

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC., LG ELECTRONICS U.S.A., INC., and VIZIO, INC.
Petitioners,¹

v.

MULTIMEDIA TECHNOLOGIES PTE. LTD.,
Patent Owner.

Case IPR2024-00351
Patent 9,510,040

EXHIBIT 2011

DECLARATION OF RAJEEV SURATI

¹ VIZIO, Inc. filed a petition in IPR2024-00694 and was joined as petitioner in this proceeding.

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I. INTRODUCTION

1. My name is Dr. Rajeev Surati. I have been retained as an expert witness to provide my independent opinion in regards with matters at issue in the *inter partes* review of U.S. Pat. No. 9,510,040 (“the ’040 Patent”) in IPR2024-00351 proceeding. I have been retained by Multimedia Technologies Pte. Ltd. (“Multimedia”), the Patent Owner, in this proceeding. The Petitioner in this case is LG Electronics, Inc. and LG Electronics U.S.A., Inc. (“LG”). Vizio, Inc. (“Vizio”) is also a Petitioner due to the motion for joinder and petition filed in IPR2024-00694. General reference to the Petitioner in this declaration shall be understood to refer to LG.

2. Unless otherwise noted, the statements made herein are based on my personal knowledge, and if called to testify about this declaration, I could and would do so competently and truthfully.

3. A detailed record of my professional qualifications including cases in which I was an expert is being submitted herewith as Exhibit 2012 and is summarized in Section II, *infra*.

4. I am being compensated for my work in this matter at the rate of \$665/hour. I am also being reimbursed for reasonable and customary expenses associated with my work and testimony in this investigation. My compensation is not contingent on the outcome of this matter or the specifics of my testimony.

5. I am not a legal expert and offer no opinions on the law. However, I have been informed by counsel of the various legal standards that apply, and I have applied those standards in arriving at my conclusions.

6. In this declaration, I have been asked to address certain invalidity opinions relating to the '040 Patent, specifically those provided by LG in its Petition, Paper 1 ("Petition") challenging the '040 Patent and the accompanying declaration of Dr. Andrew Lippman, Ex. 1003 ("Lippman Decl." or "Lippman declaration"), regarding the alleged invalidity of the '040 Patent. I note that the petition filed by Vizio is a copycat petition that presents the same grounds and expert testimony. See IPR2024-00694. The Petition and Dr. Lippman argue that Claims 1-6, 11-16, and 21-22 ("Challenged Claims") are unpatentable.

7. In this expert declaration, I provide my opinions in response to the Grounds in the Petition and the Lippman declaration, as well as the basis for my opinions. As I explain in detail later in this expert report, based on my study of the '040 Patent, the Lippman declaration, and various references cited by Petitioner and Dr. Lippman, it is my opinion that the Challenged Claims are patentable over the cited references alone or in the various combinations in the Grounds.

8. I have found multiple limitations in the Challenged Claims that are not disclosed by any one of those references or a proposed combination of references. I identify those undisclosed limitations on a claim-by-claim, reference-by-reference

basis. I also identify proposed combinations of references in a Ground or proposed modifications of a reference in a Ground that fail to render claims obvious because a person of ordinary skill in the art (“POSITA”) would not have an apparent reason to combine or modify the references as proposed by the Petitioner and Dr. Lippman. That said, my decision not to address a limitation of a Challenged Claim should not be interpreted as an admission that such a limitation is found in the art in the Ground cited by Petitioner and Dr. Lippman, or that a POSITA would have an apparent reason to combine or modify references in a manner meeting the limitation.

9. I submit this declaration having reviewed the ’040 Patent, the Challenged Claims, the ’040 Patent file history, and various references cited by Petitioner in its Petition and/or in the Lippman declaration. The material I have considered includes but is not limited to the items set forth below:

PETITIONER MATERIALS CONSIDERED	
Paper 1	Petition
Paper 16	Institution Decision dtd 5/21/2024
Ex. 1002	Prosecution History of the ’040 Patent
Ex. 1003	Declaration of Dr. Lippman
Ex. 1005	U.S. Pat. Pub. No. 2012/0054794 to Kim (“Kim”)

Ex. 1006	U.S. Pat. No. 9,008,190 to Lee (“Lee-1”)
Ex. 1007	U.S. Pat. Pub. No. 2013/0057764 to Choi (“Choi”)
Ex. 1010	U.S. Pat. Pub. No. 2013/0176415 to Lee (“Lee-2”)
Ex. 1011	U.S. Pat. Pub. No. 2013/0176415 (“Kim Published Application”)

10. I have also considered materials from the following list of Patent Owner’s list of exhibits:

PATENT OWNER MATERIAL CONSIDERED	
Ex. 2010	Challenged Claims (annotated per Petition)
Ex. 2013	U.S. Pat. No. 8,863,219 (Brown)
Ex. 2014	U.S. Pat. Pub. 2011/0320476 (McRae)
Ex. 2015	Deposition Transcript of Dr. Andrew Lippman in IPR2024-00351
Ex. 2016	Kim Provisional Application 61/583,609

11. I have also considered other materials, such as web sites and text materials in doing background research on the issues presented in this IPR.

12. My opinions as set forth in this expert declaration are based on these sources of information, together with my education, training, and experience, including my work in the field of the ’040 Patent.

II. QUALIFICATIONS AND PROFESSIONAL EXPERIENCE

13. My complete qualifications and professional experience are described in my Curriculum Vitae, a copy of which is submitted as Ex. 2012. The following is a brief summary of my relevant qualifications and professional experience.

14. I have provided my full background in the curriculum vitae included here as Exhibit 2012. My CV details my experience in electrical engineering and computer science and also includes a list of publications I have authored or co-authored.

15. I attended the Massachusetts Institute of Technology (MIT) from 1988 to 1999, during which, I earned a Bachelor of Science (1992), Master of Science (1995) and a Doctor of Philosophy (1999) in Electrical Engineering and Computer Science. My Ph.D. thesis was entitled “Scalable Self-Calibrating Technology for Large Scale Displays.”

16. Between 1989-1999 I was employed as a researcher/programmer at the MIT Artificial Intelligence Lab. At the lab I worked for Thomas F. Knight Jr. Ph.D., one of the noted inventors of the first bit mapped displays for computers as well as many other notable accomplishments. The lab is also noted for its excellence in machine vision.

17. In 1996 I began working on a Ph.D. thesis related to the display of multimedia across large displays. My Ph.D. thesis system was a special kind of

display allowing one to create ultra-high resolution displays composed of multiple projectors tiled with a slight overlap so that a camera-based feedback system could create an inverse map to drive the system such that a person would only see a continuous seamless display with no bezel or overlap. The camera-based system required imaging and decoding of 2d fiducials, and thus I became an expert at machine vision for the purpose of decoding and encoding 2d fiducials such as bar codes – the optical systems involved, the systems programming, etc. Today, this technology is better known as automatic calibration for projection mapping or structured light. My experience, along with a patent I developed and licensed based on my Ph.D. thesis, were used to create a new startup company named Scalable Display Technologies that works with a variety of Pro AV display companies' products.

18. I am a named inventor on U.S. Pat. No. 6,456,339, "Super-resolution Display," which reflects my Ph.D. work.

19. In 2004, I founded Scalable Display Technologies (SDT), and I have been the President and Chairman of the company since the founding. Among its operations, SDT operates in the Audio Video domain and has licensed software and firmware to various companies including Hitachi and NEC. I also wrote a network-synchronized media playback system involving encoding and decoding of video and audio content as well as real time recording and video capture, a product known as

“ScalablePlayer.” This product was written on top of the DirectShow system from Microsoft. In conjunction with this, for some show demonstration systems, I wrote a desktop application in C# that allowed one to preview and select different inputs and outputs.

20. Additionally, at SDT I have worked with most of the major video wall control manufacturers on customizing their systems to work with large display walls using overlapping projectors. These include Jupiter Systems, RGB Spectrum Matrox, and Datapath. In addition, I helped architect and specify some special video wall GPU functions for both AMD and NVIDIA.

21. I have received additional patents, including: U.S. Pat. No. 8,817,111, “System and method of calibrating a display system free of variation in system input resolution”; U.S. Pat. No. 8,994,757, “System and method for providing improved display quality by display adjustment and image processing using optical feedback”; U.S. Pat. No. 9,215,455, “System and method of calibrating a display system free of variation in system input resolution”; U.S. Pat. No. 9,369,683, “System and method for calibrating a display system using manual and semi-manual techniques”; and U.S. Pat. No. 9,497,447, “System and method for color and intensity calibrating of a display system for practical usage.”

22. In 2000, I started a company known as “photo.net” which was a large online photography community where I worked with many consumer electronics

manufacturers in the digital camera business. There, I implemented a photo sharing system involving the delivery of multimedia content. Additionally, I worked on e-commerce capabilities that involved some product configuration options. In running photo.net I became intimately familiar with implementing file systems for use with multimedia and super high performance image encoding/decoding systems as well as real time delivery of high bandwidth content.

23. In 1996, I founded Flash Communications, which was focused on technology related to U.S. Pat. No. 5,943,478 and associated technology that I had developed related to pop-up two-way messaging over the Internet. I am one of the named co-inventors of U.S. Pat. No. 5,943,478, which is entitled “System for Popup Messaging over the Internet,” which describes a two-way messaging system like AOL Instant Messenger and MIT’s Zephyr service built at Internet scale.

24. In 1998, Flash Communications was sold to Microsoft Corporation, and Flash Communications’ messaging technology was incorporated into Microsoft’s Messenger service and Microsoft Exchange 2000 Instant Messaging Server.

25. While working at Microsoft between 1999 and 2000, I implemented an XML-based protocol that formed a basis for the Extensible Messaging and Presence Protocol (XMPP), which is now an IETF standard for the Exchange Instant Messaging Server. I participated internally with the program management team on helping specify this protocol for the IETF standardization process.

26. Also while at Microsoft, I invented and was named as an inventor on other patents related to instant messaging, including: U.S. Pat. No. 6,415,318, “Inter-enterprise messaging system using bridgehead servers”; U.S. Pat. No. 6,604,133, “Inter-enterprise messaging system using bridgehead servers”; and U.S. Pat. No. 6,260,148, “Methods and systems for message forwarding and property notifications using electronic subscriptions.”

27. Between 2000 and 2004, I worked as a consultant and investor at Nexaweb Corporation, where I helped implement several two-way messaging features over HTTP.

28. I am on the advisory boards of several technology companies, including UnifySquare, which is a unified communications/real time collaboration consultancy; Paneve, which develops general purpose ASICs coupled with compiler technology; Nexaweb, which develops real time web application frameworks using HTTPS; Antix Labs, which develops compiler technology for universal gaming platform; and Permabit, which develops content addressable storage.

29. For my contributions as an inventor and entrepreneur, I have received several awards, including the Global Indus Technovator Award 2009 and Laureate of 2009 Computer World Honors Program.

III. RELEVANT LEGAL STANDARDS

A. Burden of Proof

30. I understand that LG has the burden of proving unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). Preponderance of the evidence “means the greater weight of evidence, evidence which is more convincing than the evidence which is offered in opposition to it.” *Hale v. Dep’t of Transp.*, 772 F.2d 882, 885 (Fed. Cir. 1985).

B. Obviousness (35 U.S.C. § 103)

31. I also understand that a patent may be rendered “obvious” based on an alleged prior art reference or a combination of such references in view of what a person of ordinary skill in the art would understand based on his or her knowledge and the references. I understand that a patent cannot be properly granted for subject matter that would have been obvious to a person of ordinary skill in the art at the time of the alleged invention, and that a patent claim directed to such obvious subject matter is invalid under 35 U.S.C. § 103. It is also my understanding that in assessing the obviousness of claimed subject matter one should evaluate obviousness over the prior art from the perspective of one of ordinary skill in the art at the time the invention was made (and not from the perspective of either a layman or a genius in that art).

32. I have been informed that the following factors must be evaluated to determine whether the Petitioner has met its burden of proof that a claimed invention is obvious:

1. The scope and content of the prior art relied upon by Petitioner;
2. The difference or differences, if any, between each claim of the patent and the prior art;
3. The level of ordinary skill in the art at the time the invention of the patent was made; and
4. Any objective indicia of non-obviousness, such as: (1) commercial success of an embodiment; (2) a long-felt need; (3) skepticism; (4) failure by others to find the solution provided by the claimed invention; (5) copying by others of the subject matter of the claim invention; (6) unexpected results of the claimed invention; (7) acceptance of others and industry praise; and (8) licensing of the patents.

33. I have been informed that to prevail on obviousness the Petitioner must establish that (1) the prior art teaches or suggests each of the limitations of the claim; (2) there exists an apparent reason to combine and/or modify the prior art as proposed; and (3) a person of ordinary skill would have a reasonable expectation of success that the proposed combination and/or modification of the prior art would operate for its intended purpose.

34. I have been informed that a claim is not proved obvious merely by demonstrating that each of the elements was independently known in the prior art. I have been informed that many, if not all, inventions rely on building blocks already known, and claimed inventions almost of necessity will likely be combinations of what is already known.

35. I have been informed that it is important in the obviousness inquiry to identify whether a POSITA at the time of the invention would have motivation to combine or modify the prior art references in the manner proposed by the Petitioner so as to arrive at the claimed invention. Put another way, a finding of obviousness should be supported by an apparent reason to combine or modify the prior art references as proposed by the Petitioner.

36. I have been informed that it is important in the obviousness inquiry that it is understood how the references are combined, including how the combination of references is supposed to work. An explanation of the operation of the combined references is often a prerequisite to determining whether a POSITA would have been motivated or had a reason to make the proposed combination/modification and would have had a reasonable expectation of success.

37. In assessing obviousness, I have been instructed to consider both the ordinary creativity and common sense of the person of ordinary skill in the art. I also understand that it is normally impermissible for common sense or common

knowledge to be applied to fill gaps in prior art that fails to teach or suggest a limitation of the claim. I also understand that the obviousness inquiry should guard against hindsight bias or hindsight reconstruction where after-the-fact reasoning is applied to combine prior art elements using the claim as a template, without establishing that, as of the date of the invention, there exists a motivation to combine or apparent reason to combine or modify the prior art as proposed.

38. In assessing obviousness, I have been instructed that, in order to qualify as proper prior art for an obviousness analysis, a reference must qualify as analogous art. I have been informed that a reference qualifies as analogous art with respect to the claims if it is either: (1) from the same field or endeavor as the patent; or (2) the reference is reasonably pertinent to the particular problem addressed by the invention. I have also been informed that for a reference to be reasonably pertinent, it must logically have commended itself during the ordinary course of development to an inventor's attention in considering the problem.

39. In assessing obviousness, I have also been instructed that, as noted above, secondary considerations can often be probative evidence of non-obviousness and can serve to avoid hindsight bias. I have been instructed that secondary considerations can be sufficient to overcome a prima facie case of obviousness.

IV. LEVEL OF ORDINARY SKILL IN THE ART AND PRIORITY DATE

40. My opinions in this declaration are based on the understandings of a person of ordinary skill in the art, which I understand is sometimes referred to as an “ordinary artisan” or by the acronym “POSITA” (Person of Ordinary Skill in the Art), as of the time of the invention. For purposes of this Declaration, I have been instructed to use August 17, 2012, as the time of invention (priority date), which I understand is the date that the Petitioner is using. See Ex. 1003 [Lippman Decl.], ¶ 19.

41. I understand that the person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. By “relevant,” I mean relevant to the Challenged Claims of the ’040 Patent.

42. I understand that, in assessing the level of skill of a person of ordinary skill in the art, one should consider the type of problems encountered in the art, the prior solutions to those problems found in the prior art, the rapidity with which innovations are made, the sophistication of the technology, the level of education of active workers in the field, and my own experience working with those of skill in the art at the time of the invention.

43. In this case, Dr. Lippman has asserted in his declaration that a person of ordinary skill in the art as of the time of the ’040 Patent “would have had a bachelor’s degree in Electrical Engineering, Software Engineering, or Computer

Engineering, or equivalent training, and approximately two years of experience working in the field of television systems and networking, human-computer interaction, or related technologies.” Ex. 1003 [Lippman Decl.], ¶ 19.

44. I believe that Dr. Lippman’s definition of the POSITA is reasonable and I have applied it in my analysis. I was at the time of invention, and am currently, one of more than ordinary skill in the art through my education, research, and work experience. As of the date of the invention, I am very familiar with the types of problems encountered in the field. Indeed, I am very familiar with people having this level of skill in the area of user interfaces in the field of television systems and networking and human-computer interaction.

V. THE ’040 PATENT

45. The Petition challenges Claims 1-6, 11-16, and 21-22 of the ’040 Patent as obvious based on two grounds:

- Ground 1 challenging Claims 1-5, 11-15, and 21 (relying on Kim, Lee-1, and Choi),
- Ground 2 challenging Claims 2-3, 6, 12-13, 16, and 22 (relying on Kim, Lee-1, Choi, and Lee-2).

See Pet., 10.

A. Overview of the '040 Patent

46. The '040 Patent is related to methods and systems for displaying content on a television. In the art, the trend of consolidation and convergence led to so-called Smart TVs, Intelligent TVs, and other enhanced TVs (hereinafter, “Smart TV” or “enhanced television”) providing multiple functions and access to different sources of content including Internet content and broadcast television content:

As such, consolidating home devices leads to integrating features and functionality into the television. The emergence of the Smart Television (Smart TV) is evidence of the trend to consolidate functionality into the television. A Smart TV is generally conceived as a device that integrates access to the Internet and Web 2.0 features into television sets. The Smart TV represents the trend of technological convergence between computers and television sets. The Smart TV generally focuses on online interactive media, Internet TV, on-demand streaming media ... traditional broadcast media.

'040 Patent, 2:11-21.

47. Regarding Smart TVs and other enhanced TVs, the '040 Patent explains that there was a need for an improved user interface that would provide for improved navigation to content and features:

Unfortunately, most Smart TVs have yet to provide seamless and intuitive user interfaces for navigating and/or executing the various features of the Smart TV. As such, there are still issues with the consolidation of features and the presentation of these features in Smart TVs. There is a need for an Intelligent TV with intuitive user

interfaces and with seamless user interaction capability.

'040 Patent, 2:24-31.

48. The '040 Patent generally describes the use of multi-panel user interfaces having a plurality of panels enabling, for example, a user to view content in one panel and view other content and/or functions (e.g., sources of content) in other panels. '040 Patent, 3:3-16. The '040 Patent states the following regarding panels:

The term 'panel,' as used herein, can mean a user interface displayed in at least a portion of the display. The panel may be interactive (e.g., accepts user input) or informational (e.g., does not accept user input). ... Panels may be provided in response to a user input from a button or remote control interface.

'040 Patent, 6:30-37.

49. The '040 Patent describes exemplary software for an enhanced television, including a "live TV application 452, a video on demand application 456, a media center application 460, an application center application 464, and a user interface application 468." '040 Patent, 20:15-19, Fig. 4. The Live TV application, VOD application, media center application, and application center application represent different sources of content.

Remote Control

50. The '040 Patent discloses an exemplary remote control device 700. '040 Patent, Fig. 7. The exemplary remote control device 700 includes various

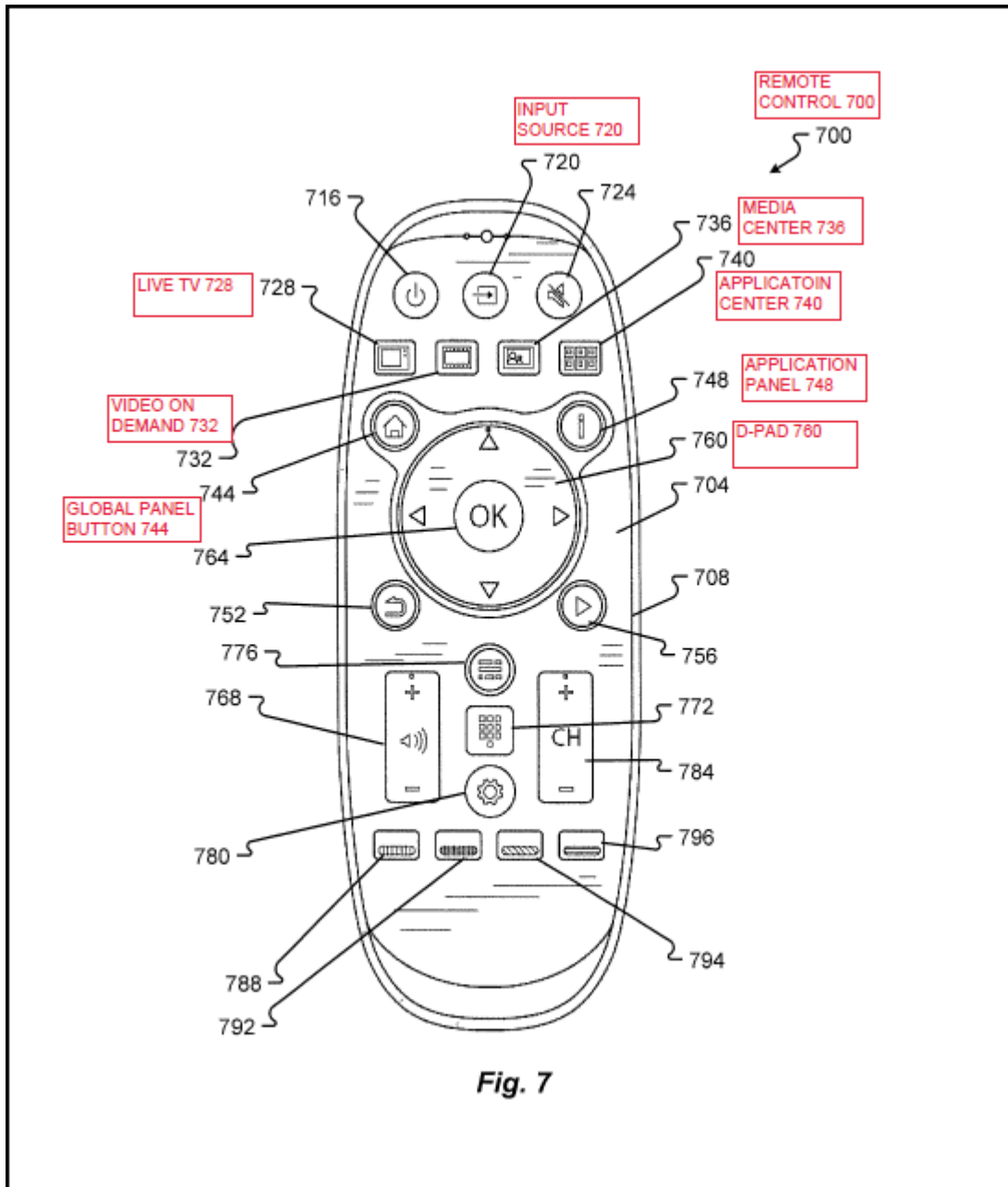
buttons, such as an “input source button” to select input sources such as Live TV, VOD, media center, application center, and various electrical connection ports. ’040 Patent, 23:58-63 (“an input source button 720 (to select input source such as Live TV, video on demand, media center, application center, high definition multimedia interface or HDMI, component or COMP, audio/Video or A/V, digital or analog television or DTV/ATV, and video graphics array (VGA))”).

