**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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**SAMSUNG ELECTRONICS CO., LTD. AND SAMSUNG ELECTRONICS AMERICA, INC.,**
Petitioner

v.

**TVNGO LTD.,**
Patent Owner

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Inter Partes Review No.: IPR2026-00213

# PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. RE50,328

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| 1016 | WIPO Publication No. WO2001078381A2 (“Escobar”) |
| 1017 | WIPO Publication No. WO1997997A1 (“Townsend”) |
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| 1019 | U.S. Patent No. 6,338,094 (“Scott”) |
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| 1022 | WIPO Publication No. WO2001010118A1 (“Cooper”) |
| 1023 | U.S. Patent No. 6,240,555 (“Shoff”) |
| 1024 | U.S. Patent Application Publication No. 2001/0047518 (“Sahota”) |
| 1025 | U.S. Patent No. 5,818,438 (“Howe”) |
| 1026 | DCT5100 Installation Manual (“DCT5100”) |
| 1027 | U.S. Patent No. 8,281,339 (“Walker”) |
| 1028 | OpenTV Core 1.1, Technical White Paper, 2002 (“OpenTV Whitepaper”) |
| 1029 | “Panasonic TVs to Include OpenTV Software,” TVTechnology Newsletter, February 4, 2004 (“Panasonic”) |
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| Exhibit No. | Description |
|---|---|
| 1031 | U.S. Patent No. RE50,328 reissue file history |
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| 1034 | U.S. Patent No. 9,407,969 |

| **CHART OF CLAIMS** |
| --- |
| [1pre] A method for generating at a user's premises an overlay using video signals constituting a first data and overlay-enabling digital data constituting a second data, the method comprising: |
| [1a] (a) providing a combiner circuit at the user's premises, wherein; |
| [1b] the combiner circuit is coupled to a TV set and connected to a separate TV [timer] tuner box or TV tuner in the TV set, at the user's premises, and |
| [1c] the combiner circuit is also connected through distinct networks to each of a video signal input providing video signals through the separate TV tuner box or the TV tuner in the TV set, and an Internet data input providing overlay-enabling digital data over the Internet, wherein |
| [1d] said video signals and said overlay-enabling digital data are received at the user's premises by different resources as mutually distinct and independent inputs, and wherein |
| [1e] said overlay-enabling digital data includes at least: |
| [1f] a Web link indicating a website where content that is associated with said overlay-enabling digital data is stored, |
| [1g] an image indicative of the content associated with said overlay-enabling digital data, and |
| [1h] an overlay activation criterion; and |
| [1i] (b) processing at the user's premises said overlay-enabling digital data and generating at the user's premises a corresponding overlay only if said overlay activation criterion is met, wherein generating the overlay includes: |
| [1j] generating at the user's premises a first display screen including at least a first portion corresponding to said video signals and a second portion overlaid over said first portion and corresponding at least to said image, and |
| [1k] associating the Web link with said second portion of the first display screen thereby allowing a user to cause the combiner circuit to retrieve said content, generate a second video display screen including at least a portion which corresponds to said content, and |
| [1l] input the second display screen to said TV set. |
| [2] The method according to claim 1, wherein said overlay enabling digital data is received at the user premises according to a pre-stored user profile. |
| [3 pre] The method according to claim 1, further including: |
| [3a] receiving a command from the user at said user premises; and |
| [3b] responsive to said command, resizing said first portion and/or said second portion of said first display screen. |

| **CHART OF CLAIMS** |
| --- |
| [4 pre] The method according to claim 1, wherein the content stored at said website enables streaming of digital data over the Internet; and |
| [4a] said method further including: pre-fetching and buffering said digital data stream from said website, thereby allowing said digital data stream to be displayed substantially without delay upon redirection by the user. |
| [5] The method according to claim 1, wherein the overlay enabling digital data comprises data representative of one or more second images, and for each of said one or more second images said overlay-enabling data comprises respective web site addresses where IP content associated with the respective second image is stored, and wherein said generating the overlay further includes within said first display said one or more second images. |
| [6] The method according to claim 1, wherein the overlay enabling digital data is supplementary or complementary to the video signals. |
| [7] The method according to claim 1, wherein the image includes an icon that indicates to the user that digital data from Internet content is currently being provided and which provides an indication of a nature of said Internet content. |
| [8] The method according to claim 1, wherein the image contains textual information advising the user to press a particular button on a remote control unit. |
| [10 pre] The method according to claim 5, further including: |
| [10a] periodically accessing a web server for downloading said overlay-enabling digital data; |
| [10b] extracting from the overlay-enabling digital data said one or more second images and the respective web sites corresponding to each of said second images; |
| [10c] retrieving and storing digital content from said web sites; and |
| [10d] if the overlay activation criterion is met and a user command that is associated with an image from amongst said one or more second images is identified, displaying the respective image from amongst the second images, accessing the respective web site associated with the displayed image and extracting and buffering content from the website. |
| [11] The method according to claim 5, further comprising displaying a respective IP content when a corresponding one of said one or more second images is selected. |
| [12] The method according to claim 7, including selecting specific Internet content by pressing a color-coded button on a remote control in accordance with a color of said icon. |

