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571-272-7822

Paper 7
Date: February 24, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA MOBILITY LLC,
Petitioner,

v.

MAXELL, LTD.,
Patent Owner.

IPR2022-01348
Patent 8,170,394 B2

Before LYNNE E. PETTIGREW, TERRENCE W. McMILLIN, and JASON W. MELVIN, *Administrative Patent Judges.*

McMILLIN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Motorola Mobility LLC ("Petitioner")[1] filed a Petition to institute an *inter partes* review of claims 2–9 (the "challenged claims") of U.S. Patent No. 8,170,394 B2 (Ex. 1001, "the '394 patent") pursuant to 35 U.S.C. § 311 *et seq*. Paper 2 ("Petition" or "Pet."). Maxell, Ltd. ("Patent Owner")[2] filed a Preliminary Response. Paper 6 ("Preliminary Response" or "Prelim. Resp.").

We have authority under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition and the Preliminary Response shows that "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a) (2018). After considering the Petition, the Preliminary Response, and the evidence of record, we institute an *inter partes* review as to the challenged claims of the '394 patent on the grounds of unpatentability presented.

B. Related Proceedings

The parties identify the following related proceedings: *In re: Certain Mobile Electronic Devices*, Inv. No. 337-TA-1324 (U.S.I.T.C.) and *Maxell, Ltd. v. Lenovo Group Ltd., et al.*, C.A. No. 6:22-cv-00334-ADA (W.D. Tex.). Pet. 2–3; Paper 3, 1. Petitioner also identifies *In re: Certain Mobile Electronic Devices*, Inv. No. 337-TA-1312 (U.S.I.T.C.) as a related matter. Pet. 2–3. Patent Owner also states that "the '394 Patent was the subject of

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[1] Petitioner identifies Motorola Mobility LLC, Lenovo (United States) Inc., and Lenovo Group Ltd. as the real parties-in-interest. Pet. 2.
[2] Patent Owner identifies Maxell, Ltd. (itself) as the only real party-in-interest. Paper 3, 1.

IPR2019-00089" and that "[t]he '394 Patent was also asserted against Blackberry Corporation and Blackberry Ltd. in *Maxell, Ltd. v. Blackberry Corp., et al.*, No. 1:17-cv-01446 (D. Del.)."[3] Paper 3, 1.

C. The '394 patent

The '394 patent is titled, "Multimedia Player Displaying Operation Panel Depending on Contents." Ex. 1001, code (54). The '394 patent is directed to a "digital content reproducing apparatus . . . with a plurality of user operation interfaces, e.g., a linear content operation panel and an interactive content operation panel." *Id*. at code (57) (Abstract). The apparatus "monitors information on digital contents, and upon occurrence of a change, the plurality of user operation panels are automatically and exclusively displayed in an operation panel display area." *Id*. Figures 2, 3, and 4 of the '394 patent are reproduced below.

[3] In the Petition, Petitioner cites to the Decision to Institute in IPR2019-00089, which is its Exhibit 1020 in this proceeding. *See, e.g.*, Pet. 15 (citing *Blackberry Corp. v. Maxell, Ltd.*, IPR2019-00089, Paper 10 (PTAB Mar. 29, 2019)). The parties refer to IPR2019-00089 as the "Blackberry IPR." In IPR2019-00089, we considered whether to institute *inter partes* review of the same claims of the same patent in view of the same cited art as in this proceeding and determined to institute trial. Ex. 1020, 6, 53. IPR2019-0089 was terminated one month after institution and prior to any decision on unpatentability of any claim of the '394 patent. IPR2019-00089, Paper 15 at 3.

FIG. 2

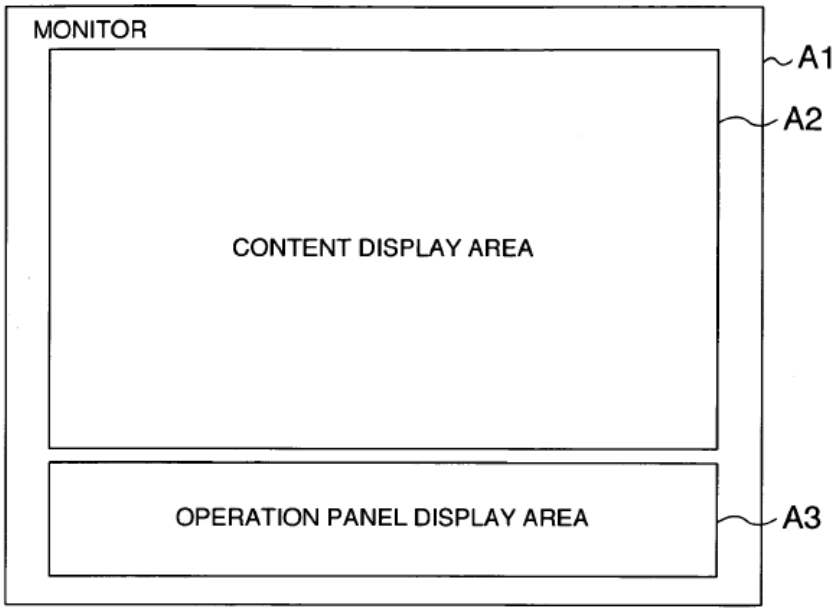

FIG. 3

FIG. 4

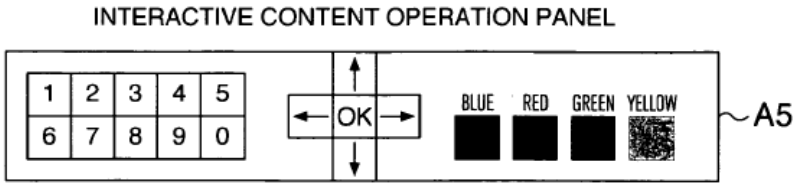

Figure 2 depicts "the layout of a screen of the apparatus;" Figure 3 depicts "a linear content operation panel of the apparatus;" and Figure 4 depicts "an interactive content operation panel of the apparatus." *Id*. at 2:45–50. As shown in Figure 2, "[a] monitor A1 has a content display area A2 and an operation panel display area A3." *Id*. at 3:44–45. "During reproduction of

linear contents such as moving image contents, a linear content operation panel A4 [as shown in Figure 3] is displayed in the operation panel display area A3." *Id*. at 3:45–48. "During reproduction of interactive contents such as data broadcast contents, an interactive content operation panel A5 [as shown in Figure 4] is displayed in the operation panel display area A3." *Id*. at 3:52–54.

D. Challenged Claims

Petitioner challenges claims 2–9 of the '394 patent.[4] Pet. 1. Of the challenged claims, claims 2, 4, and 7 are independent apparatus claims. Ex. 1001, 6:18–43, 6:49–7:6, 7:15–8:14. Claim 2 recites:

> 1. A digital content reproducing apparatus, comprising:
> an input unit which inputs digital content;
> a reproducer which reproduces the inputted digital content;
> an output unit which outputs the reproduced digital content;
> a display which displays the outputted digital content together with an alternative display of either of a linear content operation panel allowing user-instruction regarding linear reproduction functions of the reproduced digital content or an interactive content operation panel allowing user-instruction of interactive functions to an outside of the digital content reproducing apparatus, wherein the linear content operation panel and the interactive content operation panel are distinct panels from each other, which are not generated by a disabling of buttons; and
> a controller which controls the alternative display of either of the linear content operation panel or the interactive content operation panel, wherein only one of the linear content operation panel or the interactive content operation panel is displayed exclusively at any given time, together with the outputted digital content:

[4] The '394 patent has nine claims. Ex. 1001, 5:55–8:23. Petitioner challenges all the claims of the '394 patent except claim 1. *See, e.g.*, Pet. 1.

> wherein the outputted digital content together with either the linear content operation panel or the interactive content operation panel, are displayed concurrently in one screen.

Id. at 6:18–43.

E. The Asserted Grounds

Petitioner challenges claims 2–9 of the '394 patent based on the grounds set forth in the table below.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
2, 4, 5, 7, 8	102(a) or (e)[5]	Phillips[6]
2, 4, 5, 7, 8	103(a)	Phillips, Ackley[7]
2, 4, 5, 7, 8	103(a)	Phillips, Wallis[8]
3, 6, 9	103(a)	Phillips, Uchida[9]
3, 6, 9	103(a)	Phillips, Wallis, Uchida
2, 4, 5, 7, 8	103(a)	Russ,[10] McElhatten[11]
3, 6, 9	103(a)	Russ, McElhatten, Uchida

Pet. 8. Petitioner supports its showing of unpatentability of the challenged claims of the '394 patent with Exhibits 1001–1020 including the Declaration

[5] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. Because the application of the challenged patent was filed before March 16, 2013, we refer to the pre-AIA version of §§ 102, 103. Our opinions on the present record would not change if the pre-AIA version of §§ 102, 103 were not to apply.
[6] U.S. Patent No. 7,293,276 B2, issued Nov. 6, 2007 (Ex. 1005, "Phillips").
[7] U.S. Patent No. 8,112,711 B2, issued Feb. 7, 2012 (Ex. 1007, "Ackley").
[8] U.S. Patent Application. Pub. No. 2005/0188408 A1, published Aug. 25, 2005 (Ex. 1006, "Wallis").
[9] U.S. Patent No. 8,773,360 B2, issued July 8, 2014 (Ex. 1010, "Uchida").
[10] U.S. Patent No. 8,181,205 B2, issued May 15, 2012 (Ex. 1008, "Russ").
[11] U.S. Patent No. 7,073,189 B2, issued July 4, 2006 (Ex. 1009, "McElhatten").

of Benjamin B. Bederson, Ph.D. (Ex. 1002). Patent Owner did not submit any declarations or other exhibits.

II. ANALYSIS

A. Claim Construction

Claim construction in this proceeding is governed by 37 C.F.R. § 42.100(b), which provides:

> In an *inter partes* review proceeding, a claim of a patent, or a claim proposed in a motion to amend under § 42.121, shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

Under the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc), claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *See Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012). There is a "heavy presumption," however, that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002).

Petitioner states that just as in the prior *inter partes* review of the claims of the '394 patent (IPR2019-00089), the terms of the claims "should be given their plain and ordinary meaning in this IPR." Pet. 15 (citing Ex. 1020, 8–12). However, Petitioner asks us to construe the following claim terms: (1) "distinct panels" (in claim 2); (2) "mutually different

[buttons]" (in claim 4); and (3) "buttons . . . mutually differing" (in claim 7) (*id.* at 15–23) as "limited to panels in which ***all*** buttons and functions are mutually different" (*id.* at 15). However, the Petition also states, "Petitioner's proposed constructions do not have any impact on the grounds set forth herein." *Id.* at 16. Patent Owner argues that "[t]hese are improper constructions that violate the principle of claim differentiation by merging claims 2, 4, 5, 7, and 8 into a single narrow claim" (Prelim. Resp. 8–9) and these terms "should simply be given their plain and ordinary meaning to a person of skill in the art" (*id.* at 13). Thus, Patent Owner takes issue with Petitioner's proposed constructions. But, Patent Owner does not establish that any claim construction is necessary to resolve any dispute between the parties in order to determine whether *inter partes* review should be instituted. *See generally id.*

Petitioner also discusses "input unit" (in claims 2–9); and (5) "output unit" (in claims 2–9) in the "Claim Construction" section of the Petition (*see* Pet. 23–24) but states, "Petitioner does not believe that these terms need be construed" (*id.* at 23). Patent Owner "agrees that the terms considered in the Blackberry IPR should be given their plain and ordinary meaning" including the terms "input unit" and "output unit." Prelim. Resp. 8 (citing Ex. 1020, 8–11).

We construe only terms that are in controversy and then only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). We determine that, as

shown below, it is not necessary to explicitly construe any claim terms in order to make this institution decision.[12,13]

B. Legal Standards

In order for a prior art reference to serve as an anticipatory reference, it must disclose every limitation of the claimed invention, either explicitly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). Anticipation "requires that every element and limitation of the claim was previously described in a single prior art reference, either expressly or inherently, so as to place a person of ordinary skill in possession of the invention." *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1082 (Fed. Cir. 2008) (citing *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003); *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1267–69 (Fed. Cir. 1991)). "[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and,

[12] We also wish for the record to be further developed before we engage in claim construction. Claims are construed through the eyes of a skilled artisan. *Phillips*, 415 F.3d at 1313. And, Patent Owner has not presented any testimony in response to that presented by Petitioner from Dr. Bederson in support of the proposed constructions. *See* Pet. 15–24; Prelim. Resp. 8–13.

[13] If either party contends that explicit claim construction is necessary in order to make a final determination whether or not any challenged claim is unpatentable based on the arguments and evidence presented, it should clearly explain why during trial and provide a clear and unambiguous construction with supporting evidence including specifically identifying the challenges, claims, and limitations to which the construction is necessary.

thus, cannot anticipate under 35 U.S.C. § 102." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

A patent claim is unpatentable as obvious if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

"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 Technology, 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")). Petitioners cannot satisfy their burden of proving obviousness by employing "mere conclusory statements." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

C. Level of Ordinary Skill in the Art

With regard to the level of ordinary skill in the art, Petitioner contends that "[a] person of ordinary skill in the field of the '394 Patent would have had a Bachelor's degree in computer science, electrical engineering, or a similar discipline, and one to two years of work experience in user interface

design, or a related area," but "[a]dditional education in the field may serve as a substitute for experience in the field" and "[a] person with less education but more relevant practical experience may also meet this standard." Pet. 13 (citing Ex. 1002 ¶ 72). Patent Owner does not address this issue. *See generally* Prelim. Resp. Our preliminary, non-binding determination[14] is to adopt the level of ordinary skill in the art as proposed by Petitioner in order to determine whether to institute *inter partes* review.

D. Cited References

Summaries of the references relied upon in the Petition as prior art[15] establishing the unpatentability of the challenged claims are provided below.

1. Phillips (Ex. 1005)

Phillips is titled, "Interactive Television Program Guide for Recording Enhanced Video Content." Ex. 1005, code (54). Phillips discloses interactive television applications including "the interactive television program guide application, a home-shopping application, a home banking

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[14] Even where we do not explicitly indicate that our determinations at this stage are preliminary and non-binding, any determination, finding, or conclusion set forth within this document is preliminary and non-binding. We wish to have the record further developed before making any non-preliminary and binding determination, finding, or conclusion other than whether to institute trial.