51. In addition to the input source button, the exemplary remote control also includes a global TV button, a Live TV button, a VOD button, a media center button, an application center button, and an application panel center button, among others. ’040 Patent, 23:63-24:4, Fig. 7. The ’040 patent describes the remote control with the various buttons:

The remote control 700 can include one or more of ... a Live TV button 728 (to activate or select the Live TV silo), a video on demand (VOD) button 732 (to activate or select the video on demand silo), a media center button 736 (to activate or select the media center application or silo, which access various types of media such as music, TV programming, videos, and the like), an application center button 740 (to activate or select the application center application or silo), a global panel button 744, an application panel button 748 ...

’040 Patent, 23:55-24:4, Fig. 7.

52. The exemplary remote control is depicted in Figure 7:



'040 Patent, Fig. 7 (annotated).

Settings

53. One user interface is a “settings panel” which can provide information on the operational settings of the Intelligent TV including audio settings, video

settings, network settings, and system settings (language, geography). '040 Patent, 21:39-41, 24:22-51.

Media Center

54. The media center button “can provide information regarding music, videos, photographs, collections or groupings of music, videos, and/or photographs, and internal and external computational devices (such as personal computers, laptops, tablet computers, wireless phones, removable computer readable media, and the like), which can be grouped in a selected manner (such as favorites, most recently viewed, most watched or viewed, and most recently added). '040 Patent, 24:66-25:7.

Application Center

55. The application center button “may provide information regarding pre-installed and downloaded applications.” '040 Patent, 25:11-13. The '040 Patent states:

Unlike downloaded applications, pre-installed applications cannot be removed by the user or manually updated. Exemplary pre-installed applications include web browser, settings control, and content search algorithms. By way of illustration, the application center button 740 can provide a scrollable graphical grid of icons (each icon being associated with an application) currently available in the application center.

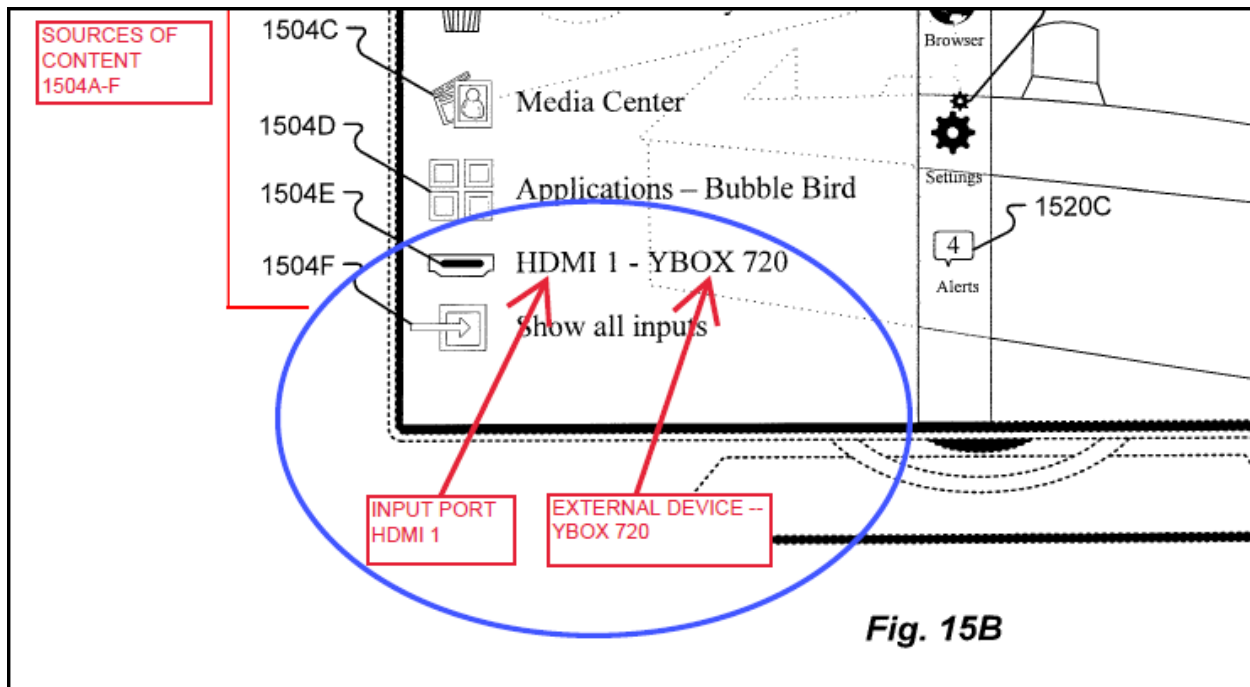
'040 Patent, 25:13-20.

Electrical input ports

56. The “input source button” in the exemplary remote control can select input sources including various electrical connection ports. ’040 Patent, 23:58-63 (“an input source button 720 (to select input source such as ... high definition multimedia interface or HDMI, component or COMP, audio/Video or A/V, digital or analog television or DTV/ATV, and video graphics array (VGA))”). The ’040 Patent discloses that the television may be connected to external devices (e.g., DVD players, tablets, PCs, game controllers, etc.) through input ports electrically connected to the television such as USB ports, HDMI ports, A/V ports, and so forth. ’040 Patent, 14:1-14, 16:8-21, 17:51-58, Fig. 1B, Fig. 2C.

57. The television system can also “determine which inputs (e.g., HDMI ports) are currently available for connecting to external devices.” ’040 Patent, 25:29-31. Electrical input ports may be displayed with indicia that indicate whether they are connected or not connected. ’040 Patent, 32:44-53 (“... connected/detected or unconnected/undetected ...”), 33:8-17 (“... the HDMI 3 should still be shown on the list, but with an unconnected/undetected state to indicate there is no device connected.”).

58. Figure 15B of the ’040 Patent discloses a global panel 1404 user interface having a list of content sources including 1504E identifying a specific input port HDM1 (**blue**) electrically connected to the YBOX 720 device:



'040 Patent, Fig. 15B (excerpted; annotated); 33:14-16.

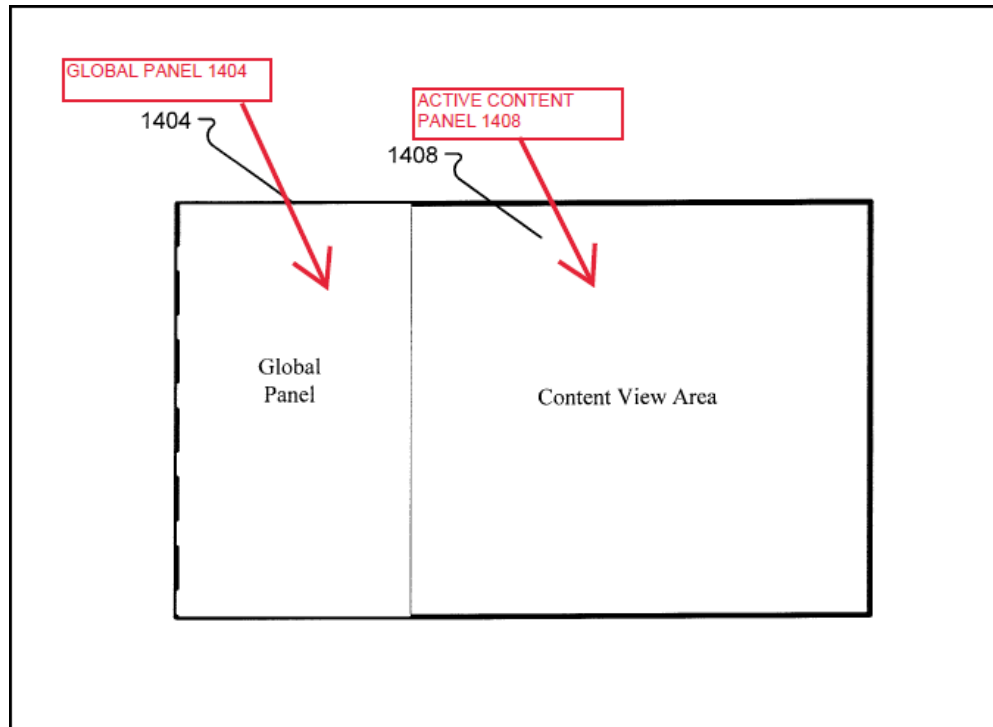
Global Panel

59. The '040 Patent discloses a “global panel” that “may include information that is associated with the home screen or top level hierarchal information for the user.” '040 Patent, 21:35-37, 29:35-37, 29:58-59 (“Therefore, the global panel 1404 may also be thought of as a home panel.”).

60. The global panel can provide information regarding what content is available from a plurality of sources of content including a live television source, a video on demand source, a media center source, an applications source, and electrical input ports of the television. '040 Patent, 25:33-35 (“determine what content is currently being offered on Live TV, on demand, the media center, and/or

the application center”), 25:26-29 (“determine what external devices are currently connected to and/or disconnected from the Intelligent TV”).

61. Figure 15A of the ’040 Patent provides an exemplary user interface with a global panel 1404 adjacent to an active content panel 1408:



’040 Patent, Fig. 15A (annotated), 29:60-30:5.

62. The ’040 Patent explains that the global panel may provide functionality separate from the content being displayed in the active content panel 1408:

For instance, global panel 1404 may be used to contain and access functionality that exists at a system level; this functionality may be completely independent of the currently viewed content. The global panel 1404 may be displayed in such a manner as to not disrupt the

content view area 1404; that is, the global panel 1404 may be displayed in such a manner as to provide a user the ability to view content displayed in the content view area 1408. ... The global panel 1404 may provide a consistent access to high level actions across all applications, an anchor for all views, a unified experience ... Moreover, and as previously discussed, global panel 1404 may be displayed by the intelligent TV 100 such that the active content in the content view area 1408 is always in view.

'040 Patent, 29:38-55.

63. Figure 15B illustrates an embodiment of a user interface with an exemplary global panel 1404 and active content area 1408. The global panel 1404 includes graphic objects representing a list of different content sources 1504A-1504F. As reflected by the indicator 1512 around the source/program “Live TV-801– CNXN”, the content sources can be selected (made “in-focus” using the indicator box) by the user:

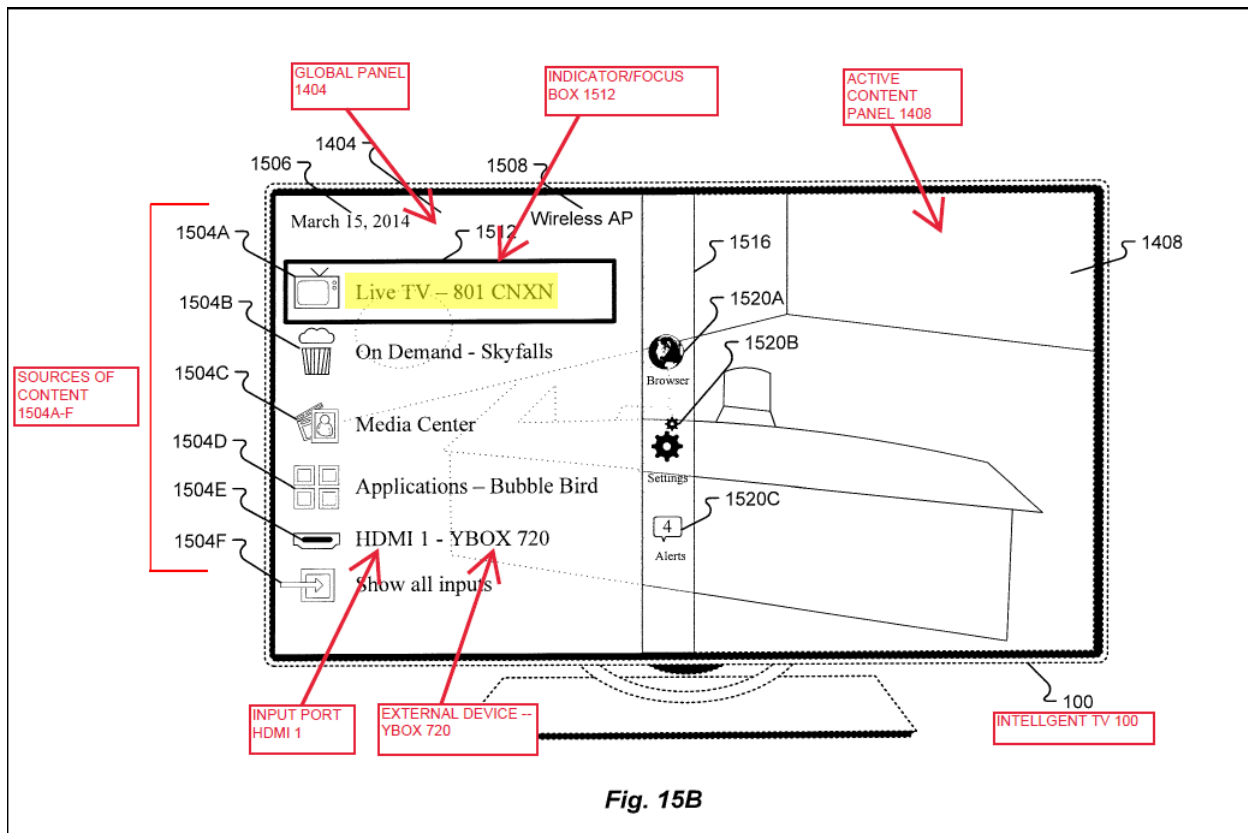


Fig. 15B

'040 Patent, Fig. 15B (annotated, highlighted).

64. The '040 Patent discloses that the sources of content 1504A-F may include Live TV, Video On Demand, Media Center, Applications, and electrical inputs for input ports (e.g., HDMI 1 and YBOX 720 in Figure 15B):

The global panel 1404 may include one or more sources represented by icons and text, or shortcuts, 1504A-E. ... As previously discussed, each icon and text 1504A-E may be associated with one or more sources of content. For example, icon and text 1504A may be associated with Live TV application 452; icon and text 1504B may be associated with video on demand 456; icon and text 1504C may be associated with media center application 460; icon and text 1504D may be associated with application center application 464; and icon and text 1504E may be

associated with one or more sources of content, either internal or external.

'040 Patent, 30:27-39, Fig. 15B.

65. The '040 Patent discloses that a content source may be selected (e.g., made in-focus) using an indicator box or other indicia to highlight the selected object:

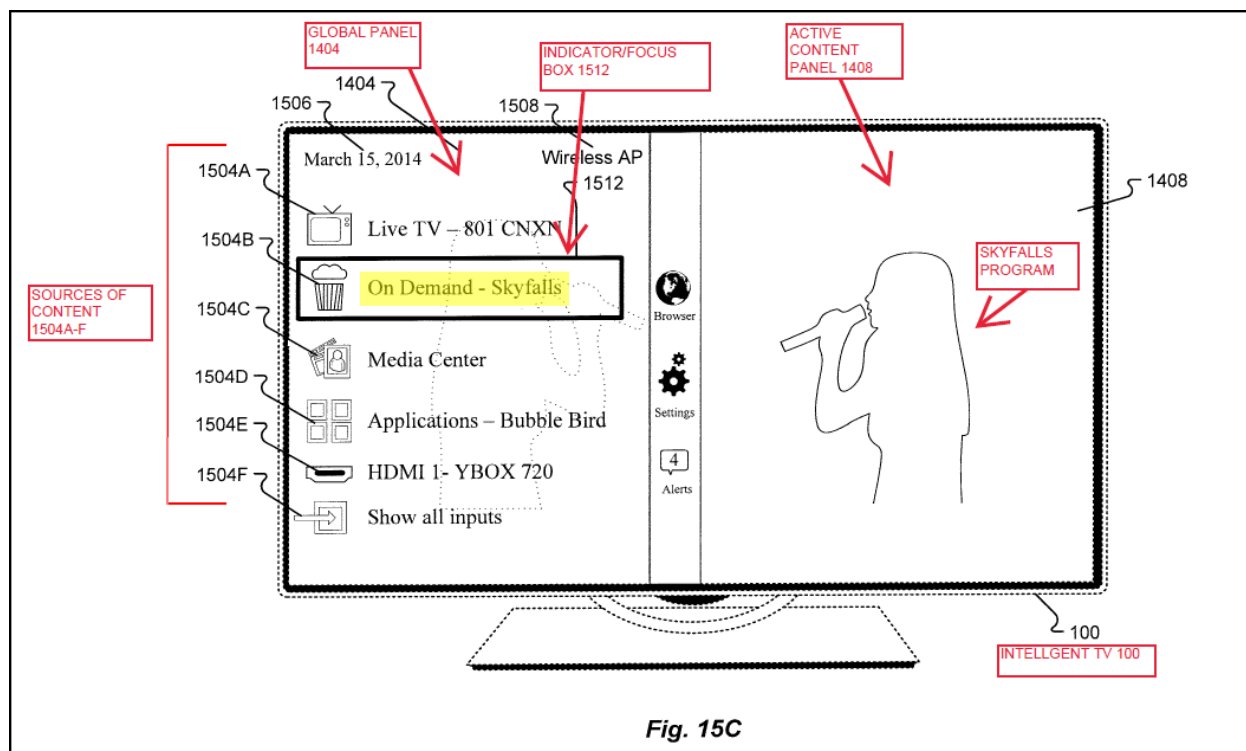
Global panel 1404 may additionally indicate a source that is selected or highlight[ed] using indicator 1512; for example, indicator 1512 may comprise a box positioned around Live TV-801 CNXN. Although illustrated as a box, other methods or configurations which provide for icon selection and/or identification may be used.

'040 Patent, 30:41-46, 32:29-59 ("focus box" for an object the user has selected), 35:19-20 ("Upon using the remote control 700 to move the focus to the 'Get Started' icon or button"), Fig. 15B, Fig. 16.

66. The '040 Patent explains that the sources of content may identify programs or applications that were previously accessed or displayed but that are now in an inactive state. '040 Patent, 30:65-31:17 (the content source indicators "may display the previously active content, or content that was previously displayed in active area 1408, at one time, but is now currently is in a hold, inactive, or paused state."). In Figure 15B, these inactive source-programs are indicated as On Demand-Skyfalls 1504B, Media Center 1504C, Applications-bubble Bird 1504D, and HDMI 1-YBOX 720 1504E. '040 Patent, Fig. 15B.

67. The listed sources of content in the global panel may also indicate a content source that is active because, for example, source 1504A (“Live TV-801 CNXN”) is selected and the associated content is being displayed in the active content area 1408. “For example, active content area 1408 ... is currently displaying a Live TV view (specifically 801 CNXN).” ’040 Patent, 30:65-67, Fig. 15B.

68. A different content source in global panel 1404 can be selected to cause another program to be presented in active content area 1408. For example, the ’040 Patent illustrates in Figure 15C that the user has selected a new content source, “On Demand-Skyfalls 1504B,” which results in the focus changing to that source-program in the global panel 1404 and the program Skyfalls being presented in active content panel 1408. ’040 Patent, Fig. 15C. The ’040 Patent states: “[A]s the indicator 1512 is moved to a different source, the content or a preview of the content may be displayed in active content area 1408 . . . FIG. 15C illustrates an image or video associated with Skyfalls being displayed in content area 1408.” ’040 Patent, 32:9-14. Figure 15C illustrates that the focus in the global panel has changed to the source 1504B because the program Skyfalls is displayed in the active content area:



'040 Patent, Fig. 15C (annotated).

Exemplary Operation of the Global Panel

69. The '040 Patent describes an exemplary method for displaying content on a television including information in a global panel. See '040 Patent, 36:27-37:13, Fig. 21. First, the user may provide a first input using a remote control requesting a global panel. Second, if the first input is associated with a global panel, the user or a user profile is identified for the user. Third, the Intelligent Television retrieves content information and displays it in the global panel. Fourth, the user may provide “additional focus information” by providing a second input selecting an object from the global panel, such as a content source 1504A-1504E as previously described in connection with Figures 15B-15C. Fifth, based on the user’s selection of the object,

an associated application is selected to cause content to be displayed in the active content area, as discussed previously for Figures 15B-15C.

70. The '040 Patent discloses the exemplary method for displaying content on a display including a global panel as follows:

Method 2100 is initiated at step 2104. Step 2104 may start with an intelligent television 100 receiving input from a remote or channel changer associated with a user. Based on the remote or channel changer input, the step 2104 may flow to step 2108, where the input received is analyzed. At step 2312, if it is determined that the analyzed communication is associated with displaying a global panel, such as panel 1404, then method 2100 proceeds to step 2116 where the user, or a user profile associated with the user is identified. Because the content information is not specific to the content displayed in the active content area 1408, once the user or user profile associated with a user has been identified, the method then proceeds to step 2120 to retrieve content information to display in the global panel 1404. At step 2124 the retrieved content is then displayed in the global pane 1404. At step 2128 additional focus information indicating a specific icon and text ... corresponding to icon and text 1504A-F may be received from a user. The specific icon and/or text with focus information may then be used to identify a specific application to select such that content is displayed in the active content area [1408] at step 2132.

'040 Patent, 36:41-65, Fig. 21.

