired program cell of the program grid using up/down and left/right arrow keys. *Id.* at 24:48–55. As discussed below, LaJoie discloses that a user, using the interactive program guide, can highlight a program in the grid and select it to be recorded by pressing a record key or select it be identified in a reminder to the user to watch the program by pressing a select key. *Id.* at Figs. 24, 26, 29:20–26, 30:9–19.

A person of ordinary skill in the art would have modified the teachings of Browne to use two instances of an interactive program guide like the one taught by LaJoie (rather than the multiple control screens as taught in Browne) to record and set reminders of different programs displayed on different televisions. Ex. 1022 ¶¶ 206, 209, 211, 218. The combination thus teaches displaying first and second instances of an interactive electronic program guide that are accessible from a plurality of user television equipment devices (televisions) located in a household. Ex. 1022 ¶ 211, 218–220.

The combination of Browne and LaJoie also teaches “receiving, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide,” as recited in claim 1. The first event of a first type is recording a television program. Browne discloses providing control screens illustrated in Figures 4A–4C and 5A–5E for scheduling a recording of a television program. Ex. 1016, Figs. 4A–4C, 5A–5E, 24:5–26:17. Browne also discloses that “[c]ontroller 105 retains data entered into the calendar program, from screens 4A–4C, in

RAM memory for future control of the multi-source recorder player 100.”  
*Id.* at 24:28–31. LaJoie discloses selecting a program to record with the interactive program guide and setting a VCR timer to carry out the scheduled recording. Ex. 1020, Fig. 24, 29:20–26. Figure 24 of LaJoie, below, illustrates this feature.

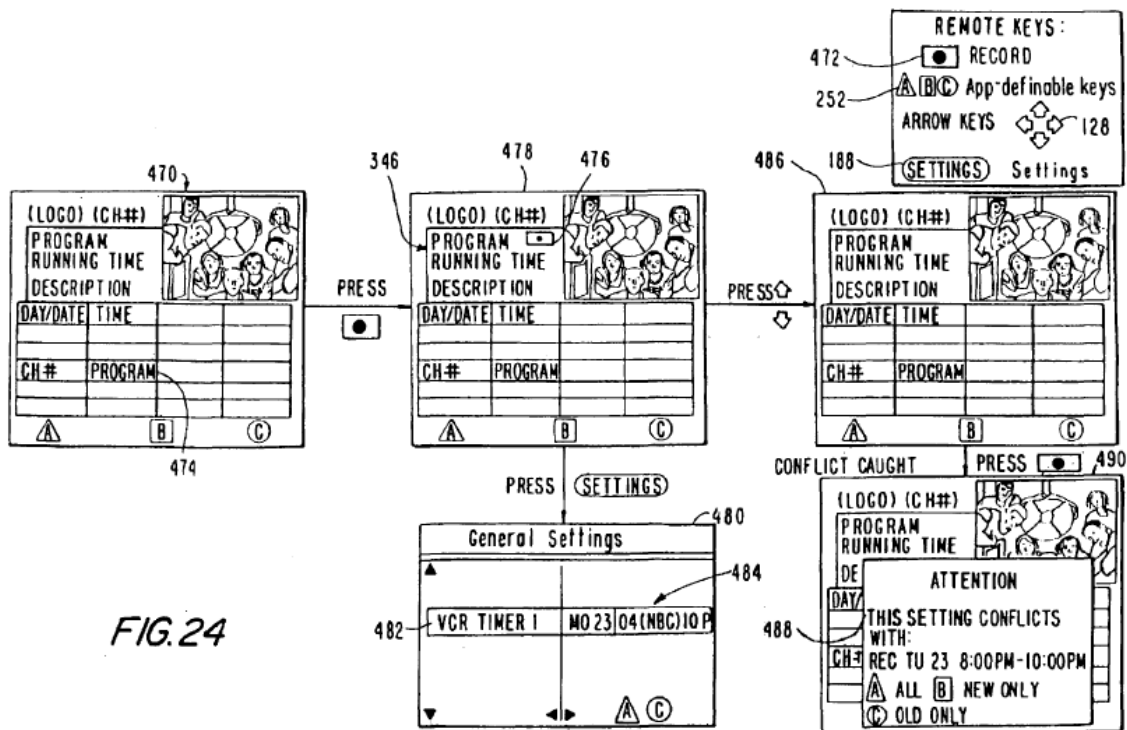


FIG. 24

Figure 24 above “illustrates the One-Touch Recording (OTR) feature” disclosed in LaJoie. *Id.* at 29:20–21. LaJoie discloses that “[f]rom an interactive program guide display 470, pressing record key 472 with a program 474 highlighted causes a VCR timer to be set up for the highlighted program 474 and a to-be-recorded indicator 476 to appear in program summary 346, as illustrated in display 478.” *Id.* at 29:21–26.

The combination of Browne and LaJoie thus teaches receiving, from the first interactive electronic program guide, a first event of a first type

(recording a television program) scheduled with the first interactive electronic program guide.

The combination of Browne and LaJoie also teaches “receiving, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide,” as recited in claim 1. The second event of a second type is reminding a user of an upcoming television program. As discussed above, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. LaJoie discloses that a user can set a reminder to watch an upcoming program using the interactive program guide. Ex. 1020, Fig. 26, 30:9–19. Figure 26 of LaJoie, below, illustrates this feature. *Id.* at 30:9–10.

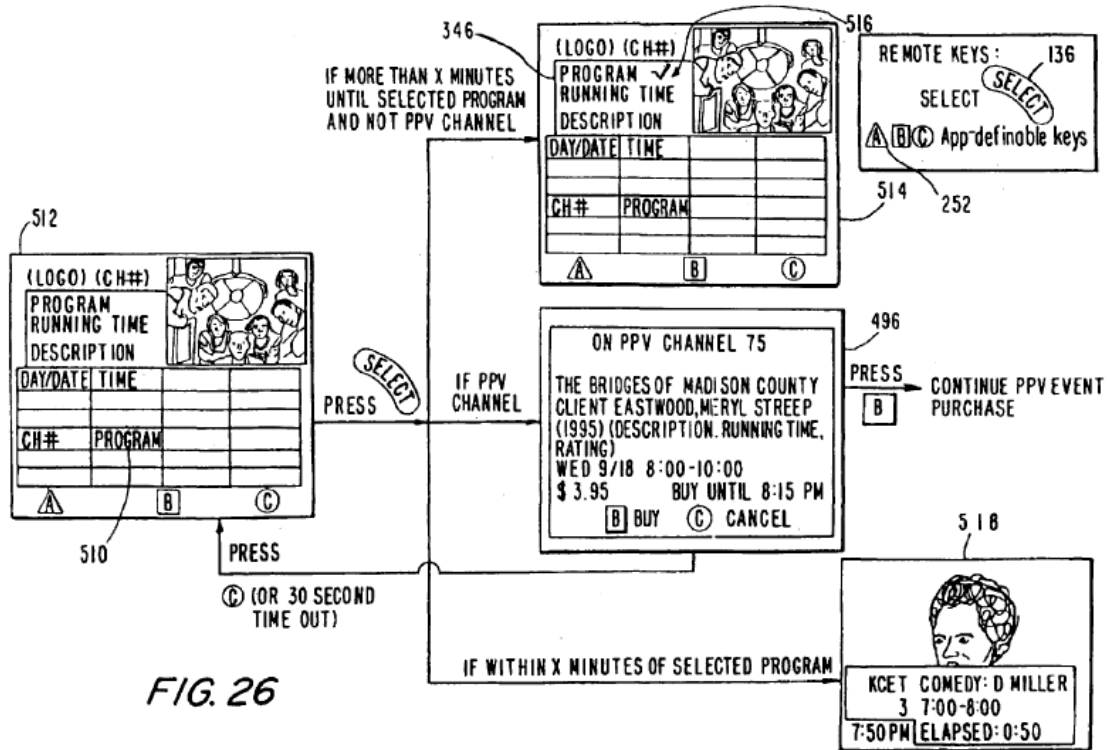


FIG. 26

Figure 26 above illustrates the reminder timer function. *Id.* at 30:9–10. LaJoie discloses that, “[w]ith a program 510 highlighted within an interactive program display 512, pressing select key 136” causes, “if the time between the current time and the start time of the program exceeds a threshold amount,” “a reminder timer icon 516 [to be] displayed in program summary 346 to indicate that set-top terminal 6 has set a reminder timer to remind the subscriber to watch the selected program as illustrated by display 514.” *Id.* at 30:10–19.

LaJoie thus discloses receiving, from an interactive electronic program guide, a second event of a second type (a reminder to watch a television program) scheduled with the interactive electronic program guide. As explained above, the combination of Browne and LaJoie teaches two instances of an electronic program guide to schedule events for different

users on different output devices. Ex. 1022 ¶¶ 210–209, 218–219, 229–231. The combination thus teaches receiving a second event of a second type scheduled with a second interactive electronic program guide, as claimed.

The combination of Browne and LaJoie also teaches “storing the received first and second events in a memory accessible to the first and second interactive electronic program guides,” as recited in claim 1. Browne discloses that the controller of the recorder player retains in RAM, “for future control of the multi-source record player 100,” the data entered on the calendar screens of Figures 4A–4C when scheduling a program recording. Ex. 1016, Figs. 4A–4C, 24:28–31. Browne also discloses that a user selects additional recording parameters (e.g., channel, input source, program title, and recording frequency) from additional control screens illustrated in Figures 5A–5D. *Id.* at 25:1–30. A person of ordinary skill in the art would have understood that, in order to carry out the scheduled recording, Browne’s recorder player would have had to store in memory the additional recording parameters selected at Figures 5A–5D. Ex. 1022 ¶ 233; Ex. 1016, 24:28–31. Browne also discloses that storage 104 (illustrated in Figure 1) is accessible to Browne’s control screens. Ex. 1016, 26:19–24. The combination of Browne and LaJoie thus teaches that the storage area would have been accessible to both instances of the interactive program guide. Ex. 1022 ¶¶ 233–235.

The combination of Browne and LaJoie also teaches “generating a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides, wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic

program guides in the household,” as required by claim 1. Browne discloses that its control screens can be placed on any screen to control operation of the recorder player. Ex. 1016, 15:27–29. Browne also discloses that recorder player 100 can be connected to multiple televisions and used in a multi-user application in which controllers in the record player “respond[s] to and interact[s] with several users simultaneously via multiple control screens.” *Id.* at 19:16–28. Browne further discloses a stored program list, shown in Figure 6 below. *Id.* at Fig. 6, 26:18–28:29.

**FIG. 6**

| 600                 |                                     |                 |        |         |              |              |        |                  |                                     |                          |
|---------------------|-------------------------------------|-----------------|--------|---------|--------------|--------------|--------|------------------|-------------------------------------|--------------------------|
| FREE PROGRAM MEMORY |                                     |                 |        |         |              |              |        |                  | 4.75 HRS                            |                          |
| #                   | LOCKED                              | TITLE           | SOURCE | CHANNEL | TIME         | DATE         | LENGTH | NOTES            | VIEWED                              |                          |
| 1                   | <input type="checkbox"/>            | -- NOT YET --   | VHF    | 4       | 4:00 - 4:30  | MAY 17, 1991 | 0.5    | NOT YET RECORDED | <input type="checkbox"/>            |                          |
| 2                   | <input type="checkbox"/>            | --              | FM     | 99.5    | 1:12 - 1:20  | MAY 15, 1991 | 0.12   |                  | <input checked="" type="checkbox"/> |                          |
| 3                   | <input type="checkbox"/>            | NIGHTLY NEWS    | VHF #  | 4       | 6:00 - 8:00  | MAY 13, 1991 | 2.0    |                  | <input type="checkbox"/>            |                          |
| 4                   | <input checked="" type="checkbox"/> | BATMAN          | CABLE  | 29      | 8:00 - 10:00 | DEC 28, 1990 | 2.0    |                  | KEEP FOR WENDY                      | <input type="checkbox"/> |
| 5                   | <input type="checkbox"/>            | THE ASTRONOMERS | VHF    | 13      | 6:30 - 7:30  | MAY 13, 1991 | 1.0    |                  | <input type="checkbox"/>            |                          |

As illustrated in Figure 6 above, stored program list 600 includes a list of recorded and to-be-recorded programs, which may include programs shared between users. *Id.* at Fig. 6, 26:18–28:29. Browne discloses that the stored program list preferably includes all stored programs and “may also include information such as title, source, channel, time of recording, the length of the program, and the date the program was recorded or is set to be recorded.” *Id.* at 26:25–29. Browne also discloses that “[i]f there are two users of the multi-source recorder player 100, it is possible for each to view only his or her own listings and not those of the other person,” such as “by incorporating a user password.” *Id.* at 28:8–11. Browne explains that

“[o]nce the password is received[,] the multi-source recorder player 100 will interface with the user in the same way as described above, the only difference being that the listings of programs retained for this user will not include any listings for other users unless they are considered ‘shared’ programs.” *Id.* at 28:20–26.

LaJoie similarly discloses a list of all VCR and reminder timers, as illustrated in Figure 14 below. Ex. 1020, Fig. 14, 22:61–23:14.

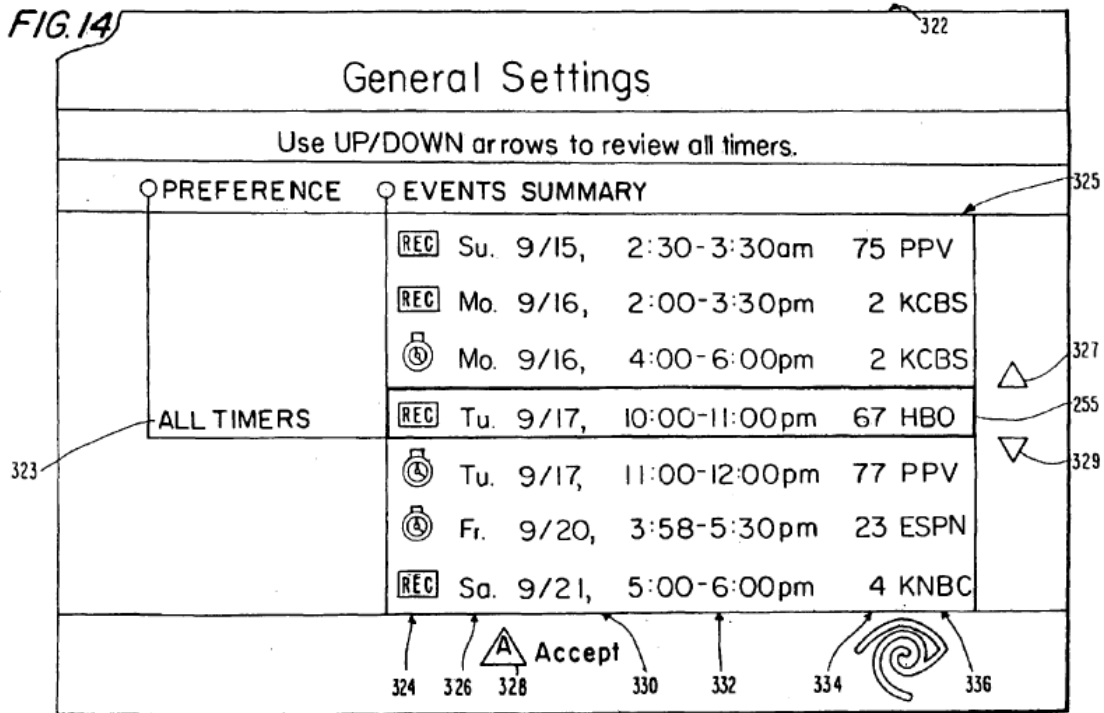


Figure 14 above illustrates list 325, which identifies the “type 324, day 326, date 330, time 332, channel number 334, and channel call sign 336 for each active timer in set-top terminal 6.” *Id.* at Fig. 14, 22:62–66. The type of timer (324) includes recording timers and reminder timers. *Id.* at Fig. 14; Ex. 1022 ¶ 176.



LaJoie thus teaches generating a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from an interactive electronic program guide. Browne teaches generating an aggregated list of scheduled events received from multiple users interacting with control screens, and that the list of scheduled events is accessible for display from any of the control screens in the household. The combination of Browne and LaJoie thus teaches the generating step recited in claim 1. Ex. 1022 ¶¶ 237–247.

*ii. Patent Owner's arguments*

Patent Owner raises a number of arguments for why the subject matter of claim 1 would not have been obvious over Browne and LaJoie. We address each argument below.

Patent Owner first argues (against all grounds) that Petitioner has not shown that Browne and LaJoie (or Alexander or Knudson) teach “first and second interactive electronic program guides.” PO Resp. 37–39. Patent Owner argues that Browne’s control screens are not interactive electronic program guides because they do not allow navigation through television listings and that LaJoie (or Alexander or Knudson) discloses only a single interactive program guide. *Id.* at 37–38. Patent Owner argues that Browne discloses a single set of control screens that can be directed to different outputs, but not different sets of control screens. *Id.* at 39. Patent Owner also argues that, in Browne, “whether one or more ‘virtual control screens’ are displayed by controller 105, they are part of a single user control program run by controller 105.” *Id.* (citing Ex. 1016, 15:18–26). Patent Owner further argues that “Browne’s disclosure of an alternative embodiment with multiple controllers 105 interacting with several users

simultaneously via multiple control screens . . . does not indicate that different screens or functions are available to each user.” *Id.* (citing Ex. 1016, 19:26–28).