[15] Patent Owner does not challenge the prior art status of any of the references relied upon in the Petition. *See generally* Prelim. Resp. As all the references relied upon in the Petition appear on their faces to qualify as prior art as asserted in the Petition (*see* Pet. 7–8), we have treated the cited art as prior art at this stage of this proceeding. If Patent Owner wishes to challenge the prior art status of any cited art, it is incumbent on Patent Owner to do so in its Response filed pursuant to 37 C.F.R. § 42.120(a). Failure to include an argument in the Response or to submit evidence with the Response may be deemed to be a forfeiture or waiver of the right to do so.

application, a video-on-demand[16] application, game applications, and other applications." *Id.* at 8:45–48. Figures 14–17 of Phillips are reproduced below.

FIG. 14

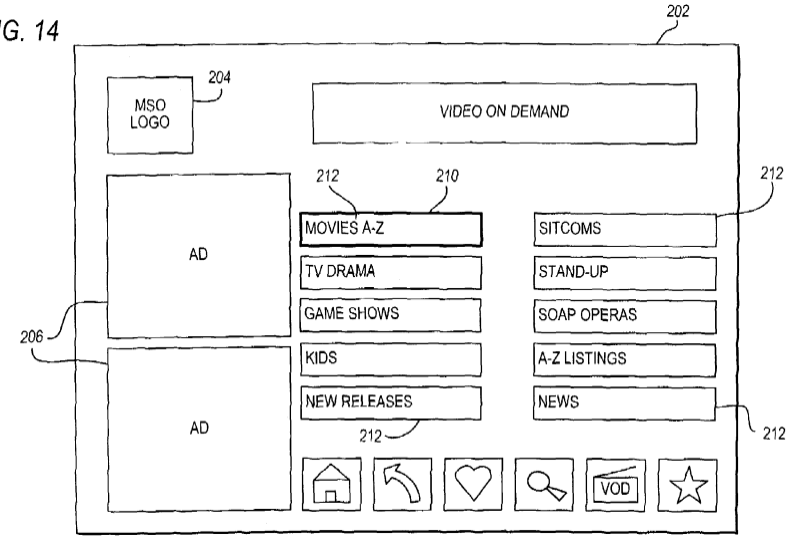
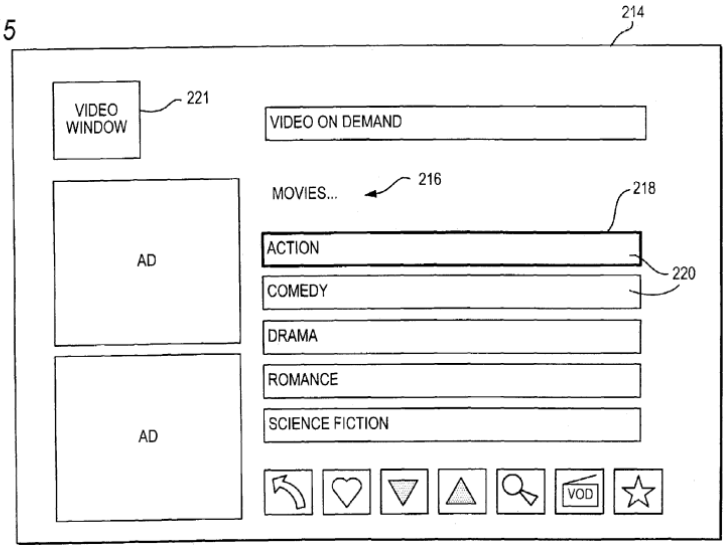


FIG. 15



[16] The parties sometimes refer to "video-on-demand" as "VoD."

FIG. 16

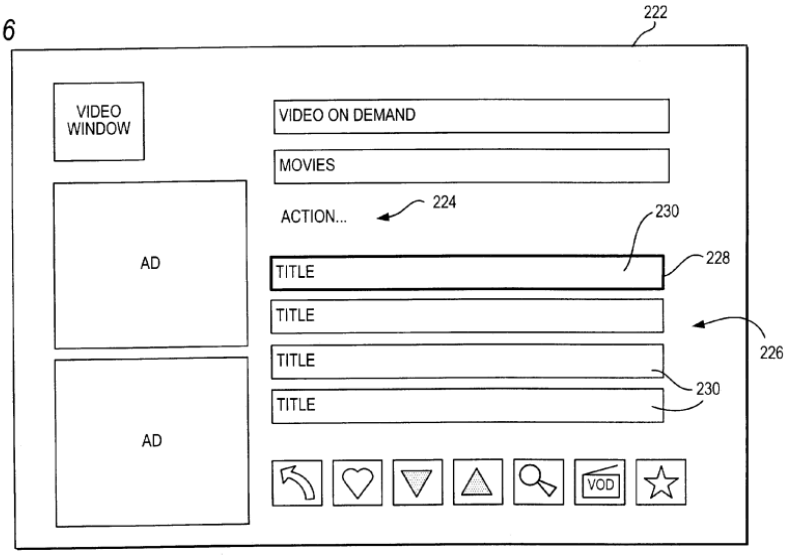


FIG. 17a

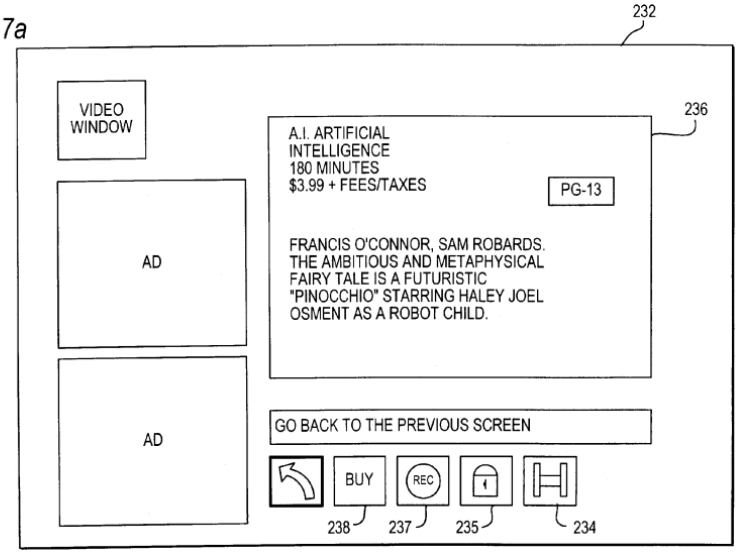
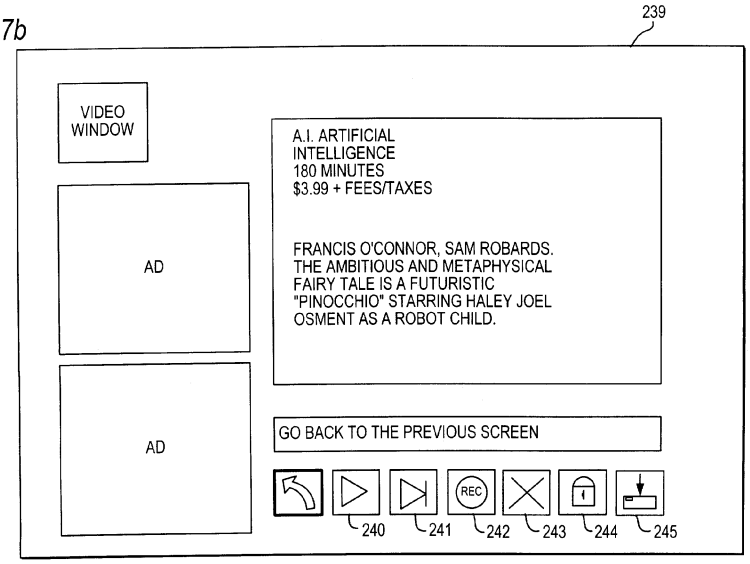


FIG. 17b



Figures 14–17 depict display screens showing interactive video-on-demand menus. *Id*. at 5:29–42. "The ordered video-on-demand content may be displayed for the user on a display screen such as video-on-demand playback screen 246 of FIG. 18." *Id*. at 20:18–20. Figure 18 of Phillips is reproduced below.

FIG. 18

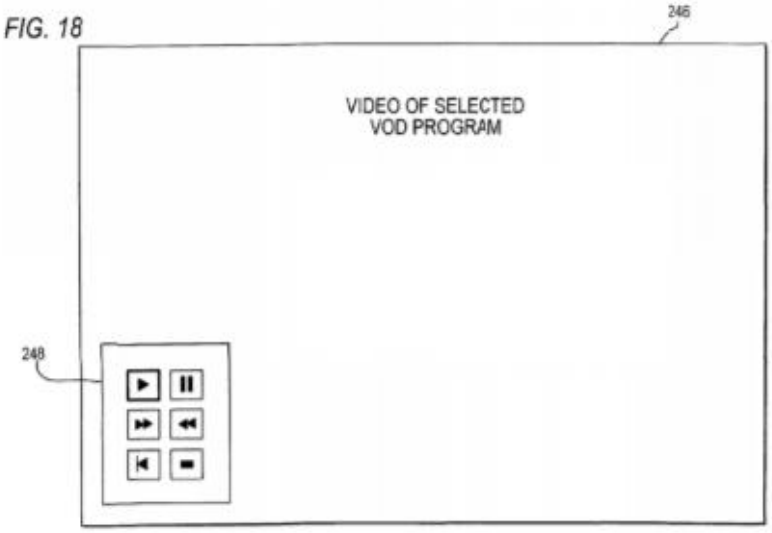


Figure 18 depicts "an illustrative display screen showing how video-on-demand playback controls may be displayed while video-on-demand content

is being displayed for the user." *Id*. at 5:43–45. The description of Figure 18 states:

> As shown in the lower portion of screen 246, interactive options may be displayed in a toolbar 248 or other suitable format. The interactive options (or similar remote control buttons) may allow the user to rewind the video-on-demand content to the beginning, rewind, play, fast-forward, pause, stop delivery of the video-on-demand content, or perform other video playback options.

Id. at 20:20–27.

2. Wallis (Ex. 1006)

Wallis is titled, "Non-Linear Interactive Video Navigation." Ex. 1006, code (54). Wallis teaches "[a] system and method for delivering interactive video and audio content items." *Id*. at code (57) (Abstract). Figure 2 of Wallis is reproduced below.

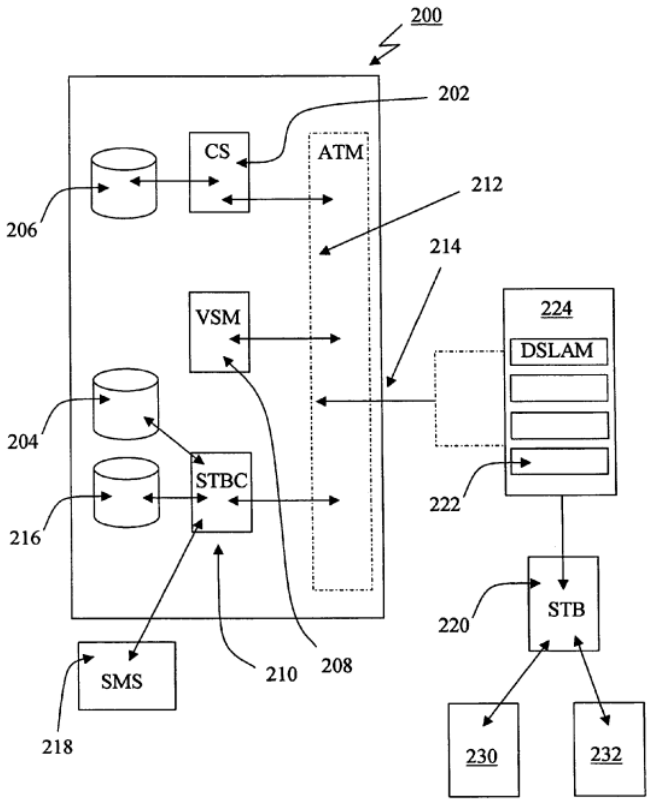


Fig 2

Figure 2 depicts "a schematic diagram of a video content delivery system." *Id.* ¶ 25. "In this figure, the STBs [set top boxes] 220 communicate with a remote video server 200." *Id.* ¶ 35. Figure 4 of Willis is reproduced below.

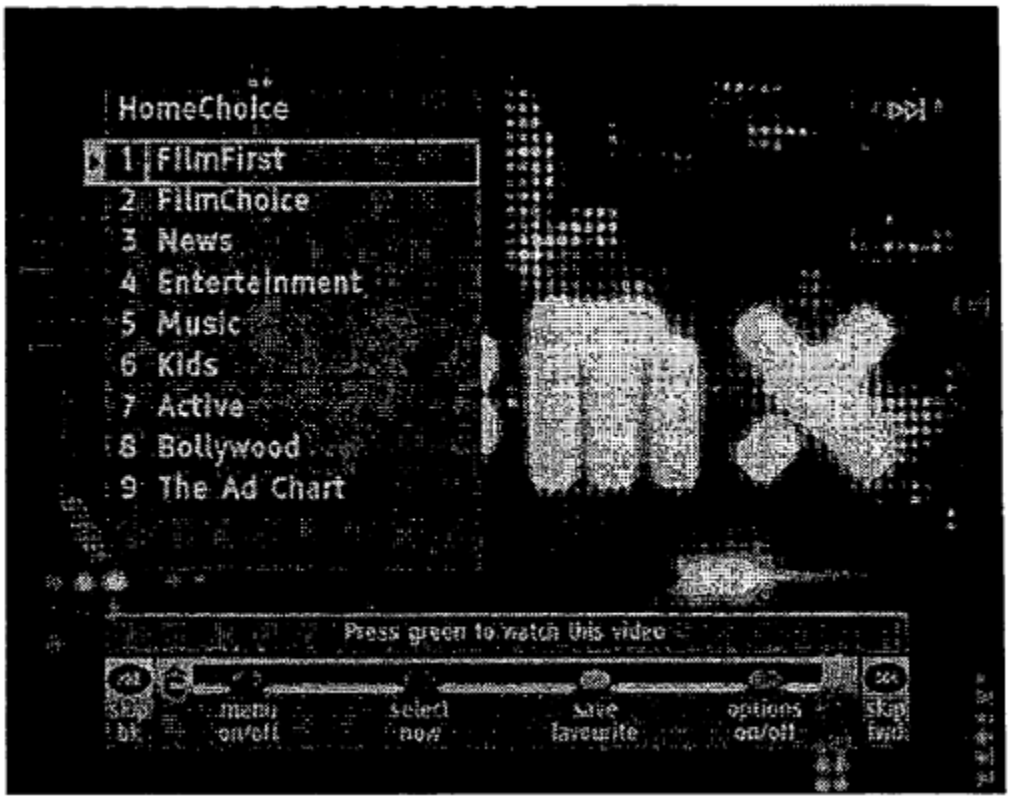


Figure 4 depicts "a snapshot of a TV display." *Id.* ¶ 27. "In FIG. 4, a screen, or graphical user interface (GUI) for interactive promotions is displayed." *Id.* ¶ 86.