71. Figure 21 illustrates the steps in the exemplary method described above:

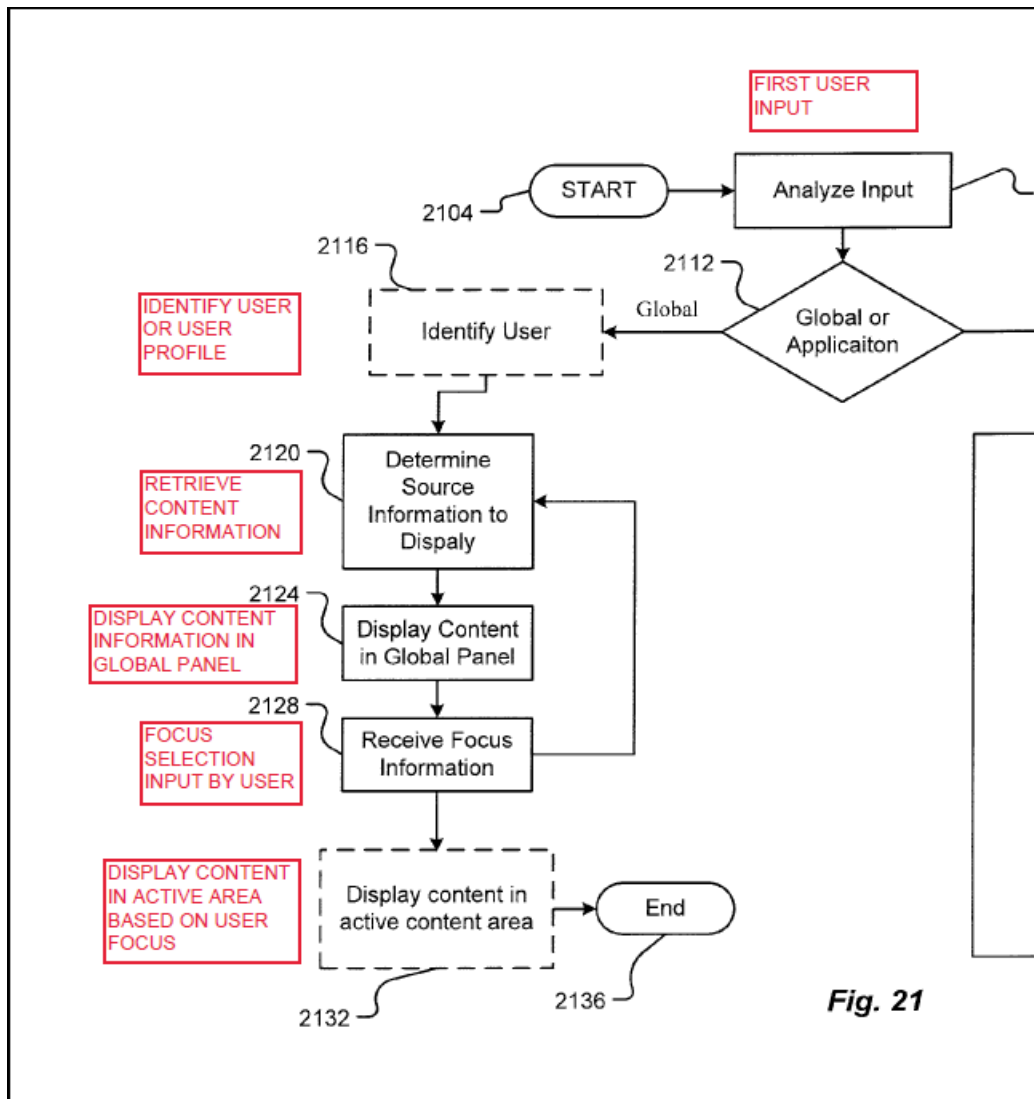


Fig. 21

'040 Patent, Fig. 21 (excerpted and annotated).

B. The Claimed Invention

72. According to independent Claim 1, the invention provides a method for displaying content on a television, including [1.1] receiving an indication of a selection from a user; [1.2] determining based on the received indication a global panel to display on the television; [1.3] retrieving from memory first content information for display in the global panel; [1.4] displaying the retrieved first content

information in the global panel; [1.5], [1.7] wherein the global panel includes a list of sources of content including [i] a live television source, [ii] a video on demand source, [iii] a media center source, [iv] an applications source, and [v] and electrical input associated with the television; and [1.6] “wherein at least one of the sources is highlighted as being associated with the first content information” that is retrieved and displayed in the global panel based on the user’s selection. ’040 Patent, 39:58-40:7 (Cl. 1).²

VI. CLAIM CONSTRUCTION

73. I understand that claims of the patent-at-issue in this IPR are generally interpreted according to their ordinary and customary meaning in the art taking into consideration the so-called “intrinsic evidence” of the patent consisting of (1) the claim language; (2) the specification; and (3) the prosecution history.

74. I understand that claim terms may be explicitly defined in the patent specification, or they may be implicitly defined through consistent usage in the specification. I also understand that the scope of claim terms may be limited by statements in the specification or prosecution history where the applicant clearly

² Patent Owner has numbered the limitations consistent with the numbering provided in the Petition.

disavows or disclaims subject matter, acts as his/her own lexicographer or otherwise indicates the meaning of claim terms through statements made by the applicant.

75. I understand that for purposes of the institution stage the Board found there was no need to provide express constructions of any claim terms. Instn. Dec., Paper 9, 12-13.

76. I have applied the ordinary and customary meaning of the claim terms in the context of the '040 Patent in establishing the patentability of the claims. This includes the ordinary and customary meaning of “electrical input associated with the television” in limitation 1.7 and “settings associated with the identified user” in limitation 2.2, discussed below in Section IX.

VII. SUMMARY OF THE PRINCIPAL APPLIED REFERENCES

A. Kim (Ex. 1005)

77. Kim, entitled “Image Display Apparatus System and Method for Operating the Same,” generally discloses an image display apparatus (e.g., television) having a user interface in the form of a “home screen” having a series of graphical “card objects” (windows) representing different “source[s] or type[s]” of content. Kim, [0193], [0194] (“card object may be a window having a predetermined configuration”). The home screen may be displayed as a default user interface or upon the user selecting a home key or providing a “go-to-home” input on the remote control device. Kim, [0192], [0094].

Home Screen and Card Objects

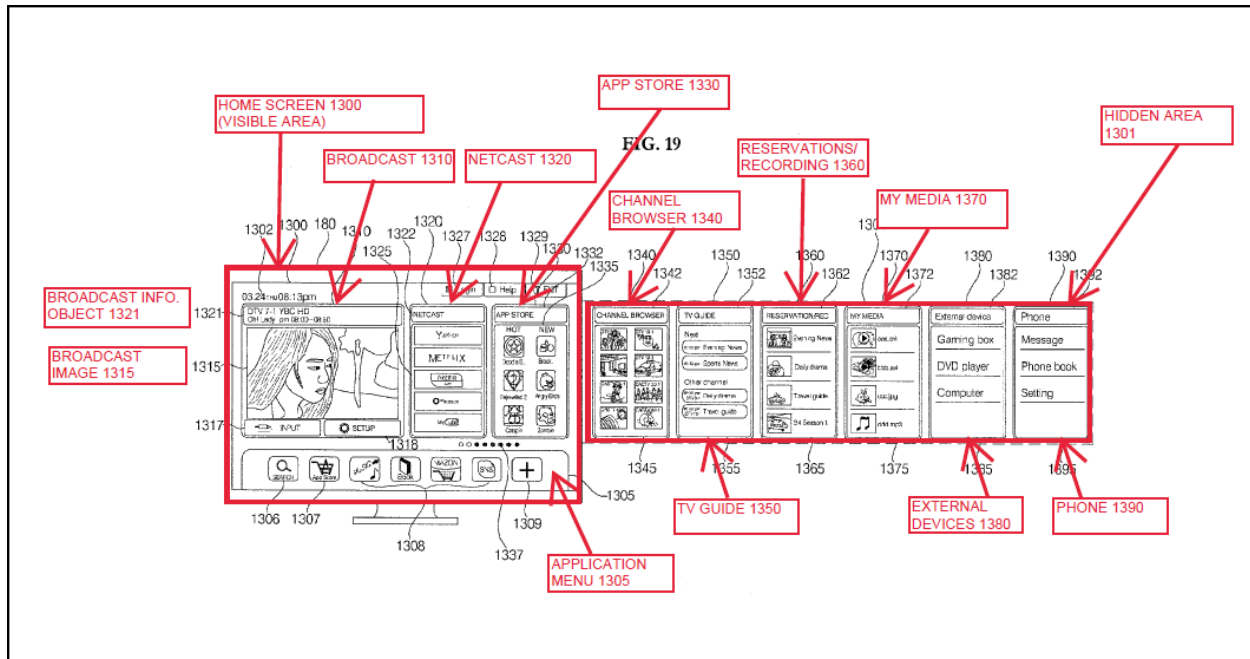
78. As illustrated in Figure 19, the home screen 1300 includes the:

- (1) Broadcast card object 1310 for broadcast content including a broadcast image display area 1315 depicting broadcast content that is currently-tuned and an information object 1321 about the currently-tuned broadcast content;
- (2) Netcast card object 1320 with thumbnails for various internet sources of content (“content providers” or “CPs”);
- (3) App Store card object 1330 including text and thumbnails for a list of software applications available for downloading;
- (4) Channel Browser card object 1340 with thumbnails representing different broadcast channels;
- (5) TV Guide card object 1350 with descriptive text for a program list of available programs;
- (6) Reservations/recording card object 1360 with text and thumbnails for a program list of programs recorded or to be recorded;
- (7) My Media card object 1370 with text and thumbnails for available multimedia files such as videos, photographs, and the like;
- (8) External Device card object 1380 with text identifying external devices connected to the television; and a

(9) Phone card object 1390 with text identifying information associated with a phone device such as a mobile phone.

'040 Patent, [0193]-[0215].

79. Figure 19 below depicts the home screen of Kim:



Kim, Fig. 19 (annotated).

80. Kim discloses a plurality of card objects in the home screen, including:

The card objects may include at least one card object representing a thumbnail list of broadcast channels, a card object representing a broadcast program guide, a card object representing a program reservation list or a program recording list, or a card object representing a media list of a device connected to the image display apparatus 100. The card objects may further include at least one of a card object representing a list of connected external devices or a card object

representing a call-associated list. The home screen may further include an application menu with at least one application that can be executed.

Kim, [0094].

81. Kim describes that card objects and other objects and icons on the home screen may be selected, meaning that the focus is changed to “focus-on” the selected object or icon. Kim, [0247]. The user selection of a card object on the home screen results in the card object being displayed full-screen. Kim, [0098] (“Moreover, if one of the card objects displayed on the display 180 is selected, the controller 170 may display the selected card object as a full screen image to cover the entirety of the display 180.”).

82. Kim describes the various card objects as follows:

Referring again to FIG. 19, the card object 1310 may be named BROADCAST and may display a broadcast image. The card object 1320 may be named NETCAST and may provide a list of CPs, e.g., a list of CPs available through NetCast. The card object 1330, which may be named APP STORE, may provide a list of applications.

The hidden card objects, as shown in FIG. 19, may include a CHANNEL BROWSER card object 1340 which may provide a thumbnail list of broadcast channels, a TV GUIDE card object 1350 which may provide a program list, a RESERVATION/REC card object 1360 which may provide a reserved or recorded program list, a MY MEDIA card object 1370 which may provide a list of multimedia files which are available on the image display apparatus 100 or on a device connected to the image display apparatus 100, an EXTERNAL

DEVICE card object 1380 which may provide a list of external devices which may be connected to the image display apparatus 100, and a PHONE card object 1390 which may provide a list of call-related items. Kim, [0195]-[0196].

83. Kim describes more specifically that the “BROADCAST card object 1310 may display a broadcast image 1315 received through the tuner 110 or the network interface 130, an information object 1321 that displays information about the broadcast image 1315.” Kim, [0197]. The broadcast image 1315 is fixed insofar “broadcast image 1315 may be viewed while the other displayed card objects ... may be scrolled.” Kim, [0197]. The information object 1321 presents information about the currently-viewed program on broadcast image 1315, such as a channel number, program name, and airtime. Kim, [0199].

84. Kim describes more specifically that “[t]he [Netcast] card object 1320 may contain a card object name 1322 (NETCAST) and a CP list 1325 that displays a list of CPs ... [such as] Yakoo, Metflix, ... and Mytube.” Kim, [0201]. As with the other card objects, Kim discloses that user selection of the Netcast object 1320 will result in it being displayed in full-screen mode. Kim, [0201] (“Upon selection of the card object name 1322, the card object 1320 may be displayed as a full screen image on the display 180.”).

85. Kim describes more specifically that “[t]he [App Store] card object 1330 may include a card object name 1332 [] and an application list 1335 ... [that]

may display a plurality of icons representing applications available on a server, for example, for download or purchase.” Kim, [0202]. “Upon selection of an application icon from the application list 1335, information related to the selected application may be displayed on the display 180.” Kim, [0202].

86. Kim describes more specifically that the “[Channel Browser] card object 1340 may represent a list of broadcast channels [and] may include a card object name 1342 (CHANNEL BROWSER) and a thumbnail list of broadcast channels 1345.” Kim, [0205]. “Upon selection of a thumbnail image from the thumbnail list 1345, a broadcast program from the selected channel may be displayed on the display 180.” Kim, [0206].

87. Kim describes more specifically that the “[TV Guide] card object 1350 ... may contain a card object name 1352 (TV GUIDE) and a program list 1355 ... [that] list[s] broadcast programs for the currently displayed channel or broadcast programs for one or more different channels.” Kim, [0207]. “If a program is selected from the program list 1355, a broadcast image of the selected program (e.g., currently being broadcast) or broadcasting information related to the selected program (e.g., future broadcasts) may be displayed on the display 180.” Kim, [0207].

88. Kim describes more specifically that the “[Reservation/Recording] card object 1360 ... [that] may include scheduled recordings or scheduled programs which have been recorded.” Kim, [0208]. “Upon selection of a scheduled recording

or a recorded program from the scheduled or recorded program list 1365, broadcast information related to the scheduled recording or the recorded broadcast program may be displayed on the display 180.” Kim, [0208].

89. Kim describes more specifically the “[My Media] card object 1370 display[s] a list [1375] of multimedia files” that may include “still images, and audio.” Kim, [0209]. “Upon selection of a file from the media list 1375, the selected file may be opened and a window (e.g., audio/video player or picture viewer window) that corresponds to the selected file may be displayed on the display 180.” Kim, [0209].

90. Kim describes more specifically the “[External devices] card object 1380 may display a list of connected external devices and may contain a card object name 1382 (EXTERNAL DEVICE) and a device list 1385 of external devices connected to the image display apparatus 100.” Kim, [0210]. “Moreover, upon selection of a specific external device from the external device list 1385, a menu related to the selected external device may be displayed.” Kim, [0210].

91. Kim describes more specifically that the “[Phone] card object 1390 may display call-related information and may include a card object name 1392 (PHONE) and a call-related list 1395 ... [that] may be a listing related to calls placed or received from a portable phone.” Kim, [0211]. Kim discloses that when an incoming call is detected, the Phone card object 1390 will be displayed, or if it is already

displayed, it will be highlighted” to draw the user’s attention. Kim, [0211]. Kim describes an incoming call:

Upon receipt of an incoming call at the portable phone ... the call-related card object 1390 may be automatically displayed in the card object area of the display 180. If the card object 1390 is already displayed on the display 180, it may be highlighted or otherwise distinguished from the other card objects.

Therefore, the user may readily identify incoming calls received on a nearby portable phone ... Moreover, upon selection of the card object name 1392, the card object 1390 may be displayed as a full screen image on the display 180.

Kim, [0211]-[0212].

92. Kim discloses that the home screen of Figure 19 may have an application menu 1305 that includes “mandatory application menu items 1306, 1307, and 1309 (Search, App Store, and +) and optional application menu items 1308 (e.g., Music, Book, MAZON, and SNS).” Kim, [0214]. The Search application menu item 1306 provides a search function, and the App Store application menu item 1307 can provide direct access to the App Store card object 1330. Kim, [0214].

93. Figures 21-23 of Kim disclose how visible card objects and hidden card objects in the home screen can be scrolled or moved. Kim, [0223]-[230], Figs. 21-23.

User Settings

94. Kim discloses that settings such as video settings, audio settings, and network settings can be set using setup object 1318. Kim, [0200] (“The setup object 1318 may be used to set various settings of the image display apparatus 100, such as video settings, audio settings, screen settings, reservation settings, ... network settings, or another appropriate setting for the image display apparatus 100.”). Kim does not teach or suggest that settings are set for specific users. *Id.*

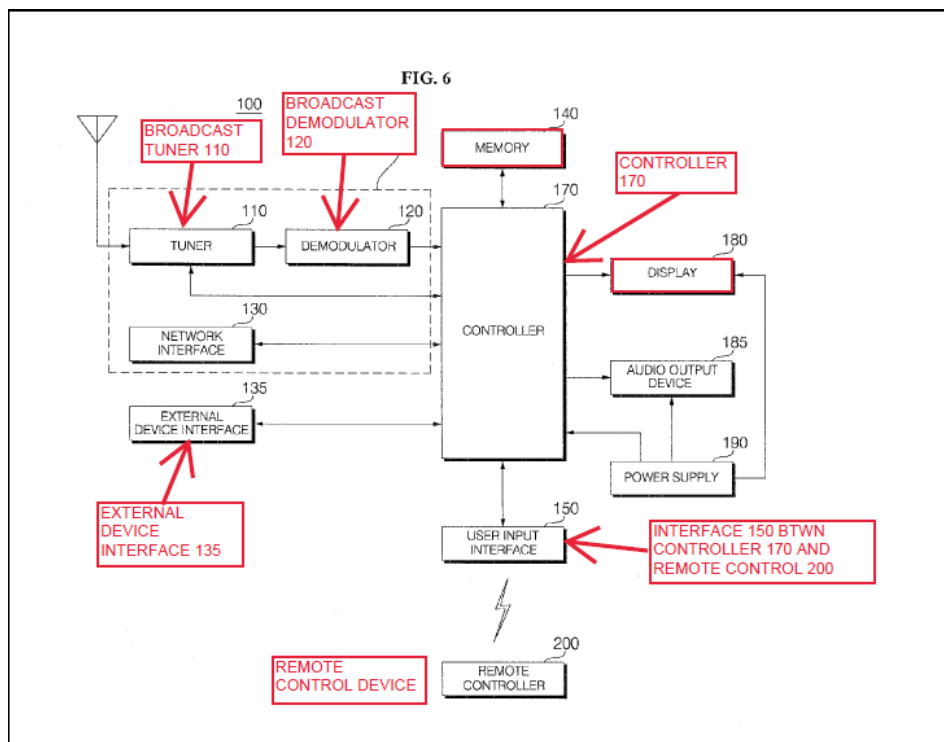
User Log-in

95. Kim discloses that a user may access the login menu 1327 on the home screen of Figure 19 to login to the App Store 1330 or to a network connected to the television. Kim, [0203] (“A Login menu item 1327 ... may be displayed above the card objects 1320 and 1330 [and] [t]he user may login to the APP STORE or a network connected to the image display apparatus 100.”).

96. Kim does not teach or suggest identifying a user based on the selection of a home screen key or go-to-home screen key to invoke the home screen.

System Diagram of Image Display Apparatus

97. Figure 6 of Kim is a block diagram of the image display apparatus 100 (e.g., television), which includes blocks for a broadcast tuner 110, demodulator 120, network interface 130, memory 140, controller 170, display 180, and a user input interface 150 that acts as an interface between the controller 170 and remote control 200:



Kim, Fig. 6 (annotated), [0065]-[0095].

98. The user interface 150 receives signals sent from remote control 200 and transmits signals to the controller 170. The user interface 150 may receive various signals from the remote control including “a channel selection signal” or a “channel switch command.” Kim, [0086], [0174].

99. The controller 170 processes incoming signals (e.g., an MPEG transport stream [TS]) and outputs images to be displayed on display 180. Kim, [0087]-[0088]. The controller 170 may provide overall control of the television, including control of the display 180 in its presentation of broadcast or other content. Kim, [0089]-[0093]. The controller 170 may include processors such as a video processor, video decoder, audio processor, data processor. Kim, [0133]-[0136].

External Devices

100. The external device interface 135 may be connected to various external devices, such as a DVD or Blue-ray player, game console, camera, or a computer. The external device interface may have an I/O interface with a USB port, CVBS port, S-video port, DVI port, or other appropriate port for connecting an external device, as described below:

The external device interface 135 may be connected to an external device such as a Digital Versatile Disk (DVD) player, a Blu-ray player, a game console, a camera, a camcorder, or a computer (e.g., a laptop computer), wirelessly or by wire. Then, the external device interface 135 externally receives video, audio, and/or data signals from the external device and transmits the received input signals to the controller 170. ... In order to receive or transmit audio, video, and data signals from or to the external device, the external device interface 135 may include[] the A/V I/O interface and/or the wireless communication module.

The A/V I/O interface of the external device interface 135 may include a Universal Serial Bus (USB) port, a Composite Video Banking Sync (CVBS) port, a Component port, a Super-video (S-Video) (analog) port, a Digital Visual Interface (DVI) port, a High-Definition Multimedia Interface (HDMI) port, a Red-Green-Blue (RGB) port, a D-sub port, or another appropriate port for connecting to an external device.

Kim, [0076]-[0077].

101. Kim discloses that the External device card object 1380 in Figure 19 may list external devices that are “connected to the image display apparatus 100 ...[that] may include a gaming box, a DVD player, a computer, or another appropriate device.” Kim, [0210], Fig. 19.

Other User Interface Displays

102. Separate from the home screen of Figure 19, Kim discloses other user interfaces on the TV display such as a full-screen “application list” depicting applications available for download and/or locally available applications. Kim, [0184]-[0185].

103. Figures 25-32 of Kim disclose how a user can access the App Store card object 1330 using, for example, a “go-to-app store input,” which results in the display of an App Store screen. Kim, [0234]-[0235], Figs. 25-32. The App Store screen includes tabbed menus with categories for sorting applications. Kim, [0236]-[0247], Fig. 25.

104. Figures 38-41 illustrate full-screen user interfaces for a Search window that is displayed upon the user selecting the search option, such as by selecting search option 1306 in Figure 19. Kim, [0266], Figs. 38-41, Fig. 19. The user inputs a search keyword or phrase (e.g., “Shutter Island”) and the Search window displays a series of programs as the search results. Kim, [0266]-[0269], Fig. 38. The search results can be sorted using category tabs.

B. Choi (Ex. 1007)

105. Choi, entitled “Method of Providing External Device List and Image Display Device,” describes a method of displaying an external device list on an image display device such as a television. Choi, Abstract.

106. Figure 5 of Choi describes an external device interface unit 135 that may connect external devices to the image display device, such as a DVD player, Blu-ray player, game console, and computer. Choi, [0097] (“The external device interface unit 135 may be used for wire/wireless connection of an external device such as a Digital Versatile Disk (DVD) player, a Bluray player, a game console, a camera, a camcorder, and a computer (such as a notebook computer).”).