Patent Owner’s arguments are not persuasive to rebut Petitioner’s showing. Browne teaches a recorder player that “allow[s] the user to record from multiple channels . . . simultaneously” and “allow[s] the user to view programs while simultaneously recording one or more other programs.” Ex. 1016, 4:12–17. Browne discloses that “[o]nce signals are input, the multi-source recorder player 100 can simultaneously record, process, route, and display the plurality of input video and/or audio signals.” *Id.* at 8:9–12. Browne explains that “the multi-source recorder player 100 preferably includes a plurality of output connections . . . for outputting output signals 112a–112h to receiving devices, such as televisions and video recorders.” *Id.* at 8:21–26. Browne also teaches that recorder player 100 displays a set of control screens for controlling the recording of programs on one television and another set of control screens on another television. Ex. 1016, Fig. 1, 15:27–33. Specifically, Browne discloses that “[t]he controller 105 generates a virtual control screen which may be placed on any screen to control . . . any or more playback or recording processes.” *Id.* at 15:27–29. Browne adds that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne further discloses that, “[i]f there are two users of the multi-source recorder player 100, it is possible for each to view only his or her own listings and not those of the other person,” by incorporating a user password. *Id.* at 28:5–26. Based on these teachings, one of ordinary

skill in the art would have understood Browne to teach two sets of control screens for controlling recording of programs. Ex. 1033 ¶¶ 42, 47. For example, a first television would have been used to display a first set of control screens as shown in Figures 4A–4C and 5A–5E for scheduling a first program to be recorded, while a second television would have been used to display a second set of control screens as shown in Figures 4A–4C and 5A–5E for scheduling a second program to be recorded. *Id.* ¶ 42. In addition, LaJoie (or Alexander or Knudson) teaches an interactive program guide that may be customized. Ex. 1020, 5:58–67; Ex. 1021, 3:35–4:10, 41:15–47:15; Ex. 1024 ¶¶ 82, 104. For example, according to LaJoie, “the subscriber can assign channels to a favorite channel list” and “block channels based on channel number, time, program rating, genre, etc.” *Id.*

Thus, based on the combined teachings of Browne and LaJoie (or Alexander or Knudson), the two instances of the interactive program guides for the two users using two different televisions would have been customized to the particular user and would have been first and second instances of the interactive program guide. Patent Owner appears to attempt to limit “first and second” interactive program guides to guides that are provided by separate computer programs or applications. *See* PO Resp. 39 (arguing that, in Browne, the control screens are “part of a single user control program run by controller 105) (citing Ex. 1016, 15:8–26). Patent Owner does not provide persuasive evidence in support of its argument. The ’871 patent specification does not limit the first and second interactive program guides to ones provided by separate applications and Patent Owner, in its Patent Owner Response, does not point to any definitional or limiting language requiring such. *See* PO Resp. 32–35, 37–39. Nor does Patent

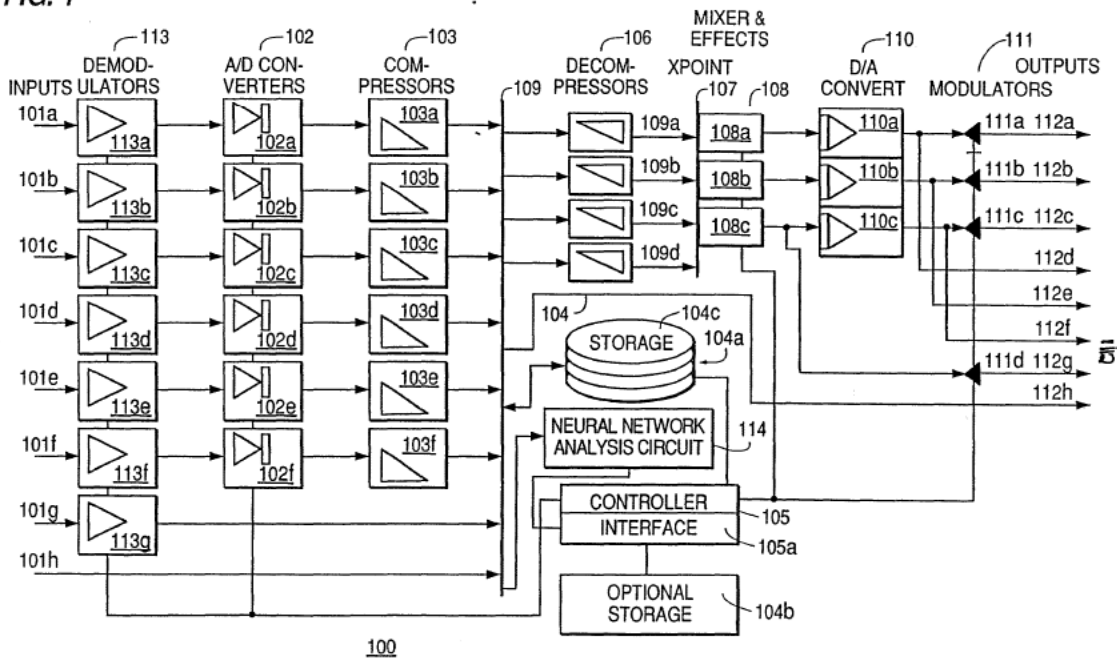
Owner rely on any testimony from its declarant that the '871 patent is so limited. *Id.* The '871 patent generally describes the multiple interactive program guides in the context of users having customized data pertaining to favorite channels and based on passwords, which likewise is described in the prior art. *See* Ex. 1001, 6:28–38. Also, Patent Owner's piecemeal attack on Browne alone and LaJoie (or Alexander or Knudson) alone is not persuasive. Patent Owner does not identify any statement in the '871 patent specification that excludes from the scope of the claims the multiple control screens described in Browne modified to be instances of an interactive program guide as taught by LaJoie (or Alexander or Knudson), which enable users to control the recorder player with user-customized data on different televisions. *See* PO Resp. 32–35, 37–39. Patent Owner's arguments regarding the first and second interactive program guides therefore do not rebut Petitioner's persuasive showing.

Patent Owner also argues that Petitioner has not shown that Browne and LaJoie (or Alexander or Knudson) teach “storing the received first and second events in a memory accessible to the first and second interactive electronic program guides.” PO Resp. 40–41. Patent Owner argues that storage section 104 stores recorded programs, not events, and therefore “it is irrelevant if storage section 104 is memory accessible to multiple sets of control screens.” *Id.* at 40. Patent Owner asserts that, according to Browne, the stored program list is stored in the memory of the controller 105, and that there is no disclosure in Browne that the controller memory is accessible to multiple sets of control screens. *Id.*

Patent Owner's arguments are not persuasive to rebut Petitioner's showing. Browne discloses that events such as future recordings of

programs are displayed in a stored program list screen, which is shown to (and accessible by) the multiple users of the recorder player. Ex. 1016, 26:19–27:2, 28:5–29. In addition, Browne states that “[t]he stored program list contains [an] index of programs stored in storage section 104, and held in the memory of the controller.” *Id.* at 16:5–7. Figure 1 of Browne, which illustrates storage 104, is shown below.

FIG. 1



As illustrated above, and as described in Browne, recorder player 100 includes “storage section 104.” *Id.* at 8:13–16. Browne discloses that “[t]he storage section 104 preferably employs high speed, large capacity random access devices which may include optical and magnetic disks, RAM memory, and very high density floppy disks. *Id.* at 12:32–13:3. Browne adds that “[t]he storage section 104 may also be configured to include a primary storage section 104a, and an optional storage 104b, which may be connected to the multi-source recorder player 100 via a high speed digital connection using interface 105a.” *Id.* at 13:3–7.

We agree with Petitioner that Browne teaches that the memory of the controller is encompassed within storage 104. *See* Reply Br. 10–11 (citing, e.g., Ex. 1016, Fig. 1, 12:32–13:11, 15:13–20, 16:3–7, 24:28–31, 26:18–27:18). Storage 104 is the only memory depicted in recorder player 100. Ex. 1016, Fig. 1, 12:32–13:3. Figure 1 above shows that storage 104 is the memory of controller 105. *Id.* at Fig. 1; Ex. 1033 ¶ 60. No separate memory for controller 105 is depicted. And as explained above, Browne teaches that storage 104 is accessible to the multiple sets of control screens. Ex. 1016, 12:32–33, 24:28–31, 26:19–24. For example, storage 104 stores the control screens that controller 105 outputs on the multiple televisions. *Id.* at 12:32–33, 24:28–31. Furthermore, claim 1 does not specify a memory location for the claimed accessibility, which Browne teaches. Accordingly, Petitioner persuasively shows that Browne and LaJoie (or Alexander or Knudson) teach “storing the received first and second events in a memory accessible to the first and second interactive electronic program guides.”

Patent Owner also argues that Petitioner has not shown that Browne and LaJoie (or Alexander or Knudson) teach generating the claimed list of scheduled events, “wherein the list of scheduled events is accessible for display from any of the first and second interactive electronic program guides in the household,” as required by claim 1. PO Resp. 41–44. Patent Owner argues that “[t]here is no disclosure in Browne that the stored program list 600 is generated by aggregating *events* received from *multiple sets of control screens*.” *Id.* at 42. Patent Owner asserts that stored program list 600 “is accessible for display from *only one set of control screens/user control program*.” *Id.* at 43. Patent Owner acknowledges that Browne discloses that the stored program list can be filtered by different users, such

as by incorporating a user password. *Id.* Patent Owner argues, however, that a user’s access through password protection “accesses the *same* set of control screens as another user with a different password.” *Id.* Relying on the testimony of its declarant, Patent Owner explains that “[i]n general, multiple user profiles allow different users to log into the same control program with potentially different access privileges and customizations.” *Id.* (citing Ex. 2003 ¶ 125).

Patent Owner’s arguments are not persuasive to rebut Petitioner’s showing for the reasons explained above in connection with the first and second interactive program guides limitation. Patent Owner’s arguments are based on the faulty premise that the claimed first and second interactive program guides must use different programs. As explained above, Patent Owner fails to identify in its Patent Owner Response or in any supporting testimony from its declarant that the ’871 patent specification (or the prosecution history) limits the claims in that manner.

Patent Owner also argues that a person of ordinary skill in the art would not have been motivated to combine Browne with LaJoie. PO Resp. 47–60. Patent Owner argues that Browne is directed to “entirely different problems and technologies” than those of LaJoie. *Id.* at 48–50. Patent Owner also argues that replacing Browne’s control screens with an interactive program guide from LaJoie would reduce Browne’s functionality and render Browne inoperable for its intended purpose. *Id.* at 50–55. Patent Owner also argues that an ordinarily skilled artisan would not have been motivated to add an interactive program guide, which requires future program information, into Browne’s system, which stores program information only for stored programs. *Id.* at 55–59. Patent Owner further

argues that an ordinarily skilled artisan would not have been motivated to add LaJoie's interactive program guide, which requires incoming and outgoing Internet Protocol datagrams to operate, in Browne's system, which lacks IP datagram functionality. *Id.* at 60.

Patent Owner's arguments are not persuasive to rebut Petitioner's showing. First, Browne's recorder player is similar to the set-top box of LaJoie in that Browne's recorder player serves as a receiver of cable television signals and controls an external VCR. Ex. 1016, 7:29–8:4, 21:31–22:5; Ex. 1020, 13:55–64, 14:59–60. Patent Owner's reliance on technical differences between the two systems does not detract from the advantages identified by Petitioner that LaJoie provides an improved interface which gives users more flexibility and makes scheduling recordings more efficient than Browne's control screens. Ex. 1022 ¶¶ 202, 204–207; Ex. 1033 ¶ 75. Second, Patent Owner does not show that the combination would have rendered Browne inoperable for its intended purpose. Although Browne lists a number of objectives of the invention, none is described as necessary, and routing is not included among them. Ex. 1016, 4:1–5:7. Even if routing was critical to the operation of Browne, the instances of the interactive program guide would have included options for performing such routing (and mixing). Ex. 1033 ¶¶ 44, 78–80. Third, Patent Owner's argument that a skilled artisan would not have been motivated to add an interactive program guide, which requires future program information, is unpersuasive, for the reasons set forth by Petitioner in its Reply. *See* Reply Br. 26–28. Fourth, Patent Owner's argument regarding IP datagram functionality is unpersuasive. Patent Owner does not argue that the combination would not



have been within the knowledge and skill to implement an interactive program guide like the one taught in LaJoie in Browne's recorder player.

Finally, Patent Owner argues (against all grounds) that Chapter 19 from the book titled *Modern Cable Television Technology: Video, Voice, and Data Communications* shows that "the interface between cable service and consumer electronics continued to present complex problems stemming from the wide variety of possible services, functions, and features." PO Resp. 63–64. Patent Owner asserts that given the complexity of the problems, "there is no basis to conclude that any of Petitioner's combinations would have yielded predictable results at the time of the invention." *Id.* at 64. Patent Owner's argument is not persuasive. As Petitioner argues, Patent Owner does not show any nexus between what the Joint Engineering Committee discussed in the chapter was working on and the claims at issue. *See* Reply 28–29. Nor does Patent Owner tie its generalized argument to any particular difficulties that an ordinarily skilled artisan would have had in combining the teachings of the references in the manner claimed.

*iii. Conclusion regarding claim 1*

Having considered the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Browne and LaJoie.

*c. Independent claim 12*

Independent claim 12 is similar to claim 1 but is directed to a system, rather than a method. Petitioner asserts that the combination of Browne and LaJoie teaches the system components recited in claim 12. Pet. 27–28. Petitioner relies on its analysis of claim 1 for showing how the combination

of Browne and LaJoie teaches the elements of claim 12 that are nearly identical to the corresponding elements in claim 1. *Id.*

Patent Owner raises the same arguments for claim 12 that it raises for claim 1. *See* PO Resp. 37–44, 47–66.

Having reviewed the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that claim 12 is unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie.

The combination of Browne and LaJoie teaches “[a] system for displaying interactive electronic program guides,” the system including “a plurality of user television equipment devices that are located in a household and from which first and second interactive electronic program guides are accessible,” as recited in claim 12. The references teach a system that includes a recorder player (as taught by Browne and as modified to incorporate the teachings of in LaJoie of user television equipment for use with an interactive program guide) and televisions as taught in Browne and LaJoie. Ex. 1016, Fig. 1, 7:29–8:29; Ex. 1020, Fig. 3, 4:66–5:14, 8:37–38; Ex. 1022 ¶¶ 248–255. As explained above in connection with claim 1, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.”

*Id.* at 15:29–33. Browne also discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. LaJoie discloses an interactive program guide that allows a user to navigate through television program listings. Ex. 1020, 6:13–17. As illustrated in Figure 16, LaJoie discloses that the interactive program guide has a time mode in which television program information is displayed in a grid arrangement. *Id.* at Fig. 16, 6:20–25. LaJoie discloses that a user navigates the television program information presented in the guide by positioning a cursor at a desired program cell (cell 396 in Figure 16) of the program grid using up/down and left/right arrow keys. *Id.* at 24:48–55. In addition, LaJoie discloses that a user, using the interactive program guide, can highlight a program in the grid and select it to be recorded by pressing a record key or select it be identified in a reminder to the user to watch the program by pressing a select key. *Id.* at Figs. 24, 26, 29:20–26, 30:9–19.

A person of ordinary skill in the art would have modified the teachings of Browne to have user television equipment for using an interactive program guide, as taught by LaJoie, to set a recording of one program with an instance of an interactive program guide on one television and a reminder of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 200–209, 248–251. The combination thus teaches a plurality of user television equipment devices that are located in a household and from which first and second instances of an interactive electronic program guide are accessible. Ex. 1022 ¶¶ 248–255; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1020, Figs. 3, 16, 24, 26, 6:13–17, 6:20–25, 29:20–26, 30:9–19.

The combination of Browne and LaJoie also teaches that the system comprises “a memory accessible to the first and second interactive electronic program guides for storing the received first and second events,” as recited in claim 12. Browne discloses that the controller of the recorder player retains in RAM, “for future control of the multi-source record player 100,” the data entered on the calendar screens of Figures 4A–4C when scheduling a program recording. Ex. 1016, Figs. 4A–4C, 24:28–31. Browne also discloses that a user selects additional recording parameters (e.g., channel, input source, program title, and recording frequency) from additional control screens illustrated in Figures 5A–5D. *Id.* at 25:1–30. A person of ordinary skill in the art would have understood that, in order to carry out the scheduled recording, Browne’s recorder player would have had to store in memory the additional recording parameters selected at Figures 5A–5D. Ex. 1022 ¶ 233; Ex. 1016, 24:28–31. Browne also discloses that storage 104 (illustrated in Figure 1) is accessible to Browne’s control screens. Ex. 1016, 26:19–24. The combination of Browne and LaJoie teaches that the storage area would have been accessible to both instances of the interactive program guide. Ex. 1022 ¶¶ 232–236.

In addition, for the reasons explained above in connection with claim 1, which recites steps identical to the functions recited in claim 12, the combination of Browne and LaJoie teaches that the plurality of user television equipment devices comprises a processor configured to perform the functions recited in claim 12. *See supra* Section II.D.3.b.1; Ex. 1022 ¶¶ 253–262.

Moreover, for the reasons explained above, Petitioner provides persuasive evidence for why a skilled artisan would have combined the

teachings of Brown and LaJoie in the manner claimed. *See supra* Section II.D.3.a. In addition, for the reasons explained above in connection with claim 1, Patent Owner's arguments are not persuasive to rebut Petitioner's showing. *See supra* Section II.D.3.b.ii.

*d. Independent claim 23*

Independent claim 23 is very similar to claim 1 but is directed to a non-transitory machine-readable media, rather than a method, for displaying first and second interactive electronic program guides. Petitioner asserts that the combination of Browne and LaJoie teaches the machine-readable media recited in claim 23. Pet. 28–30. Petitioner relies on its analysis of claim 1 for showing how the combination of Browne and LaJoie teaches the elements of claim 23 that are nearly identical to the corresponding elements in claim 1. *Id.*

Patent Owner raises the same arguments for claim 23 that it raises for claim 1. *See* PO Resp. 37–44, 47–66.

Having reviewed the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that claim 23 is unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie.

The combination of Browne and LaJoie teaches “[a] non-transitory machine-readable media for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household,” as recited in claim 23. Browne discloses that “[c]ontroller 105 is a microprocessor which preferably runs a user control program and allows a user to access and control the multi-source recorder player 100.” Ex. 1016, 15:18–20. Browne thus

discloses a non-transitory readable media for storing the control program for execution by the microprocessor. Ex. 1022 ¶¶ 256–258. LaJoie teaches that CPU 30 (illustrated in Figure 3) executes instructions stored in memory 32. Ex. 1020, Fig. 3, 13:17–20. The combination of Browne and LaJoie teaches that the non-transitory readable media would have displayed the first and second instances of the interactive program guide. Ex. 1022 ¶ 256. As explained above in connection with claim 1, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. LaJoie discloses an interactive program guide that allows a user to navigate through television program listings. Ex. 1020, 6:13–17. As illustrated in Figure 16, LaJoie discloses that the interactive program guide has a time mode in which television program information is displayed in a grid arrangement. *Id.* at Fig. 16, 6:20–25. LaJoie discloses that a user navigates the television program information presented in the guide by positioning a cursor at a desired program cell of the program grid using up/down and left/right arrow keys. *Id.* at 24:48–55. In addition, LaJoie discloses that a user, using the interactive program guide, can highlight a program in the grid and select it to be recorded by pressing a record key or select it be identified in a reminder to the user to watch the program by pressing a select key. *Id.* at Figs. 24, 26, 29:20–26, 30:9–19.

A person of ordinary skill in the art would have modified the teachings of Browne to have non-transitory machine-readable media for using an interactive program guide, as taught by LaJoie, to set a recording of one program with an instance of an interactive program guide on one television and a reminder of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 200–209, 256–258. The combination thus teaches a non-transitory machine-readable media for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household. Ex. 1022 ¶¶ 200–209, 256–258; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1020, Figs. 3, 16, 24, 26, 6:13–17, 6:20–25, 29:20–26, 30:9–19.

In addition, for the reasons explained above in connection with claim 1, which recites steps identical to the functions recited in claim 23, the combination of Browne and LaJoie teaches that the machine-readable media comprises machine-readable instructions encoded thereon for performing the functions recited in claim 23. *See supra* Section II.D.3.b.1; Ex. 1022 ¶¶ 259–262.

Moreover, for the reasons explained above, Petitioner provides persuasive evidence for why a skilled artisan would have combined the teachings of Brown and LaJoie in the manner claimed. *See supra* Section II.D.3.a. In addition, for the reasons explained above in connection with claim 1, Patent Owner’s arguments are not persuasive. *See supra* Section II.D.3.b.ii.

*e. Dependent claims 2, 13, and 24*

Claim 2 depends from claim 1 and adds “further comprising allowing a user to select a program for recording from a given interactive electronic program guide in the household.” Claims 13 and 24 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 13, and 24 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–31. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and LaJoie. *See supra* Sections II.D.3.b., II.D.3.c, II.D.3.d. In addition, Browne discloses that users may select television programs to record from control screens presented on multiple television screens connected to the recorder player. Ex. 1016, Figs. 1, 4A–4C, 5A–5E, 8:21–26, 15:27–29, 19:16–28, 24:5–26:17. LaJoie discloses that a user may select a television program to record from an interactive program guide presented on a television. Ex. 1020, Figs. 16, 24, 6:13–17, 6:20–25, 24:48–55, 29:20–31. Based on the combined teachings of Browne and LaJoie, one of ordinary skill in the art would have modified Browne to provide multiple interactive program guides like the one disclosed in LaJoie to allow for user selection of a television program to record. Ex. 1022 ¶¶ 200–209, 264. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.