3. Ackley (Ex. 1007)

Ackley is titled, "System and Method of Playback and Feature Control for Video Players." Ex. 1007, code (54). "A media player . . . receives streams of video from different media [sources] and displays its content. Simultaneously, and without interrupting the video playback, a user interface is overlaid on the video image." *Id.* at code (57) (Abstract). Figure 1 of Ackley is reproduced below.

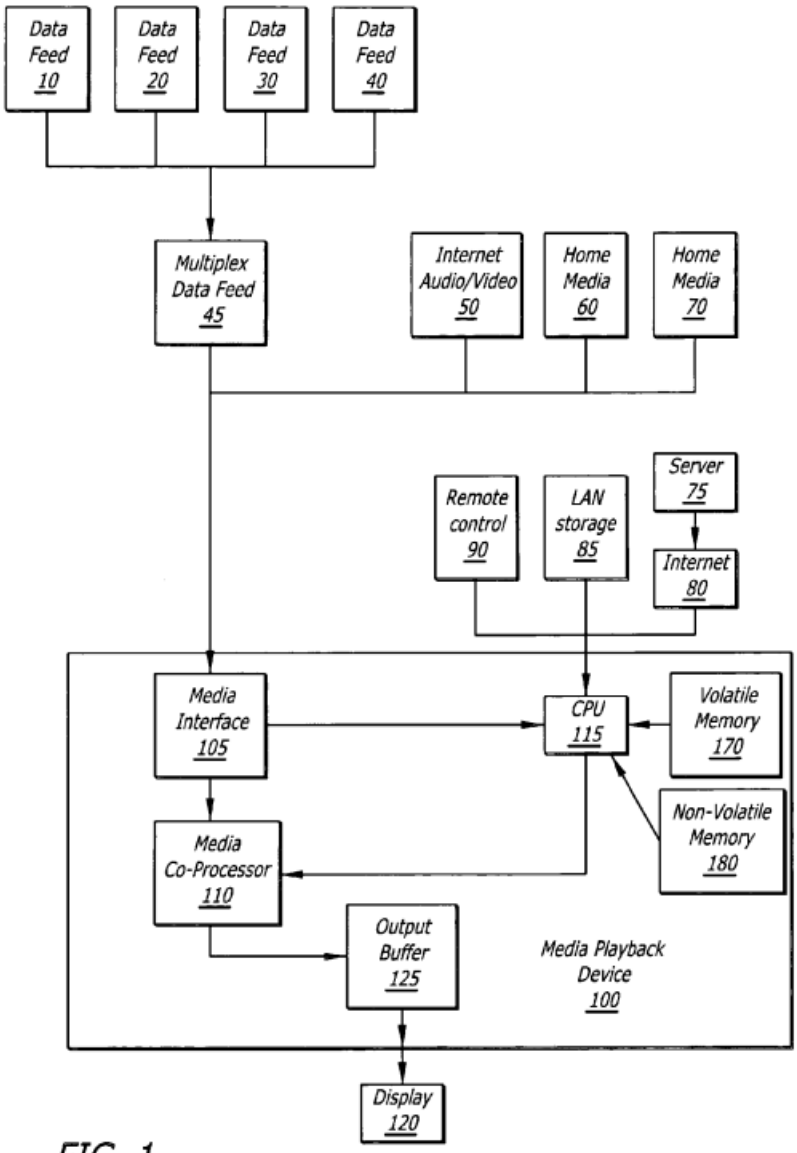


FIG. 1

Figure 1 of Ackley depicts various content sources (data feed 10, data feed 20, data feed 30, data feed 40, multiplex data feed 45, internet audio/video 50, home media 60, home media 70), media playback device 100, and display 120. *Id*. at Fig. 1. "In one embodiment, the media player contains a CPU 115 and embedded software to simultaneously display menu options and stream video to a display." *Id*. at 3:57–60. Figure 2 of Ackley is reproduced below.

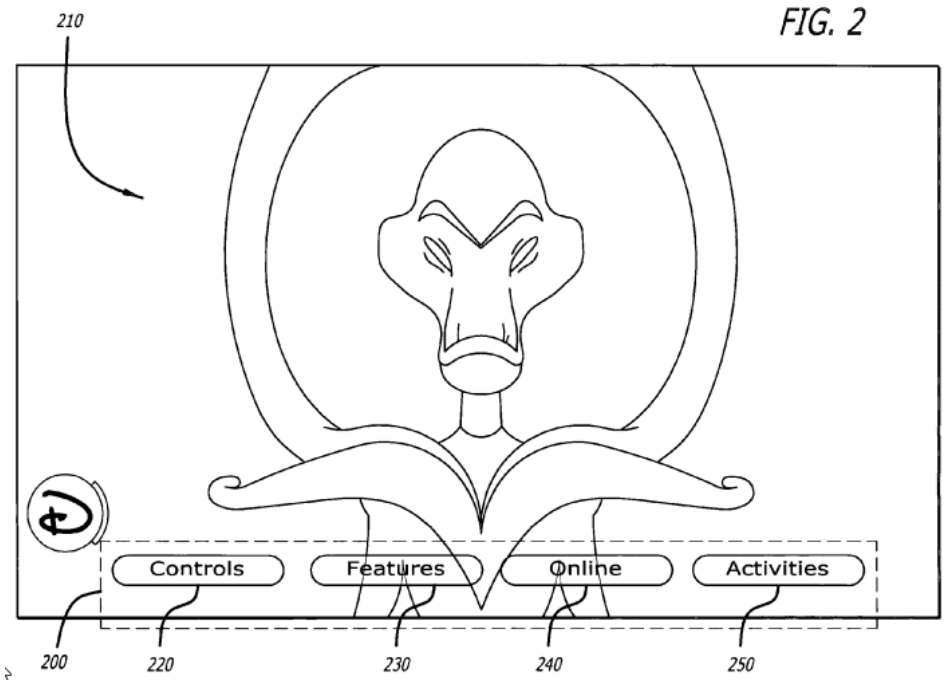


Figure 2 depicts "an exemplary screen shot illustrating the ability to operate an on-screen main menu and simultaneously view a video stream." *Id.* at 2:39–41. Figure 3 of Ackley is reproduced below.

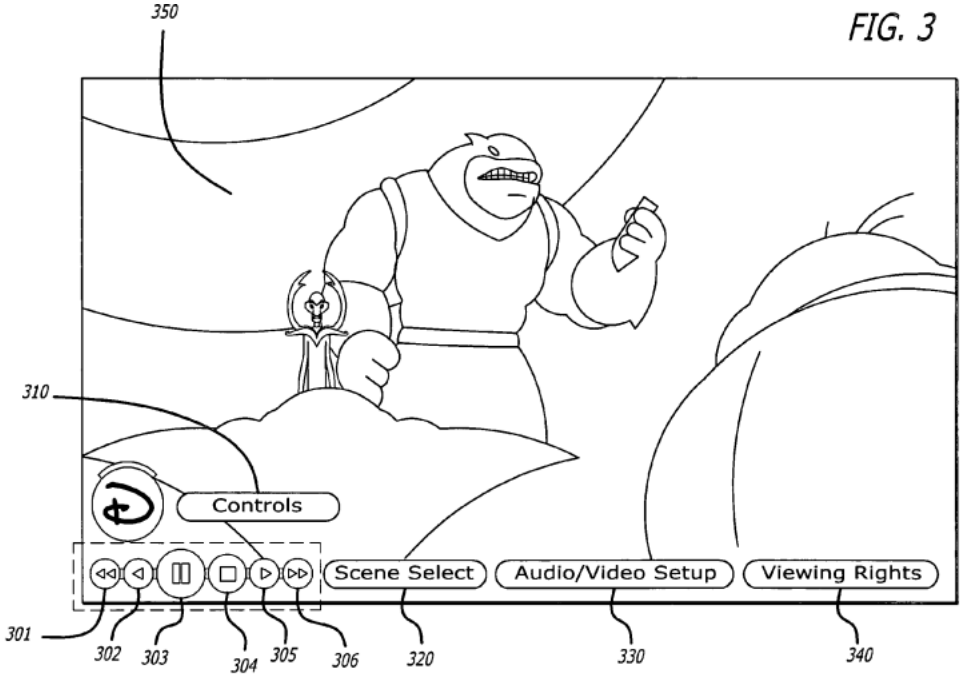


Figure 3 depicts "an exemplary screen shot illustrating the ability to operate an on-screen playback control menu and simultaneously view a video stream." *Id*. at 2:43–45.

4. Russ (Ex. 1008)

Russ is titled, "PVR Channel and PVR IPG Information." Ex. 1008, code (54). The invention relates to personal video recording (PVR) and interactive program guides (IPG). *Id*. at 1:15–17. Figure 3A of Russ is reproduced below.

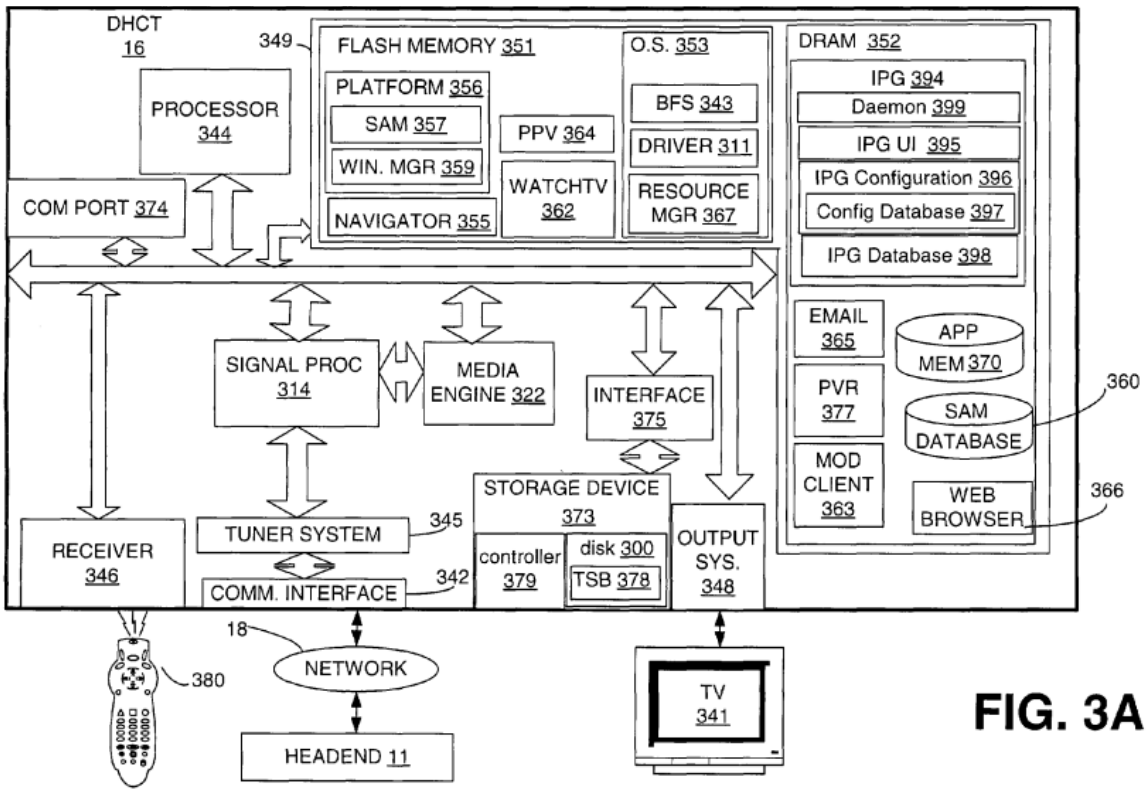


FIG. 3A

Figure 3A depicts a DHCT (digital home communication terminal device) or set-top box. *Id*. at 2:13–15. "The DHCT 16 processes analog and/or digital transmission signals for storage in the storage device 373, and/or for display to the television 341." *Id*. at 7:61–63. "The DHCT 16 preferably includes one or more processors, such as processor 344, for controlling operations of the DHCT 16, an output system 348 for driving the television display 341,

and at least one tuner system 345 for tuning into a particular television channel or frequency to display media content and for sending and receiving various types of data or media content to and from the headend 11." *Id*. at 7:42–48.

Figure 7 of Russ is reproduced below.

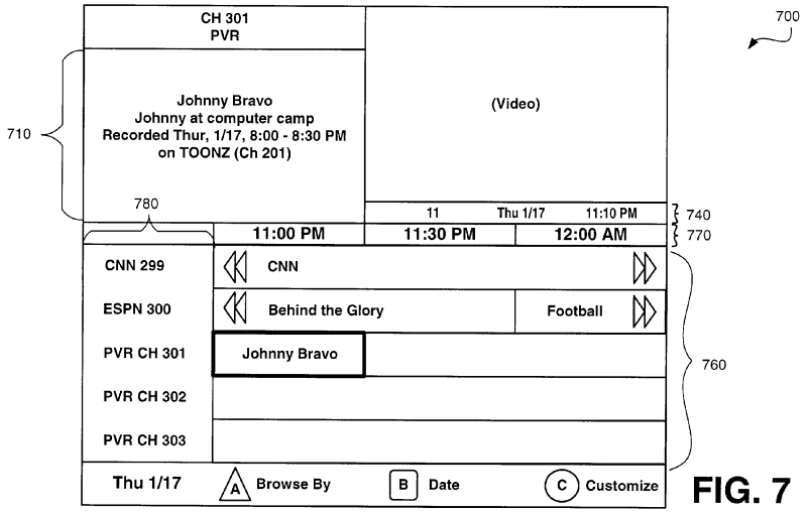


FIG. 7

Figure 7 depicts "an example IPG screen, prompted by the user after the scheduled recording of the Johnny Bravo episode, the title of which is displayed in a Personal Video Recording (PVR) channel." *Id*. at 2:33–36. Figure 8 of Russ is reproduced below.