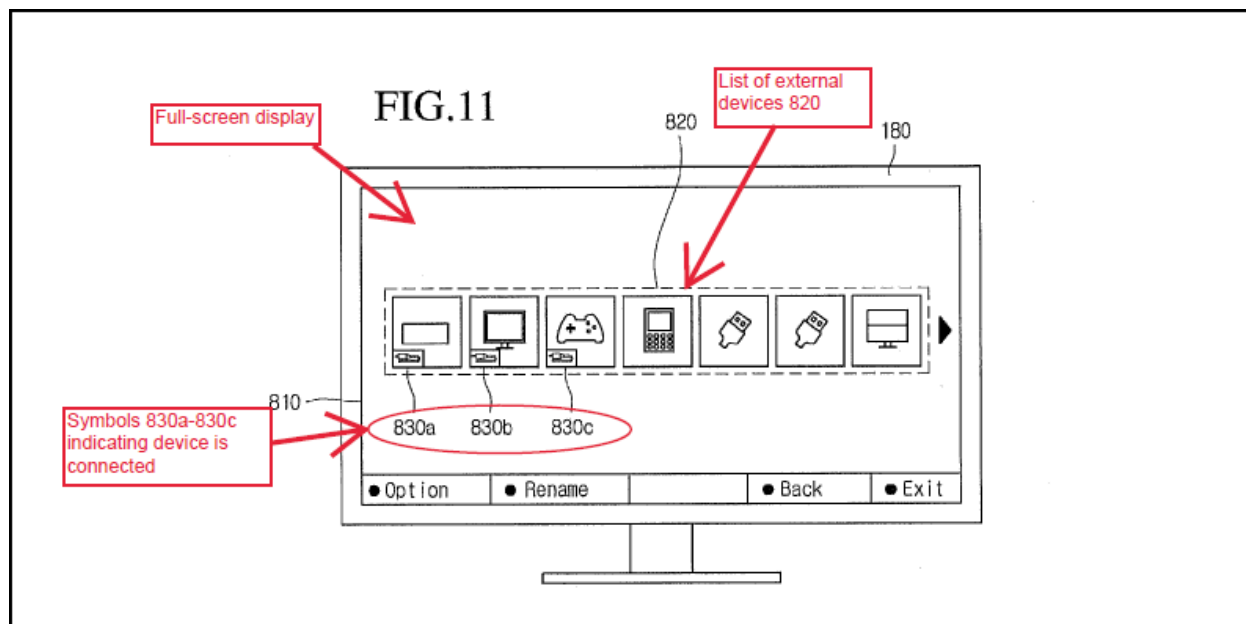
107. The external device interface unit 135 may include an A/V input/output unit that includes “a USB terminal, a Composite Video Banking Sync (CVBS) terminal, a component terminal, an S-Video terminal (i.e., an analog type), a Digital Visual Interface (DVI) terminal, a High Definition Multimedia Interface (HDMI) terminal” Choi, [0099].

108. Choi describes in Figure 11 a full-screen External devices screen on display unit 180 that includes a series of external devices 820 including icons 830a-830c that indicate which external devices are connected to the image display apparatus (e.g., television). Choi, [0250], Fig. 11. Choi does not teach or suggest an icon that identifies an external device as being connected to any particular input port.

Choi describes the full-screen display of external objects and connected-status icons as follows:

As shown in FIG. 11, a plurality of external device icons 820 representing a plurality of external devices are displayed on the full screen 810 of the display unit 180. Moreover, the control unit 170 **determines which external device icons 820 are connected** to the image display device 100 in order to display specific symbols 830a, 830b, and 830c on the external device icons **that are being connected to the image display device 100**. Therefore, external device icons that are not being connected to the image display device 100 are distinguished.

Choi, [0250] (emph. added), Fig. 11. Figure 11 of Choi is presented below:



Choi, Fig. 11 (annotated).

109. Choi does not teach or suggest that the symbols 830a-830c identify or indicate input ports.

C. Lee-1 (Ex. 1006)

110. Lee-1, entitled “Apparatus for Processing Images and Method Thereof,” generally discloses a thumbnail generator that extracts a thumbnail image from a received video signal. Lee-1, Abstract.

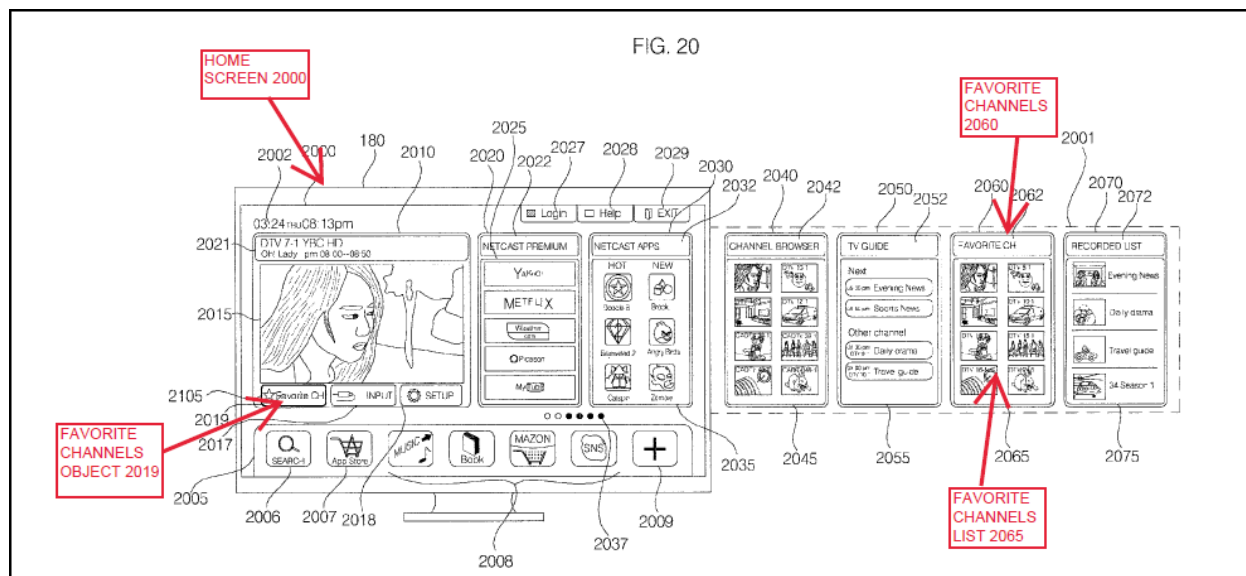
111. Lee-1 discloses that a displayed thumbnail image may have been stored in memory. Lee-1, 12:65-67 (“[T]he displayed thumbnail image may be a currently inputted image, or a previously stored image.”). Lee-1 discloses methods for generating and manipulating thumbnail images. Lee-1, 12:36-18:3.

D. Lee-2 (Ex. 1010)

112. Lee-2, entitled “Image Display Apparatus and Method for Operating the Same,” generally describes a home screen display including a favorite channels card object having a favorite channel list. Lee-2, Abstract.

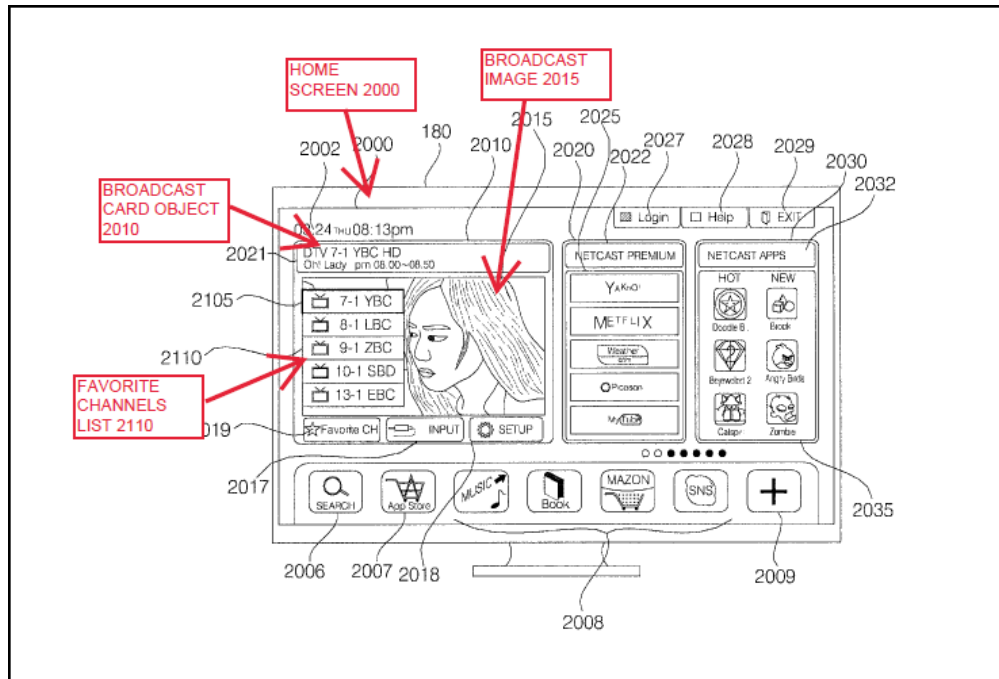
113. Figure 20 of Lee-2 presents a home screen display 2000 with various card objects 2010-2070, including a Favorite Channels card object 2060 having a favorite channels list 2065. The home screen also includes a favorite channels object 2019 that may be selected to cause the favorite channels list 2110 to be presented as depicted in Figure 21B. Lee-2, 27:4-28:18, 29:27-29 (“The [Favorite Channels] card object 2060 representing favorite channels may include a card object name 2062 (FAVORITE CH) and a list of pre-stored favorite channels 2065.”), Figs. 20, 21B.

The home screen in Figure 20 with the Favorite Channels card object 2060 is depicted below:



Lee-2, Fig. 20 (annotated:

114. Upon selection of the favorite channels object 2019 in Figure 20 or Figure 21A, a modified home screen 2000 is presented that includes the favorite channels list 2110 in the broadcast image area 2015. Lee-2, 30:44-61, Fig. 21B. Figure 21B illustrating the modified home screen 2000 with the favorite channels list 2110 is depicted below:

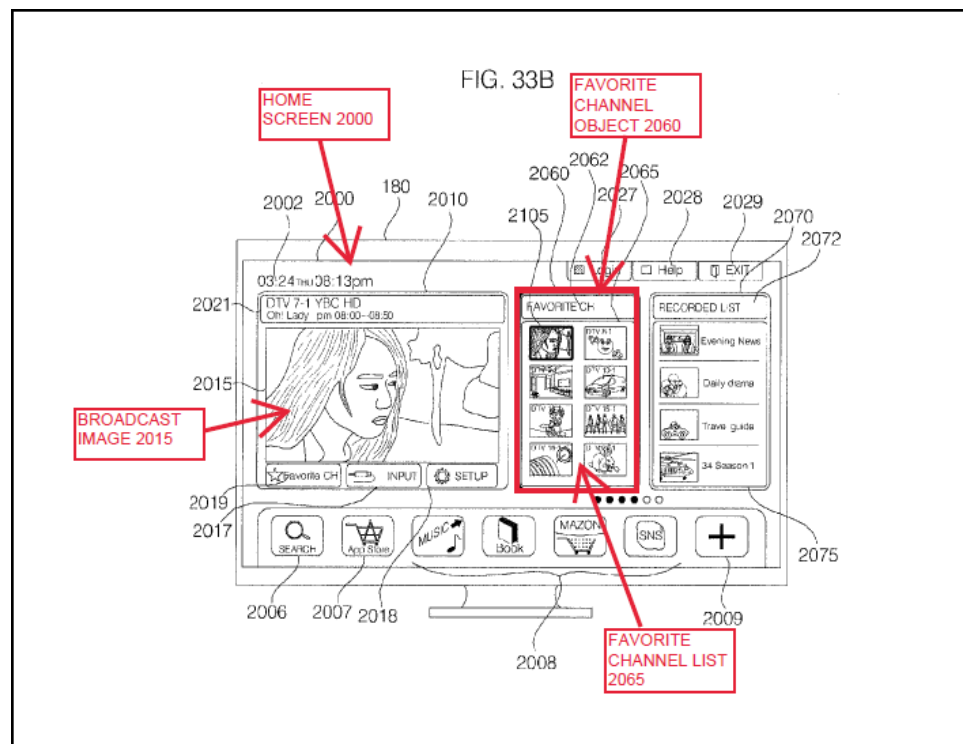


Lee-2, Fig. 21B (annotated).

115. Figure 32A illustrates a full-screen display of a selected program in currently-viewed image 3210 in display 180. Lee-2, Fig. 32A. If the user selects a favorite channel key, the user interface of Figure 32B is presented which includes the Favorite Channel card object 2060 with the favorite channel list 2065 superimposed over the currently-viewed program image. Lee-2, 37:60-38:11, Fig. 32B. Lee-2 does not disclose that the Favorite Channel card object 2060 or any channel listing 2065 within it are highlighted. Lee-2, 37:60-38:11.

116. Similar to Figures 32A-32B, Figure 33A illustrates a full-screen display of a currently-viewed image 3310. If the user selects a favorite channel key on the remote control, an updated home screen 2000 is presented in Figure 33B that includes the Favorite Channels card object 2060 with the favorite channel list 2065.

Lee-2, 38:3-11. Lee-2 discloses that the Favorite Channel card object 2060 may be highlighted. Lee-2, 38:7-11 (“The home screen 2000 may include the FAVORITE CH card object 2060. Particularly, the FAVORITE CH card object 2060 may be highlighted. Therefore, the user can readily view the FAVORITE CH card object 2060 including the favorite channel list 2065”). Accordingly, a POSITA would understand that in Figure 33B the Favorite Channel object 2060 is highlighted because the user selected the favorite key on the prior screen of Figure 33A. Figure 33B is presented below:



Lee-2, Fig. 33B (annotated).

117. Figure 39A illustrates a home screen 2000 including a favorite channel object 2019. If the user selects the favorite channel object 2019, a full-screen Favorite Channels List display is presented as depicted in Figure 39B. Lee-2, Figs. 39A-B. The Favorite Channels List display may present favorite channels in a channel list area 3910 for each of four users A-D according to the selected tab in tab group area 3920. Lee-2, 41:47-60, Fig. 39B. The Favorite Channels List display is presented in Figure 39B:

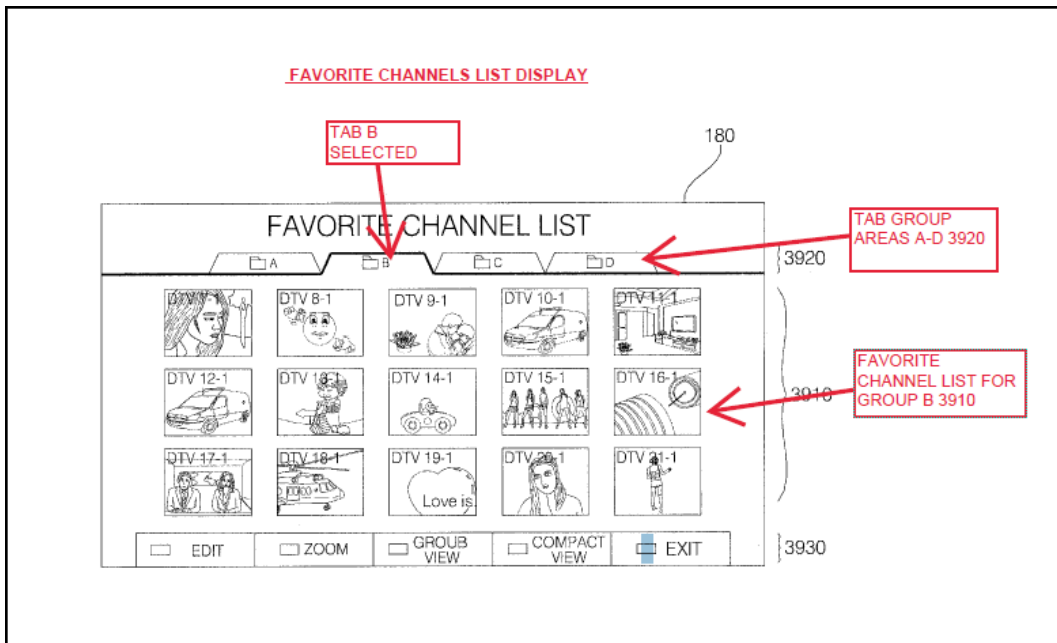


Fig. 39B (annotated).

118. Lee-2 describes the Favorite Channels List display as follows:

Referring to FIG. 39B, upon selection of the favorite channel object 2019, a favorite channel list screen including a favorite channel list is displayed fullscreen. The favorite channel list screen may include a plurality of groups A through D.

In FIG. 39B, a group area 3920 includes tabbed menus including the plurality of groups, for example, A group, B group, C group, and D group. Each group favorite channel list may correspond to the favorite channel list of each user.

Lee-2, 41:41-50.

VIII. GROUNDS 1-2 FAIL FOR CHALLENGED CLAIMS 1-6, 11-16, AND 21-22 BECAUSE CHOI (EX. 1007) AND THE KIM PUBLISHED APPLICATION (EX. 1011) ARE NOT “PRINTED PUBLICATIONS” UNDER 35 U.S.C. § 311(B)

119. I am informed that Patent Owner asserts that Choi (Ex. 1007) and the Kim Published Application (Ex. 1011) are not permissible references because they are not “printed publications” in accordance with the statute governing IPRs. As this is a purely legal issue, I note it but am not rendering any opinion on it.

IX. CLAIMS 1-5, 11-15, AND 21 ARE PATENTABLE OVER KIM, LEE-1, AND CHOI (GROUND 1)

A. Independent Claims 1, 11, and 21 Are Patentable Over Kim, Lee-1, and Choi

120. The combination of Kim, Lee-1, and Choi fails to teach at least the following limitations of Claim 1:

- Limitation 1.6: “*wherein at least one of the sources is highlighted as being associated with the first content information*” that is retrieved and displayed in limitations 1.3-1.4.

- Limitations 1.5/1.7: “*wherein the global panel includes a list of sources of content ... wherein the sources include ... an electrical input associated with the television.*”

B. Kim, Lee-1, and Choi Fail to Teach Limitation 1.6 “Wherein at Least One of the Sources is Highlighted as Being Associated with the First Content Information” that was Retrieved and Displayed Pursuant to Limitations 1.3-1.4.

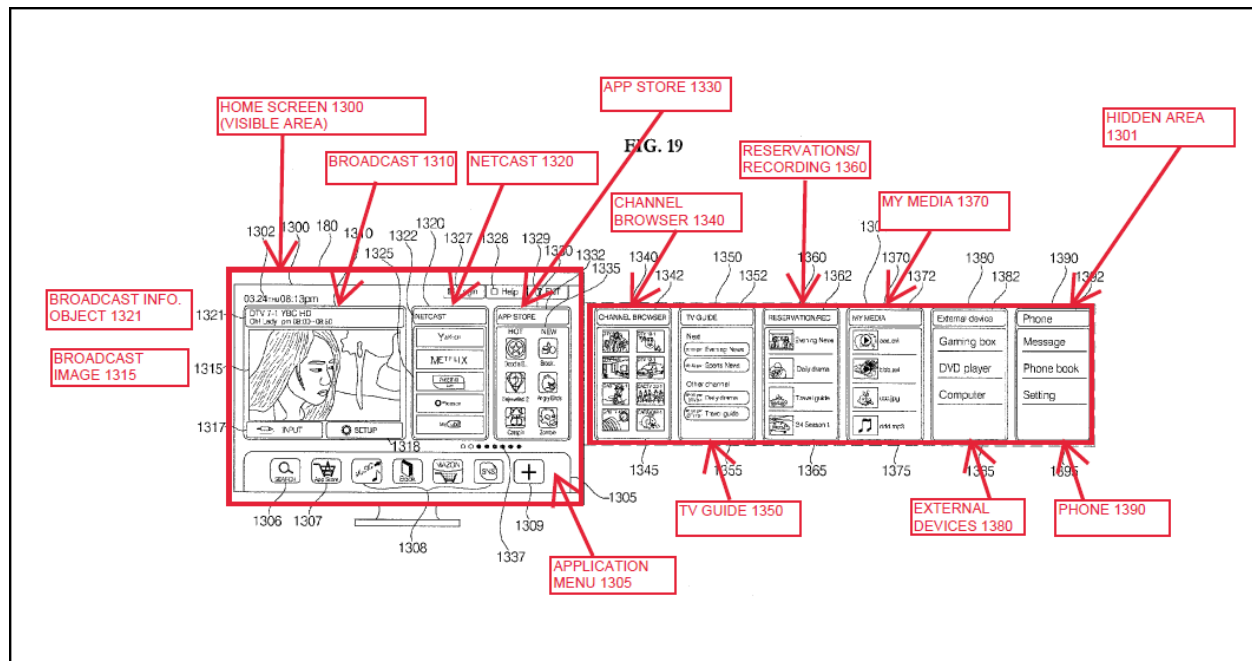
1. Petitioner Applies Limitations 1.3-1.4 for “First Content Information” to Five Specifically-Identified Card Objects in Kim

121. Limitation 1.6 refers back to limitations 1.3-1.4 which provide that “*first content information*” is retrieved and displayed in the global panel. ’040 Patent, Cl. 1.

122. In general, the Petition and Dr. Lippman assert that the home screen of Kim’s Figure 19 is the claimed “*global panel*” of Claim 1. Pet., 17, 23-27; Ex. 1003 [Lippman Decl.], ¶¶ 64, 81-86. Figure 19 of Kim illustrates a “home screen” user interface 1300 having a series of graphical “card objects” (windows) representing different “source[s] or type[s]” of content. Kim, [0193], [0194] (“card object may be a window”). The home screen may be displayed upon the user selecting a home key or providing a “go-to-home” input on the remote control device. Kim, [0192], [0094].

123. The card objects in Kim’s home screen include (1) Broadcast card object 1310 with broadcast image area 1315; (2) Netcast 1320; (3) App Store 1330;

(4) Channel Browser 1340; (5) TV Guide 1350; (6) Reservations/recordings 1360; (7) My Media 1370; (8) External devices 1380; (9) Phone card object 1390; and (10) Application menu 1305. Kim, [0193]-[0215]. Figure 19 illustrates the various card objects in the home screen:



Kim, Fig. 19 (annotated).

