

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CHARTER COMMUNICATIONS, INC.,  
Petitioner,

v.

SPRINT COMMUNICATIONS COMPANY,  
Patent Owner.

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IPR2019-01138  
Patent 6,754,907 B1

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Before WILLIAM V. SAINDON, BRIAN J. McNAMARA, and  
NATHAN A. ENGELS, *Administrative Patent Judges*.

SAINDON, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Charter Communications, Inc. (“Petitioner”) filed a petition requesting *inter partes* review of claims 1–25 of U.S. Patent No. 6,754,907 B1 (Ex. 1001, “the ’4907 patent”). Paper 2 (“Pet.”). Sprint Communications Company (“Patent Owner”) filed a Preliminary Response. Paper 8 (“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); *see also* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). Taking into account the arguments presented in the Petition and Preliminary Response, we conclude that the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim. Accordingly, we do not institute an *inter partes* review.

### A. Related Matters

Petitioner challenges the ’4907 patent in IPR2019-01136 and IPR2019-01140, which are decided at the same time as this proceeding.

Petitioner challenges a related patent, U.S. Patent No. 6,757,907 (“the ’7907 patent”) in IPR2019-01135, IPR2019-01137, and IPR2019-01139.

According to the parties, the ’4907 patent is involved in *Sprint Communications Company L.P. v. Charter Communications, Inc.*, 1:18-cv-02033-RGA and *Sprint Communications Company L.P. v. Cequel*

*Communications, LLC (d/b/a Suddenlink Communications), et al.*, 1:18-cv-01919-RGA, both in the U.S. District Court for the District of Delaware. Pet. 74–75; Paper 4, 1 (Patent Owner’s Mandatory Notice).

*B. Real Parties In Interest*

The parties do not present any dispute over real parties in interest. Petitioner asserts that Charter Communications, Inc.; Charter Communications Holdings, LLC; Spectrum Management Holding Company, LLC; Charter Communications Operating, LLC; and Time Warner Cable, LLC are the real parties in interest. Pet. 66.

Patent Owner asserts Sprint Communications Company L.P. is the real party in interest and that Sprint Corporation may be a real party in interest. Paper 4, 1.

*C. The ’4907 Patent*

The ’4907 patent is directed to a video-on-demand system having a remote control feature. Ex. 1001, code (54). The patent describes how the remote control feature can be implemented through a personal computer using a web browser, which eliminates the need for a special set-top box. *Id.* at 1:35–43. Figure 1 of the ’4907 patent is reproduced below:

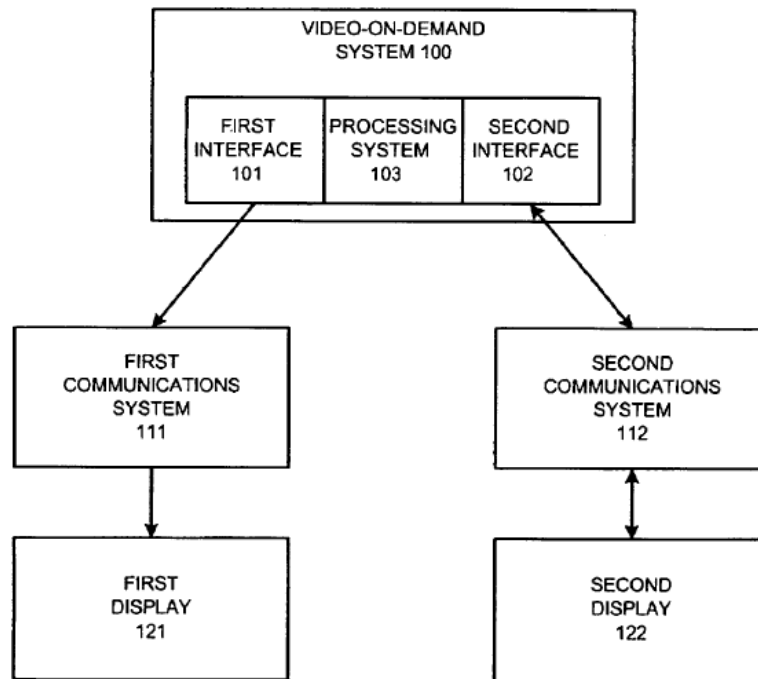


FIG. 1

Figure 1 of the '4907 patent depicts an embodiment of the claimed video on demand system. Ex. 1001, 1:61–63. According to the '4907 patent, first communication interface 101 is coupled to first communication system 111, which can be “optical fiber systems, wire or cable systems, and wireless link systems.” *Id.* at 2:27–29. These are in turn connected to first display 121, which can be a television. *Id.* at 2:31–32. The second communication interface 102 is coupled to second communication system 112, which can be the “Internet or World Wide Web.” *Id.* at 2:29–31. These are in turn connected to second display 122, which can be a personal computer with a browser. *Id.* at 2:32–33.