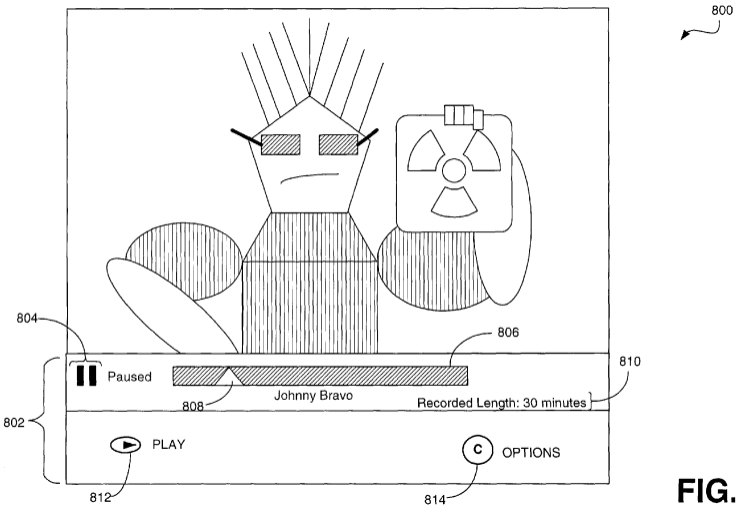


FIG. 8

Figure 8 depicts "an example screen display of the presentation of Johnny Bravo, prompted by the user selecting the Johnny Bravo episode in the IPG of FIG. 7, with a pause banner and playback bar overlaid on the display of Johnny Bravo." *Id*. at 2:38–42.

5. McElhatten (Ex. 1009)

McElhatten is titled, "Program Guide and Reservations System for Network Based Digital Information and Entertainment Storage and Delivery System." Ex. 1009, code (54). "In a broadband communications system, e.g., a cable system, programming content can be readily reserved and accessed for viewing using interactive program guides." *Id*. at code (57) (Abstract). Figure 1 of McElhatten is reproduced below.

FIG. 1

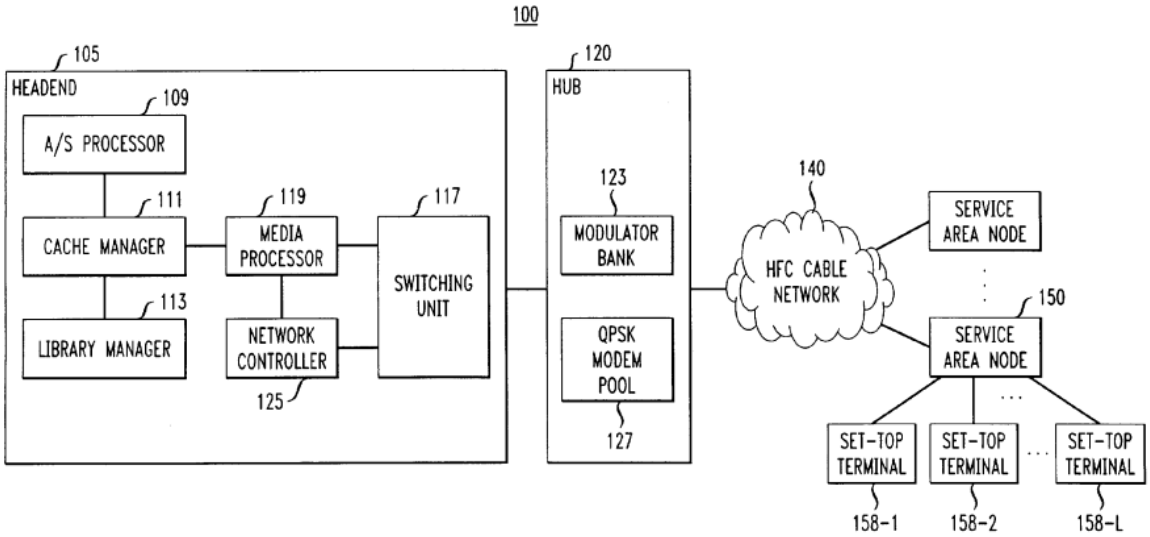


Figure 1 depicts "a block diagram of a broadband communications system." *Id*. at 3:61–62. Figure 12 of McElhatten is reproduced below.

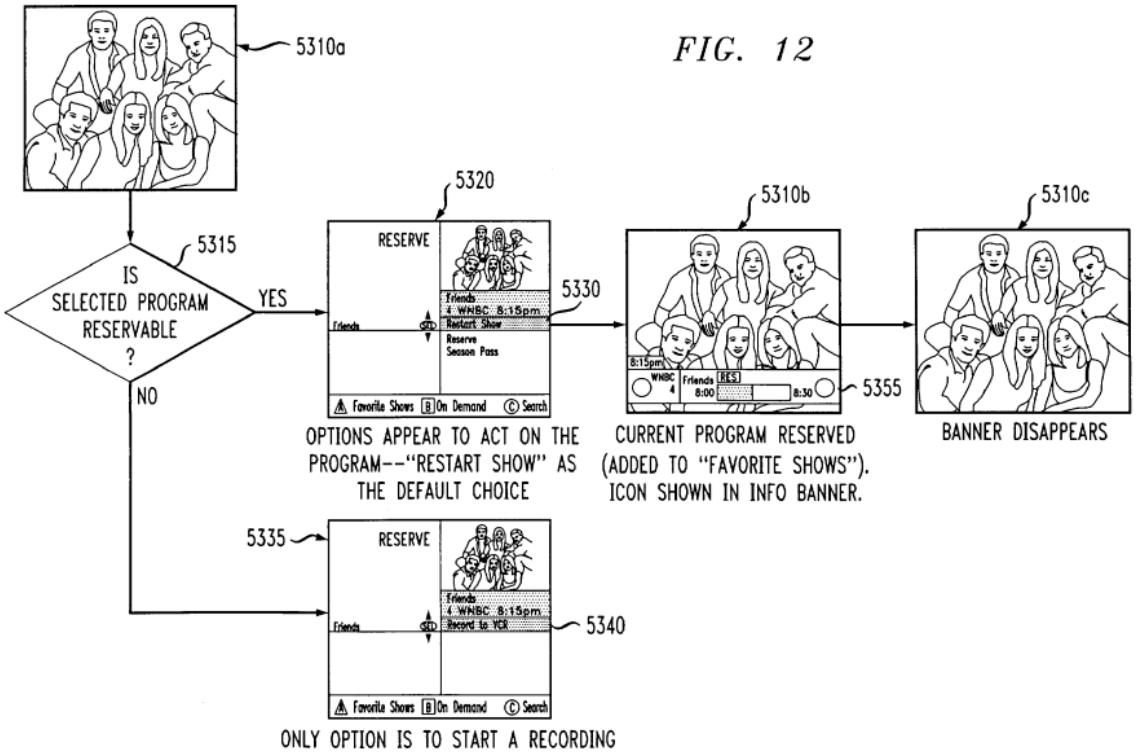


Figure 12 depicts "screen displays in reserving a current show." *Id*. at 4:21–22. McElhatten states:

> Referring to FIG. 12, if a user is watching a program that is currently being broadcast on a first channel GUI 5310*a*, the user may issue a reserve command by pressing record key 910 of remote control 900. When media processor 119 receives a command to reserve a selected program, processor 119 determines whether the selected program is reservable (5315). Reservable programs are those that have been recorded and stored at headend 105 for future access[i]bility. Such programs may then be reserved after they have been broadcast. These programs may also be manipulated by the user by issuing PVR-like commands, such as rewind, fast-forward, pause, skip commercials and restart. Programs that are not predesignated for reservation are referred to as non-reservable programs.

Id. at 15:59–16:5.

6. *Uchida (Ex. 1010)*

Uchida is titled, "Display Device, Two-Way Communication System and Display Information Using Method." Ex. 1010, code (54). Figure 2 of Uchida is reproduced below.

FIG. 2

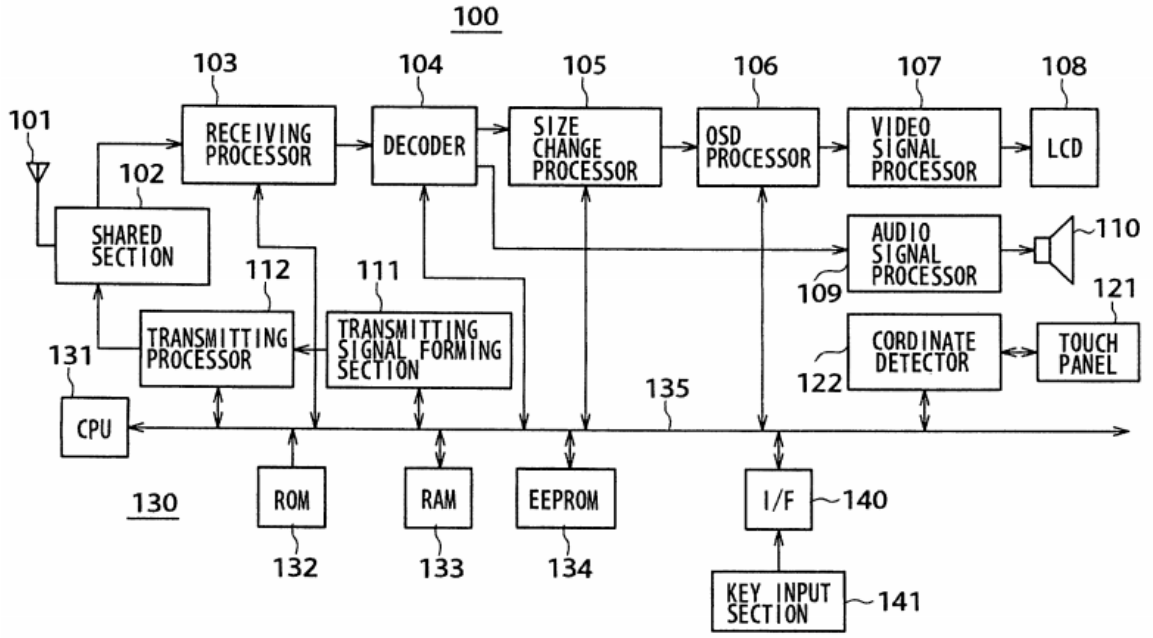


Figure 2 depicts a block diagram for a display device. *Id*. at 3:54–55.

Uchida states:

> As shown in FIG. 2, the display device 100 includes a transmitting and receiving antenna 101, an antenna shared section 102, a receiving processor 103, a decoder 104, a size change processor 105, an audio signal processor 109, a speaker 110, a transmitting signal forming section 111, a transmitting processor 112, a touch panel 121, and a coordinate detector 122.
>
> The respective sections of the display device 110 according to this embodiment are controlled by a controller 130. The controller 130 is a microcomputer having a CPU (central processing unit) 131, a ROM (read only memory) 132, a RAM (random access memory) 133, and an EEPROM (electronically erasable programmable ROM) 134 connected to each other through a CPU bus 135, as shown in FIG. 2.

Id. at 7:32–45. Figures 10A, 10B, and 10C of Uchida are reproduced below.

FIG. 10A

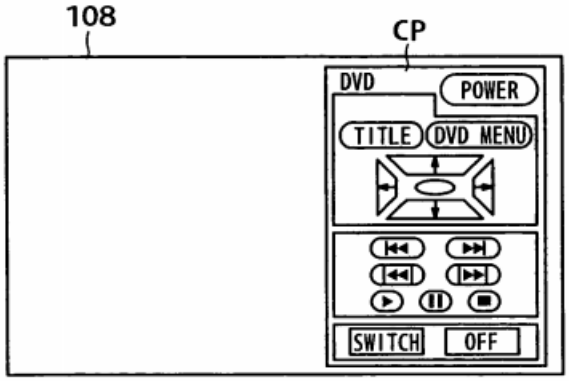


FIG. 10B

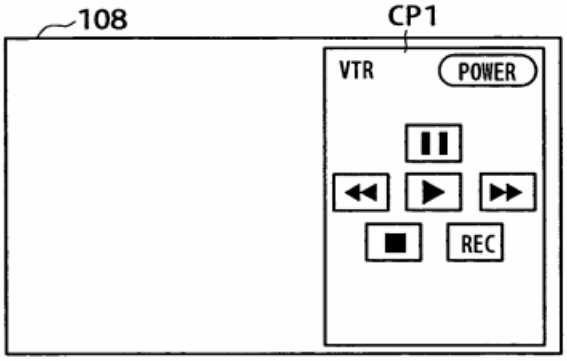
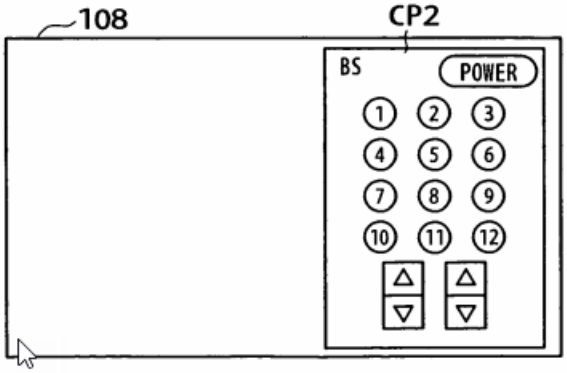


FIG. 10C



Figures 10A, 10B, and 10C depict control elements on a display. *Id*. at 4:1–3. The description of Figures 10A, 10B, and 10C provides:

> FIG. 10A is a control panel CP for the DVD device 300 which includes various operation keys such as an on/off key of a power supply, arrow keys and a decision key as described above.
>
> FIG. 10B is a control panel CP1 for the VTR, which has a pause key, a fast-forward key, a rewind key, a reproduction[,] key, a stop key, and a record key in correspondence with the on/off key of a power supply and the operation keys of the VTR. Also, FIG. 10C is a control panel CP2 for the BS digital tuner, which provides an on/off key of a power supply and numerical keys for channel selection.

Id. at 21:57–67. Figure 12B of Uchida is reproduced below.