*f. Dependent claims 3, 14, and 25*

Claim 3 depends from claim 2 and adds “further comprising transmitting a control signal from the user television equipment device from which the given interactive electronic program guide is accessible to a recording device to instruct the recording device to record the selected program.” Claims 14 and 25 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 3, 14, and 25 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–32. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and LaJoie. *See supra* Section II.D.3.e. In addition, Brown discloses that recorder player 100 can be connected to external VCR 322. Ex. 1016, Fig. 3 (element 322), 21:31–22:5. Browne also discloses that output signals 112a–112h “may include control signals for recording and viewing control of external devices,” such as video recorders. *Id.* at Fig. 1, 8:27–29. Browne also explains that “[t]he user can thus send control signals for devices along with the programs to the receiving devices,” which “allows controller 104 to control the connected receiving device.” *Id.* at 22:6–10. Browne thus teaches receiving and then transmitting control information to an external VCR for a remote video recording. Ex. 1022 ¶ 267. LaJoie teaches that a control signal is received from the user television equipment device from which a given interactive program guide is accessible. *Id.* Specifically, LaJoie discloses a One-Touch

Recording (OTR) feature in which a user, “[f]rom an interactive program guide display,” can “cause[s] a VCR timer to be set up” to record a selected television program. Ex. 1020, 29:20–26. It would have been obvious to a person of ordinary skill in the art to modify the Browne-LaJoie combination discussed above in connection with claims 1 and 2 to incorporate the OTR feature taught by LaJoie to improve user functionality and to provide an efficient means to provide recording functionality through the interactive guide. Ex. 1022 ¶ 267; *see supra* Section II.D.3.a. The combination of Browne and LaJoie thus teaches transmitting a control signal from television from which the given interactive electronic program guide is accessible to a VCR to instruct the VCR to record the selected program. *Id.* The combination also teaches a processor with an interactive program guide configured to facilitate such transmitting and machine-readable instructions for performing such transmitting. *Id.*

*g. Dependent claims 5, 16, and 27*

Claim 5 depends from claim 2 and adds “further comprising alerting the user when the selected program for recording conflicts with another program previously scheduled to be recorded from any of the first and second interactive electronic program guides that are in the household.” Claims 16 and 27 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 5, 16, and 27 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–

35; Ex. 1022 ¶¶ 273–276. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and LaJoie. *See supra* Section II.D.3.e. In addition, LaJoie discloses displaying a warning when a program is set to be recorded at a certain time and a user attempts to record another program shown at the same time, as illustrated below in Petitioner’s annotated version of LaJoie’s Figure 24. Pet. 33–34; Ex. 1020, Fig. 24, 29:32–47.

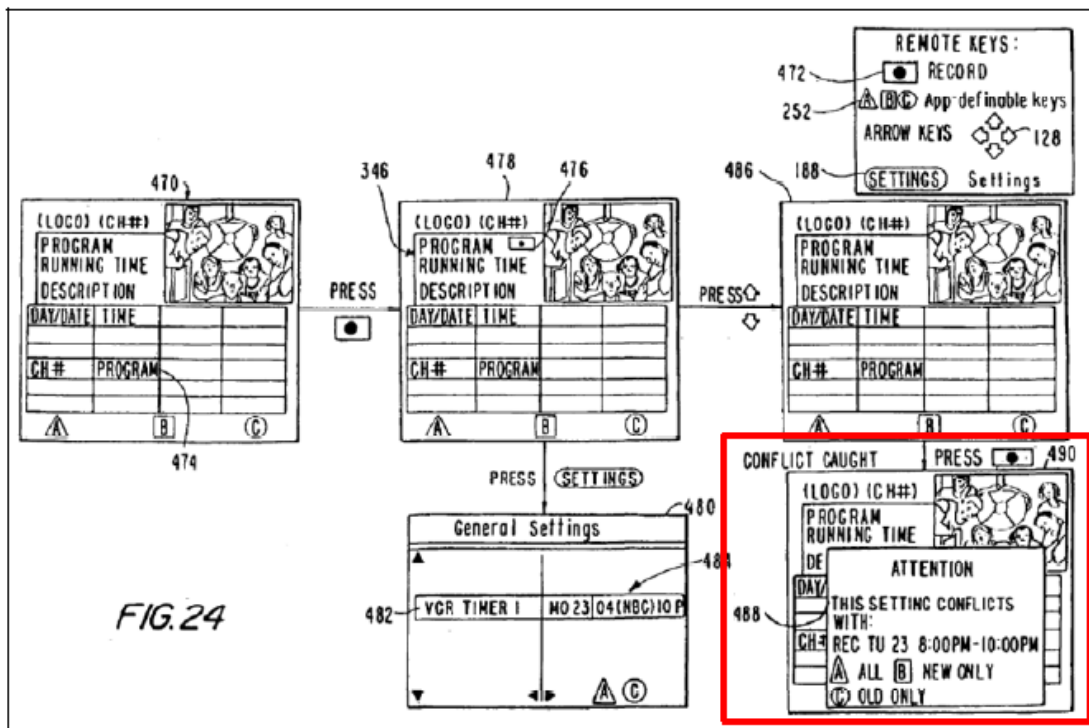


Figure 24 of LaJoie, which illustrates the One-Touch Recording feature (Ex. 1020, 29:20–21), is annotated above to include a red box around the conflict warning feature. Pet. 33–34; Ex. 1020, Fig. 24. LaJoie describes the conflict warning feature as follows:

As shown, if after having set up a program to be recorded using One-Touch Recording (display 478), the subscriber attempts to record another program which is being shown at the same time

by first highlighting (display 486) and then pressing record key 472, an attention banner 488 will be displayed (display 490) warning the subscriber of the conflict and enabling the conflict to be resolved.

Ex. 1020, 29:41–47. LaJoie thus discloses alerting the user when a program selected for recording is scheduled to air at the same time another program has already been selected to be recorded. *Id.* Based on the teachings of Browne and LaJoie, one of ordinary skill in the art would have modified Browne’s recorder player to display a warning to a user when a program selected for recording conflicts with the recording of another program previously scheduled to be recorded from any of the first and second interactive electronic program guides that are in the household. Ex. 1022 ¶¶ 274–275. A skilled artisan would have been so motivated to improve flexibility and control over program recording and to avoid recording conflicts. Ex. 1016, 3:10–4:4; Ex. 1022 ¶ 275.

*h. Dependent claims 6, 17, and 28*

Claim 6 depends from claim 2 and adds “further comprising allowing the user to cancel the recording of the selected program from any of the first and second interactive electronic program guides that are in the household.” Claims 17 and 28 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 6, 17, and 28 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–31, 35–36; Ex. 1022 ¶¶ 277–278. As explained above, the subject matter of

claims 2, 13, and 24 would have been obvious over Browne and LaJoie. *See supra* Section II.D.3.e. In addition, LaJoie discloses that a user may cancel a VCR timer by displaying the all timers list (illustrated in Figure 14), highlighting the desired timer to cancel, and pressing a stop key. Ex. 1020, Fig. 14, 22:66–23:2. Based on the combined teachings of Browne and LaJoie, one of ordinary skill in the art would have modified Browne to provide multiple interactive program guides like the one disclosed in LaJoie to allow for user cancellation of a scheduled recording. Ex. 1022 ¶¶ 200–209, 277. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.

*i. Dependent claims 7, 18, and 29*

Claim 7 depends from claim 1 and adds “further comprising allowing the user to obtain additional information for any item on the list of scheduled events.” Claims 18 and 29 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 7, 18, and 29 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–30, 36–37; Ex. 1011 ¶¶ 279–281. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and LaJoie. *See supra* Sections II.D.3.b., II.D.3.c, II.D.3.d. In addition, Browne discloses that recorder player 100 can display stored program list 600 and update it with titles or other information for the programs on the list. Ex. 1016, Fig.

6, 26:19–24, 27:13–18. Browne also discloses, as illustrated in Figure 6, that each entry in stored program list 600 includes information in addition to the title of the program, including the source, channel, time, and length. *Id.* at Fig. 6. LaJoie discloses that the interactive program guide includes “a highlighted program summary,” which “preferably indicates the title, running time, description, and characteristics of the program highlighted in the interactive program guide display.” Ex. 1020, 6:48–57. Thus, based on the combined teachings of Browne and LaJoie, both Browne and LaJoie teach mechanisms for allowing the user to obtain additional information about programs for which a VCR or reminder timer may be set, such as from the list of scheduled events or from the guide screen that lists the programs. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.

*j. Dependent claims 8, 19, and 30*

Claim 8 depends from claim 1 and adds “wherein the list of scheduled events includes programs scheduled to be recorded.” Claims 19 and 30 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 8, 19, and 30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–30, 38; Ex. 1022 ¶¶ 282–283. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and LaJoie. *See*

*supra* Sections II.D.3.b., II.D.3.c, II.D.3.d. In addition, as discussed above in connection with claim 1, Browne discloses that stored program list 600 (illustrated in Figure 6) includes programs scheduled to be recorded (Ex. 1016, Fig. 6, 24:5–26:16) and LaJoie discloses a list of scheduled events (a list of all timers) that includes programs scheduled to be recorded with a VCR using VCR timers (Ex. 1020, Fig. 14, 22:61–23:14). The combination of Browne and LaJoie thus teaches that the list of scheduled events includes programs scheduled to be recorded. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.

*k. Dependent claims 9, 20, and 31*

Claim 9 depends from claim 1 and adds “wherein the list of scheduled events includes series recordings, future pay-per-view purchases, and auto-tunes.” Claims 20 and 31 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 9, 20, and 31 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–30, 38–40; Ex. 1022 ¶¶ 284–287. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and LaJoie. *See supra* Sections II.D.3.b., II.D.3.c, II.D.3.d. In addition, as discussed above in connection with claim 1, Browne discloses that stored program list 600 (illustrated in Figure 6) includes programs scheduled to be recorded. Ex.

1016, Fig. 6, 24:5–26:16. Browne also discloses that a user can select a desired recording frequency (e.g., daily, bi-weekly, weekly, monthly) when scheduling a program to record such that the program records each time the program airs. *Id.* at Fig. 5D, 25:19–28. Browne thus teaches that the stored program list includes series recordings. LaJoie discloses that the all timers list (shown in Figure 14) includes pay-per-view (PPV) purchases and reminder timers. Ex. 1020, Fig. 14, 22:61–66, 31:40–47. With respect to pay-per-view purchases, LaJoie discloses that a user may purchase an upcoming pay-per-view program and “the set-top terminal will automatically tune” to the pay-per-view program when it begins. *Id.* at 31:15–47. With respect to reminder timers, LaJoie discloses that, “if the current time is within a threshold amount of time before the starting time of a selected program, set-top terminal 6 will tune to the channel on which the selected program is to be aired.” *Id.* at 30:24–28. LaJoie thus teaches that the all timer list includes future pay-per-view purchases and auto-tunes. The combination of Browne and LaJoie thus teaches that the list of scheduled events includes series recordings, future pay-per-view purchases, and auto-tunes. Ex. 1022 ¶¶ 284–287. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.

*l. Dependent claims 10, 21, and 32*

Claim 10 depends from claim 1 and adds “wherein the first and second interactive electronic program guides are respectively implemented on at least one of the plurality of user television equipment devices in the household.” Claims 21 and 32 depend from claims 12 and 23, respectively,



and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner's and Patent Owner's evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 10, 21, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–31, 40; Ex. 1022 ¶¶ 288–290. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and LaJoie. *See supra* Sections II.D.3.b., II.D.3.c, II.D.3.d. In addition, as explained above, Browne discloses that the recorder player can be connected to multiple televisions and that multiple users can control the playback and recording processes of the recorder player using control screens displayed on different televisions in a household. Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28. Also, LaJoie discloses an interactive electronic program guide implemented for display on a television. Ex. 1020, Figs. 16, 24, 26, 6:13–17, 6:20–25, 24:48–55, 29:20–26, 30:9–19. Based on the combined teachings of Browne and LaJoie, one of ordinary skill in the art would have connected the recorder player 100 of Browne to the multiple televisions, each of which would have had an instance of an interactive program guide. Ex. 1022 ¶¶ 201–209, 288–290. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.

*m. Dependent claims 11, 22, and 33*

Claim 11 depends from claim 1 and adds “wherein one of the received first and second events is a purchased program.” Claims 22 and 33 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent

Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner's and Patent Owner's evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 11, 22, and 33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie. *See* Pet. 21–30, 41; Ex. 1022 ¶¶ 291–294. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and LaJoie. *See supra* Sections II.D.3.b., II.D.3.c, II.D.3.d. In addition, LaJoie discloses that the all timers list (shown in Figure 14) includes pay-per-view (PPV) purchases, VCR timers, and reminder timers. Ex. 1020, Fig. 14, 22:61–66, 31:40–47. With respect to pay-per-view purchases, LaJoie discloses that a user may purchase an upcoming pay-per-view program and “the set-top terminal will automatically tune” to the pay-per-view program when it begins. *Id.* at 31:15–47. LaJoie also discloses reminder timers, for which, “if the current time is within a threshold amount of time before the starting time of a selected program, set-top terminal 6 will tune to the channel on which the selected program is to be aired.” *Id.* at 30:24–28. LaJoie thus teaches an event of a timer indicating a purchased program. The combination of Browne and LaJoie therefore teaches that one of the two received events is a purchased program. Ex. 1022 ¶¶ 291–294. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and LaJoie in the manner claimed. *See supra* Section II.D.3.a.

*E. Asserted Obviousness over Browne and Alexander*

Petitioner contends that claims 1–8, 10, 12–19, 21, 23–30, and 32 of the '871 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. Pet. 8, 41–62. Relying in part on the testimony of Dr. Rhyne, Petitioner explains how the references teach or suggest the claim limitations and provides reasoning for combining the teachings of the references. *Id.* at 41–62.

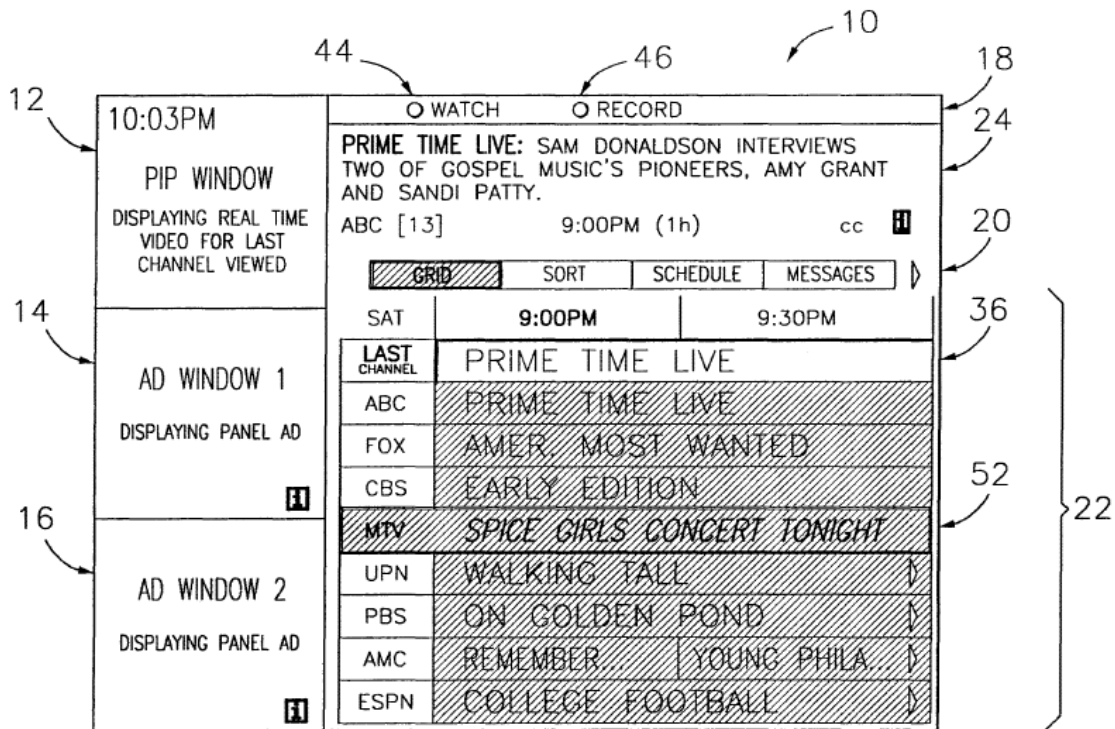
We have reviewed Petitioner's and Patent Owner's arguments and evidence of record. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–3, 5–8, 10, 12–14, 16–19, 21, 23–25, 27–30, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. We do not address here the patentability of claims 4, 15, and 26, which we find unpatentable as obvious over Browne and Knudson. *See supra* Section II.G.2.g. In addressing the grounds involving Knudson, we have addressed all challenged claims. *See SAS Inst.*, 138 S. Ct. at 1359 (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”). We also have found all challenged claims unpatentable as obvious based on the Knudson grounds. *See supra* Sections II.G., II.H. We therefore need not reach the patentability of claims 4, 15, and 26 based on Browne and Alexander. *See Gleave*, 560 F.3d at 1338.

*1. Summary of Alexander*

Alexander is a PCT application publication titled “Systems and Methods for Displaying and Recording Control Interfaces.” Ex. 1021, [54]. Alexander discloses an electronic program guide (“EPG”) with “[i]mproved interaction capabilities with the EPG,” “[i]mproved viewer control of video

recording of future-scheduled programming,” “[i]mproved features to the EPG display and navigation,” and “[u]tilization of viewer profile information to customize various aspects of the EPG.” *Id.* at [57], 3:35–4:10.<sup>7</sup>

A sample screen display of the improved interactive electronic program guide is illustrated in Figure 1 below. *Id.* at 4:16.



**FIG. 1**

As illustrated in Figure 1 above, television screen display 10 includes picture-in-picture (PIP) window 12, ad windows 14 and 16, action key bar 18, navigation bar 20, grid guide 22, and information box 24. *Id.* at 5:8–17, 19:17–19. Alexander discloses that “[i]n grid guide 22[,] the viewer moves

<sup>7</sup> Following the citation convention used in the Petition, page citations for Alexander refer to the page numbers added by Petitioner.

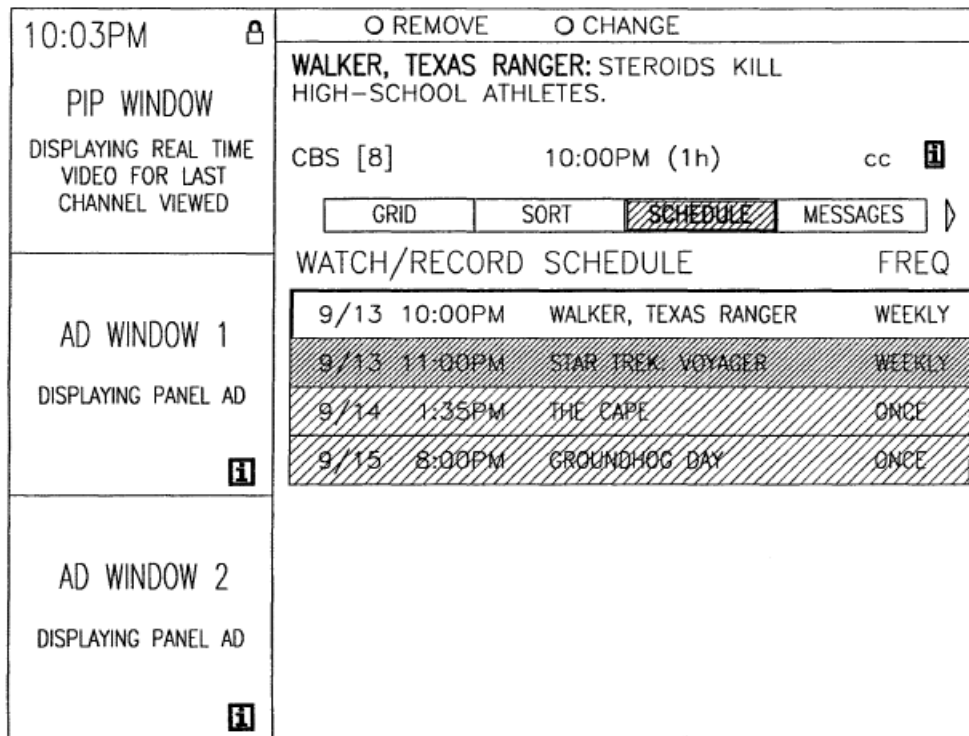
cursor 36 to highlight one of the nine tiles in which channel and title are displayed by pressing arrow keys 28 and 30” on the remote control (illustrated in Figure 20). *Id.* at 7:11–14; *see also id.* at 5:18–27 (describing keys of the remote control for user interaction with the display).

Alexander discloses a record selection function in which “the viewer instructs the EPG what programs to add to the Record List, which is the list of programs and related programming schedule information, for programs that the viewer want[s] to have recorded.” *Id.* at 11:17–20. Alexander explains that the viewer can press the Record key on the remote control or alternatively press the Record action button on the EPG display. *Id.* at 11:23–25. Alexander discloses that once a viewer selects a program for recording, the viewer can select a record-scheduling option of Once, Daily, Weekly, or Regularly. *Id.* at 16:23–25.