Processing system 103 handles communications within the system. First, processing system 103 transfers a control screen signal to second communication interface 102. *Id.* at 2:38–46. The control screen can be a webpage that includes, e.g., a control menu (play, stop, pause, rewind, fast-

forward) and a video content selection menu. *Id.* at 1:50–55. When the user enters a selection from the control screen, a video control signal is sent back to processing system 103 via second communication system 112 and second interface 102. *Id.* at 2:47–53. In response to the video control signal, processing system 103 then directs video content to the first or second display, depending on which display the video control signal selected to receive the video content. *Id.* at 2:54–67.

#### *D. Challenged Claims*

All claims in the '4907 patent are challenged. Claims 1, 10, and 19 are independent. Independent claim 1 is reproduced below with added emphasis:

1. A video-on-demand system comprising:
  - a first communication interface configured to transfer video content signals to a first communication system;
  - a second communication interface configured to transfer the video content signals to a second communication system, transfer a control screen signal to the second communication system, and receive a video control signal from the second communication system; and*
  - a processing system configured to transfer the control screen signal to the second communication interface, receive the video control signal from the second communication interface, implement a viewer-control selection indicated by the video control signal, and transfer the video content signals to the first communication interface if the first communication interface is indicated by the video control signal received from the second communication interface or transfer the video content signals to the second communication interface if the second communication interface is indicated by the video control signal.*

Independent claim 10 is also reproduced below:

10. A method of operating a video-on-demand system, the method comprising:  
transferring a control screen signal to a second communication system;  
receiving a video control signal from the second communication system;  
implementing a viewer control selection indicated by the video control signal; and  
transferring video content signals to a first communication interface if the first communication interface is indicated by the video control signal received from a second communication interface or transferring the video content signals to the second communication interface if the second communication interface is indicated by the video control signal.

Independent claim 19 is directed to a “product comprising a processor-readable storage medium storing processor-executable instructions for performing a method for operating a video-on-demand system,” with the recited method steps similar to those of claim 10.

*E. Prior Art and Asserted Grounds*

Petitioner asserts the following grounds:

<b>Claims Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)</b>
1–25	102	Ellis <sup>1</sup>
1–25	103	Ellis, Browne <sup>2</sup>
1–25	103	Ellis, Humpleman <sup>3</sup>

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<sup>1</sup> US 7,913,278 B2, iss. Mar. 22, 2011 (Ex. 1008).

<sup>2</sup> WO 92/22983, pub. Dec. 23, 1992 (Ex. 1007).

<sup>3</sup> US 6,182,094 B1, iss. Jan. 30, 2001 (Ex. 1009).

## II. PATENTABILITY ANALYSIS

### A. Claim Construction

We construe the claims “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.” 37 C.F.R. § 42.100(b). Under this standard, words of a claim are generally given their ordinary and customary meaning. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (“the words of a claim are generally given their ordinary and customary meaning”) (citations and internal quote marks omitted). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. *Id.*

Reviewing the positions of Petitioner and Patent Owner, we determine that the following claim constructions are required for us to render this Decision.

#### 1. “*video-on-demand*” (*all claims*)

The term “video-on-demand” appears in the preamble of each independent claim. Petitioner proposes that the claim be given its plain and ordinary meaning. Pet. 10. In the alternative, Petitioner proposes either “operating a system that provides video-on-demand” or “operating a video-

on-demand system without the use of a set-top box for remote control of the video-on-demand system.” *Id.*<sup>4</sup> Petitioner asserts that the differences between these constructions does not impact the outcome of this proceeding. *Id.* at 11.

Patent Owner asserts that the claim terms should be given their ordinary meaning, and does not propose any claim construction. Prelim. Resp. 19.

Reviewing the record before us, for the reasons that follow, we determine that “video-on-demand” in the preamble is limiting because it provides necessary context for the structure recited in the claims.

As a general rule, preamble language is not treated as limiting. *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002). Nonetheless, the preamble may be construed as limiting “if it recites essential structure or steps, or if it is ‘necessary to give life, meaning, and vitality’ to the claim.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). A preamble is not

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<sup>4</sup> This latter claim construction is the district court’s claim construction in the underlying litigation. Pet. 10; Ex. 1010 (Claim Construction Order from *Comcast Cable Commc’ns, LLC v. Sprint Commc’ns Co., LP*, Case No. 2:12-cv-859-JD, Dkt. 162 (Aug. 15, 2014, E.D. Pa)). The district court construed this claim term, and many others, to preclude involvement of a set-top box, based on the ’4907 patent’s discussion of such devices. Ex. 1010, 28–33; *see also* Ex. 1001, 1:30–32 (“Unfortunately, the set-top box is a special component. . . .”), 1:35–43 (“The invention solves the above problems with a video-on-demand system that allows the viewer to use a portable computer,” which “eliminates the cost of a special television set-top box.”). We do not weigh in on this issue because it is not necessary for us to render this Decision.