FIG. 12B

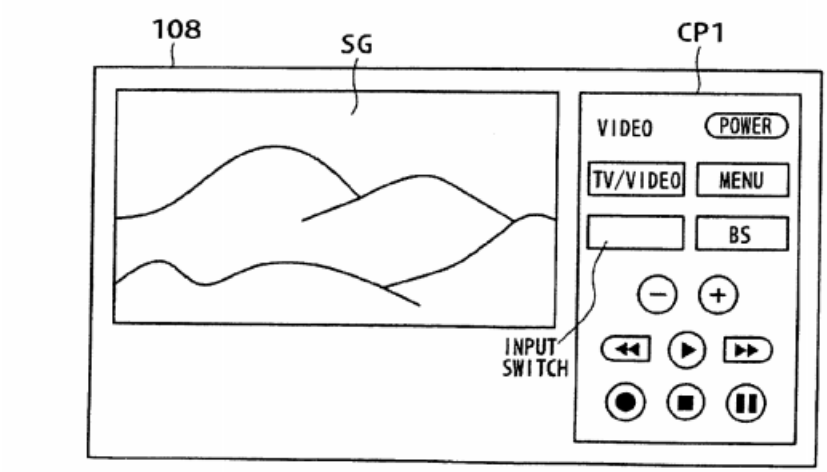


Figure 12B depicts "the display of the size-reduced main display information and the control panel." *Id*. at 4:10–11. With regard to Figure 12B, Uchida states:

> [W]hen the control panel for the VTR or the DVD device is going to be displayed, the reproduced image which is the main display information is reduced in size and displayed, and the control panel CP1 for the VTR and the DVD device is displayed for conducting operation such as reproduction stop, pause, fast forwarding, or fast rewind, as shown in FIG. 12B.

Id. at 23:24–30.

E. Challenges to Claims 2–9 Based on Phillips

Petitioner challenges claims 2, 4, 5, 7, and 8 based on Phillips alone (anticipation) and Phillips in combination with Ackley or Wallis (obviousness). *See* Pet. 8. For claims 3, 6, and 9, Petitioner relies on Phillips and Uchida in combination with Ackley or Wallis. *Id.* In the Petition, a detailed limitation-by-limitation argument is provided for each challenged claim in which passages from the cited art are mapped to the limitations in the challenged claims and, for each obviousness challenge, contentions as to motivation to combine the relevant teachings of the cited references with a reasonable expectation of success are provided. *Id.* at 25–59. With regard to the challenges based on Phillips alone or in combination with the other cited art, Patent Owner argues that Phillips does not disclose:

> *a display which displays the outputted digital content together with an alternative display of either of a linear content operation panel allowing user-instruction regarding linear reproduction functions of the reproduced digital content or an interactive content operation panel allowing user-instruction of interactive functions to an outside of the digital content reproducing apparatus* (referred to as limitations 2[d], 4[d], and 7[d] by the parties (*see* Pet. 4–6; Prelim. Resp. 1))

and

> *wherein the outputted digital content together with either the linear content operation panel or the interactive content operation panel, are displayed concurrently in one screen* (referred to as limitations 2[g], 4[g], and 7[g] by the parties (*see* Pet. 4–6; Prelim. Resp. 1))

as recited in independent claims 2, 4, and 7 of the ’394 patent. *See* Prelim. Resp. 1, 2, 13–22. At this stage of this proceeding, Patent Owner makes no other arguments relating to the challenges in the Petition for the challenges

based on Phillips alone or in combination with other references. *See generally id.* We, therefore, consider together all the challenges based on Phillips alone or in combination with other references in the analysis set forth below.

1. Element-by-Element Analysis of Challenge to Claim 2 Based on Phillips

Our element-by-element analysis of independent claim 2 is set forth below.[17]

"A digital content reproducing apparatus, comprising"

Petitioner asserts, "if the preamble is limiting, Phillips discloses this limitation of claim 2."[18] Pet. 28 (citing Ex. 1002 (Bederson Decl.) ¶¶ 116–117). Figure 1 of Phillips (cited *id.* at 27) is reproduced below.

[17] We adopt the parsing of the claims as set forth in the Petition in order to follow the contentions in the Petition.

[18] "[W]here a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). The preamble of claim 2 is a statement of purpose or intended use and claim 2 otherwise appears to define a structurally complete invention. Thus, our initial determination is that the preamble of claim 2 is not limiting. However, we need not decide whether the preamble of claim 2 is limiting as we determine the Petitioner establishes the cited art teaches a digital content reproducing apparatus.

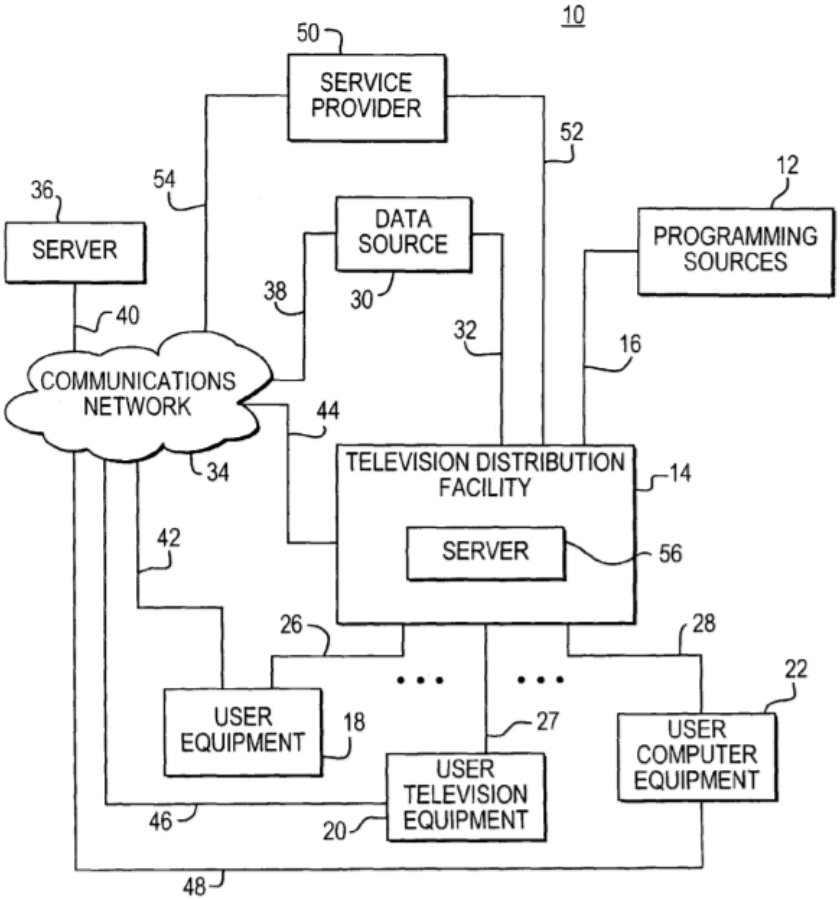


FIG. 1

Figure 1 of Phillips depicts "an interactive television system." Ex. 1005, 4:60–61. As quoted in the Petition (Pet, 27–28), the related description of Figure 1 of Phillips states, "[c]ontent such as television programming and digital music may be provided from programming sources 12 to television distribution facilities such as television distribution facility 14 using communication path 16" (Ex. 1005, 6:32–36) and "[t]he user equipment may receive television and music programming and other information from television distribution facility 14 over communication paths 26, 27, and 28" (*id.* at 6:56–59). Patent Owner does not argue the preamble of claim 2.

Based on this record, we determine that the preamble of claim 2 is disclosed by Phillips.

"an input unit which inputs digital data"

Petitioner relies on the apparatus shown in Figures 3 and 6 of Phillips and the related descriptions as teaching this limitation. Pet. 28–31. Figure 3 of Phillips is reproduced below.

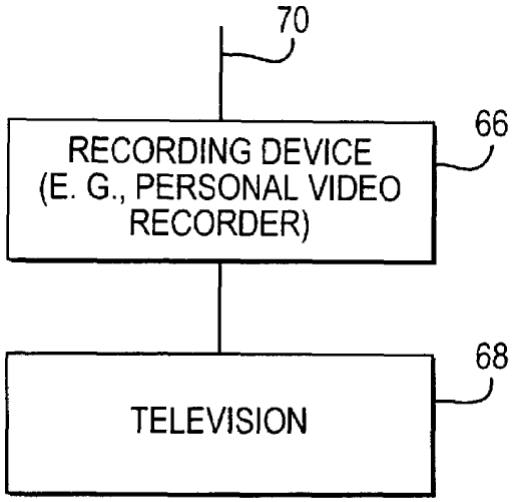


FIG. 3

Figure 3 depicts user television equipment. Ex. 1005, 4:64–65. The Petition provides:

> Phillips discloses an input unit that inputs digital content in the form of digital video circuitry including digital tuners and decoders. Phillips's STB 66 (as shown in Figure 3) receives digital content via input/output 70. (EX1005, 10:49-51). (EX1002, ¶ 119). . . .
> STB 66 contains analog and/or digital tuners and decoding circuitry for receiving digital television and music channels, which may be multiplexed. (EX1005, 10:54- 60; *see also id.* at 11:12-20 (disclosing additional digital communications circuitry)). STB 66 also contains a processor and random access memory for use when executing applications (EX1005, 10:60-64). STB 66 also includes a hard disk or other storage that "may also be used to record video such as television programs or video-on-demand content or other content provided

> to recording device 66 over input/output 70." (EX1005, 11:1-5). (EX1002, ¶120).

Pet. 28–29. Figure 6 of Phillips is reproduced below.

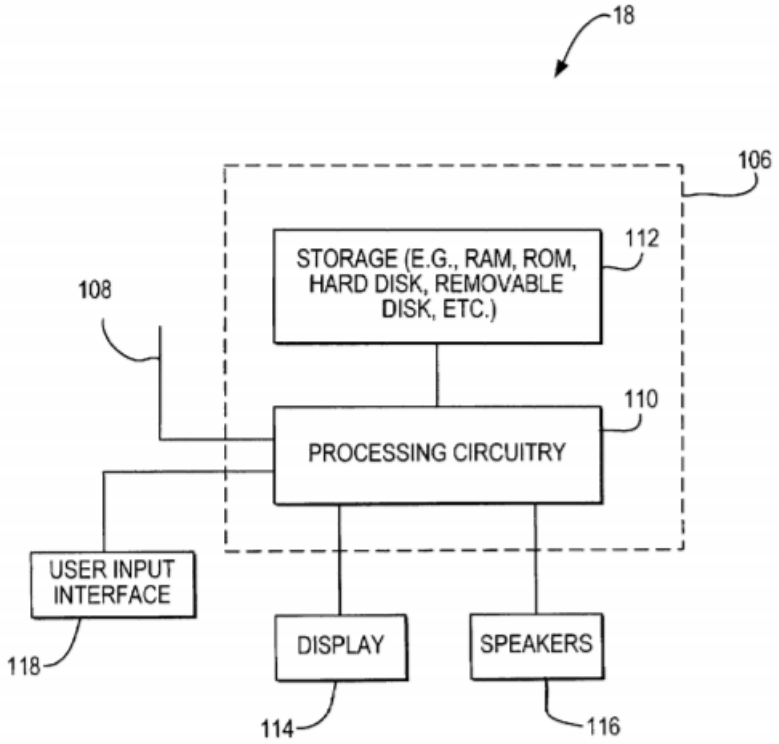


FIG. 6

Figure 6 depicts "a generalized diagram of illustrative user equipment." Ex. 1005, 5:3–4. "As shown in FIG. 6, control circuitry 106 is connected to input/output 108. Input/output 108 may be connected to one or more communication paths such as paths 26, 27, 28, 42, 46, and 48 of FIG. 1. Television and music programming may be received via input/output 108." *Id*. at 13:50–54. Patent Owner does not argue this limitation.

Based on this record, we determine that Phillips discloses this limitation.

"a reproducer which reproduces the inputted digital content"

The Petition states, "Phillips's digital content reproducing apparatus includes a reproducer to reproduce inputted digital content in the form of storage and associated control circuitry for video playback." Pet. 31. The Petition provides:

> STB 66 of Figure 3 includes a hard disk or other storage that may be used to record video "such as television programs or video-on-demand content or other content provided to recording device 66…" (EX1005, 11:1-5; *see also id.* at 10:40-47). STB 66 thus permits a user "to watch a previously-recorded program" stored on the hard disk. (EX1005, 11:29-32). (EX1002, ¶125).
>
> Control circuitry 106 for the Phillips STB (as shown in generalized diagram Figure 6) includes storage 112 as well as tuners and other digital video circuitry. (EX1005, 13:65-14:11). (EX1002, ¶126).

Id. Patent Owner does not argue this limitation.

Based on this record, we determine that Phillips discloses this limitation.

"an output unit which outputs the reproduced digital content"

The Petition states, "Phillips discloses an output unit that outputs the reproduced digital content" and provides, "STB 66 contains a processor and random access memory for use when executing applications . . . , and outputs digital content to a television." Pet. 32 (citing Ex. 1002 (Bederson Decl.) ¶128; Ex. 1005, 10:47-48, 10:60-64, 11:27-28 ("When the user presses play, the recorded video may be played back.")). And, the Petition (*id.*) quotes the following passage in Phillips:

> The tuning and encoding circuitry may be used by the user equipment to receive and display or play or record a particular television or music channel or other desired audio and video content. . . . Television programming and other video and on-

> screen options and information may be displayed on display 114.

Ex. 1005, 14:11–18. Patent Owner does not argue this limitation.

Based on this record we determine that Phillips discloses this limitation.

"a display which displays the outputted digital content together with an alternative display of either of a linear content operation panel allowing user-instruction regarding linear reproduction functions of the reproduced digital content or an interactive content operation panel allowing user-interaction of interactive functions to an outside of the digital content reproducing apparatus"

Petitioner relies on Figures 14–18 of Phillips as "display[ing] interactive content, as shown in the VoD screens of Figures 14–17, and linear content, as shown in the video display of Figure 18" and "[d]epending on the screen displayed, Phillips shows a linear content operation panel allowing user-instruction regarding the linear reproduction functions, or an interactive content operation panel allowing user-instruction of interactive functions to an outside of the digital content reproducing apparatus." Pet. 33.[19] The Petition presents Figure 17a, reproduced below, as showing an example of an interactive content operation panel. *Id*. at 34.

[19] Patent Owner asserts that "Petitioner fails to argue that Phillips shows an 'interactive content operation panel' as required by claim element 2[d]." Prelim. Resp. 13. This assertion is not explained and is clearly false. *See, e.g.*, Pet. 33.