| **CHART OF CLAIMS** |
| --- |
| [13 pre] A TV-Internet Integration circuit for generating at a user's premises an overlay using video signals constituting a first data and overlay-enabling digital data constituting a second data, the TV-Internet Integration circuit comprising: |
| [13a] a combiner circuit at the user's premises coupled to a separate TV tuner box or TV tuner, wherein |
| [13b] the combiner circuit is also connected through distinct networks to each of a video signal input providing video signals through the separate TV tuner box or the TV tuner, and an Internet data input providing overlay-enabling digital data over the Internet, wherein |
| [13c] said video signals and said overlay-enabling digital data are received at the combiner circuit at the user's premises by different resources as mutually distinct and independent inputs, and |
| [13d] wherein said overlay-enabling digital data includes at least: |
| [13e] a Web link indicating a website where content that is associated with said overlay-enabling digital data is stored; |
| [13f] an image indicative of the content associated with said overlay-enabling digital data; and |
| [13g] an overlay activation criterion, wherein |
| [13h] the combiner circuit is responsive to the overlay activation criterion being met for generating a corresponding overlay, including: |
| [13i] generating at the user's premises a first display screen including at least a first portion corresponding to said video signals and a second portion overlaid over said first portion and corresponding at least to said image, and |
| [13j] associating the Web link with said second portion of the first display screen thereby allowing a user to cause the combiner circuit to retrieve said content, and generate a second video display screen including at least a portion which corresponds to said content; and |
| [13k] a video output interface, coupled to or integrated within the combiner circuit and configured to be coupled to a video input of said TV set and to display said first display screen or said second video display screen. |
| [14] The TV-Internet Integration circuit according to claim 13, wherein said overlay-enabling digital data is received at the user premises according to a pre-stored user-profile. |
| [15 pre] The TV-Internet Integration circuit according to claim 13, further including: |
| [15a] a command input for receiving a command from the user at said user premises; and |

| **CHART OF CLAIMS** |
| --- |
| [15b] a frame adjuster for resizing said first portion and/or said second portion of said first display screen in response to said command. |
| [16 pre] The TV-Internet Integration circuit according to claim 13, further including: |
| [16a] a receiver for receiving a digital data stream, wherein the stream of the digital data is enabled by the content stored at said website; and |
| [16b] a processing unit for pre-fetching and buffering said digital data stream from said website, thereby allowing said digital data stream to be displayed substantially without delay upon redirection by the user. |
| [17 pre] The TV-internet Integration circuit according to claim 13, wherein the overlay-enabling digital data comprises data representative of one or more second images, and for each of said one or more second images said overlay-enabling data comprises respective web site addresses where IP content associated with the respective second image is stored, |
| [17a] and wherein the combiner circuit is configured to: |
| [17b] periodically access a web server for downloading said overlay-enabling digital data; |
| [17c] extract from the overlay-enabling digital data said one or more second images and the respective web sites corresponding to each of said second images; |
| [17d] retrieve and store digital content from said web sites; and |
| [17e] if the overlay activation criterion is met, and a user command that is associated with an image from amongst said one or more second images is identified, display the respective image from amongst the second images, access the respective web site associated with the displayed image and extract and buffer content from the website. |
| [18] The TV-Internet Integration circuit according to claim 13, wherein the image includes an icon that indicates to the user that digital data from Internet content is currently being provided and which provides an indication of a nature of said Internet content. |
| [19] The TV-Internet Integration circuit according to claim 13, wherein the image contains textual information advising the user to press a particular button on [the] a remote control unit. |
| [21] The TV-Internet Integration circuit according to claim 18, wherein the icon is colored so as to allow user selection of a specific Internet content by pressing a color-coded button on a remote control in accordance with a color of said icon. |

# I. INTRODUCTION

U.S. Patent RE50,328 (the ’328 patent, EX1002) claims subject matter that was well-known in the interactive television field long before the original application for the ’328 patent was filed as demonstrated below. All challenged claims should therefore be found unpatentable.

Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Petitioner”) certifies that the ’328 patent is available for *inter partes* review and that Petitioner is not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in this Petition.

# II. STATEMENT OF PRECISE RELIEF REQUESTED

Petitioner requests cancelation of claims 1-8, 10-19, and 21 of the ’328 patent in view of the following grounds:

| Ground(s) | Claims | Basis | Reference(s) |
|---|---|---|---|
| 1 | 1, 5-7, 10-11, 13, 17-18 | §102, §103 | Marler |
| 2 | 2, 12, 14, 21 | §103 | Marler and Rasmussen |
| 3 | 3, 15 | §103 | Marler and Zigmond |
| 4 | 8, 19 | §103 | Marler and Gray |
| 5 | 4, 16 | §103 | Marler and Scott |
| 6 | 1, 3, 6, 13, 15 | §103 | Zigmond |
| 7 | 1, 5, 7, 10-13, 17-18, 21 | §103 | Zigmond and Redling |
| 8 | 2, 14 | §103 | Zigmond/Zigmond and Redling and Rasmussen |
| 9 | 8, 19 | §103 | Zigmond/Zigmond and Redling, and Gray |
| 10 | 4, 16 | §103 | Zigmond/Zigmond and Redling, and Scott |

This Petition relies on the declaration of Dr. V. Michael Bove, Jr. (EX1033) and copies large portions of that declaration herein.

## III. THE '328 PATENT

### A. Overview of the '328 Patent

The '328 patent's "Summary of the Invention" section identifies two purportedly inventive concepts: (1) a "TV-Internet Integration Box" that has the ability to "merge broadcast TV signals with IP packet data at a customer site," and (2) output the merged signals and data to a TV set connected to the TV-Internet Integration Box "to display Internet program selection data while viewing a TV broadcast program and to use the selected data to select an Internet movie for display instead of the TV broadcast program." EX1002, 2:43-50. The "Internet program selection data" can be an icon such the icons 42-44 shown in Fig. 7 (an "overlay") that is superimposed on the TV program and that can be selected by the user to obtain a movie or other content. EX1002, 2:43-3:18; EX1002, 7:63-8:34; Fig. 7; EX1033, ¶¶34-37.

### B. Technical Background for the '328 Patent

The two purportedly inventive concepts identified in the "Summary of the Invention" section and everything claimed by the '328 patent were known in the interactive TV field long before the '328 patent came along. A detailed discussion of the state of the art prior to the '328 patent is discussed in the Bove Declaration. EX1033, ¶¶47-60.

## IV. PERSON OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art at the time of the alleged invention of the '328 patent (1/11/2005) ("POSITA") would have had a B.S. degree in electrical or computer engineering, computer science, or an equivalent, and two years of relevant industry experience working on interactive television systems or other systems that combined broadcast television signals and digital content available via the Internet. EX1033, ¶61.

PO's expert in prior litigation with LG opined that a POSITA "would have had at least a B.S. degree in electrical engineering, computer engineering, computer science, or equivalent and/or would have had at least two to three years of relevant industry experience." EX1009, 12. That definition is too broad, as it would treat a person with only such a B.S. and no industry experience as a POSITA. Further, because "relevant industry experience" is undefined and would encompass individuals experienced with only non-interactive televisions, only with typical website design unrelated to broadcast signals, or only with content distribution infrastructure but not development of user-facing Internet TV applications. Such individuals did not have ordinary skill in the interactive TV art. EX1033, ¶62.

# V. OVERVIEW OF THE PRIOR ART REFERENCES

## A. Marler (EX1007)

U.S. Patent Application Publication No. 2001/003212 ("Marler") was published on 6/7/2001. EX1004, 1. Marler is prior art under 35 U.S.C. §102(b).

## B. Rasmussen (EX1015)

U.S. Patent Application Publication No. 2002/0126990 ("Rasmussen") was published on 9/12/2002. EX1015, 1. Rasmussen is prior art under 35 U.S.C. §102(b).

## C. Zigmond (EX1008)

U.S. Patent No. 7,849,226 ("Zigmond") issued on 12/7/2010 based on U.S. Pat. App. No. application filed on 12/2/2004, which claims priority as a continuation to earlier U.S. Pat. App. No. 09/153,577 filed on 09/15/1998 (EX1012). The specifications of Zigmond and EX1012 are substantively identical. EX1008, passim; EX1012, passim; EX1033, ¶162. Zigmond and EX1012 identify the same inventors, and Zigmond claims priority to EX1012. EX1008, front cover and 1:9-17; EX1012, 1-43. Zigmond is therefore prior art under 35 U.S.C. §102(e) as of 09/15/1998. MPEP §2136.02.