regarded as limiting “when the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention.” *Catalina*, 289 F.3d at 809. The preamble has no separate limiting effect if, for example, “the preamble merely gives a descriptive name to the set of limitations in the body of the claim that completely set forth the invention.” *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1434 (Fed. Cir. 2000). The question whether we should “treat a preamble as a limitation is a determination ‘resolved only on review of the entire . . . patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.’” *Catalina Mktg.*, 289 F.3d at 808 (quoting *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989)).

Each of the independent claims recites in its preamble that it is, or is a method for operating, a “video-on-demand system.” In the body of the claims, each claim recites a control screen signal sent to a device, followed by a video control signal received from the device. The video control signal dictates which device receives the video content signals. Accordingly, each of the independent claims recites a system that is selecting video content based on a choice. The dependent claims provide further information as to the nature of the video control signal. For example, dependent claims 2–4 provide details directed to how a user can control the video content—by playing, pausing, or stopping the video content. Dependent claim 5 specifies that the control screen includes a video content selection. Other dependent claims recite similar functionality. The dependent claims make clear that the video control selection indicated by the video control signal of the independent claims is effecting the video-on-demand service. However,

with respect to the independent claims, without knowing that the system was a video-on-demand system, it may be possible to interpret that term as directed to, e.g., a channel change signal. The preambles are not merely a “descriptive name to the set of limitations in the body of the claim” because knowing that the claims are directed to a “video-on-demand” service breathes “life [and] meaning” into the claims by establishing that the video control signal is a particular type of signal used to provide the video-on-demand services. *IMS Tech.*, 206 F.3d at 1434; *Catalina*, 289 F.3d at 808. That is, the claims are not “structurally complete” without understanding that the control signal is a control signal of a video-on-demand service. *Catalina*, 289 F.3d at 809.

The specification of the ’4907 patent further clarifies what is meant by a video-on-demand system, and that such a system is different from non-video-on-demand systems. First, the patent provides a detailed description of what a video-on-demand system is. Ex. 1001, 1:12–32. This way of viewing video content is different from typical television viewing because playing the video is immediate, controllable, and only in response to a user request to view that particular content. *Id.* at 1:17–23 (instructing that, with video-on-demand, the video is played “[i]n response to the [user’s] request,” and allows the user “to immediately view the selected video content”), 1:27–30 (the user “may also view a video control menu on the television to play, stop, pause, rewind, and fast forward the video content on the television”). Understanding this distinction is critical to understanding how the preambles shape the claim.

In conclusion, having reviewed the claims and the specification of the ’4907 patent, we determine that the phrase “video-on-demand” in the

preambles is necessary to give life and meaning to the claims. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999) (“[I]f the claim preamble is ‘necessary to give life, meaning, and vitality’ to the claim, then the claim preamble should be construed as if in the balance of the claim.”). The difference between watching television and watching a video on demand is a difference in kind, rendering a video-on-demand system different from a non-video-on-demand system. While a person watching television can change channels and thus in some sense selects video content, such video content is being distributed regardless of whether the user selects it. Video-on-demand, by contrast, is distributed on demand, i.e., when the user specifically selects it. Because of that nature, the user also has control over the playback of the video content, such as pausing and stopping. Although the dependent claims more clearly demonstrate the on-demand nature of the video content (e.g., with the menu and control buttons), only the preamble in the independent claims provides the clue as to this context.<sup>5</sup> Thus, the preamble serves to provide the framework necessary to understand the body of the claims, and is limiting.

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<sup>5</sup> For example, claim 1 of the ’4907 patent states that the video content is sent to a particular device based on “a view-control selection indicated by the video control signal.” This is broadly recited in claim 1 to encompass the controls relevant to video-on-demand (claims 2 and 4: play, pause, stop, etc.; claim 5: content selection menu). But we do not read the breadth of the independent to include mere channel selection. Limiting claim 1 to a video-on-demand system provides meaningful context.

2. “control screen signal”  
“video content signal”  
(all claims)

A “control screen signal” is recited in each independent claim. This signal is sent by the processing system to the second communication system. A “video content signal” is also recited in each independent claim. This signal is sent by the processing system to either the first or second communication interface, depending on the selection indicated by the video control signal.