FIG. 17a

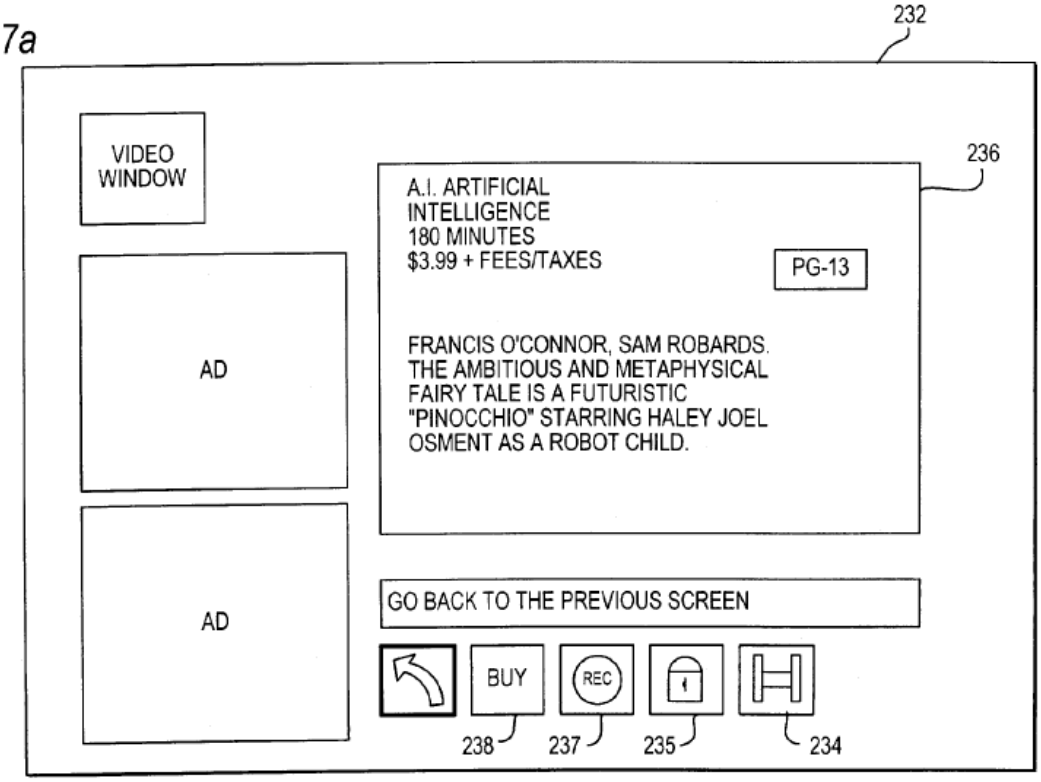


Figure 17a depicts an "illustrative video-on-demand screen[ ] that may be used to order and access video-on-demand content." Ex. 1005, 5:40–42. The Petition provides:

> [A]s shown in Figure 17a's interactive content screen displaying interactive VoD content, an interactive content operation panel is shown at the bottom of the screen that includes a back arrow to return to the previous screen (EX1005, 17:50-52 (describing element 174 of Figure 11)), a buy button 238, a record button 237, a parental control button 235, and a preview button 234. (EX1005, 19:30-48). (EX1002, ¶¶132-134). . . .
>
> The interactive content operation panel allows user-instruction of interactive functions to an outside of the digital content reproducing apparatus by, for example, informing server 36 or 56 that the user wishes to buy the video (button 238) or wishes to view a clip of the video (button 234).

Pet. 33–34. And, the Petition quotes (*id.* at 34–35) the following two passages in Phillips:

> If the user selects option 234, the interactive television application may display a video clip containing information on the video-on-demand content of interest (e.g., a promotional video such as a preview, a trailer, a review, etc.). The video clip may be delivered to the user equipment 18 from a server such as server 36 or server 56 of FIG. 1 or from equipment at a service provider such a service provider 50.

Ex. 1005, 19:44–51.

> In response to a user ordering selected content (e.g., by selecting an onscreen order options such as option 238 of Fig. 17a…), the interactive television application may deliver the ordered video-on-demand content to the user equipment from a server such as server 36 or server 56 or from a service provider such as 15 service provider 50.

Id. at 20:8-15.

Patent Owner argues that Phillips fails to disclose this limitation. Prelim. Resp. 1, 2, 16–20. Patent Owner argues with regard to the screen depicted in Figure 17a (and the screens depicted in the other figures in Phillips relied upon by Petitioner as teaching an "interactive control operation panel") that "the user control buttons displayed are for controlling the menu, rather than controlling displayed digital content" and "[t]he 'panel' in Figure 17a is instead a few buttons for controlling an information screen 232." *Id.* at 17, 18 (citing Ex. 1005 19:30–36). But, the relevant claim language from this limitation is "an interactive content operation panel allowing user-instruction of interactive functions." Ex. 1001, 6:27–28. Patent Owner never relates its argument back to this claim language by presenting any argument or evidence that counters Petitioner's argument and

evidence from the above-quoted passages from Phillips that Phillips allows the user to instruct the system using the panel to do such functions as record or display the content. Patent Owner's argument is not well supported by the claim language.

Patent Owner also argues that this limitation is not taught by Phillips because Petitioner has not shown that the same content is displayed with the "linear content operation panel" and the "interactive content operation panel." Prelim. Resp. 16–20. Specifically, Patent Owner argues, "[i]n the different iterations of the menu shown in the figures, the never the [sic] same content presented with the alternative display of an interactive content operation panel and a linear content operation pane[l]" (*id.* at 17) and

> The antecedent basis provided by "the" for "the outputted digital content" dictates that the same digital content is displayed with the alternative panels. None of the figures identified by Petitioner in Phillips demonstrate VoD content with a linear content operation panel and then the same VoD content displayed with an interactive content operation panel.

Id. at 18. Here again, we determine that the claim language does not support Patent Owner's argument. "[T]he outputted digital content" refers back to the "digital content" output by the "output unit" recited in the previous limitation that in turn refers back to the "digital content" reproduced by the "reproducer" that in turn refers back to the "digital content" input by the "input unit." *See* Ex. 1001, 6:19–23. If the "digital content" in this limitation is "input digital content," "reproduced digital content," and "outputted digital content" as recited in the preceding limitations, we determine that it is "digital content" as recited in this limitation (and the other limitations of claim 2 reciting "digital content"). As noted above, Patent Owner has not disputed Petitioner's showing for the preceding

limitations reciting "digital content" and we determine that Phillips teaches "digital content" as recited in the preceding limitations.

Furthermore, the '394 patent discloses that the digital content can change and that the type of digital content results in different operation panels being displayed. For example, the Abstract of the '394 patent states:

> A digital content reproducing apparatus is provided with a plurality of user operation interfaces, e.g., a linear content operation panel and an interactive operation panel, a data monitor unit monitors information on digital contents, and upon occurrence of a change, the plurality of user operation panels are automatically and exclusively displayed in an operation display area.

Ex. 1001, code (57). Thus, Patent Owner's argument is not well supported.

Based on this record, we determine that Phillips discloses this limitation.

"wherein the linear content operation panel and the interactive content operation panel are distinct panels from each other, which are not generated by a disabling of buttons"

Petitioner contends, "[a]s shown by comparing Phillips's Figures 17a and 18, for example, both the linear content operation panel and the interactive content operation panel are distinct operation panels, with distinct buttons and functionality, which are not generated by the disabling of buttons." Pet. 36. Patent Owner does not argue the elements of this "wherein" clause.

Based on this record, we determine that Phillips discloses this limitation.[20]

---

[20] As noted above, Petitioner requests that "distinct panels" as recited in this limitation be construed as "panels in which the buttons are all mutually

"a controller which controls the alternative display of either of the linear content operation panel or the interactive content operation panel, wherein only one of the linear content operation panel or the interactive content operation panel is displayed exclusively at any given time, together with the outputted digital content"

Petitioner relies on "control circuitry 106 with tuning and encoding circuitry to receive and display the requested interactive content or the requested linear content" for this limitation. Pet. 37 (citing Ex. 1005, 13:65–14:11). Figure 6 of Phillips is reproduced below.

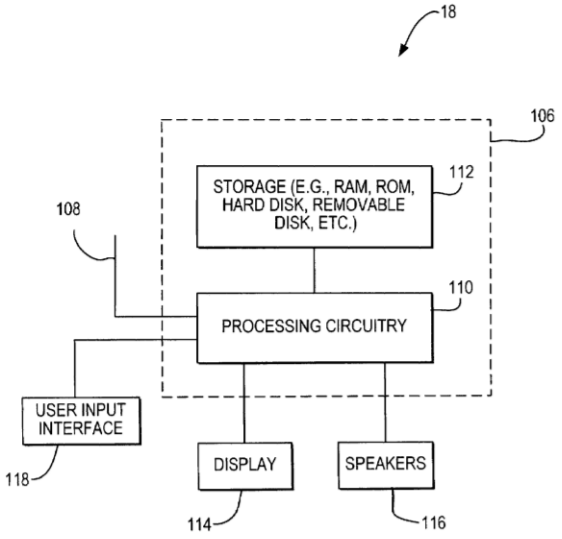


FIG. 6

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different," but also states, "Petitioner's proposed constructions do not have any impact on the grounds set forth herein." Pet. 16. The panels in Figures 17a and 18 of Phillips relied upon by Petitioner as disclosing the linear content operation panel and the interactive content operation panel have buttons that are "all mutually different." *See id.* at 36–37. And, while Patent Owner disputes the proposed construction of "distinct panels" (Prelim. Resp. 8–13), Patent Owner does not dispute the showing in the Petition that Phillips discloses the limitation in which the term "distinct panels" is recited (*see generally id.*). It is, therefore, unnecessary to decide the dispute between the parties as to construction of "distinct panels" in order to consider the showing in the Petition as to claim 2 based on Phillips.

Figure 6 depicts "control circuitry 106." Ex. 1005, 13:50. The related disclosure states, "[c]ontrol circuitry 106 may be based on any suitable processing circuitry 110 such as processing circuitry based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, etc." *Id.* at 13:65–14:1.

With regard to this limitation, the Petition also states:

> Phillips's control circuitry running the interactive television application controls the alternative display of either of the linear content operation panel or the interactive content operation panel depending upon the presently displayed screen. As shown by [Figures 17a and 18 (reproduced above)], only one of the linear content operation panel or the interactive content operation panel is displayed exclusively at any given time, together with the outputted digital content.

Pet. 40 (citing Ex. 1002 (Bederson Decl.) ¶¶ 144–145). Patent Owner does not argue this limitation.

Based on this record, we determine that Phillips discloses this limitation.

"wherein the outputted digital content together with either the linear content operation panel or the interactive content operation panel, are displayed concurrently in one screen"

Petitioner relies on Phillips as disclosing all the elements of this limitation. Pet. 40–42. The Petition states:

> Phillips discloses a display 114 that displays the outputted digital content. Display 114 is depicted in Phillips's Figures 7-18. With specific reference to Figures 14-18, Phillips displays both interactive content, as shown in the VoD guide screens of Figures 14-17, or linear content, as shown in the video display of Figure 18. And depending on the screen displayed, Phillips shows either a linear content operation panel along with the outputted digital content, or an interactive

> content operation panel along with the outputted digital content, all on one screen.

Id. at 40–41. Petitioner again relies on Figures 17a and 18 and the related descriptions as disclosing this limitation. *Id.* at 41–42. The Petition states, "[f]or example, Figure 17a illustrates an interactive content screen displaying interactive VoD content (*i.e.*, outputted digital content), concurrently with an interactive content operation panel displayed along the bottom of the screen" (*id.* at 41) and "[a]s another example, Figure 18 illustrates a linear content screen displaying a selected VoD program—i.e., the outputted digital content—[con]currently with a linear content operation panel in the bottom left corner of the screen" (*id.*).

Patent Owner disputes the showing for this limitation. *See* Prelim. Resp. 1, 2, 13–16. Patent Owner argues that "Phillips fails to disclose outputted digital content displayed concurrently with interactive content operation panel." *Id.* at 14. Specifically, Patent Owner is critical of Petitioner's showing related to Figure 17a based on the contention that "Figure 17a does not display interactive VoD content." *Id.* Patent Owner argues that "Figure 17a is an information screen (232) that contains information (236) that includes 'information on the selected video-on-demand content such as title, run time, price rating, and a description of the selected video-on-demand content" . . . but does not show "outputted digital content." *Id.* (quoting Ex. 1005, 19:33–36).

We determine that Patent Owner's position as to this limitation is not well supported. Patent Owner fails to point to any language in this limitation (or elsewhere in claim 2) that requires that the "interactive content operation panel" display interactive VoD content. The relevant claim

language from this limitation states "wherein the outputted digital content together with . . . the interactive content operation panel, are displayed concurrently in one screen." The "outputted digital content" recited in this limitation is based on "reproduced digital content" as recited in the second and third limitations of claim 2 that is based on the "inputted digital content" as recited in the first and second limitations of claim 2. *See* Ex. 1001, 6:19–22. As discussed above, Petitioner has shown that Phillips teaches all elements of the first, second, and third limitations of claim 2 and Patent Owner has not disputed these showings in any respect.

Based on this record, we determine that Phillips discloses this limitation.

2. Summary as to Claim 2

We determine that Petitioner has shown a reasonable likelihood of establishing the unpatentability of claim 2 as anticipated by Phillips. On that basis, we determine that the information presented in the Petition demonstrates a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable pursuant to 35 U.S.C. § 314 and that *inter partes* review should be instituted.

3. Claims 3–9

Petitioner also challenges claim 4, 5, 7, and 8 as anticipated by Phillips and as obvious in view of Phillips and Ackley, and Phillips and Wallis. Pet. 8. Petitioner further challenges claims 3, 6, and 9 in view of Phillips and Uchida, Phillips and Ackley and Uchida, and Phillips and Wallis and Uchida. *Id.* For each of these additional challenges based on Phillips alone and Phillips in combination with additional references, the Petition includes a detailed argument for each challenged claim in which the

cited art is mapped to the limitations and, for each obviousness challenge, contentions as to motivation to combine. *Id.* at 25–59. For each of these challenges based on Phillips alone and Phillips together with one or more other references, Patent Owner limits its arguments to those discussed above with regard to Phillips. *See generally* Prelim. Resp.

We have considered all of Petitioner's challenges based on Phillips alone and Phillips in combination with one or more references and Patent Owner's contrary arguments relating to Phillips. We determine that for each of these challenges Petitioner has demonstrated a reasonable likelihood of showing the claims challenged in the Petition are unpatentable. For each of these additional claims and challenges, Petitioner has shown that institution is independently appropriate under the applicable legal standard. *See* 35 U.S.C. § 314(a).