## D. Gray (EX1018)

U.S. Patent Application Publication No. 20050138668A1 ("Gray") was filed on 12/19/2003 and published on 6/23/2005. EX1018, 1. Gray is prior art under 35 U.S.C. §102(e).

**E. Scott (EX1019)**

U.S. Patent No. 6,338,094 (Scott) issued on 1/8/2002. EX1019, 1. Scott is prior art under 35 U.S.C. §102(b).

**F. Redling (EX1013)**

U.S. Patent No. 7,269,837 ("Redling") issued on 9/11/2007 based on a U.S. patent application filed on 5/31/2000. EX1013, 1. Redling is prior art under 35 U.S.C. §102(e).

**G. Escobar (EX1016)**

WIPO Publication No. WO2001078381A2 ("Escobar") published on 10/18/2001. EX1016, 1. Escobar is prior art under 35 U.S.C. §102(b).

**H. Reisman (EX1014)**

U.S. Patent Application Publication No. 2003/0229900 ("Reisman") was published on 12/11/2003. EX1014, 1. Reisman is prior art under 35 U.S.C. §102(b).

**I. Howe (EX1025)**

U.S. Patent No. 5,818,438 ("Howe") issued on 10/6/1998. EX1025, 1. Howe is prior art under 35 U.S.C. §102(b).

**J. Sahota (EX1024)**

U.S. Patent App. Pub. No. 2001/0047518 ("Sahota") was published on 11/29/2001. EX1024, 1. Sahota is prior art under 35 U.S.C. §102(b).

**K. Townsend (EX1017)**

WIPO Publication No. WO1997997A1 ("Townsend") was published on 7/3/1997. EX1017, 1. Townsend is prior art under 35 U.S.C. §§102(a)-(b).

## VI. CLAIM CONSTRUCTION UNDER 37 C.F.R. § 42.104(B)(3)

The Challenged Claims are interpreted using the same claim construction standard that is used to construe the claim in a civil action in federal district court. 37 C.F.R. § 42.100(b). Any claim terms not listed below should be construed according to their plain and ordinary meaning to a POSITA at the time of the alleged invention of the '328 patent. EX1033, ¶66.

### A. "Overlay activation criterion" (claims 1, 13)

In Section II of its opinion in the LG Litigation (as defined in the Mandatory Notices section below), the Federal Circuit affirmed the district court's determination that this term in the original '969 patent was indefinite because it was not clear "whether the 'overlay activation criterion' comes from the internet or from a user's premises." EX1010, 6-7. However, during reissue prosecution of the'328 patent, the PTAB found on appeal of the reissue examiner's final rejection that this term was not indefinite in view of PO's "disavowal of the 'overlay activation criterion' coming from the user's premises, as recited in dependent claims 9 and 20" and its statement that the cancellation of those claims was "to remove any possible interpretation of the 'overlay activation criterion' as coming from the user's premises (i.e., not from the internet)." EX1031, 497 (citing

EX1031, 361) (emphasis is original). In view of this decision and PO's disclaimer, this term's scope (1) has changed and is no longer indefinite, and (2) excludes any "overlay activation criterion" originating from the user's premises or otherwise not coming from the Internet. EX1033, ¶¶67-68.

## VII. GROUND 1: MARLER ANTICIPATES AND/OR RENDERS OBVIOUS CLAIMS 1, 5-7, 10-11, 13, 17-18

### A. Summary of Marler (EX1007)

Marler discloses an information-delivery system where, in some embodiments, a broadcast A/V stream and enhancement/ancillary data are delivered to a user's premises over distinct, independent paths. In Marler's system, a transport operator system transmits the television A/V content over a network ("transport medium 22") while enhancement data (or ancillary information) is delivered over a different channel ("secondary link 20") which may be the Internet. EX1007, ¶¶[0014]-[0016], [0023], [0029]; Figs. 1-2.