Petitioner asserts that both terms should be given their plain and ordinary meaning. Pet. 11, 12. Alternatively, Petitioner asserts “video control signal” should be construed as “a signal relating to the control of a video” or “a video control signal generated and processed without the involvement of a set-top box for remote control of the video-on-demand system.” *Id.* at 11. Petitioner alternatively asserts that “video content signal” should be construed as “sending video content signals” or “in response to the video control signal transferring video content signals.” *Id.* at 12. The latter alternative construction for both terms is the district court’s construction in the underlying litigation. *Id.* at 11, 12–13; *see also supra* note 4. Petitioner asserts that the differences between these constructions do not impact the outcome of this proceeding. *See id.* at 11–13.

Patent Owner asserts that all claim terms should be given their ordinary meaning, and does not propose any claim constructions. Prelim. Resp. 19.

Reviewing the position of the parties, we determine that it is necessary for purposes of this Decision to construe these claim terms. Specifically, for

the reasons that follow, we determine that a “control screen signal” is separate and distinct from a “video content signal.”

First, the independent claims have separate steps for transferring the control screen and video content signals. Likewise, the ’4907 patent’s specification is replete with instances describing the control screen as something other than video content. *See, e.g.*, Ex. 1001, 3:21–37 (noting the distinction drawn between the control screen and the menu it provides to allow the viewer to watch video content); 1:15–17 (describing various video content types), 1:48–55 (noting that the “video-on-demand system *implements* a viewer control selection indicated by the video control signal”) (emphasis added). As another example, the ’4907 patent describes the control screen as a webpage displaying a menu. *Id.* at 1:50–55, 2:45–46.

The control screen is claimed and described as separate from video content. Several dependent claims shed further light on the control screen signal (e.g., claim 2: play and stop controls are provided by the control screen signal) that are consistent with the specification’s separate treatment of controls and content. Reviewing the claims and specification, we determine that a “control screen signal” provides the user with controls that allow the user to control video content (e.g., by choosing which content to play or to control the playback of the content), whereas the “video content signals” are the actual media (movies, television shows, etc.) that are viewed by the user and controlled by the control signals.<sup>6</sup>

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<sup>6</sup> This construction is consistent with and informed by our construction of “video-on-demand” above.

### 3. *Other Claim Terms*

“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). We have construed the above terms only to the extent necessary to render our Decision, and we have determined that no further terms require construction.

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

Petitioner asserts that a person of ordinary skill in the art “would have held a bachelor’s degree in electrical engineering, computer science, or a related field with at least five years of experience or research in interactive systems applicable to digital television, including VOD for cable and Internet delivery.” Pet. 9.

Patent Owner does not offer a competing definition. Prelim. Resp. 22.

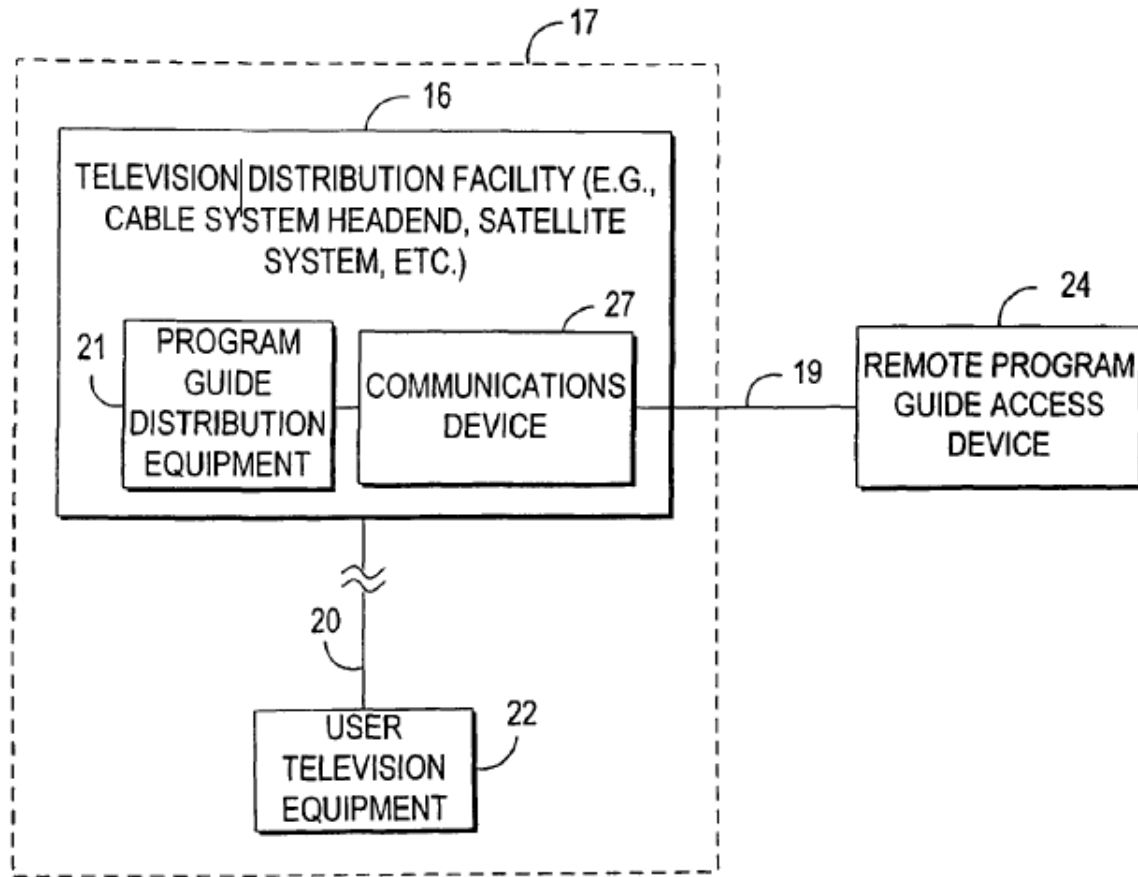
For purposes of this Decision, we find Petitioner’s proposed level of ordinary skill reasonable based upon a review of the prior art references and the ’4907 patent. We base this finding on the understanding that the prior art reference and challenged patent laid before us were written to an audience having an ordinary level of skill in the art. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1556 (Fed. Cir. 1983) (“Patents . . . are written to enable those skilled in the art to practice the invention.”). A person having Petitioner’s proposed level of skill, having significant technical expertise in the relevant field, appears to be a reasonable description of the skill level required to make and use the devices disclosed in those documents.