Alexander also discloses a watch scheduling function, which allows a user to select program titles, scheduled for delivery at future times, to watch. *Id.* at 14:11–12; *see also id.* at 11:28–30 (“In the Watch Scheduling Function, also referred to as the Watch Function, the viewer instructs the EPG what programs to add to the Watch List, which is the list of programs and related programming schedule information, for programs that the viewer want[s] to watch.”). Alexander explains that the viewer can enter the watch function by pressing the Watch key on the remote control or alternatively pressing the Watch action button on the EPG display. *Id.* at 11:33–35. According to Alexander, “the Watch Function automatically turns the television on, if it is not already on, and automatically tunes the television to the channel scheduled to deliver the designated program, if the television is not already tuned to that channel.” *Id.* at 14:14–17. Alexander discloses

that “[t]his feature provides the viewer with the opportunity to watch a program of special interest at the scheduled time even if the viewer has forgotten about the scheduled delivery.” *Id.* at 14:17–19.

Figure 6 of Alexander, below, illustrates the watch/record schedule screen of the EPG. *Id.* at 14:7.



**FIG. 6**

Figure 6 above illustrates a list of television programs on a watch/record schedule, including the frequency with which the scheduled watch/record occurs. *Id.* at Fig. 6; Ex. 1022 ¶ 104.

## 2. Analysis

### a. Reason to combine

Petitioner relies on Browne for teaching a recorder player with multiple sets of control screens to allow multiple users to schedule

recordings and share a list of recorded and to-be-recorded programs. Pet. 41–42. Petitioner relies on Alexander for teaching an interactive program guide for scheduling one-time recordings and recurring/series recordings in which the frequency of the recordings are illustrated in a watch/record list. *Id.* Petitioner provides persuasive evidence for why a person of ordinary skill in the art would have combined the teachings of Browne and Alexander in the manner claimed (as recited in claims 1–33). Pet. 41–43; Ex. 1022 ¶¶ 298–304.

A person of ordinary skill in the art would have combined Alexander’s interactive program guide with Browne’s player for the purpose of improving flexibility of, and control over, program recording and viewer interaction capabilities with the interactive program guide. Ex. 1022 ¶ 303; Ex. 1016, 3:10–4:4; Ex. 1021, [57]. Even though Browne discloses control screens for scheduling recordings on multiple televisions, Alexander discloses an interactive program guide that provides improved control over scheduling recordings by allowing a user to schedule recordings at different frequencies (such as one-time recordings and recurring recordings) in an intuitive and efficient manner directly from the program listings on the guide, and displaying those frequencies to users in a combined list (a Watch/Record Schedule) of all programs scheduled for recording. Ex. 1022 ¶¶ 298, 303, 304. The modification of indicating the recording frequency on the combined list, as taught by Alexander, also would have improved Browne’s teachings of a stored program list by mitigating duplicative and unnecessary attempts to record a program if a recurring recording has already been scheduled for that program (as shown on the combined list). *Id.* ¶ 299.

*b. Independent claim 1*

*i. Limitations of claim 1*

The combination of Browne and Alexander teaches “[a] method for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household,” as recited in claim 1. Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne also discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Browne thus discloses multiple controllers for controlling the recorder player and that the controllers respond to interactions with different users via multiple control screens.

Alexander discloses an interactive program guide that allows a user to navigate through television program listings. Ex. 1021, Fig. 1, 5:14–6:2, 7:11–14. As illustrated in Figure 1, Alexander discloses that the interactive program guide displays television program information in a grid arrangement. *Id.* at Fig. 1, 5:8–17, 7:11–14. Alexander discloses that “[i]n grid guide 22[,] the viewer moves cursor 36 to highlight one of the nine tiles in which channel and title are displayed by pressing arrow keys 28 and 30”



on the remote control (illustrated in Figure 20). *Id.* at 7:11–14. In addition, as discussed below, Alexander discloses that a user, using the interactive program guide, can highlight a program in the grid and select it to be recorded by pressing a Record key or select it be identified in a Watch reminder by pressing a Watch key. *Id.* at 11:16–35.

A person of ordinary skill in the art would have modified the teachings of Browne to use an interactive program guide, as taught by Alexander, to set a one-time recording of one program on one television and a recurring recording of another program on another television. Ex. 1022 ¶¶ 298–304. The combination thus teaches displaying first and second instances of an interactive electronic program guide that are accessible from multiple televisions in a household. Ex. 1022 ¶¶ 298–302; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1021, 10:3–13.

The combination of Browne and Alexander also teaches “receiving, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide,” as recited in claim 1. The first event of a first type is a one-time recording of a television program. Browne discloses providing control screens illustrated in Figures 4A–4C and 5A–5E for scheduling a recording of a television program. Ex. 1016, Figs. 4A–4C, 5A–5E, 24:5–26:17. One of the control screens is shown below.

**FIG. 5D**

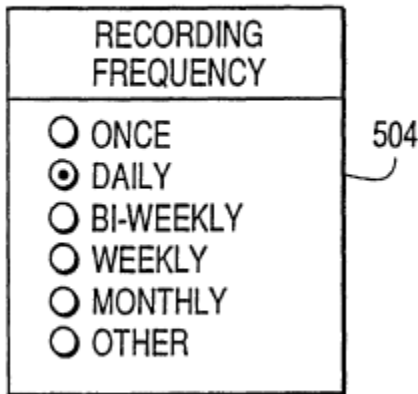


Figure 5D above illustrates a control screen for selecting the recording frequency for a television program recording. *Id.* at Fig. 5D, 25:19–30. Browne discloses one of the choices for program recording frequency is “once.” *Id.* at Fig. 5D, 25:19–30. Browne also discloses that “[c]ontroller 105 retains data entered into the calendar program, from screens 4A–4C, in RAM memory for future control of the multi-source recorder player 100.” *Id.* at 24:28–31. Based on the teachings of Browne and Alexander, in which Browne’s recorder player is modified to incorporate instances of the interactive program guide taught in Alexander, a person of ordinary skill in the art would have modified the instances of the interactive program guide to allow a user to select a desired recording frequency when scheduling a recording, as taught by Browne. Ex. 1022 ¶ 314. A person of ordinary skill in the art would have been motivated to make that modification in order to provide additional flexibility in program scheduling. *Id.* The combination of Browne and Alexander thus teaches receiving, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide.

The combination of Browne and Alexander also teaches “receiving, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide,” as recited in claim 1. The second event of a second type is a recurring recording of a television program. As discussed above, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33.

Browne further discloses providing control screens illustrated in Figures 4A–4C and 5A–5E for scheduling a recording of a television program. Ex. 1016, Figs. 4A–4C, 5A–5E, 24:5–26:17. As illustrated in Figure 5D, shown above, one of the control screens allows a user to select the recording frequency, such as daily, weekly, or monthly, for a television program recording. *Id.* at Fig. 5D, 25:19–30. Based on the teachings of Browne and Alexander, in which Browne’s recorder player is modified to incorporate instances of the interactive program guide taught in Alexander, a person of ordinary skill in the art would have modified the instances of the interactive program guide to allow a user to select a desired recording frequency, such as a recurring frequency, when scheduling a recording, as taught by Browne. Ex. 1022 ¶ 314. A person of ordinary skill in the art

would have been motivated to make that modification in order to provide additional flexibility in program scheduling. *Id.* The combination of Browne and Alexander thus teaches receiving a second event of a second type (e.g., a weekly recording of a second program) scheduled with a second interactive electronic program guide, as claimed.

The combination of Browne and Alexander also teaches “storing the received first and second events in a memory accessible to the first and second interactive electronic program guides,” as recited in claim 1. Browne discloses that the controller of the recorder player retains in RAM, “for future control of the multi-source record player 100,” the data entered on the calendar screens of Figures 4A–4C when scheduling a program recording. Ex. 1016, Figs. 4A–4C, 24:28–31. Browne also discloses that a user selects additional recording parameters (e.g., channel, input source, program title, and recording frequency) from additional control screens illustrated in Figures 5A–5D. *Id.* at 25:1–30. A person of ordinary skill in the art would have understood that, in order to carry out the scheduled recording, Browne’s recorder player would have had to store in memory the additional recording parameters selected at Figures 5A–5D. Ex. 1022 ¶ 320; Ex. 1016, 24:28–31. Browne also discloses that storage 104 (illustrated in Figure 1) is accessible to Browne’s control screens. Ex. 1016, 26:19–24. The combination of Browne and Alexander teaches that the storage area would have been accessible to both instances of the interactive program guide. Ex. 1022 ¶¶ 320–322.

The combination of Browne and Alexander also teaches “generating a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive

electronic program guides, wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household,” as required by claim 1. Browne discloses that its control screens can be placed on any screen to control operation of the recorder player. Ex. 1016, 15:27–29. Browne also discloses that recorder player 100 can be connected to multiple televisions and used in a multi-user application in which controllers in the record player “respond[s] to and interact[s] with several users simultaneously via multiple control screens.” *Id.* at 19:16–28. Browne further discloses a stored program list, shown in Figure 6 below. *Id.* at Fig. 6, 26:18–28:29.

**FIG. 6**

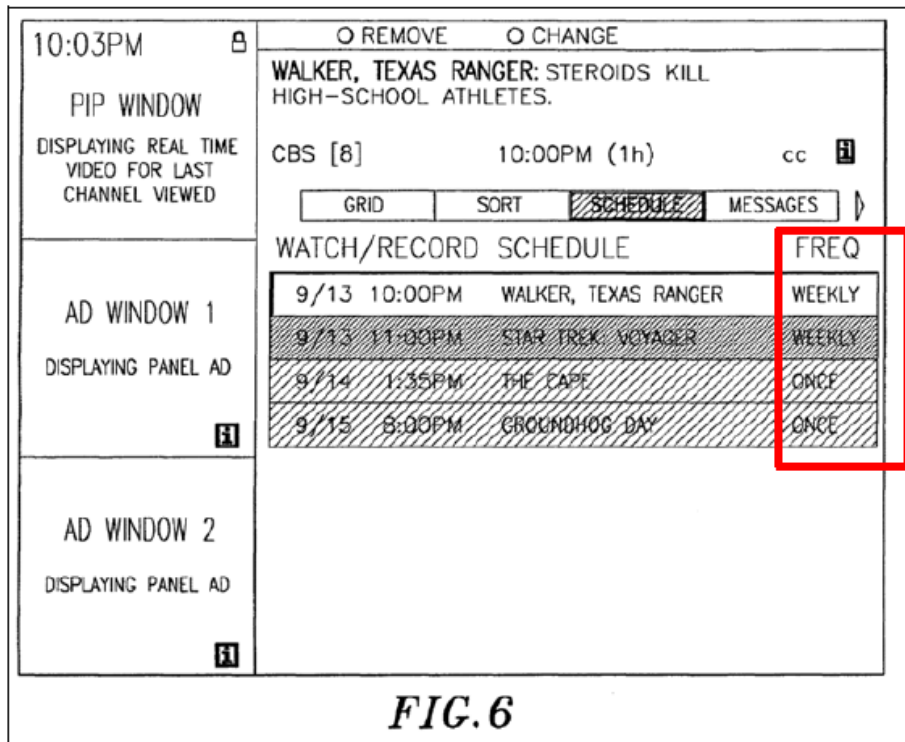
600

|   |                                     |                 |        |         |              |              |        |                  | FREE PROGRAM MEMORY                 | 4.75 HRS                 |
|---|-------------------------------------|-----------------|--------|---------|--------------|--------------|--------|------------------|-------------------------------------|--------------------------|
| # | LOCKED                              | TITLE           | SOURCE | CHANNEL | TIME         | DATE         | LENGTH | NOTES            | VIEWED                              |                          |
| 1 | <input type="checkbox"/>            | -- NOT YET --   | VHF    | 4       | 4:00 - 4:30  | MAY 17, 1991 | 0.5    | NOT YET RECORDED | <input type="checkbox"/>            |                          |
| 2 | <input type="checkbox"/>            | --              | FM     | 99.5    | 1:12 - 1:20  | MAY 15, 1991 | 0.12   |                  | <input checked="" type="checkbox"/> |                          |
| 3 | <input type="checkbox"/>            | NIGHTLY NEWS    | VHF #  | 4       | 6:00 - 8:00  | MAY 13, 1991 | 2.0    |                  | <input type="checkbox"/>            |                          |
| 4 | <input checked="" type="checkbox"/> | BATMAN          | CABLE  | 29      | 8:00 - 10:00 | DEC 28, 1990 | 2.0    |                  | KEEP FOR WENDY                      | <input type="checkbox"/> |
| 5 | <input type="checkbox"/>            | THE ASTRONOMERS | VHF    | 13      | 6:30 - 7:30  | MAY 13, 1991 | 1.0    |                  | <input type="checkbox"/>            |                          |

As illustrated in Figure 6 above, stored program list 600 includes a list of recorded and to-be-recorded programs, which may include programs shared between users. *Id.* at Fig. 6, 26:18–28:29. Browne discloses that the stored program list preferably includes all stored programs and “may also include information such as title, source, channel, time of recording, the length of the program, and the date the program was recorded or is set to be recorded.” *Id.* at 26:25–29. Browne also discloses that “[i]f there are two users of the multi-source recorder player 100, it is possible for each to view

only his or her own listings and not those of the other person,” such as “by incorporating a user password.” *Id.* at 28:8–11. Browne explains that “[o]nce the password is received[,] the multi-source recorder player 100 will interface with the user in the same way as described above, the only difference being that the listings of programs retained for this user will not include any listings for other users unless they are considered ‘shared’ programs.” *Id.* at 28:20–26.

Alexander similarly discloses a list of scheduled recordings, as illustrated in annotated Figure 6 below. Ex. 1021, Fig. 6; Pet. 47.



Annotated Figure 6 above illustrates a “Watch/Record” Schedule with a red box around the column pertaining to the watch/record frequency for each program on the list. Pet. 47; Ex. 1021, Fig. 6, 11:16–32, 14:7–8; Ex. 1022 ¶ 328. As illustrated above, the Watch/Record schedule lists

programs scheduled to be recorded once and programs scheduled to be recorded on a weekly basis. Ex. 1021, Fig. 6.

Alexander thus teaches generating a list of scheduled events of the first and second types (one-time recordings and recurring recordings) by aggregating the first and second scheduled events received from an interactive electronic program guide. Browne teaches generating an aggregated list of scheduled events received multiple users interacting with control screens, and wherein the list of scheduled events is accessible for display from any of the control screens in the household. The combination of Browne and Alexander teaches the generating step recited in claim 1. Ex. 1022 ¶¶ 324–328.

*ii. Patent Owner's arguments*

Patent Owner raises arguments for why the subject matter of claim 1 would not have been obvious over Browne and Alexander that are identical to the arguments Patent Owner raises in connection with the Browne-LaJoie combination. PO Resp. 37–44, 47–55. As explained above, these arguments are unpersuasive. *See supra* Section II.D.3.b.ii.

Patent Owner also argues that a person of ordinary skill in the art would not have been motivated to combine Browne with Alexander, raising essentially the same arguments Patent Owner raises for the combination of Browne and LaJoie. PO Resp. 47–60. Patent Owner argues that Browne is directed to “entirely different problems and technologies” than those of Alexander. *Id.* at 48–50. Patent Owner also argues that replacing Browne’s control screens with an interactive program guide from Alexander would reduce Browne’s functionality and render Browne inoperable for its intended purpose. *Id.* at 50–55. Patent Owner also argues that an ordinarily skilled

artisan would not have been motivated to add an interactive program guide, which requires future program information, into Browne's system, which stores program information only for stored programs. *Id.* at 55–59. Patent Owner further argues that an ordinarily skilled artisan would not have been motivated to improve Browne's stored program list 600 to indicate recording frequency as taught by Alexander because Browne's recorder players “does not have the issue of duplicate recordings.” *Id.* at 61–62.

Patent Owner's arguments are not persuasive. First, Browne's recorder player is similar to the set-top box of Alexander in that Browne's recorder player serves as a receiver of cable television signals and controls an external VCR. Ex. 1016, 7:29–8:4, 21:31–22:5; Ex. 1021, 5:18–20, 15:35–37, 38:9–15. Moreover, Alexander teaches that a viewer's television system may include a direct-link to the Internet to receive data and visit websites. Ex. 1021, 12:15–34. Thus, Alexander teaches multiple sources, like Browne. Ex. 1033 ¶ 75. Patent Owner's reliance on technical differences between the two systems does not detract from the advantages identified by Petitioner that Alexander provides an improved interface which gives users more flexibility and makes scheduling recordings more efficient than Browne's control screens. Ex. 1022 ¶ 303; Ex. 1033 ¶ 75. Second, Patent Owner does not show that the combination would have rendered Browne inoperable for its intended purpose. Although Browne lists a number of objectives of the invention, none is described as necessary, and routing is not included among them. Ex. 1016, 4:1–5:7. Even if routing was critical to the operation of Browne, the instances of the interactive program guide would have included options for performing such routing (and mixing). Ex. 1033 ¶¶ 50, 78–80. Third, Patent Owner's argument that a



skilled artisan would not have been motivated to add an interactive program guide, which requires future program information, is unpersuasive, for the reasons set forth by Petitioner in its Reply. *See* Reply Br. 26–28. Fourth, Patent Owner’s argument regarding duplicate recordings is unpersuasive. Browne’s recorder player, as with all storage devices, would have had capacity limitations making duplicate recordings undesirable. *See* Ex. 1016, 8:13–16, 21:6–12.

*iii. Conclusion regarding claim 1*

Having considered the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Browne and Alexander.

*c. Independent claim 12*

Independent claim 12 is similar to claim 1 but is directed to a system, rather than a method. Petitioner asserts that the combination of Browne and Alexander teaches the system components recited in claim 12. Pet. 48–50. Petitioner relies on its analysis of claim 1 for showing how the combination of Browne and Alexander teaches the elements of claim 12 that are nearly identical to the corresponding elements in claim 1. *Id.*

Patent Owner raises the same arguments for claim 12 that it raises for claim 1. *See* PO Resp. 37–44, 47–66.

Having reviewed the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that claim 12 is unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander.

The combination of Browne and Alexander teaches “[a] system for displaying interactive electronic program guides,” the system including “a plurality of user television equipment devices that are located in a household and from which first and second interactive electronic program guides are accessible,” as recited in claim 12. The references teach a system that includes a recorder player (as taught by Browne and as modified to incorporate the teachings of in Alexander of user television equipment for use with an interactive program guide) and televisions as taught in Browne and Alexander. Ex. 1016, Fig. 1, 7:29–8:29; Ex. 1021, 5:8–12, 5:18–25, 7:35–8:20, 10:5–13; Ex. 1022 ¶¶ 298–304, 329–335. As explained above in connection with claim 1, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne also discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Also as discussed above in connection with claim 1, Alexander discloses an interactive electronic program guide implemented on user television equipment for display on a television. Ex. 1021, Fig. 1, 5:8–6:2, 7:11–14, 11:16–35.

A person of ordinary skill in the art would have modified the teachings of Browne to have user television equipment for using an interactive program guide, as taught by Alexander, to set a one-time recording of one program with an instance of an interactive program guide on one television and a recurring recording of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 298–304. The combination thus teaches a plurality of user television equipment devices that are located in a household and from which first and second instances of an interactive electronic program guide are accessible. Ex. 1022 ¶¶ 298–304, 329–335; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1021, Fig. 1, 5:8–6:2, 7:11–14, 11:16–35.

The combination of Browne and Alexander also teaches that the system comprises “a memory accessible to the first and second interactive electronic program guides for storing the received first and second events,” as recited in claim 12. Ex. 1022 ¶¶ 319–323, 336. Browne discloses that the controller of the recorder player retains in RAM, “for future control of the multi-source record player 100,” the data entered on the calendar screens of Figures 4A–4C when scheduling a program recording. Ex. 1016, Figs. 4A–4C, 24:28–31. Browne also discloses that a user selects additional recording parameters (e.g., channel, input source, program title, and recording frequency) from additional control screens illustrated in Figures 5A–5D. *Id.* at 25:1–30. A person of ordinary skill in the art would have understood that, in order to carry out the scheduled recording, Browne’s recorder player would have had to store in memory the additional recording parameters selected at Figures 5A–5D. Ex. 1022 ¶ 320; Ex. 1016, 24:28–31. Browne

also discloses that storage 104 (illustrated in Figure 1) is accessible to Browne's control screens. Ex. 1016, 26:19–24. The combination of Browne and Alexander teaches that the storage area would have been accessible to both instances of the interactive program guide. Ex. 1022 ¶¶ 319–323, 336.