F. Challenges to Claims 2–9 Based on Russ

Petitioner challenges claims 2, 4, 5, 7, and 8 based on Russ in combination with McElhatten and claims 3, 6, and 9 based on Russ in combination with McElhatten and Uchida. *See* Pet. 8. In the Petition, a detailed limitation-by-limitation argument is provided for each challenged claim in which passages from the cited art are mapped to the limitations in the challenged claims and contentions as to motivation to combine the relevant teachings of the cited references with a reasonable expectation of success are provided. *Id.* at 60–83. With regard to the challenges based on Russ in combination with other references, Patent Owner argues that Russ does not disclose:

> *a display which displays the outputted digital content together with an alternative display of either of a linear content operation panel allowing user-instruction regarding linear*

> *reproduction functions of the reproduced digital content or an interactive content operation panel allowing user-instruction of interactive functions to an outside of the digital content reproducing apparatus* (referred to as limitations 2[d], 4[d], and 7[d] by the parties (*see* Pet. 4–6; Prelim. Resp. 1));

> *wherein the linear content operation panel and the interactive content operation panel are distinct panels from each other, which are not generated by a disabling of buttons* (referred to as limitations 2[e], 4[e], and 7[e] by the parties (*see* Pet. 4–6; Prelim. Resp. 2, 23, 28–30));

and

> *wherein the outputted digital content together with either the linear content operation panel or the interactive content operation panel, are displayed concurrently in one screen* (referred to as limitations 2[g], 4[g], and 7[g] by the parties (*see* Pet. 4–6; Prelim. Resp. 1))

as recited in independent claims 2, 4, and 7 of the '394 patent. *See* Prelim. Resp. 1, 2, 23–30. At this stage of this proceeding, Patent Owner makes no other arguments relating to the challenges based on Russ in combination with other references. *See generally id.* We, therefore, consider together all the challenges based on Russ in combination with other references in the analysis set forth below.

1. Element-by-Element Analysis of Challenge to Claim 2 Based on Russ

Our element-by-element analysis of independent claim 2 is set forth below.

"A digital content reproducing apparatus, comprising"

Petitioner asserts, "[i]f the preamble is limiting, Russ discloses this

limitation of claim 2."[21] Pet. 63 (citing Ex. 1002 (Bederson Decl.) ¶¶ 197–198).[22] The following passage from Russ is cited in the Petition (*id.* at 62–63):

> The DHCT [digital home communication terminal] 16 receives signals (video, audio and/or other data) from the headend 11 through the network 18. . . .
> The headend 11 may include one or more server devices (not shown) for providing video and/or audio and/or data to media client devices such as the DHCT 16. The headend 11 and the DHCT 16 cooperate to provide a user with television services via the television (not shown). The television services may include, for example, broadcast television services, cable television services, premium television services, video-on-demand (VOD) services, and/or pay-per-view (PPV) services, among others.

Ex. 1008, 6:28–47. Patent Owner does not argue the preamble of claim 2.

Based on this record, we determine that the preamble of claim 2 is taught by Russ.

"an input unit which inputs digital data"

Petitioner relies on Russ as teaching this limitation. Pet. 63–65 (citing Ex. 1002 (Bederson Decl.) ¶¶ 199–203). The Petition states: "Russ discloses a DHCT (*i.e.*, a set-top box) as an exemplary user-side input unit that

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[21] As noted above, the preamble of claim 2 is a statement of purpose or intended use and claim 2 otherwise appears to define a structurally complete invention. Thus, our initial determination is that the preamble of claim 2 is not limiting. *See Rowe*, 112 F.3d at 478. However, we also determine Russ teaches a digital content reproducing apparatus.

[22] There appears to be a typographical error in this section of the Petition. Petitioner cites paragraph 197 and then paragraph 98 of Exhibit 1002, but paragraphs 197 and 198 of Exhibit 2 relate to the preamble of claim 2 and Russ. We considered paragraphs 197 and 198 of Russ in our analysis of Petitioner's showing as to the preamble of claim 2.

interfaces with network 18 via a network interface connected to tuners and signal processors." *Id.* at 63. In support of this statement, the Petition (*id.* at 63–64) cites the following passages from Russ:

> The DHCT 16 preferably includes a communications interface 342 for receiving signals (video, audio and/or other data) from the headend 11 through the network 18.
>
> * * *
>
> The DHCT 16 processes analog and/or digital transmission signals for storage in the storage device 373, and/or for display to the television 341. The DHCT 16 preferably includes a signal processing system 314 and a media engine 322. The components of the signal processing system 314 are capable of QAM demodulation, forward error correction, and demultiplexing MPEG-2 transport streams, and parsing elementary streams and packetized elementary streams.
>
> * * *
>
> In one implementation, the processor 344, in communication generally with the device driver 311 and the storage device controller 379 and the signal processing system 314, effect retrieval of compressed video streams, compressed audio streams, and data streams corresponding to one or more media content instances from the storage device 373.

Ex. 1008, 7:37–40, 7:61–8:1, 10:51–56. Patent Owner does not argue this limitation.

Based on this record, we determine that Russ teaches this limitation.

"a reproducer which reproduces the inputted digital content"

Petitioner relies on Russ as teaching this limitation. Pet. 65–66 (citing Ex. 1002 (Bederson Decl.) ¶¶ 204–206). In support, the Petition (*id.* at 65) quotes the following passage from Russ:

> In one implementation, the processor 344, in communication generally with the device driver 311 and the

> storage device controller 379 and the signal processing system 314, effect retrieval of compressed video streams, compressed audio streams, and data streams corresponding to one or more media content instances from the storage device 373. Retrieved streams are deposited in an output cache in the storage device 373 and transferred to DRAM 352, and then processed for playback according to mechanisms well known to those having ordinary skill in the art. In some embodiments, one or more media content instances are retrieved and routed from the hard disk 300 to the media engine 322 for video and audio decoding simultaneously, and then further processed for eventual presentation on a display device or other device.

Ex. 1008, 10:51–65. Patent Owner does not argue this limitation.

Based on this record, we determine that Russ teaches this limitation.

"an output unit which outputs the reproduced digital content"

Petitioner relies on Russ as teaching this limitation. Pet. 66–67 (citing Ex. 1002 (Bederson Decl.) ¶¶ 191, 207–208). In support, the Petition provides:

> Russ's digital content reproducing apparatus includes an output system 348 for driving the television display 341. (EX1008, 7:42-48). For example, media content that is received via the communication interface 342 from the headend 11, which may be reproduced in Russ's storage device 373 (as explained above), is output to a user's television via output system 348. (EX1008, 10:51-65). (EX1002, ¶191).
>
> Russ includes one or more processors 344 for controlling operations of the DHCT, which preferably includes a signal processing system 314 and a media engine 322, circuitry that can generate graphics. (EX1008, 7:42-43, 7:63-64; see generally id. at 7:61-8:10). The signal processing system 314 outputs packetized streams for storage in the storage device 373, and may also input into the media engine 322 for display through output systems 348, which drives the television 341. (EX1008, 7:42-45, 8:11-16, Figure 3A). Russ's content may also be stored/reproduced in storage device 373 before being

> output through output system 348. (EX1008, 10:11-17, 10:37-65). (EX1002, ¶207).

Id. at 66. Patent Owner does not argue this limitation.

Based on this record, we determine that Russ teaches this limitation.

"a display which displays the outputted digital content together with an alternative display of either of a linear content operation panel allowing user-instruction regarding linear reproduction functions of the reproduced digital content or an interactive content operation panel allowing user-interaction of interactive functions to an outside of the digital content reproducing apparatus"

Petitioner relies on Russ as teaching this limitation. Pet. 67–70 (citing Ex. 1002 (Bederson Decl.) ¶¶ 210–219). In support, the Petition provides:

> Russ discloses TV 341, which displays the outputted digital content from output system 348, as shown in Russ's Figures 3A (TV 341), 4, 7, 8, 13, 38, and 39. Russ displays both interactive content, as shown in the interactive program guide (IPG) screens of Figures 4, 7, 13, and 38, and linear content, as shown in the video display of Figures 8 and 39. (EX1008, 13:6-14:40, 16:4-18:23, 19:4-60, and 25:1-50). And depending on the screen displayed, Russ either shows a linear content operation panel or an interactive content operation panel. (EX1002, ¶¶210-214).
>
> As shown in Figures 6, 9, 11-12, 14-16, 18-33, and 35-37, Russ describes a variety of other interactive content screens including interactive content operation panels. (EX1008, 15:31-16:3, 18:24-19:8, 20:8-21:26, 21:33-24:67). (EX1002, ¶215).

Pet. 67. The Petition relies on Figures 7 and 38, reproduced below, as depicting "interactive content operation panel[s] allowing user-instruction of interactive functions" as recited in claim 2. *See id.* at 68.

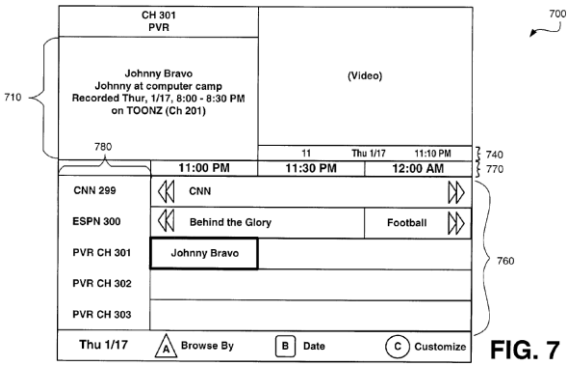


FIG. 7

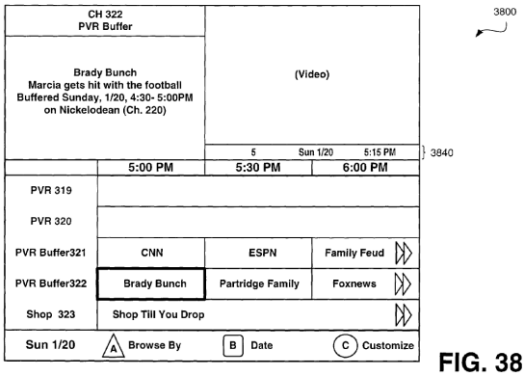


FIG. 38

Figure 7 depicts "an example IPG [interactive program guide] screen, prompted by the user after the scheduled recording of the Johnny Bravo episode, the title of which is displayed in a Personal Video Recording (PVR) channel" and Figure 38 depicts "and example IPG screen that illustrates the PVR buffer channels." Ex. 1008, 2:33–36, 4:43–44. The Petition states, "[i]n both [Figures 7 and 38], the IPG screen includes an interactive content operational panel at the bottom of the screen, which includes the following buttons: A 'Browse By,' B 'Date,' and C 'Customize.'" Pet. 68.

With regard to "allowing user-interaction of interactive functions to an outside of the digital content reproducing apparatus" as recited in claim 2, the Petition provides:

> Russ also discloses allowing user-instruction of interactive functions to an outside of the digital content reproducing apparatus. "DHCT 16 preferably includes a communications interface 342 for receiving signals (video, audio and/or other data) from the headend 11 through the network 18 and for providing any reverse information to the headend 11 through the network 18." (EX1008, 7:37-41). For example, Russ discloses that applications (including the PVR application 377 and IPG application 394 (see EX1008, Fig. 3A, 9:27-31; 12:34-36)) typically include a client part and a server counterpart "that cooperate to provide the complete functionality of the application." (EX1008, 8:27-31). As another example, Russ discloses that when a user selects the IPG button shown, for example, in Fig. 13, the IPG user

> interface uses the windows manager and other graphics utilities to render an IPG on the screen, and that the electronic program guide application contains a daemon that collects IPG data from the headend, outside the device. (EX1008, 12:34-13:3, 20:62-63). A POSITA would understand based on these disclosures that Russ would allow user instructions to the PVR or IPG applications or IPG requests to be directed outside of the digital content reproducing apparatus, including to headend servers. (EX1008, 6:38-41). (EX1002, ¶217).

Pet. 68–69.

Patent Owner disputes this portion of Petitioner's showing. *See* Prelim. Resp. 23–25 (citing Ex. 1008, 12:37–40, 12:48–52, 12:64–67, Fig. 3A). Patent Owner asserts that, "Petitioner fails to discuss how interactive functions are directed outside of the digital content reproduction apparatus." *Id.* at 24. We disagree with this assertion. As shown in the above-quoted passage from the Petition, Petitioner does discuss this element of claim 2 and supports its showing with citations to Russ and expert declaration testimony. And, the passages from Russ relied upon by Patent Owner relate to the functionality of the applications depicted in Figure 3A of Russ. *See* Ex. 1008, 12:34–13:5. Contrary to Patent Owner's position, Russ discloses that the applications disclosed in Figure 3A may be executed by the DHCT 16 of Russ communicating with the headend 11 that is outside the DHCT 16. See *id.* at Fig. 3A. Russ states:

> FIG. 3A is a block diagram illustration of an example DHCT 16 that is coupled to a headend 11 and to a television 341, in accordance with one embodiment of the invention. It will be understood that the DHCT 16 shown in FIG. 3A is merely illustrative and should not be construed as implying any limitations upon the scope of the preferred embodiments of the invention. For example, some of the functionality performed by applications executed in the DHCT 16 (such as an MOD

> application 363) may instead be performed completely or in part at the headend 11 and vice versa, or not at all in some embodiments. The DHCT 16 preferably includes a communications interface 342 for receiving signals (video, audio and/or other data) from the headend 11 through the network 18 and for providing any reverse information to the headend 11 through the network 18.

Id. at 7:27–40. We have considered and weighed all the arguments and evidence of the parties on this issue and determine that Petitioner has established a reasonable likelihood of prevailing on this issue. On this record, Russ better supports Petitioner's position than Patent Owner's position. And, Petitioner's position is supported by expert testimony while Patent Owner's position is not.

The Petition relies on Figures 8 and 39, reproduced below, as depicting "a linear content operation panel allowing user-instruction regarding linear reproduction functions of the reproduced digital content" as recited in claim 2. Pet. 69.