*C. The Ellis Anticipation Ground*

Petitioner asserts that all claims of the '4907 patent are anticipated by Ellis. Pet. 15–40. We first provide a brief overview of Ellis, then review the parties' positions, and then turn to our analysis of the ground.

1. *Ellis*

Ellis is directed to a remote interactive television program guide. Ex. 1008, 1:19–21. Television program guides allow a user to view a list of television programming, instead of having to consult printed program guides. *Id.* at 1:23–36. In Ellis, however, the program guide is available on the television as well as from a remote location. *Id.* at 2:19–28, 32–46. Figure 2b of Ellis, reproduced below, shows an illustrative arrangement for the interactive television program guide equipment and remote program access device:



**FIG. 2b**

Figure 2b of Ellis shows that both the user television equipment 22 and remote program guide access device 24 receive the program guide from interactive television distribution facility 16. Program guide distribution equipment 21 distributes the program guide data. *Id.* at 5:1–12. The program guide data is sent to user television equipment 22 over communication path 20, i.e., television channels. *Id.* at 5:9–12. The program guide data is sent to remote program guide access device 24 over remote access link 19 via communication device 27. *Id.* at 6:37–47. Remote program guide access device 24 connects via remote access link to communications device 27 of television distribution facilities 16. *Id.* at Fig.



2b.

Remote program guide access device 24 allows the user to interact with the television program guide, as well as “to access various functions of the interactive program guide (e.g., reminder information, parental control settings, favorite channel settings, user profiles, etc.).” *Id.* at 5:37–39 (describing the interactive guide), 5:55–57 (describing the other functions); *see also id.* at 12:4–55 (describing an embodiment where remote device 24 is a PC). The user using remote program guide access device 24 may also be able to order pay-per-view programs, remotely view video and audio that is being distributed to the local television program guide or that has been stored on user television equipment 22, as well as the opportunity to control television equipment 22 remotely. *Id.* at 18:59–19:19, 20:10–16.

## 2. *Petitioner’s Ground*

As to independent claim 1, Petitioner asserts that Ellis is a video-on-demand system because it transmits video data from multiple sources, and allows a user to order pay-per-view content. Pet. 15–16. Petitioner asserts that program guide distribution equipment 21 is the first communication interface, that the television signals are the video content signals, and that communication path 20 is the first communication system. *Id.* at 18–20. Petitioner asserts that program guide distribution equipment 21 and communication device 27 are collectively the second communication interface, that remote access link 19 is the second communication system, and that the program guide information is the control screen signal. *Id.* at 21–27. Lastly, Petitioner asserts that television distribution facility 16 is the processing system. *Id.* at 27–30. Petitioner asserts that independent claims

10 and 19 are unpatentable for the same or similar reasons as claim 1. *Id.* at 37, 38–40.

Patent Owner argues that Ellis does not anticipate the claimed subject matter. Prelim. Resp. 22–31. One argument is that Ellis’s program guide data is not a control screen signal. Prelim. Resp. 29–31. Patent Owner bases this argument on the premise that the display program guide information in Ellis is “not information that defines a *control screen* for a video-on-demand system.” *Id.* at 30.