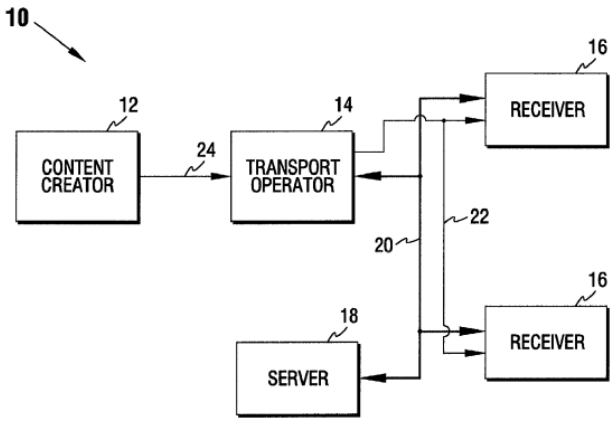



FIG. 1

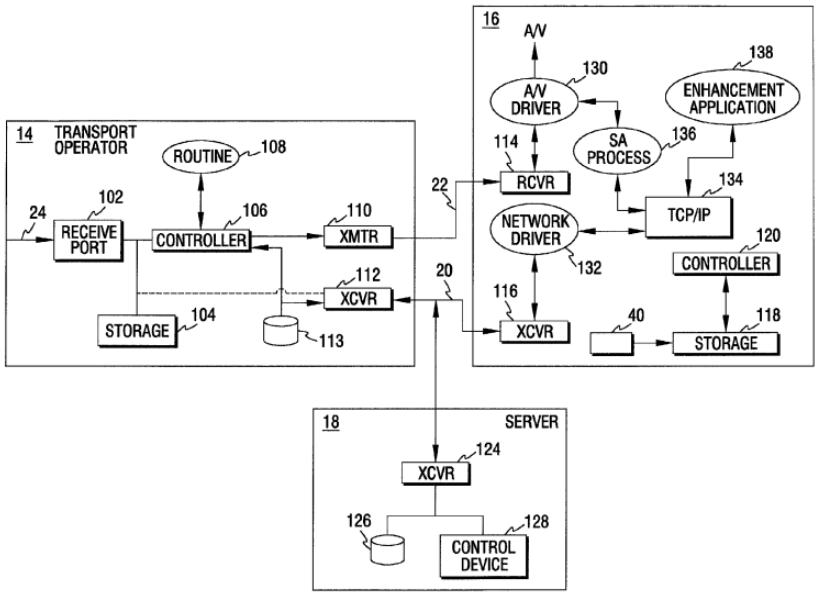



FIG. 2

Marler provides, referring to an ATVEF Specification, an example of enhancement data that can include three components: announcements (including special announcements), triggers, and resource streams delivered using IP multicast. EX1007, ¶¶[0020]- [0022], [0026], [0038]-[0040]. Marler discloses that this enhancement data may be sent over the separate link 20 “to provide for greater

flexibility and/or to alleviate bandwidth concerns of the transport medium 22." EX1007, ¶[0023]. The Internet-delivered enhancement data allows Marler's system to associate specific digital resources, including web pages, URLs, icon locators, and content-identifying icon images and hyperlinks, with the underlying A/V program. At the user's premises, receiver 16 (*e.g.*, a television, set-top box, or computer) processes the incoming A/V content received via the broadcast medium coupled to receiver 114 together with the enhancement data received via the Internet at the transceiver 116 to generate overlays, including graphical icons that identify the nature or subject matter of the Internet-delivered content. EX1007, ¶¶[0031]-[0033], [0040]; Fig. 3.

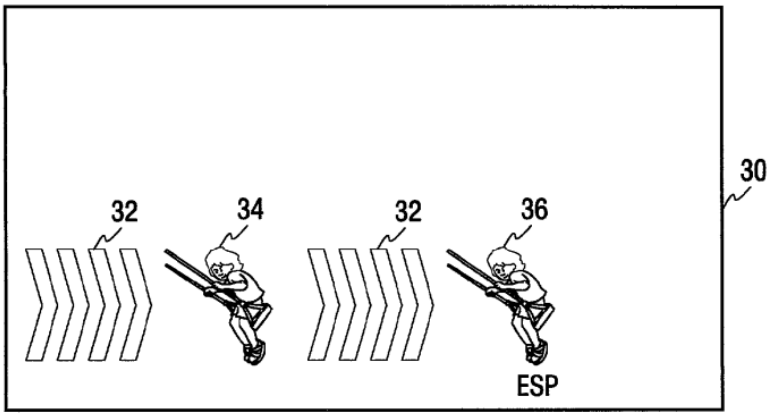



**FIG. 3**

While Marler's disclosure of sending the enhancement data over link 20 may not fall within the example of the ATVEF standard, a POSITA would have understood that paragraph [0023] of Marler discloses a non-ATVEF-compliant embodiment under which all enhancement data is transmitted over link 20. If

Marler does not explicitly disclose transmitting the trigger over link 20, a POSITA would have found it obvious when reading paragraph [0023] because this was well-known in the art, and would have been motivated to do so to enable the provision of enhancement data without participation of the entity that transmits the TV programs to the receiver. For example, Sahota discloses an ATVEF-compliant implementation but also discloses "[i]n one embodiment, a trigger can come through an IP pathway." EX1024, ¶¶[0045], [0066]; see also EX1025, 3:55-60 5:39-42, 12:6-8, 28:11-14; 29:7-63 (discussing transmission of identifying code which functions as a trigger via out-of-band transmission system).