In addition, for the reasons explained above in connection with claim 1, which recites steps identical to the functions recited in claim 12, the combination of Browne and Alexander teaches that the plurality of user television equipment devices comprises a processor configured to perform the functions recited in claim 12. *See supra* Section II.E.2.b.1; Ex. 1022 ¶¶ 329–335.

Moreover, for the reasons explained above, Petitioner provides persuasive evidence for why a skilled artisan would have combined the teachings of Brown and Alexander in the manner claimed. *See supra* Section II.E.2.a. In addition, for the reasons explained above in connection with claim 1, Patent Owner's arguments are not persuasive. *See supra* Section II.E.2.b.ii.

*d. Independent claim 23*

Independent claim 23 is very similar to claim 1 but is directed to a non-transitory machine-readable media, rather than a method, for displaying first and second interactive electronic program guides. Petitioner asserts that the combination of Browne and Alexander teaches the machine-readable media recited in claim 23. Pet. 50–52. Petitioner relies on its analysis of claim 1 for showing how the combination of Browne and Alexander teaches the elements of claim 23 that are nearly identical to the corresponding elements in claim 1. *Id.*

Patent Owner raises the same arguments for claim 23 that it raises for claim 1. *See* PO Resp. 37–44, 47–66.

Having reviewed the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that claim 23 is unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander.

The combination of Browne and Alexander teaches “[a] non-transitory machine-readable media for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household,” as recited in claim 23. Browne discloses that “[c]ontroller 105 is a microprocessor which preferably runs a user control program and allows a user to access and control the multi-source recorder player 100.” Ex. 1016, 15:18–20. Browne thus discloses a non-transitory readable media for storing the control program for execution by the microprocessor. Ex. 1022 ¶ 338. Alexander discloses hardware, including a processor and programmable direct memory access controller, for its interactive program guide system. Ex. 1021, 7:35–8:18. The combination of Browne and Alexander thus teaches non-transitory machine-readable media for displaying an interactive electronic program guide. In addition, the combination of Browne and Alexander teaches that the non-transitory readable media would have displayed the first and second instances of the interactive program guide. Ex. 1022 ¶¶ 298–304, 337–338. As explained above in connection with claim 1, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be

placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Also as discussed above in connection with claim 1, Alexander discloses an interactive electronic program guide implemented on user television equipment for display on a television. Ex. 1021, Fig. 1, 5:8–6:2, 7:11–14, 7:35–8:18, 11:16–35.

A person of ordinary skill in the art would have modified the teachings of Browne to have non-transitory machine-readable media for using an interactive program guide, as taught by Alexander, to set a one-time recording of one program with an instance of an interactive program guide on one television and a recurring recording of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 298–304, 337–338. The combination thus teaches a non-transitory machine-readable media for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household. Ex. 1022 ¶¶ 298–304, 337–338; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1021, Fig. 1, 5:8–6:2, 7:11–14, 11:16–35.

In addition, for the reasons explained above in connection with claim 1, which recites steps identical to the functions recited in claim 23, the combination of Browne and Alexander teaches that the machine-readable media comprises machine-readable instructions encoded thereon for performing the functions recited in claim 23. *See supra* Section II.E.2.b.1; Ex. 1022 ¶¶ 339–342.

Moreover, for the reasons explained above, Petitioner provides persuasive evidence for why a skilled artisan would have combined the teachings of Brown and Alexander in the manner claimed. *See supra* Section II.E.2.a. In addition, for the reasons explained above in connection with claim 1, Patent Owner's arguments are not persuasive. *See supra* Section II.E.2.b.ii.

*e. Dependent claims 2, 13, and 24*

Claim 2 depends from claim 1 and adds "further comprising allowing a user to select a program for recording from a given interactive electronic program guide in the household." Claims 13 and 24 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner's and Patent Owner's evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 13, and 24 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 43–53. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Alexander. *See supra* Sections II.E.2.b., II.E.2.c, II.E.2.d. In addition, Browne discloses that users may select television programs to record from control screens presented on multiple television screens connected to the recorder player. Ex. 1016, Figs. 1, 4A–4C, 5A–5E, 8:21–26, 15:27–29, 19:16–28, 24:5–26:17. Alexander discloses that a user may select a television program to record from an interactive program guide presented on a television. Ex. 1021, Figs. 1, 6, 5:14–6:2, 7:11–22, 11:16–25, 15:33–37, 16:23–27. Based on the combined

teachings of Browne and Alexander, one of ordinary skill in the art would have modified Browne to provide multiple interactive program guides like the one disclosed in Alexander to allow for user selection of a television program to record. Ex. 1022 ¶¶ 296–304. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Alexander in the manner claimed. *See supra* Section II.D.2.a.

*f. Dependent claims 3, 14, and 25*

Claim 3 depends from claim 2 and adds “further comprising transmitting a control signal from the user television equipment device from which the given interactive electronic program guide is accessible to a recording device to instruct the recording device to record the selected program.” Claims 14 and 25 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 3, 14, and 25 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 43–54. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Alexander. *See supra* Section II.E.2.e. In addition, Brown discloses that recorder player 100 can be connected to external VCR 322. Ex. 1016, Fig. 3 (element 322), 21:31–22:5. Browne also discloses that output signals 112a–112h “may include control signals for recording and viewing control of external devices,” such as video recorders. *Id.* at Fig. 1, 8:27–29. Browne also explains that “[t]he



user can thus send control signals for devices along with the programs to the receiving devices,” which “allows controller 104 to control the connected receiving device.” *Id.* at 22:6–10. Browne thus teaches receiving and then transmitting control information to an external VCR for a remote video recording. Ex. 1022 ¶ 347.

Alexander discloses a Record Selection Function, in which “[t]he viewer can press the ‘Record’ key . . . on the viewer’s remote control device” or “the viewer can press a ‘Record’ action button the EPG display.” Ex. 1021, 11:17–25. Alexander thus teaches receiving control information via an interactive program guide operating on a user television equipment device. Ex. 1022 ¶ 347.

It would have been obvious to a person of ordinary skill in the art to modify the Browne-Alexander combination discussed above in connection with claims 1 and 2 to incorporate the Record Selection feature taught by Alexander to improve user functionality and to provide an efficient means to provide recording functionality through the interactive guide. Ex. 1022 ¶ 347; *see supra* Section II.E.2.a. The combination of Browne and Alexander thus teaches transmitting a control signal from the television from which the given interactive electronic program guide is accessible to a VCR to instruct the VCR to record the selected program. *Id.* The combination also teaches a processor with an interactive program guide configured to facilitate such transmitting and machine-readable instructions for performing such transmitting. *Id.*

*g. Dependent claims 5, 16, and 27*

Claim 5 depends from claim 2 and adds “further comprising alerting the user when the selected program for recording conflicts with another

program previously scheduled to be recorded from any of the first and second interactive electronic program guides that are in the household.” Claims 16 and 27 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 5, 16, and 27 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 55–56; Ex. 1022 ¶¶ 352–354. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Alexander. *See supra* Section II.E.2.e. In addition, Alexander discloses that the interactive program guide detects conflicts between recording instructions and prompts a user to resolve the conflicts. Ex. 1021, 18:6–31. Specifically, Alexander discloses that “[i]f the EPG detects an overlap in date, time and duration between the newly received instruction on the one hand and one or more of the remaining record instructions in the Record List, the EPG formats a message to the viewer describing the conflict.” *Id.* at 18:11–14. Alexander explains that “[t]he message describes to the user the newly received instruction to record a particular program and the conflicting record instruction in the Record List” and that “[t]he EPG will require that the viewer revise the record instructions to eliminate the conflict.” *Id.* at 18:14–18. Alexander thus discloses alerting the user when the selected program for recording conflicts with another program previously scheduled to be recorded from the interactive electronic program guide.

Based on the teachings of Browne and Alexander, one of ordinary skill in the art would have modified Browne's recorder player to display a warning to a user when a program selected for recording conflicts with the recording of another program previously scheduled to be recorded from any of the first and second instances of the interactive electronic program guide that are in the household. Ex. 1022 ¶¶ 302–304, 352–354. A skilled artisan would have been so motivated to improve flexibility and control over program recording and to avoid recording conflicts. Ex. 1016, 3:10–4:4; Ex. 1021, [57]; Ex. 1022 ¶ 352.

*h. Dependent claims 6, 17, and 28*

Claim 6 depends from claim 2 and adds “further comprising allowing the user to cancel the recording of the selected program from any of the first and second interactive electronic program guides that are in the household.” Claims 17 and 28 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

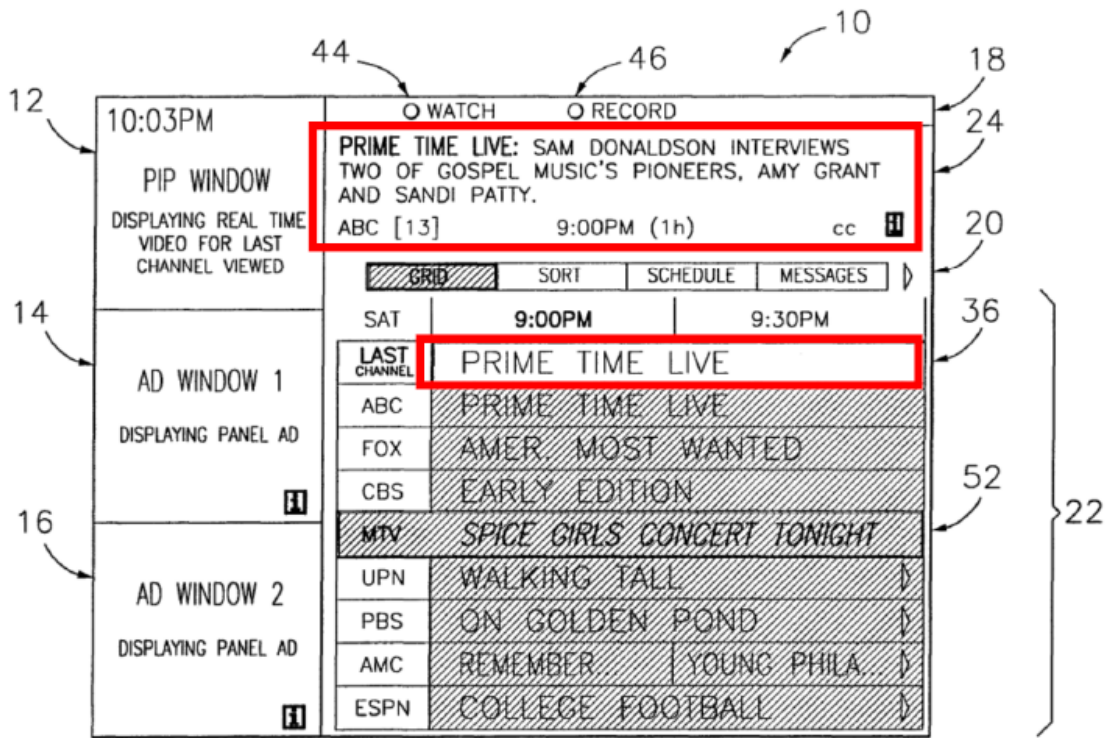
Having reviewed the Petitioner's and Patent Owner's evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 6, 17, and 28 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 43–53, 56–58; Ex. 1022 ¶¶ 355–357. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Alexander. *See supra* Section II.E.2.e. In addition, Alexander discloses a “Remove” option on the Watch/Record Schedule (illustrated in Figure 6), which a user can select to remove/cancel a scheduled recording. Ex. 1021, Fig. 6, 14:7–8; Ex. 1022 ¶ 355. Based on the combined teachings of Browne

and Alexander, one of ordinary skill in the art would have modified Browne to provide multiple interactive program guides like the one disclosed in Alexander to allow for user cancellation of a scheduled recording. Ex. 1022 ¶¶ 298–303, 356. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Alexander in the manner claimed. *See supra* Section II.E.2.a.

*i. Dependent claims 7, 18, and 29*

Claim 7 depends from claim 1 and adds “further comprising allowing the user to obtain additional information for any item on the list of scheduled events.” Claims 18 and 29 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

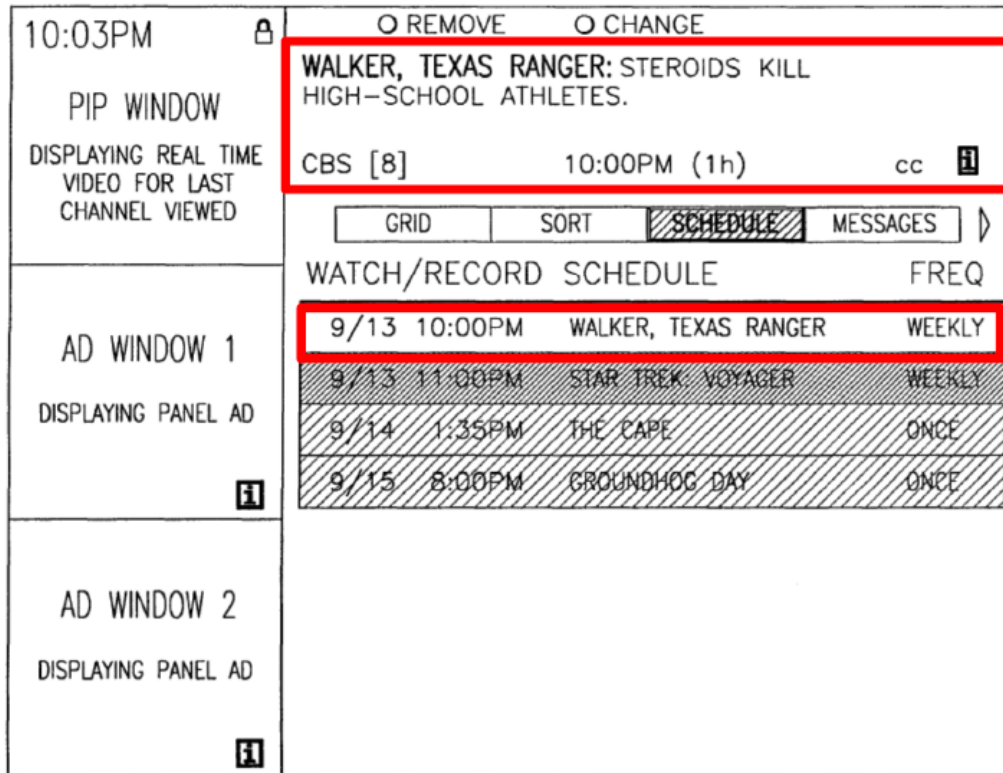
Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 7, 18, and 29 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 43–53, 58–60; Ex. 1022 ¶¶ 358–361. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Alexander. *See supra* Sections II.E.2.b., II.E.2.c, II.E.2.d. In addition, Alexander discloses that the EPG includes additional information regarding a selected program, as illustrated in annotated Figure 1 below.



**FIG. 1**

Figure 1 above, which shows television screen display 10 for an embodiment of Alexander’s EPG, is annotated to include red boxes around a television program entry for “Prime Time Live” and “information box 24,” which Alexander refers to as the “detailed information area.” Pet. 59; Ex. 1021, Fig. 1, 5:8–10, 5:14–17. The information box above shows additional information regarding the Prime Time Live episode. Ex. 1021, Fig. 1.

Alexander similarly discloses, as shown below in annotated Figure 6, that the screen with the Watch/Record Schedule includes additional information regarding programs listed on the schedule. Pet. 60; Ex. 1021, Fig. 6.



**FIG. 6**

Annotated Figure 6 above includes red boxes around an entry on the Watch/Record Schedule for an episode of “Walker, Texas Ranger” and additional information regarding that episode. Pet. 60; Ex. 1021, Fig. 6, 11:16–25, 14:7. Alexander thus teaches allowing the user to obtain additional information for any item on the list of scheduled events. Ex. 1021, Fig. 6, 5:8–10, 5:14–17, 11:16–25.

The combination of Browne and Alexander teaches allowing the user to view details for the programs associated with the entries in the combined list of scheduled one-time program recordings and recurring recordings. The combination thus teaches the step of allowing the user to obtain additional information for any item on the list of scheduled events, and a processor with an interactive program guide configured to facilitate such a step and

machine-readable instructions for performing the step. Ex. 1022 ¶¶ 358–361. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Alexander in the manner claimed. *See supra* Section II.E.2.a.

*j. Dependent claims 8, 19, and 30*

Claim 8 depends from claim 1 and adds “wherein the list of scheduled events includes programs scheduled to be recorded.” Claims 19 and 30 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 8, 19, and 30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 43–53, 61; Ex. 1022 ¶¶ 362–363. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Alexander. *See supra* Sections II.E.2.b., II.E.2.c, II.E.2.d. In addition, as discussed above in connection with claim 1, Browne discloses that stored program list 600 (illustrated in Figure 6) includes programs scheduled to be recorded (Ex. 1016, Fig. 6, 24:5–26:16) and Alexander discloses a list of scheduled events that includes programs scheduled to be recorded once and programs scheduled to be recorded more frequently, such as weekly (Ex. 1021, Fig. 6, 11:16–35, 14:7). The combination of Browne and Alexander thus teaches that the list of scheduled events includes programs scheduled to be recorded. Moreover, for the reasons explained above, one of ordinary skill in the art

would have been motivated to combine the teachings of Browne and Alexander in the manner claimed. *See supra* Section II.E.2.a.

*k. Dependent claims 10, 21, and 32*

Claim 10 depends from claim 1 and adds “wherein the first and second interactive electronic program guides are respectively implemented on at least one of the plurality of user television equipment devices in the household.” Claims 21 and 32 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 10, 21, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Alexander. *See* Pet. 43–53, 61–62; Ex. 1022 ¶¶ 364–366. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Alexander. *See supra* Sections II.E.2.b., II.E.2.c, II.E.2.d. In addition, as explained above, Browne discloses that the recorder player can be connected to multiple televisions and that multiple users can control the playback and recording processes of the recorder player using control screens displayed on different televisions in a household. Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28. Also, Alexander discloses an interactive electronic program guide implemented for display on a television. Ex. 1021, 3:10–4:10, 5:18–27, 10:4–13. Based on the combined teachings of Browne and Alexander, one of ordinary skill in the art would have connected the recorder player 100 of Browne to the multiple televisions, each of which would have had an instance of an interactive program guide. Ex. 1022 ¶¶ 298–303, 364–365.



Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Alexander in the manner claimed. *See supra* Section II.E.2.a.

*F. Asserted Obviousness over Browne, Alexander, and LaJoie*

Petitioner contends that claims 9, 11, 20, 22, 31, and 33 of the '871 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Alexander, and LaJoie. Pet. 8, 62–66. Relying in part on the testimony of Dr. Rhyne, Petitioner explains how the references teach or suggest the claim limitations and provides reasoning for combining the teachings of the references. *Id.* at 62–66.

We have reviewed Petitioner's and Patent Owner's arguments and evidence of record. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that the subject matter of claims 9, 11, 20, 22, 31, and 33 of the '871 patent would have been obvious over Browne, Alexander, and LaJoie.

*1. Claims 9, 20, and 31*

Claim 9 depends from claim 1 and adds “wherein the list of scheduled events includes series recordings, future pay-per-view purchases, and auto-tunes.” Claims 20 and 31 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner's and Patent Owner's evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 9, 20, and 31 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Alexander, and LaJoie. *See* Pet. 62–66; Ex. 1022 ¶¶ 371–374. As explained above, the subject

matter of claims 1, 12, and 23 would have been obvious over Browne and Alexander. *See supra* Sections II.E.2.b., II.E.2.c, II.E.2.d. Moreover, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Alexander in the manner recited in claims 1, 12, and 23. *See supra* Section II.E.2.a.