### 3. *Analysis of the Ellis Anticipation Ground*

Patent Owner’s argument that Ellis does not describe a control screen signal for a video-on-demand system is persuasive because we agree that Ellis is not a video-on-demand system. As we explained in our claim construction section, a video-on-demand system is a specific type of video system that allows a user to select video content from a library, start watching the selected content at the time of the user’s choosing, and control playback of the video content. The claimed control screen signal facilitates control of *that* system.

There is no indication in the record before us that Ellis provides anything other than standard television. The program guide merely displays what content is going to be displayed at a given time. *See* Ex. 1008, 1:23–36. There is no indication in the record before us that the content in Ellis is able to be played on demand, i.e., at the time of the user chooses, and controlled by the user while that content is played. Thus, we do not find Ellis to disclose the claimed control screen signal, which is a control screen signal for a video-on-demand system. We acknowledge that Ellis allows ordering of pay-per-view programs (*id.* at 18:26–41) or stored programs (*id.*

at 25:63–26:14), but we have no evidence that suggests pay-per-view content has playback control, and we do not have evidence that playing locally recorded or stored video would have been understood to be video-on-demand.

Reviewing the Petition, we determine that the Petitioner has not sufficiently explained how Ellis describes the control screen signal of a video-on-demand system required by all of the claims.

#### *D. The Ellis-Browne Ground*

Petitioner asserts that all claims of the '4907 patent are unpatentable in view of Ellis and Browne. Pet. 40–53. We will begin with a brief overview of Browne and the positions of the parties before turning to our analysis.

##### *1. Overview of Browne*

Browne describes an audio/video recorder system that has a plurality of transmission input signals that can be stored, reconfigured, and output to various devices. Ex. 1007, code (57). Figure 1 of Browne, reproduced below, provides a schematic drawing of the system:

FIG. 1

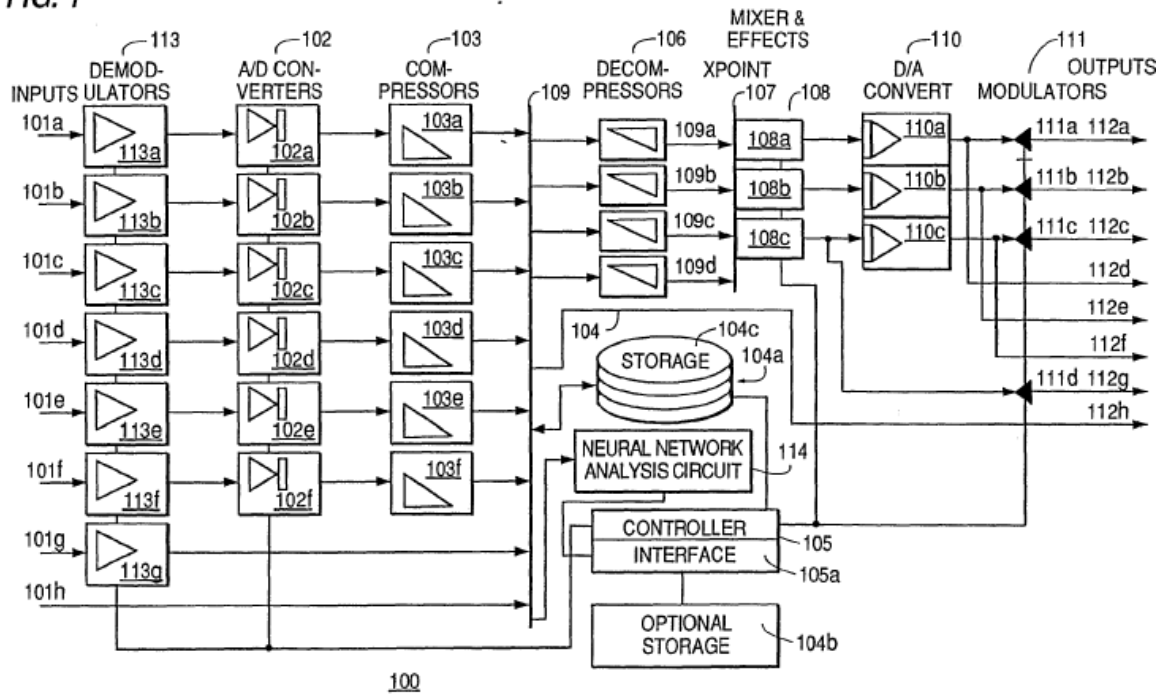


Figure 1 of Browne shows various inputs 101 connected to various signal processing elements (demodulators 113, A/D converters 102, compressors 109), storage 104c, mixer and effects components 108, and then various signal processing elements (D/A converters 110, modulators 111) to send a signal to outputs 112. Controller and interface 105 and 105a control the routing and processing of signals. Ex. 1007, 13.