Marler emphasizes that these icons may be provided via URLs and may be displayed transparently over the TV image to signal that related Internet content is available and can be used to navigate to that content. EX1007, ¶¶[0035]-[0038]. Marler further discloses that the overlay appears only when defined timing or triggering conditions (overlay-activation criterion) are satisfied. EX1007, ¶¶[0038], [0041]; Fig. 5.

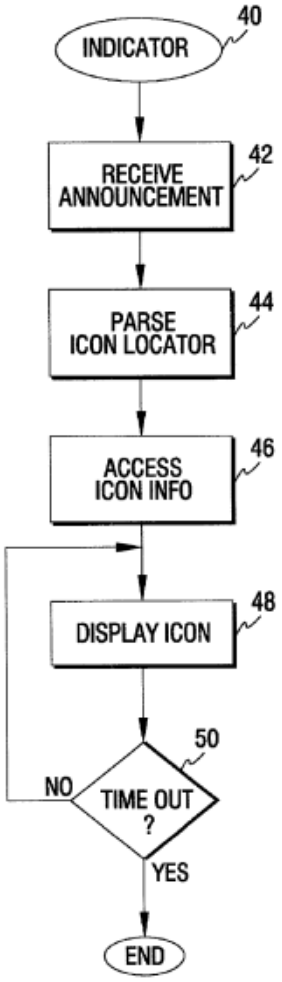



**FIG. 5**

Marler thus discloses or renders obvious a system and method where broadcast video is received from a first source and overlay-enabling digital data is received from an Internet-based second source, with the receiver combining these independent inputs at the user's premises to generate an overlaid display. EX1007, ¶¶[0013]-[0038]; EX1033, ¶¶69-74.

### B. Claims 1 and 13

#### 1. [1pre]/[13pre]

If limiting, Marler discloses these preambles. EX1033, ¶¶75-81. Marler discloses a "TV-Internet Integration circuit," receiver 16, and a method performed by the receiver 16 to receive and display enhancement data as discussed below for limitations [1a]-[1l]/[13a]-[13k]. The receiver 16 may be a television or a set-top box. EX1007, ¶[0014].

**"At a user's premises":** Marler's receiver 16 may operate "at various receiving sites, including homes." EX1007, ¶[0013].

**"An overlay":** Marler discloses that the receiver 16 may receive an "announcement stream" for the enhancement data and that the "the announcement stream may include script that causes a transparent overlay to be produced over the display image on the display 30 of a receiver 16." EX1007, ¶¶[0034], [0040] (emphasis added). Marler describes a specific embodiment of "providing information that causes an icon to be displayed as an overlay." EX1007, cl. 6.

**"Video signals constituting a first data":** Marler's system transmits television content that includes video data for delivery to receivers. EX1007, ¶[0006]. In Marler, the content creator provides television content (*i.e.*, audio/video data) to the transport operator system for transmission. EX1007, ¶[0013]. Marler

defines A/V content as any audio and/or video data distributed for presentation to viewers. EX1007, ¶[0015].

**"Overlay-enabling digital data constituting a second data":** Marler discloses that the receiver 16 obtains "ancillary information" and "enhancement data" transmitted with (or alongside) the video and used to generate the overlay. For example, Marler explains that "the content creator receives the ancillary information" "transmitted in association with the content previously received" (EX1007, ¶[0033]), and that this "ancillary information" includes content-identifying data such as URLs or local identifiers (LID) (EX1007, ¶¶[0035]-[0036]) (cl. 4 ("transmitting information indicative of the content included in the ancillary information includes transmitting a local identifier in said ancillary information that points to a location storing a content-identifying icon.")). According to Marler, "the announcement stream may include script that causes a transparent overlay to be produced over the display image on the display 30 of a receiver 16." EX1007, ¶[0040].)

**"TV-Internet Integration circuit" in claim 13's preamble:** Marler discloses a user-premise device that generates overlays and merges broadcast A/V with Internet-sourced enhancement data: receiver 16, which includes "a receiver circuit 114 (e.g., a TV tuner card)" "adapted to receive content over the transport medium 22 and a transceiver 116" "adapted to communicate over the secondary

link 20." EX1007, ¶[0029]. Within receiver 16, the SA process 136, working with the A/V device driver 130 under controller 120, combines these sources and produces a transparent overlay over the television image and outputs the combined video to display 30. *See*, *e.g.*, EX1007, ¶¶[0029], [0030], [0040]; Figs. 2-3.