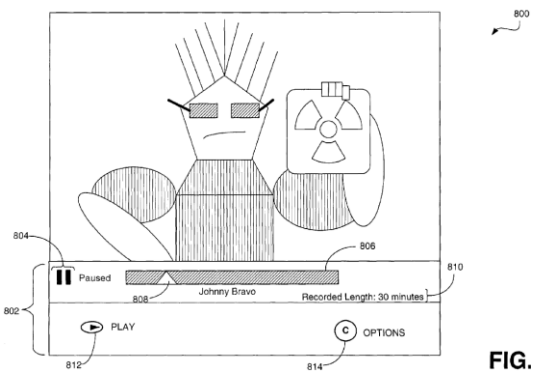


FIG. 8

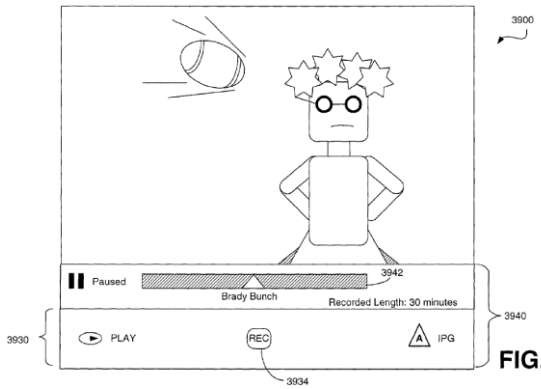


FIG. 39

Figure 8 depicts, "an example screen display of the presentation of Johnny Bravo, prompted by the user selecting the Johnny Bravo episode in the IPG of FIG. 7, with a pause banner and playback bar overlaid on the display of Johnny Bravo" and Figure 39 depicts, "an example screen display of

a Brady Bunch episode selected for viewing from a PVR buffer channel in the example IPG screen shown in FIG. 38." Ex. 1008, 2:38–42, 4:46–48. The Petition states:

> If linear content, such as PVR CH 301 Johnny Bravo in Fig. 7 or PVR Buffer 322 Brady Bunch in Fig. 38 is selected for viewing, a new screen is displayed, as depicted in Figures 8 and 39. These figures depict the presentation of linear content with a pause banner 802/3940. (EX1008, 17:35-39, 25:40-45). Pause banner 802/3940 also includes playback bar 806 or progress bar 3942, header 3930, and various icon buttons 812, 814, 3934. (EX1008, 17:45-52, 18:3-4, 25:41-47). (EX1002, ¶218).

Pet. 69.

Based on this record, we determine that Russ teaches this limitation.

"wherein the linear content operation panel and the interactive content operation panel are distinct panels from each other, which are not generated by a disabling of buttons"

Petitioner relies on Russ as teaching this limitation. Pet. 70 (citing Ex. 1002 (Bederson Decl.) ¶¶ 220–222). In support, the Petition provides:

> As shown by comparing Russ's Figures 7 and 8, for example, both the linear content operation panel and the interactive content operation panel are distinct operation panels, with distinct buttons and functionality, which are not generated by the disabling of buttons. Figure 7 depicts an interactive content operation panel with buttons A "Browse By," B "Date," and C "Customize." Navigation arrows are also included in Russ's interactive content operation panels (as shown in Figures 3 and 33). Figure 8, in contrast, depicts content operation panel 802, including a playback bar 806 and play and options buttons. Thus, Russ includes distinct interactive and linear operation panels, which are not generated by the disabling of buttons. The same is true if up/down and left/right navigation arrows are included in Russ's interactive content operation panels as these controls are not included in Russ's

> linear content operation panels. For the same reasons, Russ discloses panels with buttons that are all mutually different.

Id. As stated in the last sentence of this quoted paragraph from the Petition, Petitioner contends the buttons depicted in Figures 7 and 8 "are all mutually different." *Id.*

Patent Owner argues "the panels in Figures 7 and 8 are **not** distinct panels according to Petitioner's construction," because "the interactive operation panel in Figure 7 has a 'C' button that is also present in Figure 8." Prelim. Resp. 28–29. Patent Owner contends that the "C" buttons in Figures 7 and 8 have the same or similar functions, but the passages cited in Russ do not support this contention. *Id.* at 29 (citing Ex. 1008, 16:64–65, 18:5–17). As noted above, Petitioner requested that we construe "distinct panels" as recited in claim 2 as "panels in which the buttons are all mutually different." Pet. 15–16. However, we have not adopted this construction. *See* Section II.A. (Claim Construction) above. And, Patent Owner argues Petitioner's proposed construction is overly-restrictive and should be rejected. Prelim. Resp. 9. Patent Owner contends that "the plain meaning of 'distinct' simply means that each panel has an arrangement of buttons that differs from the other panels in some way." *Id.* The screens depicted in Figures 7 and 8 are "distinct panels" according to the meaning attributed to this term by Patent Owner.

Figures 7 and 8 of Russ are reproduced below.

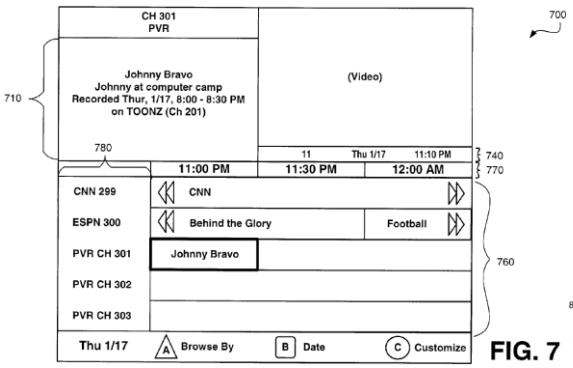


FIG. 7

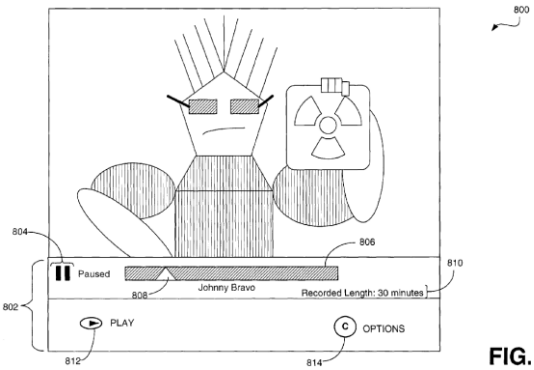


FIG. 8

The overall appearances of these depicted screens are quite different. The functions of the screens depicted in Figures 7 and 8 are very different. *Compare* Ex. 1008, 16:4–17:29 (detailed description of Figure 7), *with id.* at 17:30–18:23 (detailed description of Figure 8). And, although the screens depicted in these figures both have "C" buttons in the bottom, right corner, in Figure 7, the "C" button is labelled "Customize" and, in Figure 8, the "C" button is labelled "Options."

Based on this record, we determine that Figures 7 and 8 are "distinct panels" as recited in claim 2 and that Russ teaches this limitation.

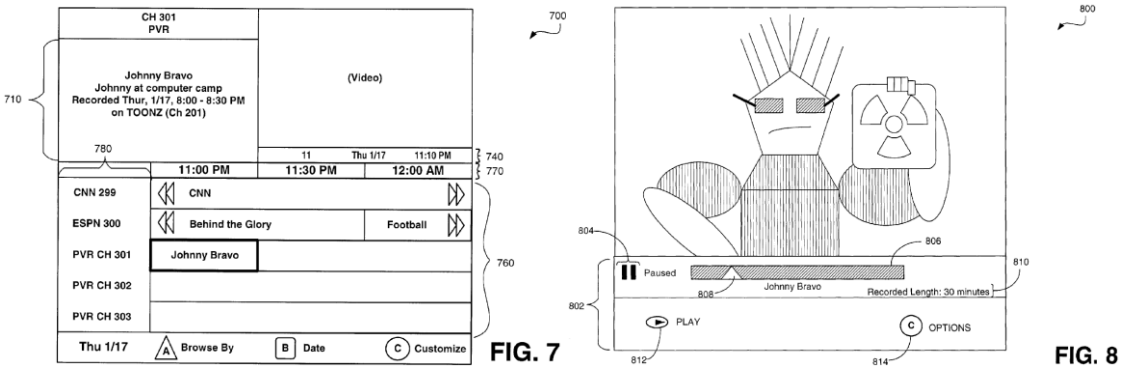
"a controller which controls the alternative display of either of the linear content operation panel or the interactive content operation panel, wherein only one of the linear content operation panel or the interactive content operation panel is displayed exclusively at any given time, together with the outputted digital content"

Petitioner relies on Russ as teaching this limitation.[23] Pet. 71–73 (citing Ex. 1002 (Bederson Decl.) ¶¶ 223–226). In support, the Petition states:

[23] Petitioner relies on McElhatten but only on a contingent basis. The Petition states, "[i]f the Board finds that this limitation requires assessment of the content's metadata to determine if it is linear or interactive content and then, based on that determination, display of the appropriate operation panel, this is disclosed by McElhatten." Pet. 73. We make no such finding.

> As discussed above with respect [to the first three limitations of claim 2], Russ includes control circuitry and components, e.g., processor 344, receiver 346, tuner system 345, signal processor 314, media engine 322, flash memory 351, and DRAM 352, which enable the DHCT 16 to receive and display the requested interactive content or the requested linear content, including through the use of various applications including a PVR application and an IPG application.

Id. at 71. To illustrate that Russ teaches this limitation, the Petition juxtaposes Figures 7 and 8 as shown below. *Id.* at 72.



According to Petitioner, Figure 7 depicts the display of an interactive content operational panel and Figure 8 depicts the alternative display of a linear content operation panel as recited in claim 2. *Id.* The Petition states:

> As seen in Figure 7, IPG screen 700 includes an interactive content operational panel at the bottom of the screen, with buttons A "Browse By," B "Date," and C "Customize." If linear content, such as the PVR CH 301 Johnny Bravo is selected, a new screen is displayed, i.e., Figure 8, which depicts a separate operation panel including playback bar 806, along

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Patent Owner argues that none of the challenged claims require assessment of the content's metadata. *See* Prelim. Resp. 20, 23. We determine that the Petition provides an adequate showing that Russ alone teaches this limitation. We have considered the showing in the Petition as to McElhatten and the motivation to combine Russ and McElhatten but determine it is unnecessary to discuss these aspects of the Petition in order to determine that it is appropriate to institute trial.

> with play and options buttons. (EX1008, 17:30-18:23). PVR application 377 generates the pause banner/operation panel and manages execution of functions in the pause banner. (EX1008, 17:39-45). (EX1002, ¶225).

Id. Patent Owner does not argue this limitation.

Based on this record, we determine that Russ teaches this limitation.

"wherein the outputted digital content together with either the linear content operation panel or the interactive content operation panel, are displayed concurrently in one screen"

Petitioner relies on Russ as teaching this limitation. Pet. 78–79 (citing Ex. 1002 (Bederson Decl.) ¶¶ 235–237). In support, the Petition provides:

> Russ discloses TV 341, which displays the outputted digital content from output system 348. That display is depicted in Russ's Figures 4, 7, 8, 13, 38, and 39. With specific reference to these figures, Russ displays both interactive content, as shown in the interactive program guide (IPG) screens of Figures 4, 7, 13, and 38, and linear content, as shown in the video display of Figures 8 and 39. And depending on the screen displayed, Russ either shows a linear content operation panel or an interactive content operation panel. (EX1002, ¶235).

Id. at 78. Here again, the Petition points to Figures 7 and 8 as examples which illustrate that Russ teaches the elements of this limitation. *Id.* at 78–79.

Patent Owner disputes Petitioner's showing as to this limitation. See Prelim. Resp. 1, 2, 26–28. Patent Owner argues that, "[t]he interactive content operation panel is not concurrently displayed with the outputted digital content in any of Petitioner's example figures." *Id.* at 27–28. Although somewhat unclear from this section of the Preliminary Response, this argument appears to be based on Patent Owner's contention (discussed

above) that the "outputted digital content" displayed with the "linear content operation panel" and the "interactive content operation panel" must be the same. As also discussed above, we do not believe that this argument is supported by the claim language.

Based on this record, we determine that Russ teaches this limitation.

2. Summary as to Claim 2

We determine that Petitioner has shown a reasonable likelihood of establishing the unpatentability of claim 2 based on this challenge. We again determine that the information presented in the Petition demonstrates that it is more likely than not that at least one of the claims challenged in the Petition is unpatentable and that *inter partes* review should be instituted. On this further basis, Petitioner has shown that institution is independently appropriate under the applicable legal standard. *See* 35 U.S.C. § 314(a).

3. Claims 3–9

Petitioner also challenges claim 4, 5, 7, and 8 based on the combination of Russ and McElhatten and claims 3, 6, and 9 based on the combination of Russ, McElhatten, and Uchida. Pet. 8. For each of these additional challenges based on Russ in combination with additional references, the Petition includes a detailed argument for each challenged claim in which the cited art is mapped to the limitations and, for each obviousness challenge, contentions as to motivation to combine. *Id.* at 60–83. For these challenges based on Russ together with one or more other references, Patent Owner limits its arguments to those discussed above with regard to Russ. *See generally* Prelim. Resp.

We have considered Petitioner's challenges based on Russ in combination with one or more references and Patent Owner's contrary

arguments relating to Russ. We determine that, for each of these challenges, Petitioner has demonstrated a reasonable likelihood of showing the claims challenged in the Petition are unpatentable. For these additional challenges, Petitioner has shown that institution is independently appropriate under the applicable legal standard. *See* 35 U.S.C. § 314(a).

III. CONCLUSION

For the reasons discussed above, we determine that Petitioner has demonstrated a reasonable likelihood of showing at least one of the claims challenged in the Petition is unpatentable. Accordingly, we institute as to all the challenged claims and all the challenges raised in the Petition. 37 C.F.R. § 42.108 (a) ("When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.").

Our findings and conclusions discussed herein are based on a preliminary record. We will make a final determination on the patentability of the challenged claims, as necessary and applying the preponderance of the evidence standard, based on a record fully developed through trial. Any argument not raised in a timely Patent Owner Response to the Petition filed pursuant to 37 C.F.R. § 42.120(a), or as permitted in another manner during trial, shall be deemed waived even if asserted in the Preliminary Response. *See In re NuVasive, Inc.*, 842 F.3d 1376, 1380–81 (Fed. Cir. 2016) (holding Patent Owner waived an argument addressed in the Preliminary Response by not raising the same argument in the Patent Owner Response). In addition, nothing in this Decision authorizes Petitioner to supplement information advanced in the Petition in a manner not permitted by the Board's Rules.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of the '394 patent is instituted with respect to the challenged claims and the grounds set forth in the Petition; and

FURTHER ORDERED pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4(b), *inter partes* review of the '394 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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