124. Limitation 1.3 of Claim 1 of the '040 Patent recites “*retrieving ... first content information for display in the global panel.*” Limitation 1.4 recites “*displaying, via the television, the retrieved [first] content information in the global panel.*” See '040 Patent, Cl. 1. The Petitioner takes the position that the claimed “*first content information*” is met by descriptive text and/or thumbnails displayed within specific card objects in Kim’s home screen. Pet., 27; Lippman Decl., ¶ 89. In particular, the Petitioner and Dr. Lippman’s theory is that limitations 1.3-1.4 are met

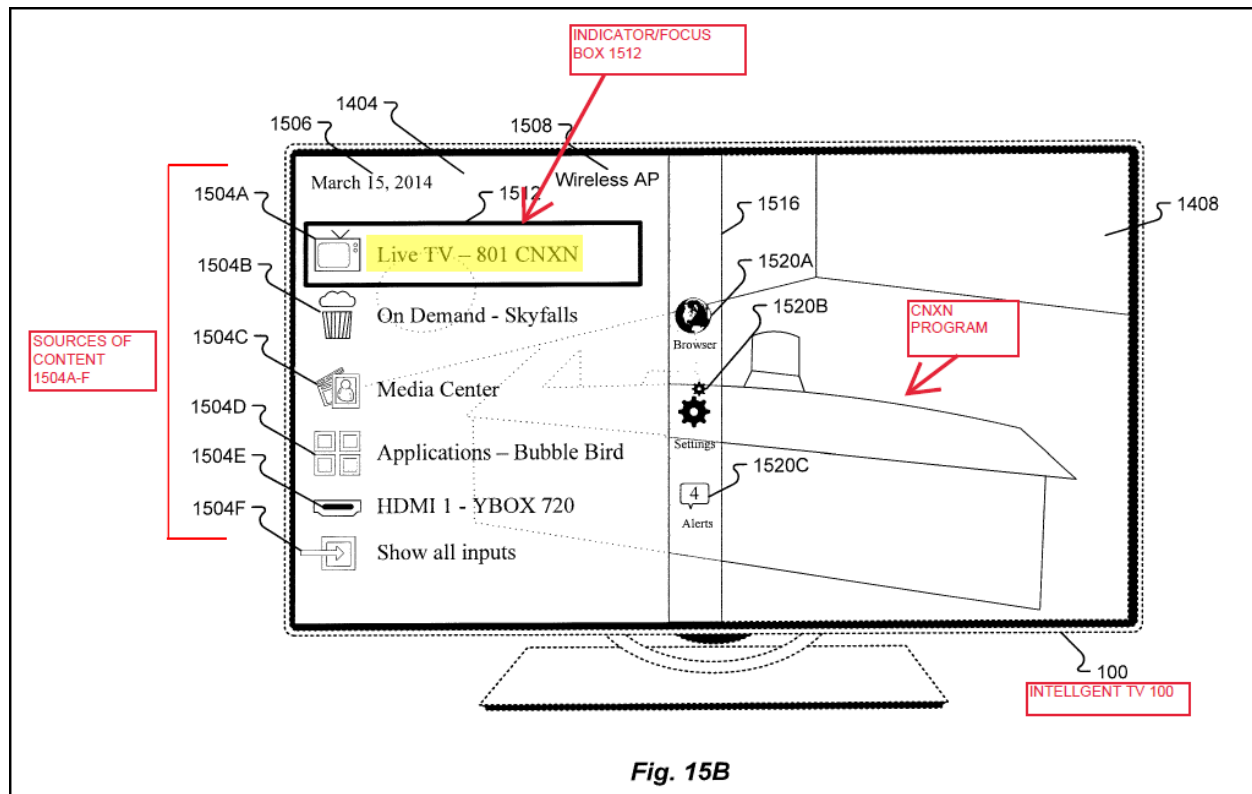
by the display of descriptive text and/or thumbnails in the following five card objects: (A) App Store 1330, (B) Reservation/recordings 1360, (C) My Media 1370, (D) Channel Browser 1340, and (E) Broadcast 1310.³ Pet., 28-31; Lippman Decl., ¶¶ 89-101. For example, the Petitioner asserts that the text and thumbnails in application list 1335 for applications in the App Store card object 1330 meets the retrieved “*first content information*” of limitation 1.3. Pet., 28; Lippman Decl., ¶¶ 90-91.

**2. Kim, Lee-1, and Choi Do Not Meet Limitation 1.6
Requiring that “At Least One of the Sources Is Highlighted
As Being Associated With the First Content Information.”**

125. Limitation 1.6 requires that “*at least one of the sources is highlighted as being associated with the first content information.*” ’040 Patent, Cl. 1. In other words, one of the content sources listed in the global panel is highlighted because it is associated with the first content information that was retrieved and displayed in limitations 1.3-1.4.

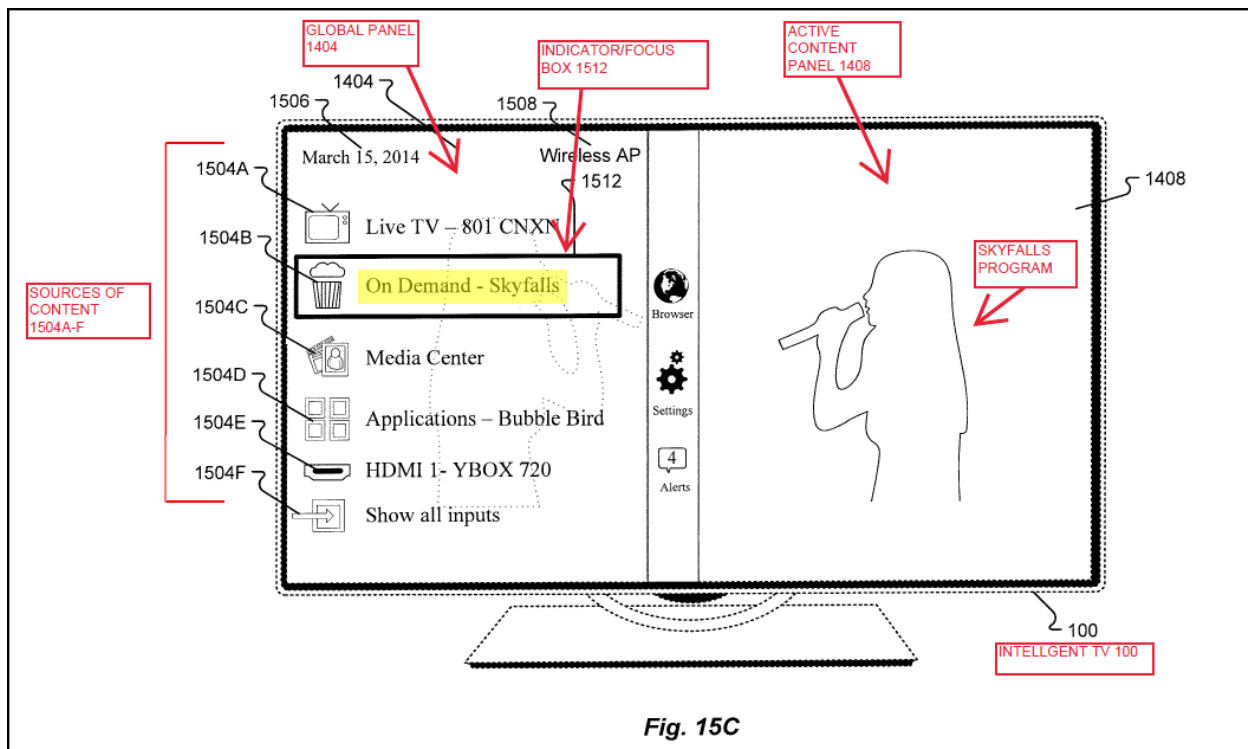
³ The card objects identified by the Petitioner for limitations 1.3-1.4 [(A) App Store 1330, (B) Reservation/recordings 1360, (C) My Media 1370, (D) Channel Browser 1340, and (E) Broadcast 1310] are also referred to herein as “the specifically-identified card objects.”

126. The '040 Patent discloses that a content source may be highlighted if it corresponds to information content that is being displayed. By way of example, Figure 15B of the '040 Patent illustrates that the source Live TV-801 CNXN (1504A) on the left hand side is highlighted with a box 1512 because it corresponds to the program CNXN that is being displayed on the right hand side:



'040 Patent, Fig. 15B (annotated), 30:65-67 (“currently displaying a Live TV view (specifically 801 CNXN).”).

127. In another example, Figure 15C illustrates that the On Demand-Skyfalls source (1504B) on the left hand side is highlighted with a box because it corresponds to the program Skyfalls being presented on the right hand side:



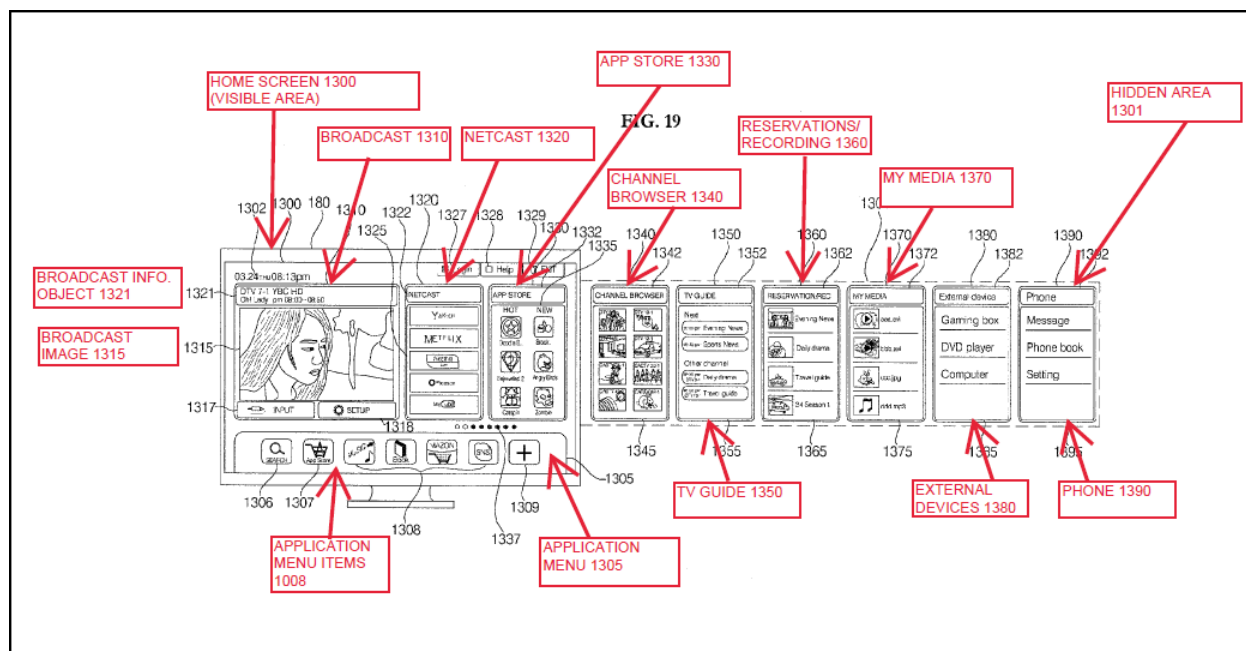
'040 Patent, Fig. 15C (annotated); '040 Patent, 32:9-14.

a. Kim Does Not Teach or Suggest Limitation 1.6

128. The Petitioner and its expert essentially rely solely on Kim as meeting limitation 1.6. Pet., 46-49; Lippman Decl., ¶¶ 132-142. Specifically, the Petitioner and its expert assert that the claimed first content information is the text/thumbnail information in the five card objects: (A) App Store 1330, (B) Reservation recordings 1360, (C) My Media 1370, (D) Channel Browser 1340, and (E) Broadcast 1310. Pet., 28-31; Lippman Decl., ¶¶ 89-101. A POSITA would readily appreciate that Kim does not teach or suggest that any of the specifically-identified card objects 1330, 1340, 1360, 1370, and 1310 (the alleged "*sources of content*") is highlighted because

the text/thumbnails (the alleged “*first content information*”) in that card object have been displayed.

129. On the contrary, a POSITA would readily understand from Kim that these card objects (“*sources of content*”) and their text/thumbnails (“*first content information*”) are automatically displayed together when the user invokes the home screen, and none of the specifically-identified card objects is highlighted. Kim, [0193]-[0215], Fig. 19, as illustrated below:



Kim, Fig. 19 (annotated).

130. The Petitioner’s expert Dr. Lippman conceded that Figure 19 of Kim illustrates the descriptive text/thumbnails (alleged “*first content information*”) for each of the five specifically-identified card objects without any of the five card objects (alleged “*sources of content*”) being highlighted. Ex 2015 [Dep. Tr. Dr.

Lippman], 190:10-13 (Q: “Is it correct that in Figure 19, none of the five card objects that allegedly contain the first content information are highlighted?” A: “The cards in Figure 19 are not highlighted.”).

131. Nowhere does Kim teach or suggest that displaying the information inside the card object causes the card object (alleged “*source[] of content*”) to be highlighted. Accordingly, Kim does not meet limitation 1.6 of Claim 1 of the ’040 Patent.

b. The Proposed Modification to Kim Does Not Teach or Suggest Limitation 1.6

132. Kim only discloses a single instance where an alleged content source (card object) is highlighted, and it pertains to the Phone object 1390. Kim, [0211]. The Petitioner argues that Kim’s disclosure regarding the Phone card object 1390 somehow meets limitation 1.6. Pet., 46-47. Kim discloses that the Phone card object 1390 can be highlighted if the system detects an incoming phone call:

The [Phone] card object 1390 may display call-related information and may include a card object name 1392 (PHONE) and a call-related list 1395. ... Upon receipt of an incoming call at the portable phone, the ... card object 1390 may be automatically displayed in the card object area of the display 180. **If the card object 1390 is already displayed** on the display 180, **it may be highlighted** or otherwise distinguished from the other card objects.

Kim, [0211] (emph. added).

133. Kim’s teaching that the Phone object 1390 may be highlighted is distinguishable from the claimed highlighting in multiple respects. First, the highlighting is triggered by the receipt of an incoming call. Kim does not remotely suggest that the Phone object 1390 is highlighted because its text information (e.g., message, Phone book, Setting in Fig. 19) is displayed. Accordingly, the proposed application of the teaching from Phone object 1390 does not meet the requirement under 1.6 that at least one of the specifically-identified card objects (alleged “*sources of content*”) is highlighted because its text/thumbnail (alleged “*first content information*”) has been displayed.

134. Further, a POSITA would not have reason to apply Kim’s teaching for the Phone object 1390 to the other card objects because the triggering event of an incoming call does not pertain to the other specifically-identified card objects (i.e., the (A) App Store 1330, (B) Reservation/recordings 1360, (C) My Media 1370, (D) Channel Browser 1340, and (E) Broadcast 1310). For example, a POSITA would not have reason to highlight the App Store object in response to an incoming call. Indeed, it would confuse the user because it would distract from the highlighted Phone object. It is my opinion that a POSITA would not modify Kim to highlight other cards based on the teaching that the Phone card is highlighted when there is an incoming call.

135. The Petitioner argues that Kim’s teaching of highlighting the Phone card object 1390 “would generally apply to Kim’s other card objects.” Pet., 46-47. The Petitioner and its expert never explain why this is the case. The Petitioner goes on to argue that a POSITA would modify at least one of the other card objects to be highlighted “so it is distinguished from the other card objects.” Pet., 46-47.

136. The Petitioner’s reasoning does not meet limitation 1.6. First, even if Kim’s teaching from Phone card 1390 is applied to the other card objects, a POSITA would understand that the result is that one of the other specifically-identified card objects (i.e., the (A) App Store 1330, (B) Reservation/recordings 1360, (C) My Media 1370, (D) Channel Browser 1340, and (E) Broadcast 1310) is highlighted upon detection of an incoming phone call. That does not meet limitation 1.6, which requires highlighting the card object based on the information in the card object (the alleged “*first content information*”) being displayed pursuant to limitation 1.4.

137. Even if one of the five specifically-identified card objects (e.g., the App Store object 1330) was highlighted to “distinguish it” from other card objects, that does not meet limitation 1.6’s requirement that the card object (alleged “*source of content*”) is highlighted because text/thumbnail information (alleged “*first content information*”) has been displayed. Furthermore, a POSITA would know that the choice not to highlight it was because there was no reason to do because the so-called “first content” information is displayed on all 5 objects. When constructing a

good user interface, great consideration is given to what is shown, how it is shown, what it indicates to the user. The fact that Kim has chosen not to and that there is no clear reason to do so would be factored into the decision by a POSITA on whether a POSITA *would* modify the system as disclosed.

138. Second, the Petitioner's argument that Kim would be modified to allow for distinguishing one card object from the other is not supported by the record. No reason is given by the Petitioner or Dr. Lippman for why one card object (i.e., the (A) App Store 1330, (B) Reservation/recordings 1360, (C) My Media 1370, (D) Channel Browser 1340, and (E) Broadcast 1310) would need additional highlighting to distinguish it from the others. Pet., 46-47; Lippman Decl., ¶¶ 135-136. The Petitioner asserts that "in the circumstance where the APP STORE card object is already displayed ... it would have been obvious to a POSITA for the APP STORE card object 1330 to be highlighted so that it is distinguished from the other card objects and readily identified by the user." Pet., 46-47. The expert's conclusory testimony merely parrots the Petition *verbatim*. See Lippman Decl., ¶ 135. The reasoning is conclusory and circular. The Petition provides no reason and no evidence as to why the App Store card object or any of the other specifically-identified card objects would need highlighting to allow the user to identify that card object. In fact, the Petitioner's expert conceded that a user would be able to readily

distinguish between the different card objects without highlighting them. Ex. 2015 [Dep. Tr. Dr. Lippman], 176:22-177:17.

139. In deposition, the Petitioner's expert had trouble explaining why any of the specifically-identified card objects would be highlighted in Kim alone or as modified:

Q: And we just discussed App Store card object being highlighted and you indicated that you didn't get into why it was highlighted. In paragraph 138 of your declaration where you're discussing the reservation record card object, do you explain why it would be highlighted in your proposed modification to Kim?

A: I'm not sure what you mean by why.

Q: Well, what makes it get highlighted? What triggers the highlighting?

A: One thing that can trigger it is a user action.

Q: So would an example of that be a user selecting a card object?

A: That would be an example of that.

Ex. 2015 [Dep. Tr. Dr. Lippman], 206:25-207:16. In sum, Dr. Lippman's best explanation was that one of the card objects would be highlighted because the user selected the card object, not because the card object was displaying descriptive text and thumbnails (alleged "*first content information*"), as required by limitation 1.6.

140. In its decision on institution, the Board did not have an opportunity to address the fact that the Phone card object teaching regarding incoming calls does not apply to the specifically-identified card objects (1330, 1340, 1360, 1370, 1310),

and, even if it was applied, those card objects 1330-1370 would not be being highlighted because their descriptive content was displayed, as required by limitation 1.6. See Instn. Dec., 29-30.

c. The Petitioner's Other Back-Up Arguments Fail to Resolve Missing Limitation 1.6

141. The Petition also refers to Ex. 1010 (Lee-2) in support of its argument for modifying Kim. In the institution decision, the Board viewed Lee-2 as evidence of general background knowledge in the art. See Instn., Dec., 30; Pet., 47; Lippman Decl., ¶ 135. I note that the Petitioner did not assert that Lee-2 was cited as background knowledge, and it was not identified as part of Ground 1 (Kim, Lee-1, and Choi).

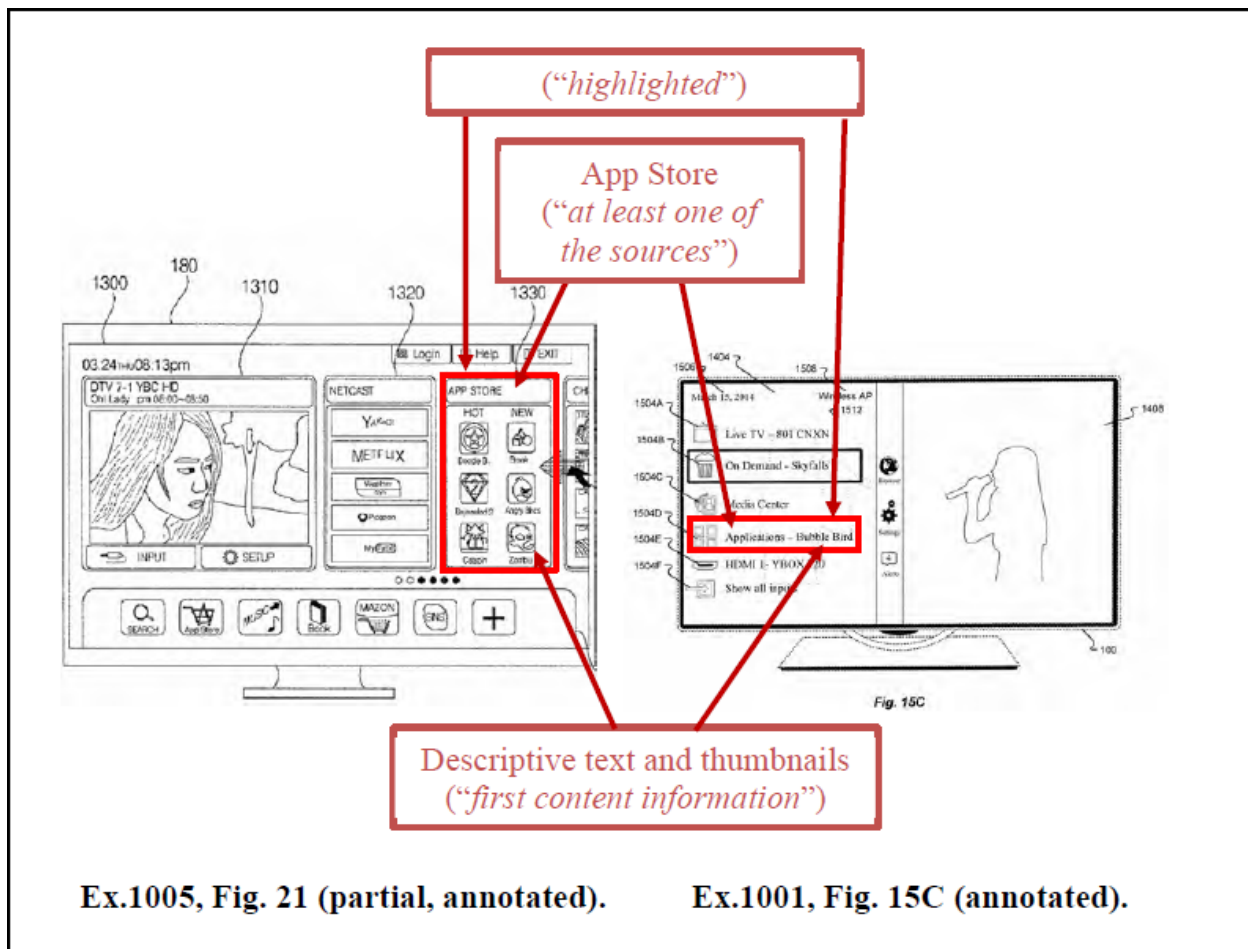
142. Even if considered, Lee-2 does not fill the gap in Kim regarding limitation 1.6 for a source being highlighted as being associated with display content that was retrieved and displayed pursuant to limitations 1.3-1.4. In Lee-2, a Favorite Channels card object 2060 is highlighted in Figure 33B because it was selected by user input of a local key in the previous user interface in Figure 33A. Thus, the Favorite Channels card object is highlighted because it was selected via the local key, not because its information content 2065 is displayed:

Referring to FIG. 33A, an image 3310 is displayed full screen on the display 180. **Upon input of a local key (not shown) or a favorite channel key (not shown) of the remote controller,** the home screen

2000 may be displayed as illustrated in FIG. 33B. **The home screen 2000 may include the FAVORITE CH card object 2060. Particularly, the FAVORITE CH card object 2060 may be highlighted.** Therefore, the user can readily view the FAVORITE CH card object 2060 including the favorite channel list 2065.

Lee-2, 38:3-11 (emph added), Fig. 33B. The Petitioner's expert confirmed the point in deposition. Ex. 2015 [Dep. Tr. Dr. Lippman], 199:15-18 (Q: "And if it's highlighted that's triggered by the user selecting the favorite channel using the key, right?" A: "Using a key, yeah."). Accordingly, the teaching of Lee-2 (purportedly reflecting general knowledge) does not fill the gap in Kim of a card object being highlighted because the information content in it is displayed per limitation 1.6.