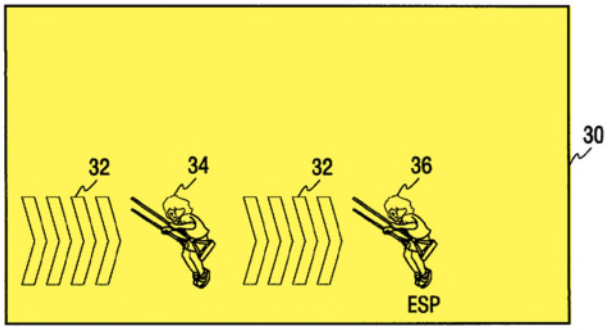



FIG. 3

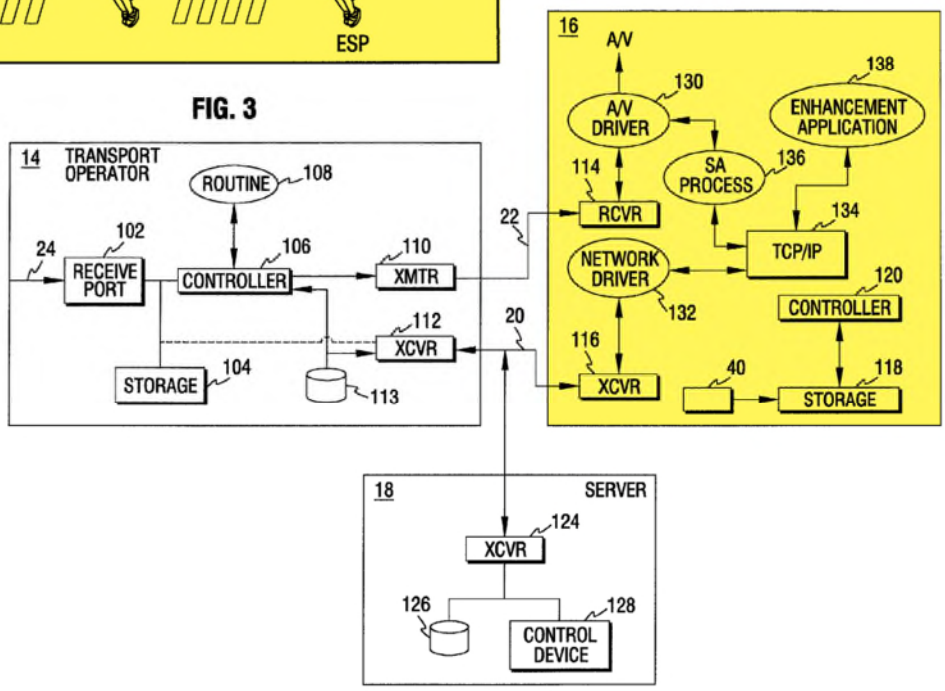



FIG. 2

Regarding [1pre], Marler also discloses a method performed by the receiver 16 for generating the overlay using the first and second data as discussed in further detail below for limitations [1a]-[1l].

**2. [1a]/[13a]**

Marler discloses these limitations. EX1033, ¶¶82-83. Marler's receiver 16 is the "TV-Internet Integration circuit" as discussed above, and the recited "combiner circuit" within receiver 16 is implemented in Marler by the SA process 136 working with the A/V device driver 130, network device driver 132, and TCP/IP stack 134 under the control of, and executing on, the controller 120 (collectively, a circuit). EX1007, ¶[0030], Fig. 2. Additionally, Marler's SA process 136 "may be part of the enhancement application 138," and the "application routines, device drivers, and other routines or programs may be executable on a controller 120," with code "stored in a storage medium 118 and loaded by the controller 120 for execution." *Id*. The SA process 136 "is capable of associating enhancement data received over the secondary link 20 to the currently tuned A/V channel" and "may then combine the associated enhancement data with the A/V content of the currently-tuned TV channel for presentation." *Id*.