In addition, Browne discloses that stored program list 600 (illustrated in Figure 6) includes programs scheduled to be recorded. Ex. 1016, Fig. 6, 24:5–26:16. Browne also discloses that a user can select a desired recording frequency (e.g., daily, bi-weekly, weekly, monthly) when scheduling a program to record such that the program records each time the program airs. *Id.* at Fig. 5D, 25:19–28. Browne thus teaches that the stored program list includes series recordings. Alexander similarly discloses scheduling recurring (series) recordings, which are included in a Watch/Record Schedule, as illustrated in Figure 6. Ex. 1021, Fig. 6, 11:16–32, 14:7, 15:32–37, 16:23–25. Alexander further discloses automatically tuning a television to a program on the Watch List. *Id.* at 14:10–19.

Browne does not disclose that stored program list 660, and Alexander does not disclose that Watch Record Schedule illustrated in Figure 6, includes pay-per-view purchases. A person of ordinary skill in the art would have been motivated to modify the Browne-Alexander combination to include in the listing of scheduled events pay-per-view purchases, as taught by LaJoie, to further improve flexibility and control over program recording and viewer interaction capabilities to include scheduling recording of pay-per-view programming. Ex. 1022 ¶¶ 368–370.

LaJoie discloses an all timers list (shown in Figure 14) that includes pay-per-view (PPV) purchases and reminder timers. Ex. 1020, Fig. 14,

22:61–66, 31:40–47. With respect to pay-per-view purchases, LaJoie discloses that a user may purchase an upcoming pay-per-view program and “the set-top terminal will automatically tune” to the pay-per-view program when it begins. *Id.* at 31:15–47. With respect to reminder timers, LaJoie discloses that, “if the current time is within a threshold amount of time before the starting time of a selected program, set-top terminal 6 will tune to the channel on which the selected program is to be aired.” *Id.* at 30:24–28. LaJoie thus teaches that the all timer list includes future pay-per-view purchases and auto-tunes.

The combination of Browne, Alexander, and LaJoie thus teaches that the list of scheduled events includes series recordings, future pay-per-view purchases, and auto-tunes. Ex. 1022 ¶¶ 371–373.

## 2. *Claims 11, 22, and 33*

Claim 11 depends from claim 1 and adds “wherein one of the received first and second events is a purchased program.” Claims 22 and 33 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 11, 22, and 33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Alexander, and LaJoie. *See* Pet. 62–64, 66; Ex. 1022 ¶¶ 375–378. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Alexander. *See supra* Sections II.E.2.b., II.E.2.c, II.E.2.d. Moreover, one of ordinary skill in the art would have been motivated to combine the teachings

of Browne and Alexander in the manner recited in claims 1, 12, and 23. *See supra* Section II.E.2.a.

Neither Browne nor Alexander discloses that one of the scheduled events is a purchased program. As explained above, a person of ordinary skill in the art would have been motivated to modify the Browne-Alexander combination to include scheduling a purchased program, as taught by LaJoie, to further improve flexibility and control over program recording and viewer interaction capabilities to include scheduling recording of pay-per-view programming. Ex. 1022 ¶¶ 368–370.

LaJoie discloses that the all timers list (shown in Figure 14) includes pay-per-view (PPV) purchases, VCR timers, and reminder timers. Ex. 1020, Fig. 14, 22:61–66, 31:40–47. With respect to pay-per-view purchases, LaJoie discloses that a user may purchase an upcoming pay-per-view program and “the set-top terminal will automatically tune” to the pay-per-view program when it begins. *Id.* at 31:15–47. LaJoie also discloses reminder timers, for which, “if the current time is within a threshold amount of time before the starting time of a selected program, set-top terminal 6 will tune to the channel on which the selected program is to be aired.” *Id.* at 30:24–28. LaJoie thus teaches an event of a timer indicating a purchased program. The combination of Browne, Alexander, and LaJoie therefore teaches that one of the two received events is a purchased program. Ex. 1022 ¶¶ 375–378.

*G. Asserted Obviousness over Browne and Knudson*

Petitioner contends that claims 1–8, 10, 12–19, 21, 23–30, and 32 of the ’871 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. Pet. 8, 67–88. Relying in part on the testimony of

Dr. Rhyne, Petitioner explains how the references teach or suggest the claim limitations and provides reasoning for combining the teachings of the references. *Id.* at 67–88.

We have reviewed Petitioner’s and Patent Owner’s arguments and evidence of record. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–8, 10, 12–19, 21, 23–30, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson.

### *1. Summary of Knudson*

Knudson is a U.S. patent application publication titled “Series Recording Options Using an Interactive Television Program Guide.” Ex. 1024, [54]. Knudson is prior art to the ’871 patent under 35 U.S.C. § 102(e),<sup>8</sup> which Patent Owner does not dispute (*see, e.g.*, PO Resp. 22–24).

Knudson discloses an interactive television program guide system that allows a user to set a reminder or schedule a recording for a single episode or each episode of a program series. *Id.* at Abstract.

Figure 4, below, illustrates an example of program listings grid 50 that may be displayed by the interactive program guide. *Id.* ¶ 50.

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<sup>8</sup> Petitioner contends that Knudson “has priority to June 11, 1998”—the filing date of a provisional application to which Knudson claims priority—and is prior art to the ’871 patent under 35 U.S.C. § 102(e). Pet. 16–17. Petitioner asserts that claim 255 of Knudson is supported by disclosures in the provisional application. *Id.* at 16 n.2. We agree with Petitioner’s contentions set forth in footnote 2 on page 16 of the Petition, including that claim 255 is supported by the cited passages on page 1 of the Knudson provisional application (page 3 of Exhibit 1025). *See* Ex. 1025, 3; Ex. 1026, 4–5.

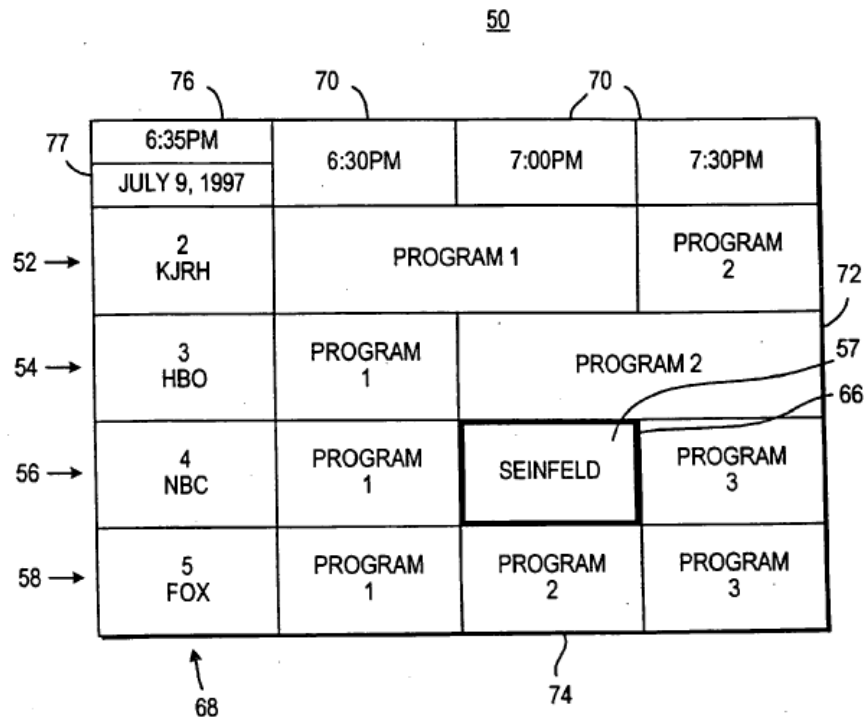
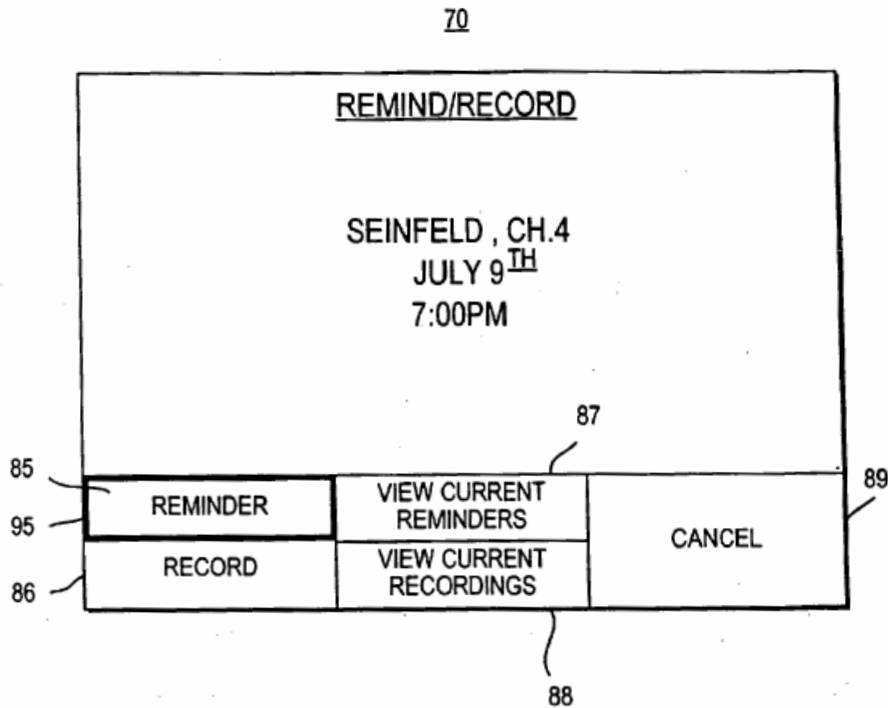


FIG. 4

As illustrated above, program listings grid 50 includes program listings in rows for particular channels at particular times, including highlight region 66 to highlight current grid cell. *Id.* ¶¶ 50–51. Knudson discloses that “[t]he user can position highlight region 66 using arrow keys” on a remote control. *Id.* ¶ 52.

Knudson discloses that “[i]f the user wishes to set a reminder or schedule a recording for a program, the user may position highlight region 66 on the appropriate program listing” and press the “enter” button on the remote control. *Id.* ¶ 54. According to Knudson, “[i]f the ‘enter’ button on remote control 40 is pressed, the user may be presented with a remind/record screen such as remind/record screen 70 of [Figure] 6.” *Id.* Figure 6 is shown below.



**FIG. 6**

As illustrated in Figure 6 above, remind/record screen 70 “present[s] the user with the program title as well as the date and time the program is scheduled to air.” *Id.* ¶ 55. The remind/record screen also includes reminder option 85, record option 86, view current reminders option 87, view current recordings option 88, and cancel option 89. *Id.*

Knudson discloses that “[i]f the user wishes to set a reminder to remind the user when a given program is to be broadcast, the user may position highlight region 95 of [Figure] 6 onto reminder option 85 and press an ‘enter’ button (or other similar button) on remote control 40.” *Id.* ¶ 56. According to Knudson, once the user presses the enter button, the user is presented with the reminder screen shown in Figure 7 (below). *Id.* ¶ 57.

90

91 SEINFELD (0:30), CH.4, 7:00PM JULY 9, 1997

92 REMINDER OPTIONS

95 SCHEDULE REMINDER FOR:  
 THIS EPISODE  
 ENTIRE SERIES

104 PROGRAM CHANNELS:  
 THIS CHANNEL  
 SELECTED CHANNELS  
 ALL CHANNELS

107 HOW SOON BEFORE EVENT DO YOU WANT TO BE REMINDED?  
 3 MINUTES (1-15)  OTHER

108 PROGRAM DAYS:  
 THIS DAY  
 SELECTED DAYS  
 ALL DAYS

108 PROGRAM TYPE:  
 FIRST-RUN  
 RERUN  
 ALL NETWORK  
 SYNDICATED  
 UNVIEWED ONLY

94 OK CANCEL RECORD VIEW CURRENT REMINDERS

97 96 98

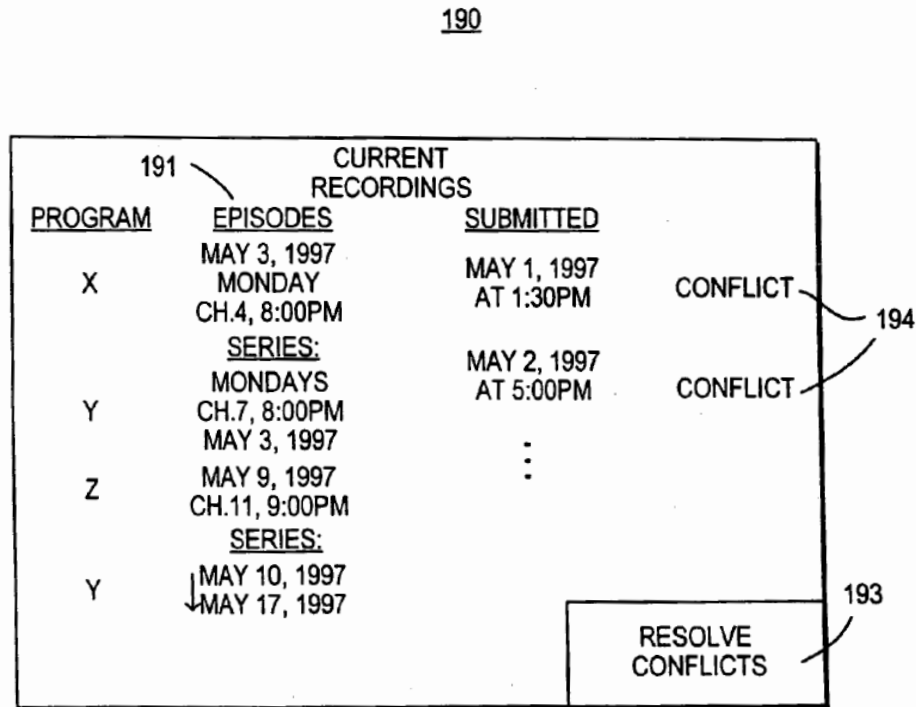
FIG. 7

As illustrated in Figure 7 above, “reminder screen 90 contains various user-selectable options that the user may complete when setting reminder messages to remind the user when selected television programming is to be broadcast.” *Id.* ¶ 57.

Similar to the reminder option on the remind/record screen of Figure 6, a user who “wishes to record a program episode or series . . . may position highlight region 95 of [Figure] 6 onto record option 86 and press an enter or other similar button on remote control 40.” *Id.* ¶ 84. If the enter button is pressed, the user is presented with the record screen of Figure 11, which is similar to reminder screen of Figure 7 above. *Id.* at Figs. 7, 11, ¶ 84.



Knudson further discloses that “the program guide allows the user to resolve conflicts as soon as conflicts are detected.” *Id.* ¶ 98. Figure 14, below, illustrates an example. *Id.*



**FIG. 14**

As illustrated in Figure 14 above, current recordings screen 190 lists the user’s scheduled recordings for programs x, y, and z. *Id.* Also as illustrated above, programs x and z are single broadcasts while program y is a program series. *Id.* According to Knudson, and as shown in “EPISODES” column 191, “an episode of program Y is scheduled to air on the same day and at the same time (i.e., May 3, 1997 at 8:00 PM) as program X.” *Id.* Knudson discloses that “current recordings screen 190 may display a conflicting recordings message such as conflicting recordings message 194 (i.e., “CONFLICT”) of [Figure] 14.” *Id.* Knudson adds that “[p]rogram

conflicts may also be displayed using other suitable techniques, such as displaying the conflicting programs with a unique color or icon, etc.” *Id.*

## 2. Analysis

### a. Reason to combine

Petitioner relies on Browne for teaching a recorder player with multiple sets of control screens to allow multiple users to schedule recordings and share a list of recorded and to-be-recorded programs. Pet. 67–68. Petitioner relies on Knudson for teaching an interactive program guide that allows a user to set television program reminders and recordings using the interactive program guide. *Id.* Petitioner provides persuasive evidence for why a person of ordinary skill in the art would have combined the teachings of Browne and Alexander in the manner claimed (as recited in claims 1–8, 10, 12–19, 21, 23–30, and 32). Pet. 67–69; Ex. 1022 ¶¶ 382–397.

A person of ordinary skill in the art would have combined Knudson’s interactive program guide with Browne’s player for the purpose of allowing the multiple users to easily and intuitively select multiple television programs for watching and/or recording from multiple televisions. Ex. 1022 ¶¶ 384, 396. Even though Browne discloses control screens for scheduling recordings on multiple televisions, Knudson’s disclosed interactive program guide provides a simpler and more intuitive mechanism for scheduling recordings as well as for providing reminders of upcoming programming. *Id.* ¶¶ 384–396; Ex. 1016, 3:10–4:4; Ex. 1024 ¶ 7. In addition, a person of ordinary skill in the art would have recognized that some users would have wanted to create reminders as taught by Knudson to help remind them about

programs of interest and hopefully prevent them from missing such programs. Ex. 1033 ¶ 44.

*b. Independent claim 1*

*i. Limitations of claim 1*

The combination of Browne and Knudson teaches “[a] method for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household,” as recited in claim 1. Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne also discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Browne thus discloses multiple controllers for controlling the recorder player and that the controllers respond to interactions with different users via multiple control screens.

Knudson discloses an interactive program guide, which displays program listings in a grid format (as illustrated in Figure 1) and which allows a user to highlight a cell in the grid corresponding to a program. Ex. 1024 at Fig. 4, ¶¶ 50–52. Knudson also discloses selecting one of the programs in the program guide to record and displaying a program record

screen like the one shown in Figure 11 to configure settings of the recording. *Id.* at Figs. 6, 11, ¶ 84. Knudson similarly discloses selecting one of the programs in the program guide to be reminded of and displaying a program reminder screen like the one shown in Figure 7 to configure the settings of the reminder. *Id.* at Figs. 6, 7, ¶¶ 56–58.

A person of ordinary skill in the art would have modified the teachings of Browne to use an interactive program guide, as taught by Knudson, to set a recording of one program with an instance of an interactive program guide on one television and a reminder of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 380–396, 402–404. The combination thus teaches displaying first and second instances of an interactive electronic program guide that are accessible from multiple televisions in a household. Ex. 1022 ¶¶ 399–404; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1024, Figs. 4, 6, 7, 11, ¶¶ 50–52, 56–58, 84.

The combination of Browne and Knudson also teaches “receiving, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide,” as recited in claim 1. The first event of a first type is a recording of a television program. Browne discloses providing control screens illustrated in Figures 4A–4C and 5A–5E for scheduling a recording of a television program. Ex. 1016, Figs. 4A–4C, 5A–5E, 24:5–26:17. Browne discloses that “[c]ontroller 105 retains data entered into the calendar program, from screens 4A–4C, in RAM memory for future control of the multi-source recorder player 100.” *Id.* at 24:28–31. Knudson discloses scheduling a television program to be recorded by selecting a television program (e.g., at program listings grid 50

in Figure 4) and configuring the settings of the recording (e.g., at program record screen 140 in Figure 11). Ex. 1024, Figs. 4, 6, 11, ¶¶ 54, 55, 84.

A person of ordinary skill in the art would have modified the teachings of Browne to use an interactive program guide, as taught by Knudson, to set a recording of a television program with an instance of an interactive program guide on a first television. Ex. 1022 ¶¶ 380–396, 408–409. The combination of Browne and Knudson thus teaches receiving, from the first interactive electronic program guide, a first event of a first type scheduled with the first interactive electronic program guide.

The combination of Browne and Knudson also teaches “receiving, from the second interactive electronic program guide, a second event of a second type scheduled with the second interactive electronic program guide,” as recited in claim 1. The second event of a second type is a reminder of an upcoming broadcast of a television program. As discussed above, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne further discloses providing control screens illustrated in Figures 4A–4C and 5A–5E for scheduling a recording of a television program. Ex. 1016, Figs. 4A–4C, 5A–5E, 24:5–26:17. Knudson discloses scheduling a television program to be reminded of by selecting a

television program (e.g., at program listings grid 50 in Figure 4), selecting a remind option (e.g., at remind/record screen 70 in Figure 6), and configuring the settings of the reminder (e.g., at program record screen 140 in Figure 11). Ex. 1024, Figs. 4, 6, 7, ¶¶ 54, 55, 58.

A person of ordinary skill in the art would have modified the teachings of Browne to use an interactive program guide, as taught by Knudson, to set a recording of one program with an instance of an interactive program guide on one television and a reminder of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 380–396, 415. The combination of Browne and Knudson thus teaches receiving a second event of a second type (e.g., a reminder of a second program) scheduled with a second interactive electronic program guide, as claimed.