143. The Petition provides a side-by-side comparison of a modified Kim home screen having a highlighted App Store card 1330 and Figure 15C of the '040 Patent. Pet., 48. The comparison is misleading, but when properly viewed illustrates the distinction between Kim (alone or modified) and limitation 1.6:



See Pet., 48.

144. The diagram is misleading because Figure 15C of the '040 Patent does not disclose the Applications-Bubble Bird source 1504E being highlighted. Instead, Figure 15C shows the On Demand-Skyfalls source 1504B on the left hand side being highlighted because the information content for the Skyfalls program is being displayed in the right hand side, as illustrated below:

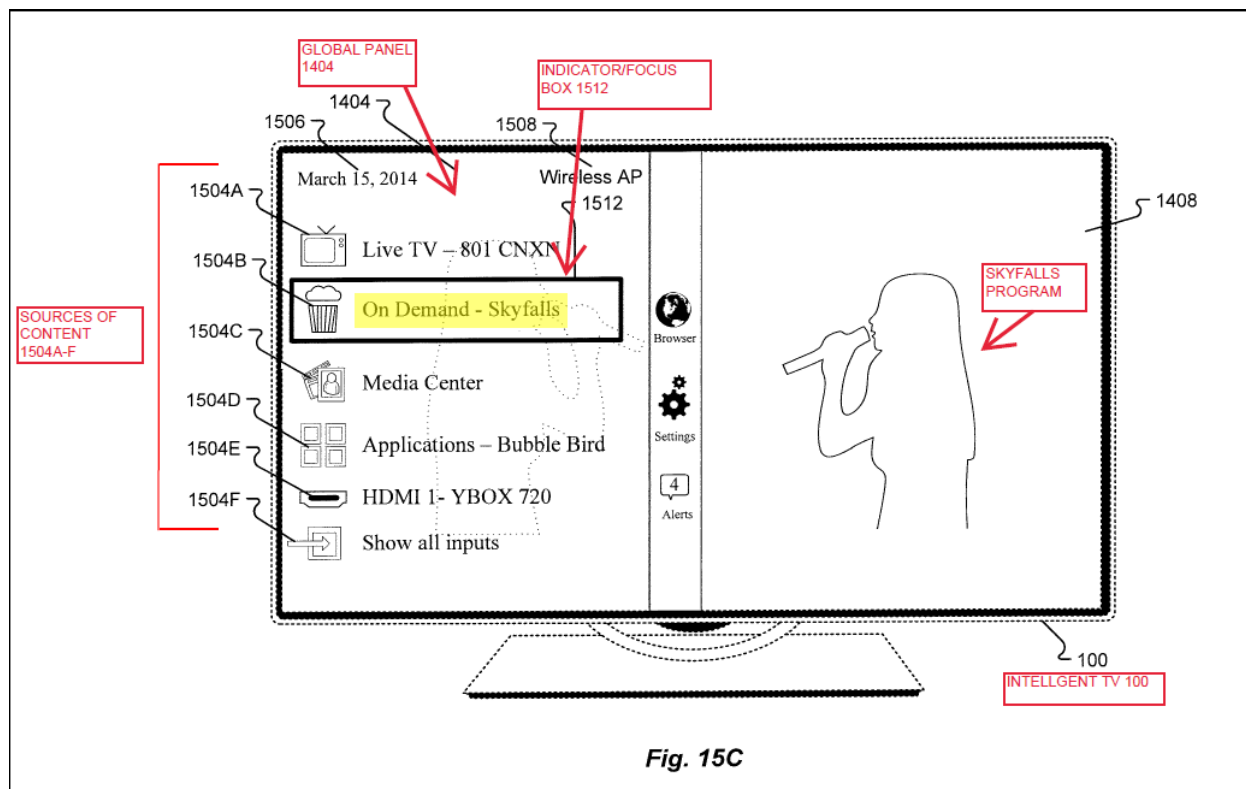


Fig. 15C

'040 Patent, Fig. 15C (annotated); '040 Patent, 32:9-14.

145. As described previously, if a different content source is selected, then it will be highlighted (e.g., Live TV-801 CNXN) because it is associated with the new information content that is being displayed (CNXN program). '040 Patent, 32:9-14 ("as the indicator 1512 is moved to a different source, the content or a preview of the content may be displayed"). FIG. 15B of the '040 Patent illustrates the Live TV – 801 CNXN source is highlighted because video for CNXN is being displayed in content area 1408:

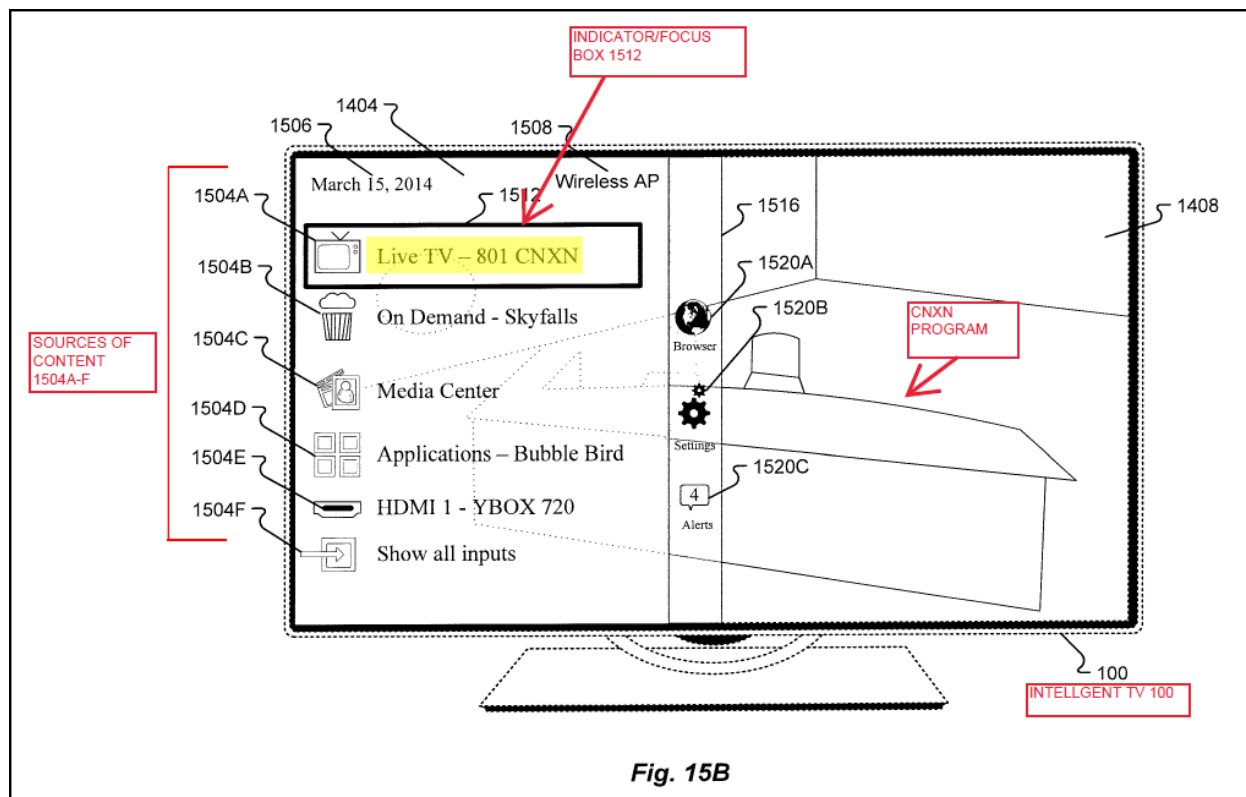


Fig. 15B

'040 Patent, Fig. 15B (annotated); '040 Patent, 30:65-67.

146. Thus, as described and claimed in the '040 Patent, a source of content is highlighted because it is related to information content (*"first content information"*) from that source that is being displayed, and the highlighted source of content will change when information content from a different source is displayed. This is in stark contrast to Kim, where the display of the information content inside a card object does not cause the card object to be highlighted. Kim also does not teach or suggest that the display of different information content will change which card object is highlighted.

147. The Petitioner also argues that Kim teaches limitation 1.6 through its disclosure that “partially-displayed” card objects may have a color or tint to distinguish them from fully-displayed “active card objects.” Kim, [0228]. As the Petitioner and its expert concede, this “highlighting” is based on a card object being partially-displayed (e.g., Reservation-Recordings card object 1360), as illustrated in Figure 22. Kim, [0224], Fig. 22. The Board was correct in finding that Kim discloses this form of highlighting to distinguish partially-displayed cards from active cards. Instn. Dec., 29-30. However, there is no highlighting of a card object because the information content within the card object has been displayed as required by limitation 1.6.

148. In summary, Kim, alone or as proposed to be modified, does not meet limitation 1.6 for “*one of the sources is highlighted as being associated with the [retrieved and displayed] first content information.*”

**C. Kim, Lee-1, and Choi Fail to Teach Limitations 1.5 and 1.7
“Wherein the Global Panel Includes a List of Sources of Content
... Wherein the Sources Include ... An Electrical Input Associated
With the Television”**

149. The combination of Kim, Lee-1, and Choi fails to teach limitations 1.5 and 1.7 providing that “the global panel includes a list of sources of content ... wherein the sources include ... an electrical input associated with the television.” ’040 Patent, Cl. 1.

1. “An Electrical Input Associated With the Television”

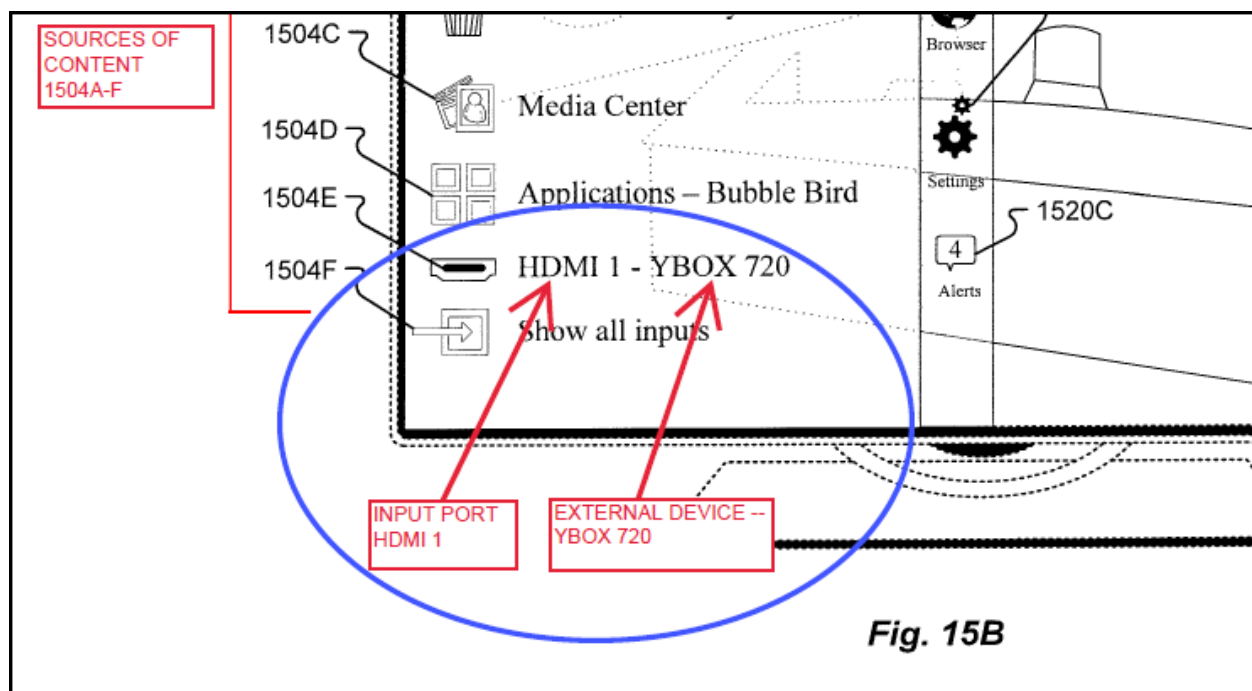
150. A POSITA would understand the ordinary and customary meaning of the limitation as meaning that the global panel has a list of sources of content that includes at least one input port electrically connecting the television.⁴ It is well-understood that televisions in the 2012 timeframe include electrically connected input ports for connecting external devices, a few examples being an HDMI port, a USB port, a DVI port, and so forth. See Ex. 2013, (Brown), 7:16-20, 12:66-13:6, Fig. 2 (television with port inputs including HDMI, USB, DVI, S-Video, etc.); Ex. 2014 (McRae), [0006].

151. The specification '040 Patent discloses various input ports electrically connecting the television. '040 Patent, 6:16-19 (“An input can be a device or devices (e.g., DVD, VCR, etc.) **electrically connected to the television through a port** (e.g., HDMI, video/audio inputs, etc.), 23:58-63 (“an input source button 720 (to select input source such as ... HDMI, component or COMP, audio/Video or A/V, digital or analog television or DTV/ATV ...”). The '040 Patent discloses that the system can also “determine which inputs (e.g., HDMI ports) are currently available

⁴ The Petitioner was aware of the claim construction issue regarding “an electrical input.” See Pet., 55-56 (“To the extent argued that the claim requires the specific input port be referenced ...”).

for connecting to external devices.” ’040 Patent, 25:29-31. The ’040 Patent elsewhere discloses ports providing electrical inputs to the television for external devices. ’040 Patent, 17:51-58 (“Ethernet port, a Universal 55 Serial Bus (USB) port, Thunderbolt™ or Light Peak interface, Institute of Electrical and Electronics Engineers (IEEE) 1394 port, or other interface.”).

152. Figure 15B of the ’040 Patent discloses a global panel 1404 having a list of content sources including 1504E identifying a specific input port HDM 1 (blue) connected to the YBOX 720 external device:



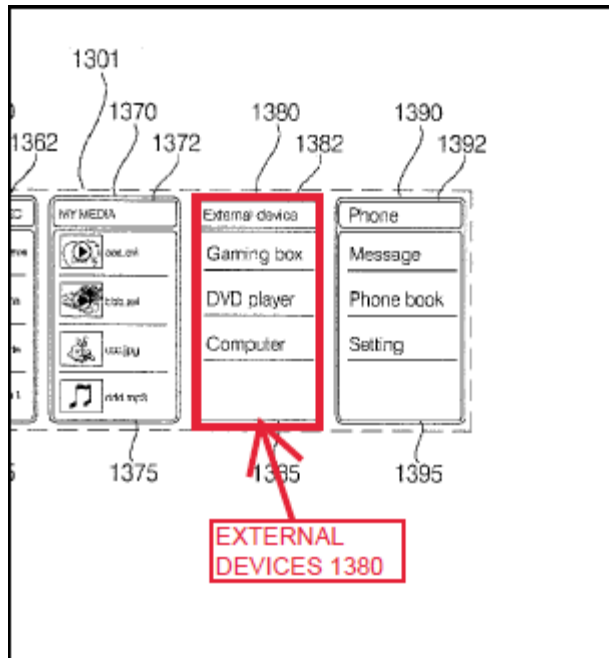
’040 Patent, Fig. 15B (excerpted; annotated); 33:14-16.

153. The claimed display of a source that is an “*electrical input associated with the television*” is supported by Figure 15B, which identifies a specific input port (HDMI 1) connecting the external device. A POSITA would readily appreciate that

the ordinary and customary meaning of the “*electrical input associated with the television*” in limitation 1.7 as referring to an input port.

2. Kim Modified by Choi Fails to Teach the Display of an Input Port

154. The Petitioner and its expert rely on Kim’s External devices card 1380 to meet limitations 1.5/1.7. Pet., 54-56; Lippman Decl., ¶¶ 157-162. The Petitioner and its expert concede that Kim’s External devices card only displays external devices that are connected to the television. It does not display input ports of the television. Kim, [0094] (“The card objects may further include at least one of a card object representing a list of connected external devices ...”), [0210] (“[External devices] card object 1380 may display a list of connected external devices and may contain ... a device list 1385 of external devices connected to the image display apparatus 100.”). The home screen of Figure 19 that is the basis of the Petitioner’s obviousness theory discloses external devices including a gaming box, DVD player, and Computer, not any input ports to the television:

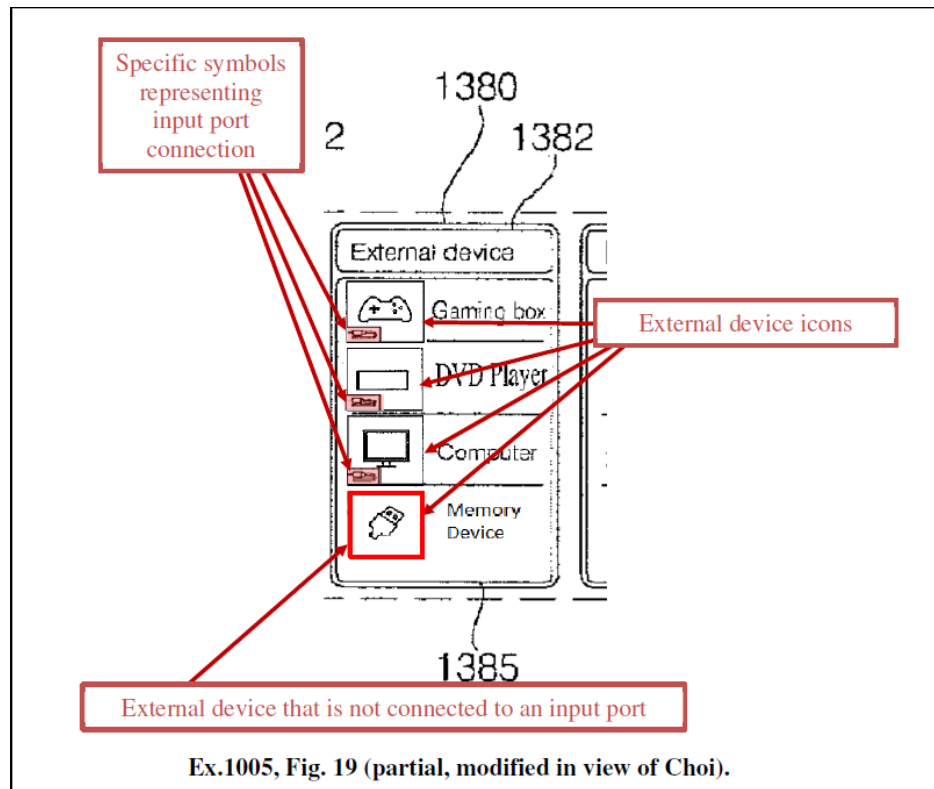


Kim, Fig. 19 (excerpted, annotated).

The Combination of Choi With Kim Fails to Meet Limitation 1.7

155. The Petitioner argues that a POSITA would modify Kim based on Choi. Pet., 54-55; Lippman Decl., ¶¶ 158-162. However, the proposed combination of Kim with Choi fails to meet limitation 1.7 for displaying an electrically connected input port.

156. The Petitioner presents the following illustration of the combined Kim/Choi external device card 1380:



Pet., 55 (annotated by Petitioner, Fig. 19).

157. However, Choi's symbols indicate which external devices are connected, not that an external device is connected to a particular input port. Choi states:

As shown in FIG. 11, a plurality of external device icons 820 representing a plurality of external devices are displayed on the full screen 810 of the display unit 180. Moreover, the control unit 170 **determines which external device icons 820 are connected** to the image display device 100 in order to **display specific symbols 830a, 830b, and 830c on the external device icons that are being connected** to the image display device 100. Therefore, external device

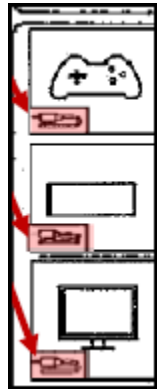
icons that are not being connected to the image display device 100 are distinguished.

Choi, [0250] (emph. added). In short, Choi teaches symbols indicating that an external device is connected to the television (“connected to the image display device 100”), not that a specific input port is connected. Choi does not even mention input ports for Figure 11. Accordingly, Choi does not fill the gap in Kim to meet limitation 1.7.

158. Indeed, a POSITA would understand Choi as teaching that the controller 170 “determines which external device icons 820 are connected,” not that it determines which **input ports** are connected. That is confirmed when Choi states that the result is that the user interface can “display specific symbols 830a, 830b, and 830c on the external device[s] ... **that are being connected.**” Choi, [0250] (emph. added), Fig. 11. Accordingly, Choi does not teach symbols that identify an input port to meet limitation 1.7.

159. The symbols from Choi as applied to Kim in the Petitioner’s modified Figure 19 of Kim above are not “specific symbols representing input port connection,” as alleged in the Petition. Pet., 55 (see annotated Fig. 19). Each of the symbols is identical and does not represent a different input port. Choi confirms this by stating that the symbol can be any character or text for indicating which external devices are connected. Choi, [0250] (The specific symbol used in Figure 11 is just “one example of a method of distinguishing [external devices] from each other ...

That is, any one of letters, symbols, colors, and flashing lights may be used for distinction.”). Indeed, the Petitioner’s proposed combination of Kim and Choi reflects that each of the symbols (highlighted in pink) is identical and thus does not represent different input ports:



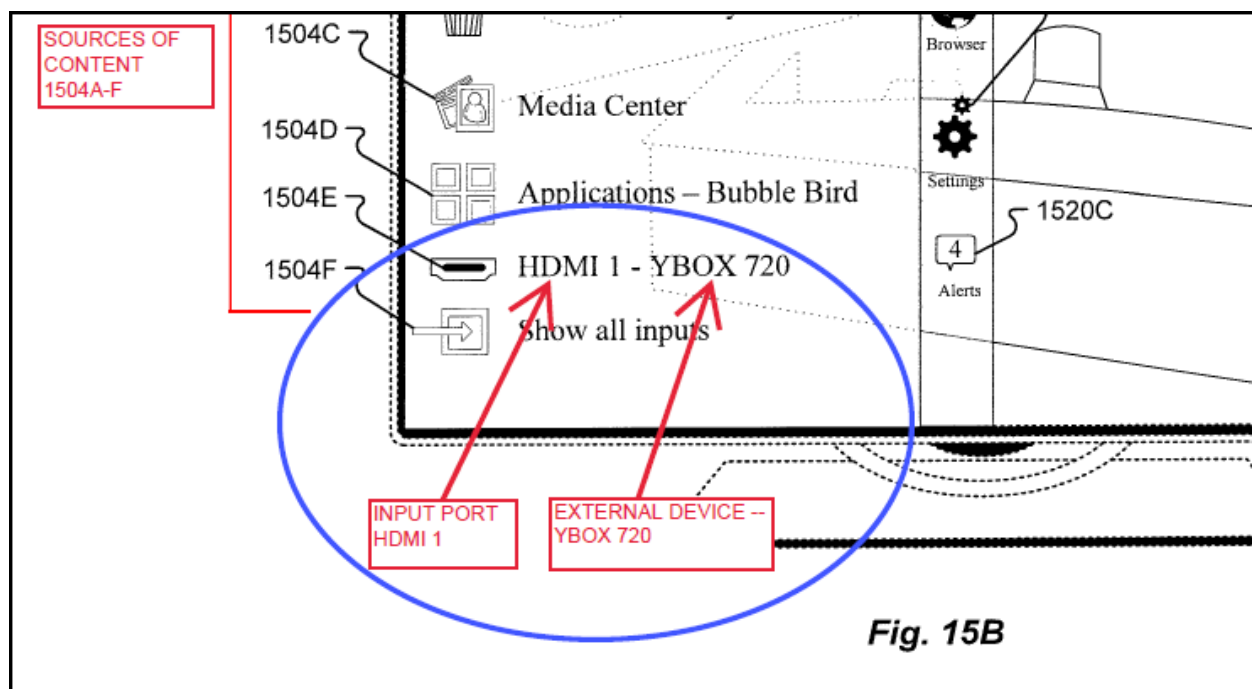
Pet., 55 (excerpt of Petitioner’s annotated Fig. 19 of Kim).