## 2. The Parties' Positions

Petitioner's proposed combination is to "implement[] the video-on-demand system and remote control device of *Ellis* with the control screen and video control menus of *Browne* on the remote control of *Ellis*." Pet. 40; *id.* at 43 (asserting that a person of ordinary skill in the art "would have been motivated to combine Browne's generation and transfer of a control screen with the control screen framework already disclosed in *Ellis*"); *see also id.* at 40–45 (setting out Petitioner's rationale for combination).

With respect to the limitation requiring transferring a control screen signal to the second communication system, Petitioner directs our attention to certain features of Browne. Pet. 49–50. In particular, Petitioner asserts that the high-speed data bus (no item number) is the second communication system, controller 105 is the second communication interface, and the virtual control screen provided by the controller is the control screen signal. *Id.* at 50. According to Petitioner, the control screen may have a list of programs stored for selection and viewing. *Id.* Petitioner also asserts that digital cross point 107 is the claimed processing system. *Id.* at 51.

Patent Owner argues that Petitioner has not explained why a person of ordinary skill in the art would have combined the teachings of Browne in Ellis to arrive at the claimed invention. Prelim. Resp. 37–41. For example, Patent Owner argues that “Petitioner does not show (or attempt to show) why or how Browne’s teachings relating to [the asserted] components . . . would have been combined with Ellis,” and characterizes Petitioner’s rationale as “generic and insufficient.” *Id.* at 38–39.

### *3. Analysis for the Ellis-Browne Ground*

We agree with Patent Owner that Petitioner has failed to adequately explain why a person of ordinary skill in the art would have combined the control menu features from Browne into the system of Ellis. Reviewing the Petition, it is not clear to us what would be the specific combination of features envisioned by Petitioner to have been obvious. We understand that a proposed combination is not a physical extraction of a component described in one reference and then grafting it onto another component described in another reference. *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (“[i]t is well-established that a determination of obviousness

based on teachings from multiple references does not require an actual, physical substitution of elements”); *see also In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (“[T]he criterion [is] not whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.”). That said, the proposed combination must result in something having all of the claimed features arranged as claimed. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011) (“obviousness requires [a] showing that a person of ordinary skill . . . would have selected and combined those prior art elements . . . to yield the claimed invention) (emphasis added); *see also Orexo AB v. Actavis Elizabeth LLC*, 903 F.3d 1265, 1273 (Fed. Cir. 2018) (“The question is not whether the various references separately taught [the claimed] components . . ., but whether the prior art suggested the selection and combination achieved.”) (emphasis added). Similarly, we must have a sufficient idea of how and why the combination of teachings is applied in order to evaluate whether the changes necessary to arrive at the claimed invention would have been predictable and within the level of ordinary skill. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359 (Fed. Cir. 2016) (“one must have a motivation to combine *accompanied by a reasonable expectation of achieving what is claimed* in the patent-at-issue”) (emphasis added).

Here, we begin with the program guide of Ellis. We have determined already that Ellis is not a video-on-demand system. Setting aside the issue of whether Brown is a video-on-demand system,<sup>7</sup> Petitioner does not

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<sup>7</sup> Browne has some aspects of a video-on-demand system, in that it allows a user to select video content and to control the playback of the content, but all

sufficiently explain how the teachings of Browne are applied to the system of Ellis to make it a video-on-demand system. Petitioner’s proposed combination is to modify the “remote control device of *Ellis*,” but Petitioner has not directed us to, nor are we aware of, a remote control device in Ellis. *See* Pet. 40. Petitioner further asserts that it would be obvious to combine Browne’s generation and transfer of the control screen with the control screen framework in Ellis (*id.* at 43), but it is not clear what that means in terms of which features are being modified in or added to Ellis. Ellis already has a menu system, so there is no apparent need to incorporate any feature in Browne simply for generating a menu. To the extent Petitioner is asserting that Ellis also is modified to include functionality regarding play of recorded videos, that requires modification of not just a menu but also the infrastructure required to provide such playback features. Petitioner does not address any such modification. Each of the independent claims requires the transfer of certain signals between certain components. Without a more clear identification of the combination, we are not able to discern whether the proposed combination includes all of the claimed features in the manner arranged in the claim. Accordingly, we determine that Petitioner has not

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of the content is locally stored. *See* Pet. 42–43 (citing Ex. 1007, 13, 27); Ex. 1007, 13 (“The user of the multi-source recorder player 100 communicates with controller 105 in order to control the multi-source recorder player 100 and to retrieve data, stored as programs, in storage section 104”), 26 (“viewing a list of stored programs”). We need not resolve the issue of whether this would have been considered a video-on-demand system by person of ordinary skill in the art at the time of the invention because we can resolve the parties’ dispute by focusing on the reasons for the proposed combination.

established sufficiently a reason with rational underpinnings for combining the teachings of the references.