The combination of Browne and Knudson also teaches “storing the received first and second events in a memory accessible to the first and second interactive electronic program guides,” as recited in claim 1. Browne discloses that the controller of the recorder player retains in RAM, “for future control of the multi-source record player 100,” the data entered on the calendar screens of Figures 4A–4C when scheduling a program recording. Ex. 1016, Figs. 4A–4C, 24:28–31. Browne also discloses that a user selects additional recording parameters (e.g., channel, input source, program title, and recording frequency) from additional control screens illustrated in Figures 5A–5D. *Id.* at 25:1–30. A person of ordinary skill in the art would have understood that, in order to carry out the scheduled recording, Browne’s recorder player would have had to store in memory the additional recording parameters selected at Figures 5A–5D. Ex. 1022 ¶ 418; Ex. 1016,

24:28–31. Browne also discloses that storage 104 (illustrated in Figure 1) is accessible to Browne’s control screens. Ex. 1016, 26:19–24. The combination of Browne and Knudson teaches that the storage area would have been accessible to both instances of the interactive program guide. Ex. 1022 ¶ 420.

The combination of Browne and Knudson also teaches “generating a list of scheduled events of the first and second types by aggregating the first and second scheduled events received from the first and second interactive electronic program guides, wherein the list of scheduled events is accessible for display from any of the first and the second interactive electronic program guides in the household,” as required by claim 1. Browne discloses that its control screens can be placed on any screen to control operation of the recorder player. Ex. 1016, 15:27–29. Browne also discloses that recorder player 100 can be connected to multiple televisions and used in a multi-user application in which controllers in the record player “respond[s] to and interact[s] with several users simultaneously via multiple control screens.” *Id.* at 19:16–28. Browne further discloses a stored program list, shown in Figure 6 below. *Id.* at Fig. 6, 26:18–28:29.

**FIG. 6**

600

|   |                                     |                 |        |         |              |              |        |                  | FREE PROGRAM MEMORY                 | 4.75 HRS                 |
|---|-------------------------------------|-----------------|--------|---------|--------------|--------------|--------|------------------|-------------------------------------|--------------------------|
| # | LOCKED                              | TITLE           | SOURCE | CHANNEL | TIME         | DATE         | LENGTH | NOTES            | VIEWED                              |                          |
| 1 | <input type="checkbox"/>            | -- NOT YET --   | VHF    | 4       | 4:00 - 4:30  | MAY 17, 1991 | 0.5    | NOT YET RECORDED | <input type="checkbox"/>            |                          |
| 2 | <input type="checkbox"/>            | --              | FM     | 99.5    | 1:12 - 1:20  | MAY 15, 1991 | 0.12   |                  | <input checked="" type="checkbox"/> |                          |
| 3 | <input type="checkbox"/>            | NIGHTLY NEWS    | VHF #  | 4       | 6:00 - 8:00  | MAY 13, 1991 | 2.0    |                  | <input type="checkbox"/>            |                          |
| 4 | <input checked="" type="checkbox"/> | BATMAN          | CABLE  | 29      | 8:00 - 10:00 | DEC 28, 1990 | 2.0    |                  | KEEP FOR WENDY                      | <input type="checkbox"/> |
| 5 | <input type="checkbox"/>            | THE ASTRONOMERS | VHF    | 13      | 6:30 - 7:30  | MAY 13, 1991 | 1.0    |                  | <input type="checkbox"/>            |                          |

As illustrated in Figure 6 above, stored program list 600 includes a list of recorded and to-be-recorded programs, which may include programs shared between users. *Id.* at Fig. 6, 26:18–28:29. Browne discloses that the stored program list preferably includes all stored programs and “may also include information such as title, source, channel, time of recording, the length of the program, and the date the program was recorded or is set to be recorded.” *Id.* at 26:25–29. Browne also discloses that “[i]f there are two users of the multi-source recorder player 100, it is possible for each to view only his or her own listings and not those of the other person,” such as “by incorporating a user password.” *Id.* at 28:8–11. Browne explains that “[o]nce the password is received[,] the multi-source recorder player 100 will interface with the user in the same way as described above, the only difference being that the listings of programs retained for this user will not include any listings for other users unless they are considered ‘shared’ programs.” *Id.* at 28:20–26.

Knudson discloses a current recordings screen (shown in Figure 10), which lists the currently scheduled reminders, and a current recordings screen (shown in Figure 12), which lists the currently scheduled recordings. Ex. 1024, Figs. 10, 12, ¶ 88. Knudson further discloses that “currently set reminders and currently scheduled recordings may be listed and displayed on the same program guide screen.” *Id.* ¶ 107.

Knudson thus teaches generating a list of scheduled events of the first and second types (recordings and reminders) by aggregating the first and second scheduled events received from an interactive electronic program guide. Browne teaches generating an aggregated list of scheduled events received multiple users interacting with control screens, and wherein the list



of scheduled events is accessible for display from any of the control screens in the household. The combination of Browne and Knudson thus teaches the generating step recited in claim 1. Ex. 1022 ¶¶ 422–428.

*ii. Patent Owner's arguments*

Patent Owner raises arguments for why the subject matter of claim 1 would not have been obvious over Browne and Knudson that are identical to the arguments Patent Owner raises in connection with the Browne-LaJoie combination. PO Resp. 37–44, 47–55. As explained above, these arguments are unpersuasive. *See supra* Section II.D.3.b.ii.

Patent Owner also argues that a person of ordinary skill in the art would not have been motivated to combine Browne with Knudson, raising essentially the same arguments Patent Owner raises for the combination of Browne and LaJoie. PO Resp. 47–60. Patent Owner argues that Browne is directed to “entirely different problems and technologies” than those of Knudson. *Id.* at 48–50. Patent Owner also argues that replacing Browne’s control screens with an interactive program guide from Knudson would reduce Browne’s functionality and render Browne inoperable for its intended purpose. *Id.* at 50–55. Patent Owner also argues that an ordinarily skilled artisan would not have been motivated to add an interactive program guide, which requires future program information, into Browne’s system, which stores program information only for stored programs. *Id.* at 55–59. Patent Owner further argues against Petitioner’s alternative reason for combining the references—that the combination addresses a problem that arises when an instance of a program airs on a different channel or time than other instances. *Id.* at 62 (citing Pet. 68).

Patent Owner's arguments are not persuasive. First, Browne's recorder player is similar to the set-top box of Alexander in that Browne's recorder player serves as a receiver of cable television signals and controls an external VCR. Ex. 1016, 7:29–8:4, 21:31–22:5; Ex. 1021, 5:18–20, 15:35–37, 38:9–15. Moreover, Alexander teaches that a viewer's television system may include a direct-link to the Internet to receive data and visit websites. Ex. 1021, 12:15–34. Thus, Alexander teaches multiple sources, like Browne. Ex. 1033 ¶ 75. Patent Owner's reliance on technical differences between the two systems does not detract from the advantages identified by Petitioner that Alexander provides an improved interface which gives users more flexibility and makes scheduling recordings more efficient than Browne's control screens. Ex. 1022 ¶ 303; Ex. 1033 ¶ 75. Second, Patent Owner does not show that the combination would have rendered Browne inoperable for its intended purpose. Although Browne lists a number of objectives of the invention, none is described as necessary, and routing is not included among them. Ex. 1016, 4:1–5:7. Even if routing was critical to the operation of Browne, the instances of the interactive program guide would have included options for performing such routing (and mixing). Ex. 1033 ¶¶ 56, 78–80. Third, Patent Owner's argument that a skilled artisan would not have been motivated to add an interactive program guide, which requires future program information, is unpersuasive, for the reasons set forth by Petitioner in its Reply. *See* Reply Br. 26–28. Fourth, Patent Owner's argument against Petitioner's alternative reason for combining the references is unpersuasive. We do not rely on that reason in finding that an ordinarily skilled artisan would have been motivated to

combine the teachings of Browne and Knudson as claimed. *See supra* Section II.G.2.a.

*iii. Conclusion regarding claim 1*

Having considered the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Browne and Knudson.

*c. Independent claim 12*

Independent claim 12 is similar to claim 1 but is directed to a system, rather than a method. Petitioner asserts that the combination of Browne and Knudson teaches the system components recited in claim 12. Pet. 74–75. Petitioner relies on its analysis of claim 1 for showing how the combination of Browne and Knudson teaches the elements of claim 12 that are nearly identical to the corresponding elements in claim 1. *Id.*

Patent Owner raises the same arguments for claim 12 that it raises for claim 1. *See* PO Resp. 37–44, 47–66.

Having reviewed the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that claim 12 is unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson.

The combination of Browne and Knudson teaches “[a] system for displaying interactive electronic program guides,” the system including “a plurality of user television equipment devices that are located in a household and from which first and second interactive electronic program guides are accessible,” as recited in claim 12. The references teach a system that includes a recorder player (as taught by Browne and as modified to

incorporate the teachings of in Knudson of user television equipment for use with an interactive program guide) and televisions as taught in Browne and Knudson. Ex. 1016, Fig. 1, 7:29–8:29; Ex. 1024, Figs. 2, 3; Ex. 1022 ¶¶ 429–436. As explained above in connection with claim 1, Browne discloses a multi-source recorder player with multiple outputs that can output to various recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]f a user wishes to view programs on several monitors simultaneously, the controller 105 can either operate multiple virtual control screens, one or more for each output monitor, or for each program window.” *Id.* at 15:29–33. Browne also discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Knudson discloses an interactive electronic program guide implemented on user television equipment for display on a television. Ex. 1024, Figs. 1, 2, 4, 7, 11, ¶¶ 11, 12, 42, 43, 50–52, 58, 84. Knudson discloses that the interactive program guide displays program listings in a grid format (as illustrated in Figure 1) and allows a user to highlight a cell in the grid corresponding to a program. *Id.* at Fig. 4, ¶¶ 50–52. Knudson also discloses selecting one of the programs in the program guide to record and displaying a program record screen like the one shown in Figure 11 to configure settings of the recording. *Id.* at Figs. 6, 11, ¶ 84. Knudson similarly discloses selecting one of the programs in the program guide to be reminded of and displaying a

program reminder screen like the one shown in Figure 7 to configure the settings of the reminder. *Id.* at Figs. 6, 7, ¶¶ 56–58.

A person of ordinary skill in the art would have modified the teachings of Browne to have user television equipment for using an interactive program guide, as taught by Knudson, to set a recording of one program with an instance of an interactive program guide on one television and a reminder of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 380–396, 402–404. The combination thus teaches a plurality of user television equipment devices that are located in a household and from which first and second instances of an interactive electronic program guide are accessible. Ex. 1022 ¶¶ 399–404, 429–432; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1024, Figs. 4, 6, 7, 11, ¶¶ 50–52, 56–58, 84.

The combination of Browne and Knudson also teaches that the system comprises “a memory accessible to the first and second interactive electronic program guides for storing the received first and second events,” as recited in claim 12. Browne discloses that the controller of the recorder player retains in RAM, “for future control of the multi-source record player 100,” the data entered on the calendar screens of Figures 4A–4C when scheduling a program recording. Ex. 1016, Figs. 4A–4C, 24:28–31. Browne also discloses that a user selects additional recording parameters (e.g., channel, input source, program title, and recording frequency) from additional control screens illustrated in Figures 5A–5D. *Id.* at 25:1–30. A person of ordinary skill in the art would have understood that, in order to carry out the scheduled recording, Browne’s recorder player would have had to store in memory the additional recording parameters selected at Figures 5A–5D. Ex.

1022 ¶ 418; Ex. 1016, 24:28–31. Browne also discloses that storage 104 (illustrated in Figure 1) is accessible to Browne’s control screens. Ex. 1016, 26:19–24. The combination of Browne and Knudson teaches that the storage area would have been accessible to both instances of the interactive program guide. Ex. 1022 ¶¶ 417–421, 436.

In addition, for the reasons explained above in connection with claim 1, which recites steps identical to the functions recited in claim 12, the combination of Browne and Knudson teaches that the plurality of user television equipment devices comprises a processor configured to perform the functions recited in claim 12. *See supra* Section II.G.2.b.1; Ex. 1022 ¶¶ 430–436.

Moreover, for the reasons explained above, Petitioner provides persuasive evidence for why a skilled artisan would have combined the teachings of Brown and Knudson in the manner claimed. *See supra* Section II.G.2.a. In addition, for the reasons explained above in connection with claim 1, Patent Owner’s arguments are not persuasive. *See supra* Section II.G.2.b.ii.

*d. Independent claim 23*

Independent claim 23 is very similar to claim 1 but is directed to a non-transitory machine-readable media, rather than a method, for displaying first and second interactive electronic program guides. Petitioner asserts that the combination of Browne and Knudson teaches the machine-readable media recited in claim 23. Pet. 75–77. Petitioner relies on its analysis of claim 1 for showing how the combination of Browne and Knudson teaches the elements of claim 23 that are nearly identical to the corresponding elements in claim 1. *Id.*

Patent Owner raises the same arguments for claim 23 that it raises for claim 1. *See* PO Resp. 37–44, 47–66.

Having reviewed the evidence of record and the arguments of the parties, Petitioner has shown by a preponderance of the evidence that claim 23 is unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson.

The combination of Browne and Knudson teaches “[a] non-transitory machine-readable media for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a household,” as recited in claim 23. Browne discloses that “[c]ontroller 105 is a microprocessor which preferably runs a user control program and allows a user to access and control the multi-source recorder player 100.” Ex. 1016, 15:18–20. Browne thus discloses a non-transitory readable media for storing the control program for execution by the microprocessor. Ex. 1022 ¶ 438. Knudson teaches that processing circuitry displays various program guide screens on a television. Ex. 1024 ¶¶ 44 (“When set-top box 28 receives commands from remote control 40 that inform set-top box 28 that the guide button has been pressed, the interactive television program guide is invoked and processing circuitry within set-top box 28 displays various program guide display screens on television 36.”).

The combination of Browne and Knudson teaches that the non-transitory readable media would have displayed the first and second instances of the interactive program guide. Ex. 1022 ¶¶ 437–438. As explained above in connection with claim 1, Browne discloses a multi-source recorder player with multiple outputs that can output to various

recording devices, such as televisions, connected to the player. Ex. 1016, Fig. 1, 8:21–26. Browne also discloses control screens, “which may be placed on any screen to control . . . any one or more playback or recording processes.” *Id.* at 15:27–29. Browne further discloses that “[i]n a multi-user application, multiple controllers 105 preferably respond and interact with several users simultaneously via multiple control screens.” *Id.* at 19:25–28. Knudson discloses an interactive electronic program guide implemented on user television equipment for display on a television. Ex. 1024, Figs. 1, 2, 4, 7, 11, ¶¶ 11, 12, 42, 43, 50–52, 58, 84. Knudson discloses that the interactive program guide displays program listings in a grid format (as illustrated in Figure 1) and allows a user to highlight a cell in the grid corresponding to a program. *Id.* at Fig. 4, ¶¶ 50–52. Knudson also discloses selecting one of the programs in the program guide to record or set a reminder for and displaying a program record screen like the one shown in Figure 11 or a program reminder screen like the one shown in Figure 7 to configure settings of the recording/reminder. *Id.* at Figs. 6, 7, 11, ¶¶ 56–58, 84.

A person of ordinary skill in the art would have modified the teachings of Browne to have non-transitory machine-readable media for using an interactive program guide, as taught by Knudson, to set a recording of one program with an instance of an interactive program guide on one television and a reminder of another program with a second instance of an interactive program guide on another television. Ex. 1022 ¶¶ 380–396, 437–438. The combination thus teaches a non-transitory machine-readable media for displaying first and second interactive electronic program guides that are accessible from a plurality of user television equipment devices located in a



household. Ex. 1022 ¶¶ 399–404, 429–432; Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28, 26:18–28:29; Ex. 1024, Figs. 4, 6, 7, 11, ¶¶ 50–52, 56–58, 84.

In addition, for the reasons explained above in connection with claim 1, which recites steps identical to the functions recited in claim 23, the combination of Browne and Knudson teaches that the machine-readable media comprises machine-readable instructions encoded thereon for performing the functions recited in claim 23. *See supra* Section II.G.2.b.1; Ex. 1022 ¶¶ 437–442.

Moreover, for the reasons explained above, Petitioner provides persuasive evidence for why a skilled artisan would have combined the teachings of Brown and Knudson in the manner claimed. *See supra* Section II.G.2.a. In addition, for the reasons explained above in connection with claim 1, Patent Owner’s arguments are not persuasive. *See supra* Section II.G.2.b.ii.

*e. Dependent claims 2, 13, and 24*

Claim 2 depends from claim 1 and adds “further comprising allowing a user to select a program for recording from a given interactive electronic program guide in the household.” Claims 13 and 24 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 13, and 24 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet.

69–78. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Knudson. *See supra* Sections II.G.2.b., II.G.2.c, II.G.2.d. In addition, Browne discloses that users may select television programs to record from control screens presented on multiple television screens connected to the recorder player. Ex. 1016, Figs. 1, 4A–4C, 5A–5E, 8:21–26, 15:27–29, 19:16–28, 24:5–26:17. Knudson discloses that a user may select a television program to record from an interactive program guide presented on a television. Ex. 1024, Figs. 4, 6, 11, ¶¶ 50–52, 84. Based on the combined teachings of Browne and Knudson, one of ordinary skill in the art would have modified Browne to provide multiple instances of an interactive program guide like the one disclosed in Knudson to allow for user selection of a television program to record. Ex. 1022 ¶¶ 443–445. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Knudson in the manner claimed. *See supra* Section II.G.2.a.

*f. Dependent claims 3, 14, and 25*

Claim 3 depends from claim 2 and adds “further comprising transmitting a control signal from the user television equipment device from which the given interactive electronic program guide is accessible to a recording device to instruct the recording device to record the selected program.” Claims 14 and 25 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 3, 14, and 25 are unpatentable

under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–79. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Knudson. *See supra* Section II.G.2.e. In addition, Brown discloses that recorder player 100 can be connected to external VCR 322. Ex. 1016, Fig. 3 (element 322), 21:31–22:5. Browne also discloses that output signals 112a–112h “may include control signals for recording and viewing control of external devices,” such as video recorders. *Id.* at Fig. 1, 8:27–29. Browne also explains that “[t]he user can thus send control signals for devices along with the programs to the receiving devices,” which “allows controller 104 to control the connected receiving device.” *Id.* at 22:6–10. Browne thus teaches receiving and then transmitting control information to an external VCR for a remote video recording. Ex. 1022 ¶ 347.

Knudson discloses a “program guide display screen” (such as program listings grid 50 shown in Figure 4) which a user can employ to select a program for recording. Ex. 1024, Figs. 4, 6, ¶ 54. Knudson thus teaches receiving control information via an interactive program guide operating on a user television equipment device. Ex. 1022 ¶ 447.