160. The Petitioner’s expert Dr. Lippman conceded that each of the symbols in Choi is identical and does not designate specific ports. Ex. 2015 [Dep. Tr. Dr. Lippman], 119:3-6 (Q: “The symbols that are shown in 830A through 830C, they’re all the same. Correct? The symbols are all identical?” A: “Those little -- little ones yes.”), 121:12-15 (Q: “[A]re the symbols 830A through 830C identified as being any particular type of input port?” A: “No, that indicates that something’s connected.”), 167:22-25: (Q: “Do they specify any particular input port? Yes, that’s the question.” A: “No, they don’t.”)

161. In contrast to Kim and Choi, the ’040 Patent discloses that its processor can determine which input ports are connected. ’040 Patent, 25:29-31 (“determine

which inputs (e.g., HDMI ports) are currently available for connecting to external devices”). The ’040 Patent presents a user interface providing a list identifying a specific input port (e.g., HDMI 1, HDMI 3) that is electrically connected to a device. ’040 Patent, 31:14-16 (HDMI 1), 33:12-22 (HDMI 3).

162. The user interface in the ’040 Patent displays source 1504E identifying a specific input port HDM 1 (**blue**) connected to the YBOX 720 external device:



’040 Patent, Fig. 15B (excerpted; annotated); 33:14-16. The Petitioner’s modified version of Kim’s Figure 19 does not display an input port. Pet, 55; Lippman Decl., ¶ 159. Accordingly, the proposed modified Kim External device object 1380 fails to meet the “*electrical input*” limitation 1.7.

163. The Petitioner knows there is a gap between the proposed Kim/Choi combination and limitation 1.7, and thus provides a back-up argument: “To the

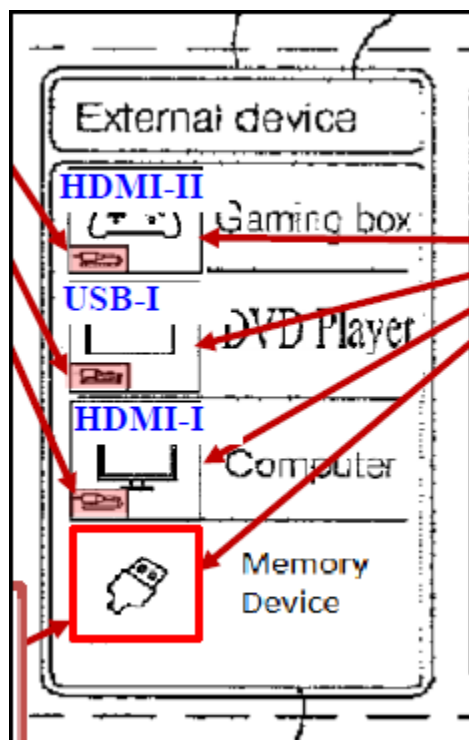
extent argued that the claim requires the specific input port be referenced by name, e.g., ‘HDMI,’ such would have been obvious as analyzed at [1.5].” Pet., 55-56.

164. The referenced analysis for limitation 1.5 (Pet., 41-45) is not meaningfully different from the analysis for limitation 1.7. The annotated Figure 11 of Choi (Pet., 42) does not display “specific symbols representing input port connections” as alleged. For the same reasons described above, the symbols in Choi indicate a connected status, not an input port. Consequently, the combination of Choi and Kim is missing the requirement of limitation 1.7 of displaying an input port.

165. The Petitioner proposes a further modification to the once-modified Kim External devices object 1390, which is that it would be displayed with a specific input port description, such as “HDMI-DVD Player.” Pet., 45 (citing Ex. 1011 (“Kim Published Application” or “Kim Application”); Lippman Decl., ¶¶ 127-129. However, the Petitioner’s expert explained that a POSITA would be motivated to configure the External devices object 1380 to identify a connected external device **without identifying an input port** “so that the user wouldn’t have to know that kind of technical information like whether it’s a USB or component video or an HDMI connection.” Ex. 2015 [Dep. Tr. Dr. Lippman], 212:6-10. Accordingly, a POSITA would not make the additional modification to Kim to meet limitation 1.7.

166. Additionally, a POSITA would not make the further proposed modification of adding an input port text identifier to Kim/Choi because the display

would become cluttered and confusing for the user, just like Dr. Lippman explained in deposition. The goal of the user interface in both the '040 Patent and Kim is to provide a user-friendly user interface that enables the user to easily and intuitively navigate the content sources, program content, and functions in an enhanced television. '040 Patent, 2:21-31; Kim, [0094]. A POSITA would not have reason to add an input port identifier like “HDMI-DVD Player” to the Kim/Choi display because it would become unduly complicated and the result would thus run counter to the objective of the '040 Patent, as well as Kim. The further modified Kim/Choi display would appear as follows (additions in blue):



Kim, Fig. 19 (excerpted and annotated in red by Petitioner; annotated in blue by Patent Owner). This is not an issue of bodily combining references. The display

presented above represents what the Petitioner proposes with its second modification to Kim. A POSITA would not have motivation to further modify Kim to add an input port identifier because the user interface would become unduly complex and would be displaying additional information that confuses the user.

167. The Petitioner and Dr. Lippman also fail to make any showing that the further modified Kim/Choi/Kim Application display would have a reasonable expectation of success. See Pet., 44-45; Ex. 1003 [Lippman Decl.], ¶¶ 129-131. The proposed combination would not have a reasonable expectation of success for the reasons I provided above as to why a POSITA would not make the proposed modification based on the Kim Application.

168. Also, it is my understanding that the Kim Published Application is not prior art because its filing date of January 4, 2013, is after the August 17, 2012, priority date of the '040 Patent. There is no analysis in the Petition or in the Lippman declaration showing that the claims in the Kim Published Application are supported by Provisional App. No. 61/583,609. Ex. 1011, 1 (60). My understanding is that a reference is effective prior art as of its provisional application only if the claims of the reference are supported by the provisional application. I have reviewed the 61/583,609 provisional application and do not believe that it provides support for the following limitations of claim 1 of the Kim Application: (1) “a camera unit configured to sense and eye movement of a user holding the mobile terminal,” and

(2) “a controller configured to receive indication signals from the mobile terminal indicating at least one of a grip pattern and an eye movement of the user holding the mobile terminal.” See Ex. 1011 [Kim Application], 67 (Cl. 1); Ex. 2016 [Kim Provisional Application 61/583,609]. Accordingly, the Kim Published Application is not prior art to the ’040 Patent.

A POSITA Would Not Have Reason to Combine Choi With Kim to Meet Limitation 1.7

169. Additionally, the combination fails because a POSITA would not have a reason to modify Kim according to Choi. The motivation provided by the Petitioner is that the addition of Choi’s symbols to Kim would “include icons representing external devices with specific symbols that **distinguish connected devices from devices that are not connected.**” Pet., 54-55 (emph. added). However, Kim teaches that the displayed external devices are ones that are **connected** to the television. Kim, [0094] (“representing a list of **connected** external devices ...”), [0210] (“a device list 1385 of external devices **connected** to the image display apparatus 100”) (all emph. added). The Petitioner’s expert agreed. Ex. 2015 [Dep. Tr. Dr. Lippman], 134:17-20 (Q: “But you don’t dispute that paragraph 94 in Kim states representing a list of connected external devices. That’s what Kim says, right?” A: “Right.”). Accordingly, because Kim only displays external devices that are connected, there is no reason to modify Kim by Choi to add symbols indicating that the devices are connected.

170. Additionally, the Petitioner's stated motivation of modifying Kim by Choi to "distinguish connected devices from devices that are not connected" (Pet., 54-55; Lippman Decl., ¶ 158) does not provide a reason to display symbols indicating which **input port** is connected to meet limitation 1.7. In fact, during deposition the Petitioner's expert explained that it made sense to identify a connected external device **without identifying an input port** "so that the user wouldn't have to know that kind of technical information like whether it's a USB or component video or an HDMI connection." Ex. 2015 [Dep. Tr. Dr. Lippman], 212:6-10.

171. Furthermore, a POSITA would not make the second modification to Kim to include identification of a specific input port because it is not feasible. Kim's controller 170 is only disclosed as being capable of detecting and displaying which external devices are connected, not detecting and displaying specific input ports, Kim, Fig. 6, [0094] ("a card object representing a list of connected external devices"), [0210] ("a device list 1385 of external devices connected to the image display apparatus 100"). Kim, [0210]. Similarly, Choi's controller 170 does not detect specific input ports; rather, it is only disclosed as being capable of detecting and displaying which devices are connected or not connected. Choi ("the control unit 170 determines which external device icons 820 are connected to the image display device 100"). Accordingly, a POSITA would not have reason to further modify Kim to add specific input ports onto the display.

D. Independent Claims 11 and 21 are Patentable

172. Independent Claims 11 and 21 recite substantially identical limitations as independent Claim 1. Claims 11 and 21 are patentable for at least the reasons set forth herein for Claim 1.

E. Claims 2 and 12 Are Patentable Over Kim, Lee-1, and Choi

173. Kim, Lee-1, and Choi fail to teach at least the following limitations of Claim 2:

- Limitation 2.1: “*identifying a user associated with the received indication*”
- Limitation 2.2: “*retrieving one or more settings associated with the identified user*”
- Limitation 2.3: “*retrieving, from memory, content information associated with the identified user*”

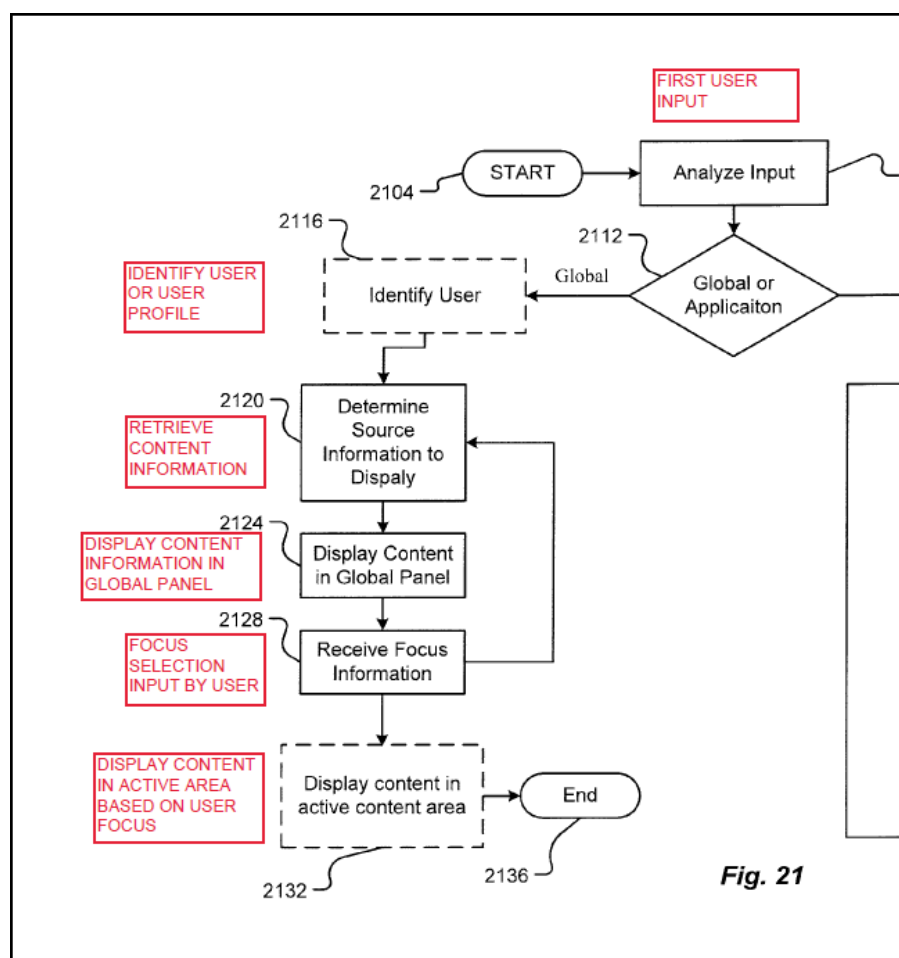
174. Claim 12 has substantially similar limitations as Claim 2 and is patentable for at least the same reasons.

1. Kim, Lee-1, and Choi Fail to Teach Limitation 2.1 for “Identifying a User Associated With the Received Indication”

175. Limitation 2.1 provides for “*identifying a user associated with the received indication.*” The “*received indication*” refers to the user selection in

limitation 1.1. Accordingly, the method provides that the user is identified based on the user input.

176. The '040 Patent discloses in connection with Figure 21 that if the user makes a global panel selection the television apparatus identifies the user. '040 Patent, 36:48-52 (“[I]f it is determined that the analyzed communication is associated with displaying a global panel ... then ... the user, or a user profile associated with the user is identified”). Figure 21 of the '040 Patent discloses identifying the user making a global panel selection:



'040 Patent, Fig. 21 (annotated).

177. The Petitioner relies solely on Kim for limitation 2.1. According to the Petitioner, the “received indication” is met by the user’s input of a “home key” button or a “go-to-home screen” button in Kim. Pet., 20, 22. Accordingly, limitation 2.1 is only met if the Kim/Lee-1/Choi combination identifies a user based on the input of the home key/go-to-home screen button.

178. The Petitioner argues that a user may login to the App Store or a network using the login 1327 icon on the home screen of Figure 19 of Kim. Pet., 56-57; Lippman Decl., ¶¶ 165-166. However, this does not satisfy limitation 2.1 because in Kim such a user login takes place as **separate operation** with additional user inputs **after** the user makes the “*received indication*” user input to open the home screen. Kim confirms that the user input that opens the home screen occurs before the user can login using the home screen. Kim, [0192], Fig. 19. Kim’s user login results from **separate user inputs**⁵ by selecting the login object 1327 **after** the home screen is opened. Kim, [0203] (“A Login menu item 1327 ... may be displayed above the card objects 1320 and 1330 [and] [t]he user may login to the APP STORE or a network connected to the image display apparatus 100.”). Thus, limitation 2.1

⁵ Kim discloses that the user login operation involves at least three user inputs after the user made the input to invoke the home screen: (1) selection of login object 1327, (2) entry of user name, and (3) entry of password. Pet., 57-58.

is not satisfied by Kim’s disclosure of a user login after the home screen is selected and displayed.

179. The Petitioner and its expert also make a “happenstance” argument that there would be instances where a user making a first input to open the home screen would proceed to select the login object 1327 and then enter a user name and password. Pet., 57-57; Lippman Decl., ¶ 168. As I explained above, this does not meet the claim limitation because the user is not being identified based on the “*received indication*” (selection of the home screen) input, rather, any user identification occurs via separate user input operations taking place after the home screen is invoked.

180. Accordingly, limitation 2.1 is not met because Kim does not identify a user based on the input of the home key/go-to-home screen button.

181. The Petitioner also references Kim’s disclosure in Figure 6 that “the network interface 130 may transmit data ... to a user or electronic device selected from among users or electronic devices pre-registered with the image display apparatus 100.” Kim, [0081]; Pet., 57. A POSITA would not understand that passage as teaching or suggesting “*identifying a user associated with the [home screen selection]*” per limitation 2.1.

182. Instead, a POSITA would understand that passage as teaching that the network interface 130 can transfer data to a user who has registered with the

television 100. A POSITA would understand that a user can register without providing identity information. Second, sending data to a registered user does not mean that the user is identified, it merely means that the data is sent to a registered user as opposed to a non-registered user. Third, sending data to a registered user in paragraph [0081] of Kim is not disclosed as being performed as a result of the user inputting a selection for the home screen of Kim, as is required by the Petitioner's application of Kim to limitations 2.1 and 1.1.

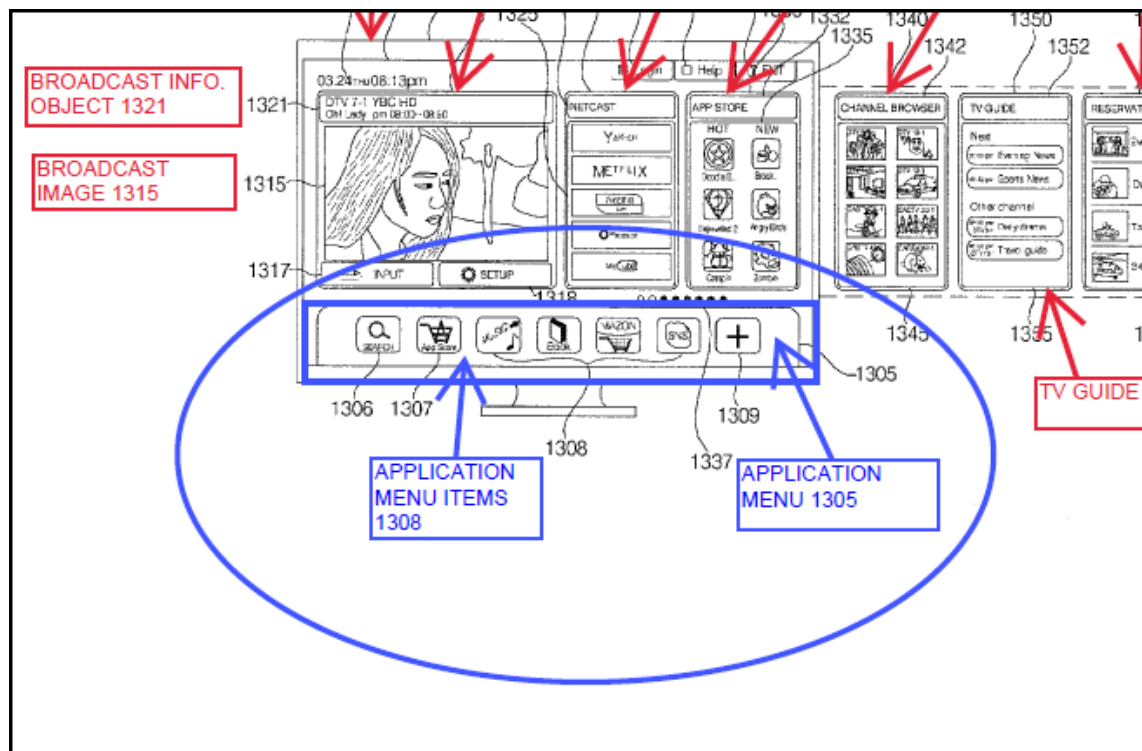
183. For at least the above reasons, Kim's disclosure of preregistered users does not meet limitation 2.1.

2. Kim, Lee-1, and Choi Fail to Teach Limitation 2.2 for “Retrieving One or More Settings Associated With the Identified User.”

184. Limitation 2.2 provides for “*retrieving one or more settings associated with the identified user.*” The '040 Patent discloses user settings consistent with its ordinary and customary meaning as referring to operational settings for an enhanced television, including audio settings, picture/video settings, language/geography settings, and network settings. '040 Patent, 21:39-41 (“information displayed about the settings of the audio or video, or other settable characteristics of the Intelligent TV 100.”), 24:22-51.

185. The Petitioner argues that the claimed user settings are met by Kim's application menu 1305 from which the user can select various optional application

items 1308. Pet., 58; Lippman Decl., ¶¶ 170-172. The application menu 1305 and optional applications 1308 are found in Kim’s home screen of Figure 19 (in **blue**):



Kim, Fig. 19 (excerpted; annotated).

186. Kim describes that the application menu 1305 includes “mandatory application menu items 1306, 1307, and 1309 (Search, App Store, and +) and optional application menu items 1308 (e.g., Music, Book, MAZON, and SNS).” Kim, [0214]. Kim refers to the optional menu items 1308 as being “user-set application menu items 1308.” Kim, [0217].

187. The Petitioner and its expert assert that the “user-set application menu items 1308” such as Music, Book, MAZON, and SNS meet limitation 2.2 for “retrieving one or more settings associated with the identified user.” Pet., 58;

Lippman Decl., ¶¶ 170-171. However, limitation 2.2 requires retrieving user settings for the identified user based on the “*received indication*,” which according to the Petitioner’s argument for limitations 1.1-1.2 is the user inputting a home screen selection. Pet., 20, 23-24. The alleged user settings for limitation 2.2, the optional software applications 1308, are not retrieved in response to a user selecting the home page. Instead, those applications would only be retrieved upon the user selecting an application after the home screen is displayed. Kim, [0215] (“The plurality of application menu items may include predetermined menu items 1306 to 1309 which may be selected from all application menu items [1305] available on the display 180.”). Thus, the alleged user settings (optional software applications) are not retrieved based on the user making the home screen selection (alleged “*received indication*”) pursuant to limitation 2.2.

188. Furthermore, a POSITA would not consider user applications or application thumbnails to be user settings associated with an “*identified user*.” Kim refers to these applications as “user-set” applications because they are optional and a user can set them, not because they are associated with a specifically identified user. Kim, [0217]. The Petitioner and its expert make no showing that Kim’s user-set applications or thumbnails are associated with an “*identified user*” per limitation 2.2. Kim does not teach or suggest that the user applications or thumbnails are different for different users. A POSITA would understand Kim as teaching that the

user applications and any thumbnails are optional applications for the benefit of all users of the television. Kim, [0215]. Kim does not teach or suggest that the user applications and thumbnails are tied to an “*identified user*” so as to meet limitation 2.2.

189. Also, a POSITA would not consider user applications or application thumbnails to be user settings within the ambit of limitation 2.2. A POSITA would understand that applications and application thumbnails are not operational settings for an enhanced television, such as audio settings, picture/video settings, language/geography settings, and network settings that are “*settings associated with the identified user*” per limitation 2.2.