### *E. The Ellis-Humpleman Ground*

Petitioner asserts that all claims of the '4907 patent are unpatentable in view of Ellis and Humpleman. Pet. 53–66. We will begin with a brief overview of Humpleman and the positions of the parties before turning to our analysis.

#### *1. Overview of Humpleman*

Humpleman is directed to a system for generating a program guide for a home network. Ex. 1009, Abstract. In this system, Internet technology is used to control and command home devices connected to a home network, where each home device contains an interface (e.g., an HTML page) for commanding and controlling the device. *Id.* at 4:4–20, 6:48–64. The digital television or a personal computer provides a display that allows a user to view another HTML interface. *Id.* at 5:55–67. This latter interface is the session manager, which is hosted on a session server, which is in turn a device that contains a session manager, a display unit, various HTML files, and a browser. *Id.* at 14:5–19, 18:45–58. The session manager displays the various devices available for control. *Id.* at 14:15–19. If the user chooses to control a device, the session manager sends the command and control information to the interface of the appropriate device(s). *Id.* at 14:19–39.

#### *2. The Parties' Positions*

Petitioner asserts that “[t]he proposed combination of *Ellis* and *Humpleman* implements the video-on-demand system and remote control device of *Ellis* with the control screen in video control menus of *Humpleman*



on the remote control of *Ellis*.” Pet. 53. Petitioner largely relies on *Ellis* for the claim limitations directed to the first communication system, and Humpleman for the second communication system and processing system. *See id.* at 58–62. With respect to Humpleman, Petitioner asserts that a “control application”<sup>8</sup> associated with a home device is the claimed second communication interface, that the HTML files on the devices are the claimed control screen signals, and that the home network is the claimed second communication system. *Id.* at 59. Petitioner also asserts that the session manager is the claimed processing system. *Id.* at 61. Petitioner asserts that a person of ordinary skill in the art “would have naturally been motivated to use additional features . . . such as the control configurations taught by *Humpleman*.” *Id.* at 53.

Patent Owner argues that Petitioner offers effectively the same rationale as in the *Ellis-Browne* combination. Prelim. Resp. 42, 46–49. Specifically, Patent Owner argues that Petitioner do not explain why a person of ordinary skill in the art would have combined elements from the references in the way the claimed invention does. *Id.* at 48.

### 3. Analysis of the *Ellis-Humpleman* Ground

We agree with Patent Owner that Petitioner has not shown a reason for combining the teachings of the references. Petitioner has identified elements in Humpleman, but has not adequately explained the application of

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<sup>8</sup> The control application of Humpleman is described as handling the communication between the session manager and a home device. Ex. 1009, 19:34–45. For example, the control application of a given device is capable of storing and advertising the home device’s data specifications when queried by session manager. *Id.* at 19:62–65.

Humpleman's teachings to Ellis, or why it would have been obvious to do so. For example, Petitioner refers to the "remote control" of Ellis, but does not direct our attention to where in Ellis a remote control is disclosed. Pet. 53, 54. To the extent Petitioner is proposing to incorporate into Ellis new features and capabilities taught in Humpleman, Petitioner has not identified with sufficient clarity which features or capabilities, or what modifications would be necessary to accomplish those features in Ellis. For example, Humpleman's menu system is predicated on special devices in a home network that provide remote controllable interfaces using HTML. By contrast, Ellis's program guide is controlled centrally by program guide distribution equipment 21 located in television distribution facility 16. Ex. 1008. The issue is not just that these are in different physical locations, but that they are different in kind: one is a local network serving one individual home, whereas the other is a wide network serving many homes. They require different types of systems to provide such functionality. Without further explanation as to which teachings are being incorporated into Ellis, it is not clear to us how the references are being combined to arrive at the claimed invention.

In addition, Ellis is not a video-on-demand system, as found above, and Petitioner does not explain sufficiently how Humpleman's teachings are being applied to turn it into one. *See* Pet. 58 (relying on Ellis to disclose the video-on-demand system recited in the preamble).

For these reasons, we determine that Petitioner has not demonstrated a reasonable likelihood that it would succeed in demonstrating one or more claims to be unpatentable under the Ellis-Humpleman ground.

### III. ORDER

We determine that Petitioner has not demonstrated a reasonable likelihood that it would succeed in demonstrating that one or more claims of the '4907 patent would have been unpatentable under any of the grounds asserted in its Petition.

In view of the foregoing, it is hereby:

ORDERED that the Petition is *denied* and that we do not institute an *inter partes* review of the '4907 patent.

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Patent 6,754,907 B1

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