It would have been obvious to a person of ordinary skill in the art to modify the Browne-Knudson combination discussed above in connection with claims 1 and 2 to incorporate the recording feature taught by Knudson to improve user functionality and to provide an efficient means to provide recording functionality through the interactive guide. Ex. 1022 ¶ 447; *see supra* Section II.G.2.a. The combination of Browne and Knudson thus teaches transmitting a control signal from television from which the given interactive electronic program guide is accessible to a VCR to instruct the

VCR to record the selected program. *Id.* The combination also teaches a processor with an interactive program guide configured to facilitate such transmitting and machine-readable instructions for performing such transmitting. *Id.*

*g. Dependent claims 4, 15, and 26*

Claim 4 depends from claim 2 and adds “further comprising alerting the user when the selected program for recording has already been selected to be recorded with a different interactive electronic program guide that is in the household.” Claims 15 and 26 depend from claims 13 and 24, respectively, and recite a similar limitation.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 4, 15, and 26 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–81. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Knudson. *See supra* Section II.G.2.e. In addition, Knudson teaches displaying a list of recordings, including a conflicting message if two recordings are in conflict. Ex. 1024, Fig. 14, ¶¶ 19, 20, 98–103. Specifically, Knudson discloses that “the program guide allows the user to resolve conflicts as soon as conflicts are detected.” *Id.* ¶ 98. Figure 14, below, illustrates an example. *Id.*

190

| <u>PROGRAM</u> | <u>EPISODES</u>  | <u>SUBMITTED</u>         |          |
|----------------|--|--------------------------|----------|
| X              | MAY 3, 1997<br>MONDAY<br>CH.4, 8:00PM                    | MAY 1, 1997<br>AT 1:30PM | CONFLICT |
| Y              | <u>SERIES:</u><br>MONDAYS<br>CH.7, 8:00PM<br>MAY 3, 1997 | MAY 2, 1997<br>AT 5:00PM | CONFLICT |
| Z              | MAY 9, 1997<br>CH.11, 9:00PM                             | ⋮                        |          |
| Y              | <u>SERIES:</u><br>MAY 10, 1997<br>MAY 17, 1997           |                          |          |

RESOLVE CONFLICTS

FIG. 14

As illustrated in Figure 14 above, current recordings screen 190 lists the user's scheduled recordings for programs x, y, and z. *Id.* Also as illustrated above, programs x and z are single broadcasts while program y is a program series. *Id.* According to Knudson, and as shown in "EPISODES" column 191, "an episode of program Y is scheduled to air on the same day and at the same time (i.e., May 3, 1997 at 8:00 PM) as program X." *Id.* Knudson discloses that "current recordings screen 190 may display a conflicting recordings message such as conflicting recordings message 194 (i.e., "CONFLICT") of [Figure] 14." *Id.* Knudson adds that "[p]rogram conflicts may also be displayed using other suitable techniques, such as displaying the conflicting programs with a unique color or icon, etc." *Id.* Knudson thus teaches alerting the user of a conflict between a requested

recording and an existing recording. The above figure also lists a particular program twice—program Y. It is listed for the episode airing on Monday, May 7, 2007 and for the episodes airing on subsequent Mondays. *Id.* at Fig. 14.

Based on these teachings, a person of ordinary skill in the art would have further modified the Browne-Knudson combination such that the system would have alerted the user of a duplicate recording—i.e., when the selected program for recording has already been selected to be recorded—including when the recording has already been selected to be recorded by a different instance of an interactive electronic program guide that is in the household. Ex. 1022 ¶ 452. An ordinarily skilled artisan would have been so motivated to improve the user experience by alerting the user of potential duplicate recordings to improve control over program recording. Ex. 1022 ¶ 452.

Patent Owner argues that, in Knudson, the conflict recording message shows “a conflict between two different programs (programs X and Y) that are scheduled to be recorded at the same time,” and is not alerting the user that the selected program for recording has already been selected for recording. PO Resp. 46. Patent Owner’s argument is not persuasive because Petitioner does not rely on Knudson for expressly disclosing the claim limitation added in claims 4, 15, and 26. Rather, Petitioner shows, with support from its declarant, that alerting a user to a conflict of duplicate recordings would have been obvious in view of the teachings in Knudson of alerting the user to a conflict for resources because two different programs are set to be broadcast at the same time. Knudson teaches displaying “program conflicts” to users, such as via a message on the screen or

displaying the conflicting programs with a unique color or icon. It would have been obvious to include within the displayed “program conflicts” programs that are duplicate recordings of each other. Ex. 1022 ¶ 452.

*h. Dependent claims 5, 16, and 27*

Claim 5 depends from claim 2 and adds “further comprising alerting the user when the selected program for recording conflicts with another program previously scheduled to be recorded from any of the first and second interactive electronic program guides that are in the household.” Claims 16 and 27 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 5, 16, and 27 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–78, 81–83; Ex. 1022 ¶¶ 455–457. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Knudson. *See supra* Section II.G.2.e. In addition, Knudson discloses that “[i]f the user sets a reminder that conflicts with an existing reminder, the system may inform the user of the conflict.” Ex. 1024 ¶ 20. Specifically, as explained above in connection with claim 4, Knudson teaches displaying a list of recordings, including a conflicting message if two recordings are in conflict. Ex. 1024, Fig. 14, ¶¶ 19, 20, 98–103. Figure 14, below, illustrates an example. *Id.* ¶ 98.

190

| CURRENT RECORDINGS |   |                          |          |
|--------------------|---|--------------------------|----------|
| PROGRAM            | EPISODES  | SUBMITTED                |          |
| X                  | MAY 3, 1997<br>MONDAY<br>CH.4, 8:00PM             | MAY 1, 1997<br>AT 1:30PM | CONFLICT |
| Y                  | SERIES:<br>MONDAYS<br>CH.7, 8:00PM<br>MAY 3, 1997 | MAY 2, 1997<br>AT 5:00PM | CONFLICT |
| Z                  | MAY 9, 1997<br>CH.11, 9:00PM                      | ⋮                        |          |
| Y                  | SERIES:<br>MAY 10, 1997<br>MAY 17, 1997           |                          |          |

RESOLVE CONFLICTS

FIG. 14

As illustrated in Figure 14 above, current recordings screen 190 lists the user's scheduled recordings for programs x, y, and z. *Id.* Also as illustrated above, programs x and z are single broadcasts while program y is a program series. *Id.* According to Knudson, and as shown in "EPISODES" column 191, "an episode of program Y is scheduled to air on the same day and at the same time (i.e., May 3, 1997 at 8:00 PM) as program X." *Id.* Knudson disclose that "current recordings screen 190 may display a conflicting recordings message such as conflicting recordings message 194 (i.e., "CONFLICT") of [Figure] 14." *Id.* Knudson adds that "[p]rogram conflicts may also be displayed using other suitable techniques, such as displaying the conflicting programs with a unique color or icon, etc." *Id.* Knudson thus teaches alerting the user when the selected program for



recording conflicts with another program previously scheduled to be recorded from the interactive electronic program guide. The combination of Browne and Knudson teaches providing the alerting functionality when a selected program for recording conflicts with another program previously scheduled to be recorded from any of the first and second interactive electronic program guides that are in the household. Ex. 1022 ¶¶ 455–457; *see supra* Section II.G.2.e. A person of ordinary skill in the art would have modified the Browne-Knudson combination having multiple instances of an interactive program guide (as described above in connection with claim 2) to improve the user experience by alerting the user of potential conflicts, as taught by Knudson. Ex. 1022 ¶ 455.

*i. Dependent claims 6, 17, and 28*

Claim 6 depends from claim 2 and adds “further comprising allowing the user to cancel the recording of the selected program from any of the first and second interactive electronic program guides that are in the household.” Claims 17 and 28 depend from claims 13 and 24, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 6, 17, and 28 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–78, 83–84; Ex. 1022 ¶¶ 458–460. As explained above, the subject matter of claims 2, 13, and 24 would have been obvious over Browne and Knudson. *See supra* Section II.G.2.e. In addition, Knudson discloses that “the user may update or delete any currently scheduled recording from any program

guide grid or other guide listing screen or from current recordings listing 170.” Ex. 1024 ¶¶ 92; *see also id.* ¶¶ 94 (describing cancelling recordings from program record screen 140 of Figure 11), 95 (describing cancelling recordings from current recordings list 170 of Figure 12). Based on the combined teachings of Browne and Knudson, one of ordinary skill in the art would have modified Browne to provide multiple interactive program guides like the one disclosed in Knudson to allow for user cancellation of a scheduled recording. Ex. 1022 ¶¶ 380–396, 459. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Knudson in the manner claimed. *See supra* Section II.G.2.a.

*j. Dependent claims 7, 18, and 29*

Claim 7 depends from claim 1 and adds “further comprising allowing the user to obtain additional information for any item on the list of scheduled events.” Claims 18 and 29 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 7, 18, and 29 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–78, 84–86; Ex. 1022 ¶¶ 461–464. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Knudson. *See supra* Sections II.G.2.b., II.G.2.c, II.G.2.d. In addition, Knudson discloses an interactive program guide with a current reminders screen (shown in Figure 10), which displays to a user information, such as program

name, program episode, reminder type, and submission date/time, for each reminder in the list of currently scheduled reminders. Ex. 1024, Fig. 10, ¶ 70. Knudson also discloses a current recordings screen (shown in Figure 12), which displays to a user information, such as program name, program episode, and submission date/time, for each recording in the list of currently scheduled recordings. *Id.* at Fig. 12, ¶ 88. Knudson further discloses that “currently set reminders and currently scheduled recordings may be listed and displayed on the same program guide screen.” *Id.* ¶ 107. Knudson thus teaches allowing the user to obtain additional information for any item on the list of scheduled events. Ex. 1024, Figs. 10, 12, ¶¶ 70, 88, 107.

The combination of Browne and Knudson thus teaches the step of allowing the user to obtain additional information for any item on the list of scheduled events, and a processor with an interactive program guide configured to facilitate such a step and machine-readable instructions for performing the step. Ex. 1022 ¶¶ 461–464. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Knudson in the manner claimed. *See supra* Section II.G.2.a.

*k. Dependent claims 8, 19, and 30*

Claim 8 depends from claim 1 and adds “wherein the list of scheduled events includes programs scheduled to be recorded.” Claims 19 and 30 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a

preponderance of the evidence that claims 8, 19, and 30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–78, 86–87; Ex. 1022 ¶¶ 465–466. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Knudson. *See supra* Sections II.G.2.b., II.G.2.c, II.G.2.d. In addition, as discussed above in connection with claim 1, Browne discloses that stored program list 600 (illustrated in Figure 6) includes programs scheduled to be recorded (Ex. 1016, Fig. 6, 24:5–26:16) and Knudson discloses a list of scheduled events that includes programs scheduled to be recorded (Ex. 1024, Fig. 12, ¶¶ 88, 107 (“[C]urrently set reminders and currently scheduled recordings may be listed and displayed on the same program guide screen.”)). The combination of Browne and Knudson thus teaches that the list of scheduled events includes programs scheduled to be recorded. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Knudson in the manner claimed. *See supra* Section II.G.2.a.

*l. Dependent claims 10, 21, and 32*

Claim 10 depends from claim 1 and adds “wherein the first and second interactive electronic program guides are respectively implemented on at least one of the plurality of user television equipment devices in the household.” Claims 21 and 32 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 10, 21, and 32 are unpatentable

under 35 U.S.C. § 103(a) as obvious over Browne and Knudson. *See* Pet. 69–78, 87–88; Ex. 1022 ¶¶ 467–469. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Knudson. *See supra* Sections II.G.2.b., II.G.2.c, II.G.2.d. In addition, as explained above, Browne discloses that the recorder player can be connected to multiple televisions and that multiple users can control the playback and recording processes of the recorder player using control screens displayed on different televisions in a household. Ex. 1016, Fig. 1, 8:21–26, 15:27–33, 19:16–28. Also, Knudson discloses an interactive electronic program guide implemented on user television equipment for display on a television. Ex. 1024, Figs. 1, 2, 4, 7, 11, ¶¶ 11, 12, 42, 43, 50–52, 58, 84. Based on the combined teachings of Browne and Knudson, one of ordinary skill in the art would have connected the recorder player 100 of Browne to the multiple televisions, each of which would have had an instance of an interactive program guide. Ex. 1022 ¶¶ 380–396, 467–468. Moreover, for the reasons explained above, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Knudson in the manner claimed. *See supra* Section II.G.2.a.

*H. Asserted Obviousness over Browne, Knudson, and LaJoie*

Petitioner contends that claims 9, 11, 20, 22, 31, and 33 of the '871 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Knudson, and LaJoie. Pet. 8, 88–92. Relying in part on the testimony of Dr. Rhyne, Petitioner explains how the references teach or suggest the claim limitations and provides reasoning for combining the teachings of the references. *Id.* at 88–92.

We have reviewed Petitioner's and Patent Owner's arguments and evidence of record. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that the subject matter of claims 9, 11, 20, 22, 31, and 33 of the '871 patent would have been obvious over Browne, Knudson, and LaJoie.

*1. Claims 9, 20, and 31*

Claim 9 depends from claim 1 and adds "wherein the list of scheduled events includes series recordings, future pay-per-view purchases, and auto-tunes." Claims 20 and 31 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner's and Patent Owner's evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 9, 20, and 31 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Knudson, and LaJoie. *See* Pet. 90–92; Ex. 1022 ¶¶ 476–479. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Knudson. *See supra* Sections II.G.2.b., II.G.2.c, II.G.2.d. Moreover, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Alexander in the manner recited in claims 1, 12, and 23. *See supra* Section II.G.2.a.

In addition, Browne discloses that stored program list 600 (illustrated in Figure 6) includes programs scheduled to be recorded. Ex. 1016, Fig. 6, 24:5–26:16. Browne also discloses that a user can select a desired recording frequency (e.g., daily, bi-weekly, weekly, monthly) when scheduling a program to record such that the program records each time the program airs.

*Id.* at Fig. 5D, 25:19–28. Browne thus teaches that the stored program list includes series recordings. Knudson similarly discloses scheduling series recordings and displaying an interactive program guide screen with a listing of both currently scheduled recordings and reminders. Ex. 1024, Fig. 12, ¶¶ 84, 88, 107.

Browne does not disclose that stored program list 660, and Knudson does not disclose that the listing of currently scheduled recordings and reminders, includes pay-per-view purchases. A person of ordinary skill in the art would have been motivated to modify the Browne-Knudson combination to include in the listing of scheduled events pay-per-view purchases, as taught by LaJoie, to further improve flexibility and control over program recording and viewer interaction capabilities to include scheduling recording of pay-per-view programming. Ex. 1022 ¶¶ 471–475.

LaJoie discloses an all timers list (shown in Figure 14) that includes pay-per-view (PPV) purchases and reminder timers. Ex. 1020, Fig. 14, 22:61–66, 31:40–47. With respect to pay-per-view purchases, LaJoie discloses that a user may purchase an upcoming pay-per-view program and “the set-top terminal will automatically tune” to the pay-per-view program when it begins. *Id.* at 31:15–47. With respect to reminder timers, LaJoie discloses that, “if the current time is within a threshold amount of time before the starting time of a selected program, set-top terminal 6 will tune to the channel on which the selected program is to be aired.” *Id.* at 30:24–28. LaJoie thus teaches that the all timer list includes future pay-per-view purchases and auto-tunes.

The combination of Browne, Knudson, and LaJoie thus teaches that the list of scheduled events includes series recordings, future pay-per-view purchases, and auto-tunes. Ex. 1022 ¶¶ 476–478.

2. *Claims 11, 22, and 33*

Claim 11 depends from claim 1 and adds “wherein one of the received first and second events is a purchased program.” Claims 22 and 33 depend from claims 12 and 23, respectively, and recite a similar limitation. Patent Owner does not raise any arguments specific to these dependent claims. *See generally* PO Resp.

Having reviewed the Petitioner’s and Patent Owner’s evidence and arguments, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 11, 22, and 33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne, Knudson, and LaJoie. *See* Pet. 88–89, 92; Ex. 1022 ¶¶ 480–483. As explained above, the subject matter of claims 1, 12, and 23 would have been obvious over Browne and Knudson. *See supra* Sections II.G.2.b., II.G.2.c, II.G.2.d. Moreover, one of ordinary skill in the art would have been motivated to combine the teachings of Browne and Knudson in the manner recited in claims 1, 12, and 23. *See supra* Section II.G.2.a.

Neither Browne nor Knudson discloses that one of the scheduled events is a purchased program. As explained above, a person of ordinary skill in the art would have been motivated to modify the Browne-Knudson combination to include scheduling a purchased program, as taught by LaJoie, to further improve flexibility and control over program recording and viewer interaction capabilities to include scheduling recording of pay-per-view programming. Ex. 1022 ¶¶ 471–475.



LaJoie discloses that the all timers list (shown in Figure 14) includes pay-per-view (PPV) purchases, VCR timers, and reminder timers. Ex. 1020, Fig. 14, 22:61–66, 31:40–47. With respect to pay-per-view purchases, LaJoie discloses that a user may purchase an upcoming pay-per-view program and “the set-top terminal will automatically tune” to the pay-per-view program when it begins. *Id.* at 31:15–47. LaJoie also discloses reminder timers, for which, “if the current time is within a threshold amount of time before the starting time of a selected program, set-top terminal 6 will tune to the channel on which the selected program is to be aired.” *Id.* at 30:24–28. LaJoie thus teaches an event of a timer indicating a purchased program. The combination of Browne, Knudson, and LaJoie therefore teaches that one of the two received events is a purchased program. Ex. 1022 ¶¶ 480–483.

### III. PATENT OWNER’S MOTIONS

Patent Owner moves to exclude paragraphs 44–46, 50–53, 56–58, 63, 65, 67, and 69 of the Second Rhyne Declaration (Exhibit 1033) as exceeding the permissible scope of reply evidence. MTE 1–6. Petitioner opposes, arguing that (i) the cited testimony of Dr. Rhyne merely elaborates on Dr. Rhyne’s prior opinions in direct response to issues raised by Patent Owner in the Patent Owner Response and (ii) neither Petitioner nor Dr. Rhyne could have anticipated Patent Owner’s proposed construction of “first and second interactive program guide” and reading of Browne that triggered the additional testimony. MTE Opp. 1–3, 5–14.

Because we do not rely on paragraphs 45, 46, 51–53, 57, 58, 63, 65, 67, and 69 of the Second Rhyne Declaration, we dismiss that aspect of Patent Owner’s motion to exclude as moot. With regard to paragraphs 44,

50, and 56, we agree with Petitioner that Dr. Rhyne’s testimony therein is responsive to arguments raised by Patent Owner in the Patent Owner Response and was not necessary to show unpatentability of the claimed subject matter. *See* MTE Opp. 1–2, 10. Dr. Rhyne is further explaining his testimony regarding reasons to combine and responding to Patent Owner’s rebuttal arguments that the combinations would have reduced Browne’s functionality and rendered Browne inoperable for its intended purpose. *See* PO Resp. 50–55; Ex. 1033 ¶¶ 44 (explaining why, even if routing and mixing were deemed critical, “it still would have been obvious to combine Browne and LaJoie”), 50 (same for Browne and Alexander), 56 (same for Browne and Knudson). Moreover, Petitioner could have—but chose not to—cross-examine Dr. Rhyne on his reply declaration and thereafter file observations or seek authorization to file a surreply. *See* MTE Opp. 8; Tr. 40:10–13. For these reasons, we deny Patent Owner’s motion to exclude paragraphs 44, 50, and 56 of the Second Rhyne Declaration.

Patent Owner also moves to supplement the record with an excerpt from the transcript of a *Markman* hearing held on July 26, 2018, before the International Trade Commission (“ITC”) in Investigation No. 337-TA-1103. MTS 1–5. Petitioner opposes, arguing that the ITC evidence is irrelevant because it relates to different terms in a different patent in a different court applying a different standard and that admission of the evidence would be prejudicial to Petitioner. MTS Opp. 1–5.

Patent Owner’s motion to supplement the record is denied. The *Markman* hearing addressed a patent (U.S. Patent No. 7,827,585) that is unrelated to the challenged patent here. *See* MTS Opp. 2. Moreover, because there is no dispute that each of LaJoie, Alexander, and Knudson

discloses an interactive electronic program guide, we need not construe the term or consider an argument made regarding an alleged similar term appearing in a different, unrelated patent.

#### IV. CONCLUSION

For the above reasons, Petitioner has demonstrated by a preponderance of the evidence that (i) claims 1–3, 5–14, 16–25, and 27–33 of the '871 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Browne and LaJoie; (ii) claims 1–3, 5–8, 10, 12–14, 16–19, 21, 23–25, 27–30, and 32 are unpatentable as obvious over Browne and Alexander; (iii) claims 9, 11, 20, 22, 31, and 33 are unpatentable as obvious over Browne, Alexander, and LaJoie; (iv) claims 1–8, 10, 12–19, 21, 23–30, and 32 are unpatentable as obvious over Browne and Knudson; and (v) claims 9, 11, 20, 22, 31, and 33 are unpatentable as obvious over Browne, Knudson, and LaJoie.

#### V. ORDER

Accordingly, it is

ORDERED that claims 1–33 of U.S. Patent No. 8,566,871 B2 are unpatentable;

ORDERED that Patent Owner's motion to exclude is denied-in-part and dismissed-in-part;

ORDERED that Patent Owner's motion to supplement is denied; 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.

IPR2017-00942  
Patent 8,566,871 B2

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