190. The Petitioner’s expert asserts that “[i]t would have been obvious to a POSITA, for controller to ‘*retrieve[]*’ from memory 140 the user’s settings for the application menu items 1308 ... so that the corresponding application thumbnails would be retrieved from memory 140 and displayed.” Lippman Decl., ¶ 172. This analysis is deficient in two respects. First, it does not identify the user settings. Second, the expert’s conclusory assertion that the (unspecified) user settings would have to be retrieved so that the thumbnails can be retrieved does not make sense. A POSTA would understand that the thumbnails for the applications would be stored in memory and would be retrieved to be displayed in application menu 1308 in

Figure 19 of Kim. Kim, Fig. 19. There is no need to identify the applications in order to identify the thumbnails.

191. Claim 2 is patentable over the applied references which fail to teach or suggest limitation 2.2 for “*retrieving one or more settings associated with the identified user.*”

3. Kim, Lee-1, and Choi Fail to Teach Limitation 2.3 for “Retrieving, From Memory, Content Information Associated With the Identified User”

192. Limitation 2.3 provides for “*retrieving, from memory, content information associated with the identified user.*” The ’040 Patent discloses that after the user is identified, content information is retrieved and displayed in the global panel. ’040 Patent, 36:48-58. The ordinary and customary understanding of the language is that content information specific to the identified user is retrieved.

193. The Petitioner and its expert assert that the thumbnails for the user-set applications 1308 in Figure 19 of Kim meet the limitation. Pet., 59; Lippman Decl., ¶ 173. But Kim does not meet limitation 2.3. For the same reasons explained for limitation 2.2, the thumbnails are not associated with “*the identified user*” because Kim does not teach or suggest that the user applications or associated thumbnails are specific to specific users.

F. Claims 3 and 13 Are Patentable Over Kim, Lee-1, and Choi

194. Kim, Lee-1, and Choi fail to render Claim 3 unpatentable for at least the reasons set forth for Claim 2 above. Notably, the Petitioner and its expert again discuss the claimed user settings without clearly identifying what are the user settings in Kim. Pet., 97 (“Additionally, ... the retrieved application thumbnails are also associated to the one or more settings associated with the user because the thumbnails correspond to the user settings for application menu items 1308.”). Pet., 59; Lippman Decl., ¶ 181 (*verbatim*).

195. Accordingly, Claim 3 is patentable over the proffered combination in Ground 1.

196. Claim 13 has substantially similar limitations as Claim 3 and is patentable for at least the same reasons.

G. Claims 4 and 14 Are Patentable Over Kim, Lee-1, and Choi

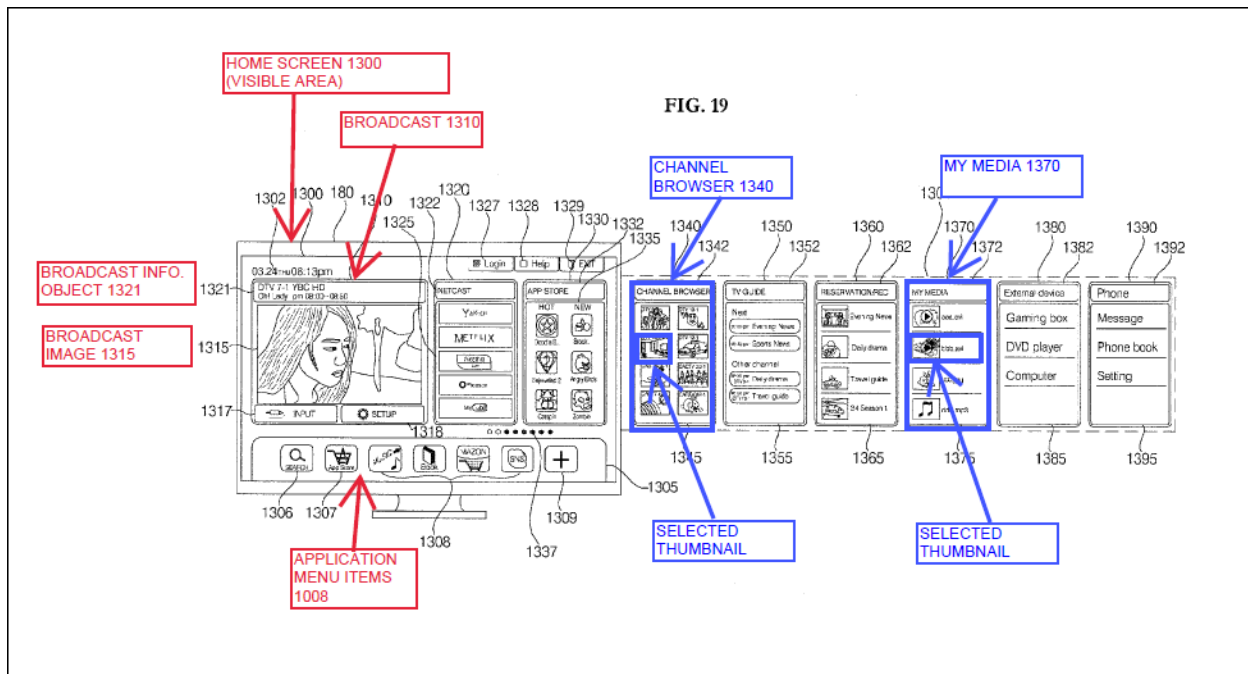
197. Claim 4 provides for a user input providing a “*second indication*,” “*determining, based on the second indication, a source of content information to be displayed in the global panel*,” “*retrieving ... [second] content information from the determined source*,” and “*displaying ... the [second] content information associated with the determined source*.” ’040 Patent, Cl. 4.

198. Claim 14 has substantially similar limitations as Claim 4 and is patentable for at least the same reasons set forth herein.

199. The Petitioner and its expert read Claim 4 onto the user's selection of one of two card objects in Kim's home screen of Figure 19: (1) Channel Browser card object 1340, and (2) My Media card object 1370. Pet., 61-64; Lippman Decl., ¶¶ 184-194. For limitation 4.1, the Petitioner relies on the user's selection of a thumbnail in the Channel Browser card object 1340, which causes the selected program to be displayed as a full-screen image on display 180. Kim, [0206] ("Upon selection of a thumbnail image from the thumbnail list 1345, a broadcast program from the selected channel may be displayed on the display 180."). As illustrated in Figure 13 of Kim, display 180 is the entire screen. Kim, Fig 13.

200. The Petitioner also refers to Kim's disclosure of an embodiment for scrolling card objects at [0287]-[0294] and asserts that the referenced "third object" would be understood to be the My Media Card object 1370. Pet., 63-64. Kim discloses that selection of a thumbnail on the third object (allegedly the My Media card 1370) "may cause the [content] to be retrieved for display on the display ... as a full screen image on the display." Kim, [0293].

201. Although not clearly stated (see Pet., 62-64), it appears that the Petitioner identifies the claimed "*second indication*" of limitation 4.1 as being a user selecting a thumbnail in the Channel Browser object 1340 or selecting a thumbnail in the My Media object 1370 in the home screen, as illustrated below (in blue):



Kim, Fig. 19 (annotated).

202. Limitation 4.2 provides for “*determining, based on the second indication, a source of [second] content information to be displayed in the global panel.*”

203. The Petitioner argues that limitation 4.2 is met because the Channel Browser card object 1340 allegedly has a “link for connecting to a content provider” that may “include a URL configured to retrieve a multimedia content stored on the content server.” Pet., 64. However, Kim does not disclose the Channel Browser card object as having a URL to retrieve content stored on a content server. On the contrary, the Channel Browser is disclosed as identifying broadcast channels. Kim, [0205] (“the [Channel Browser] card object 1340 may represent a list of broadcast channels [and] may include a card object name 1342 (CHANNEL BROWSER) and

a thumbnail list of broadcast channels 1345.”); Kim, [0206] (“Upon selection of a thumbnail image from the thumbnail list 1345, a broadcast program from the selected channel may be displayed on the display 180.”). The Petitioner has improperly and incorrectly attempted to read the Channel Browser 1340 into the “second card object” in Kim’s discussion of scrolling card objects at [0287]-[0294], but that discussion does not teach or suggest that the second card object having “at least one link for connecting to a content provider or to a storage device” (Kim, [0289]) is the Channel Browser 1340. See Kim, [0287]-[0294]. Indeed, the discussion in those passages does not even reference any one of the card objects 1300-1390 found in Figure 19 of Kim.

204. Thus, the Petitioner’s theory is based on the incorrect premise that the Channel browser card object in Kim has a URL to retrieve multimedia content stored on the content server. See Pet., 64. Accordingly, Kim does not teach or suggest limitation 4.2 for “*determining, based on the second indication, a source of content information to be displayed.*”

205. The Petitioner makes a back-up argument that “it would be obvious” to modify the Channel browser card object “to include a ‘link for connecting to a content provider’ with ‘a URL configured to retrieve multimedia content stored on the content server’ so that the smart TV 100 would be able to determine the content source that provides content.” Pet., 65. However, a POSITA would not make the

proposed modification to Channel Browser 1340 because, as explained above, the Channel Browser 1340 contains identification of available **broadcast channels**, not links to content stored on a content server. See Kim, [0205]-[0206]. Also, the rationale of enabling the TV “to determine the content source that provides the content” does not apply because the Channel Browser already knows the content sources, which are the identified broadcast channels in the Channel Browser. Accordingly, Kim’s Channel Browser does not meet limitation 4.2 for multiple reasons.

206. The Petitioner’s alternative argument is based on the My Media card object 1370 allegedly being the “third card object” referenced in the discussion of scrolling card objects in paragraphs [0287]-[0294] of Kim. Pet., 65-67. However, nowhere in those passages does Kim teach or suggest that the third card object is the My Media card object of Figure 19. The Petition references [0085] and [0196] of Kim, but neither discloses that selecting a thumbnail in the My Media object “*determines, based on the received second indication, a source of content information*” per limitation 4.2. Pet., 66. The Petitioner argues that “it would have been obvious for the controller 170 to determine the corresponding content source” but does not provide reasoning for why that is the case. Pet., 66.

207. The Petitioner also argues that selecting a thumbnail in My Media card 1370 would cause the associated video to be displayed in the Broadcast card object

1310 of Figure 19. Pet., 66. However, nowhere does Kim teach or suggest that information content from the My Media card 1370 can be played in the broadcast image 1315 of the Broadcast card object 1310. On the contrary, the Broadcast card object 1310 only displays currently-tuned **broadcast content** from a channel:

Referring again to FIG. 19, the card object 1310 may be named BROADCAST and may display a broadcast image [1315].

Kim, [0195].

BROADCAST card object 1310 may display a broadcast image 1315 received through the tuner 110 or the network interface 130, an information object 1321 that displays information about the broadcast image 1315.

Kim, [0197].

208. The Petitioner’s assertion that selection of a thumbnail in the My Media card 1370 would cause video to be displayed in the Broadcast card object 1310 is not supported by Kim. Pet, 66. The passages in paragraphs [0090], [0082], and [0097] cited by the Petitioner (at 66) do not support the assertion.

209. Thus, Kim does not teach or suggest that selecting a thumbnail in the My Media object 1370 results in content information being “*displayed in the global panel*” (allegedly, the home screen of Kim), and accordingly, the proposed combination fails to meet limitation 4.2 for “*determining, based on the second indication, a source of content information to be displayed in the global panel.*”

H. Claim 5 Is Patentable Over Kim, Lee-1, and Choi

210. Dependent Claim 5 is patentable over Kim, Lee-1, and Choi for at least the same reasons as independent Claim 1.

I. Claim 15 Is Patentable Over Kim, Lee-1, and Choi

211. Claim 15 is patentable for at least the same reasons as for independent Claims 1 and 11.

X. CLAIMS 2-3, 6, 12-13, 16, AND 22 ARE PATENTABLE OVER KIM, LEE-1, CHOI, AND LEE-2 (GROUND 2)

A. Claims 2 and 12 Are Patentable Over Kim, Lee-1, Choi, and Lee-2

212. The combination of Kim, Lee-1, Choi, and Lee-2 fails to teach at least the following limitations of Claim 2:

- Limitation 2.1: “*identifying a user associated with the received indication*”
- Limitation 2.2: “*retrieving one or more settings associated with the identified user*”

213. Claim 12 has substantially similar limitations as Claim 2 and is patentable for at least the same reasons set forth below.

1. Kim, Lee-1, Choi, and Lee-2 Fail to Teach Limitation 2.1 for “Identifying a User Associated With the Received Indication”

214. Limitation 2.1 provides for “*identifying a user associated with the received indication*,” where the “*received indication*” refers back to the input by a user in limitation 1.1.

in Figure 39B of Lee-2 are displayed in response to the user selection of favorite channel object 2019 on a home screen that is already displayed. Lee-2, 41:41-43 (“Referring to FIG. 39B, upon selection [in FIG. 39A] of the favorite channel object 2019, a favorite channel list screen including a favorite channel list is displayed fullscreen.”), 41:51-54. For that reason, the display of user B’s favorite channels does not teach or suggest “*identifying a user associated with the received indication*” of limitation 2.1.

218. Petitioner makes another “happenstance” argument that “there are instances” where a user provides a first input for the initial home screen selection per limitation 1.1 and then makes a second input to select favorite channel object 2019 to produce another display with user B’s favorite channels. Pet., 79. This argument simply confirms that the display of user B’s favorite channels is not based on the first input where the home screen is selected by the user, as required by limitations 1.1 and 2.1.

219. Additionally, the Petitioner’s argument is deficient because Figure 39B displays the favorite channels for four users A-D. The selection of tab B simply displays user B’s favorite channels; it does not identify user B as required for limitation 2.1. The user (whoever it is) can select any tab A-D to display the favorite channels for each of users A-D. The selection of those tabs by the user does not identify the user to meet limitation 2.1.

220. The Petitioner also makes an argument that it would be obvious for Kim to be modified so that the user making the first input to call up the home screen would be identified by Kim's image display apparatus 100. Pet., 79-80. However, Kim does not disclose anywhere that the image display apparatus 100 stores information about a plurality of different users of the device, so there would be no need to identify the user invoking the home screen. Indeed, Kim's only reference to favorite channels is to a single list for the image display apparatus, not multiple lists for different users. Kim, [0205] ("the thumbnail images may correspond to pre-stored user channels (e.g., favorite list)"). Thus, a POSITA would not have reason to modify Kim as proposed.

221. Additionally, the Petitioner does not provide any explanation or evidence on how Kim's system could identify a user based on the user's input selection of a single button (home screen key or go-to-home screen key) to call up the home screen. Lee-2 does not disclose how a user could be identified based on the selection of the home screen. The Petitioner has not established a reasonable expectation of success for the proposed modification of Kim to identify a user based on selection of a home screen button. I note that neither the Petitioner or its expert address the reasonable expectation of success for this proposed modification to Kim. See Pet., 79-80; Lippman Decl., ¶¶ 287-288. Indeed, Kim does not remotely disclose

any mechanism for identifying a user based on the input selection of the home screen, as discussed previously.

222. Accordingly, Claim 2 is patentable over the references of Ground 2 because limitation 2.1 is not satisfied.

2. Kim, Lee-1, Choi, and Lee-2 Fail to Teach Limitation 2.2 for “Retrieving One or More Settings Associated With the Identified User”

223. Limitation 2.2 provides for “*retrieving one or more settings associated with the identified user.*” The ’040 Patent discloses user settings consistent with its ordinary and customer meaning as the operational settings for the enhanced television, including audio settings, picture/video settings, language/geography settings, and network settings. ’040 Patent, 21:39-41 (“information displayed about the settings of the audio or video, or other settable characteristics of the Intelligent TV 100.”), 24:22-51.

224. The Petitioner identifies the channel setup menu 3930 in Figure 39B of Lee-2 as allegedly meeting limitation 2.2. Pet., 80-81. The Petitioner asserts that favorite channel setup inputs such as the “user’s favorite channel list and the number of displayed thumbnails” would be settings retrieved for the identified user.

225. However, a POSITA would understand the claimed settings as encompassing operational settings for the enhanced television, such as audio settings, picture/video settings, language/geography settings, and network settings.

The Petitioner's reference to favorite channel parameters does not teach or suggest the claimed settings. For this reason, the proposed combination does not meet limitation 2.2.

B. Claims 3 and 13 Are Patentable Over Kim, Lee-1, Choi, and Lee-2

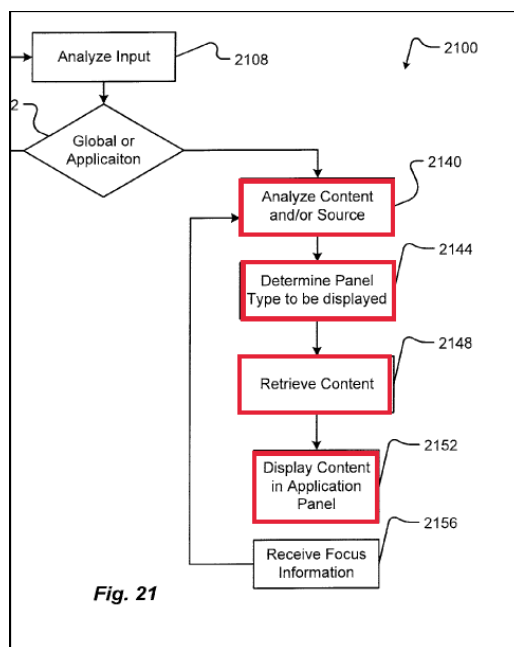
226. Kim, Lee-1, Choi, and Lee-2 fail to render Claim 3 unpatentable for at least the reasons set forth for Claim 2 above for Ground 2.

227. Claim 13 has substantially similar limitations as Claim 3 and is patentable for at least the same reasons.

C. Claim 6, 16, and 22 Are Patentable Over Kim, Lee-1, Choi, and Lee-2

228. Kim, Lee-1, Choi, and Lee-2 fail to render Claim 6 unpatentable as discussed below. Claims 16 and 22 have substantially similar limitations as Claim 6 and are patentable for at least the same reasons.

229. Claim 6 is supported by the disclosure associated with Figure 21 of the '040 Patent providing for analyzing a source of content or content information currently-displayed on the television, selecting a panel type, retrieving content information based on the panel type, and displaying the retrieved content information based on the selected panel type:



'040 Patent, Fig. 21 (annotated), 36:66-37:8.

1. Kim, Lee-1, Cho, and Lee-2 Fail to Teach Limitation 6.1 for “Identifying At Least One of a Content Source and a Content Information Currently Being Displayed Via a Television”

230. Limitation 6.1 provides for “*identifying at least one of a content source and a content information currently being displayed via a television.*” Based on that identification, a panel type will be selected and second content information will be retrieved and displayed in the global panel in addition to the first content information displayed pursuant to Claim 1.

231. Regarding limitation 6.1, the Petitioner relies on Figure 32B of Lee-2 as allegedly highlighting a thumbnail in the Favorite Channels object 2060 because it allegedly corresponds to the currently-viewed program in image 3210. However,

Lee-2 does not disclose that a thumbnail is highlighted. This is the entirety of the disclosure regarding Figures 32A-32B:

Referring to FIG. 32A, an image 3210 is displayed fullscreen on the display 180. Upon input of a local key (not shown) or a favorite channel key (not shown) of the remote controller, the FAVORITE CH card object 2060 may be displayed on the display 180 as illustrated in FIG. 32B. The FAVORITE CH card object 2060 may be displayed together with the image 3210 on the same screen. Therefore, the user can instantly be aware of the FAVORITE CH card object 2060 including the favorite channel list 2065.

Lee-2, 37:58-38:2.

232. The Petitioner implies that Figure 32B has the top left thumbnail highlighted in the Favorite Channel object 2060. As noted, Lee-2 does not disclose that the thumbnail is highlighted. Even if it was highlighted, a POSITA would understand that it could be highlighted simply because the user selected the thumbnail to learn more about the channel associated with it. For instance, a POSITA would understand that if the user recognized that a favorite channel thumbnail corresponded to a currently-viewed program, the user might select the thumbnail to get more information, which would cause the thumbnail to be highlighted.

233. The Petitioner and its expert provide no evidence that a thumbnail in Figure 32B is highlighted because Lee-2's image display apparatus detects a

“currently watched channel (e.g., DTV 7-1) so that it may be included in the FAVORITE CH card object 2060,” as alleged. Pet., 84-85; Lippman Decl., ¶¶ 308-309. The Favorite Channel card object 2060 includes the favorite channel thumbnails because they were set by the user, not because they correspond to a currently-viewed program. Lee-2, 41:61-67 (user employs the channel setup menu to set his/her favorite channels). Indeed, Lee-2 teaches that “[a] channel that the user is watching **may** be included in the FAVORITE CH card object.” Lee-2, 63-67 (emph added). Accordingly, Lee-2 does not teach or suggest that the currently-viewed channel is detected or identified so that it can be highlighted in the Favorite Channels object 2060, as the Petitioner argues.

234. Accordingly, Lee-2 does not teach or suggest “*identifying at least one of a content source and a content information currently being displayed*” pursuant to limitation 6.1. Because the Petitioner relies entirely on Lee-2 for this limitation, the combination including Kim fails to meet limitation 6.1.

2. Kim, Lee-1, Cho, and Lee-2 Fail to Teach Limitation 6.2 for “Selecting a Panel Type Based on the Identified At Least One of [a] Content Source and Content Information Being Displayed via the Television”

235. Limitation 6.2 provides for “*selecting a panel type based on the identified at least one of [a] content source and content information being displayed via the television.*”

236. The Petitioner argues that the display of a Favorite Channel object 2060 meets this limitation. Pet., 86. However, the Favorite Channel object 2060 (alleged “*panel type*”) is selected based on the user selecting a favorite channel key or similar button. Lee-2, 37:62-67. Lee-2 does not teach or suggest that the Favorite Channel object is selected based on identifying a content source or content information for a currently-displayed program, as would be required for limitation 6.2. The figures and passages cited by the Petitioner disclose that a user is viewing a program (e.g., in Figure 32A or Figure 33A) and then selects the favorite channel key to bring up a different user interface having the program superimposed with the Favorite Channels object 2060 (e.g., in Figure 32B or Figure 33B). Lee-2, Figs. 32A-32B, 33A-33B.

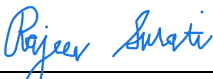
237. The alleged identification of the content source (e.g., channel) or content information (e.g., program name) does not cause the Favorite Channels object 2060 (alleged “*panel type*”) to be selected. Rather, the user’s selection of the favorite channel button causes it to be selected.

238. Accordingly, the applied references fail to meet Limitation 6.2 providing for “selecting a panel type based on the identified at least one of [a] content source and content information being displayed via the television.”

XI. CONCLUSION

239. I hereby declare that all statements made herein of my own knowledge are true and all statements made herein on information and belief were and are believed by me to be true, and that all statements herein were and are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that any such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Respectfully submitted,



Rajeev Surati

Dated: August 22, 2024