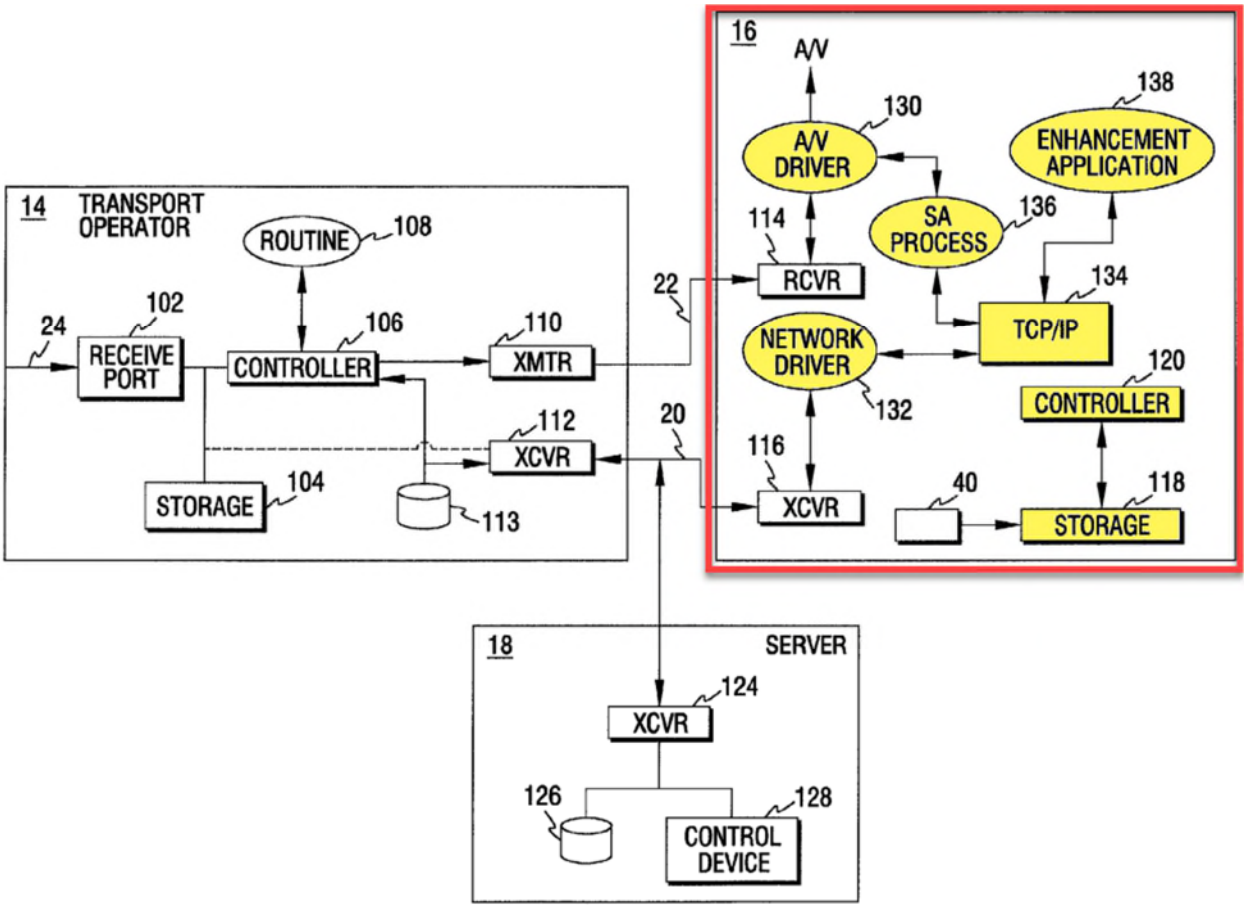



**FIG. 2**

The requirement in limitation [13a] for the combiner circuit to be "coupled to a separate TV tuner box or TV tuner" is addressed in limitation [1b] below.

**3. [1b]**

Marler discloses or renders obvious this limitation. EX1033, ¶¶84-85. The SA process 136 working with the A/V device driver 130, network device driver 132, and TCP/IP stack 134 under the control of, and executing on, the controller 120 (*i.e.*, "combiner circuit") is coupled to the user's display (*i.e.*, "TV set") because Marler discloses the combined/overlaid video being presented on display

30 of receiver 16, and the A/V device driver 130 "forwards the received A/V content to application software adapted to process and present the A/V content in the receiving system." EX1007, ¶¶[0029], [0031], [0040]. Marler further explains that the network device driver 132 receives enhancement data from the secondary link 20 (via transceiver 116) and passes that data to the TCP/IP stack 134, after which the SA process 136 "associat[es] enhancement data received over the secondary link 20 to the currently tuned A/V channel" and "combine[s] the associated enhancement data with the A/V content … for presentation," EX1007, ¶[0030]. Thus, these components—130, 132, 134, and 136 under controller 120—operate together to perform the combining function. Marler discloses that the combiner circuit is connected to "a separate TV tuner box or a TV tuner in the TV set" because "the receiving circuit 114 (e.g., a TV tuner card) is adapted to receive content over the transport medium 22," *Id.* The receiving circuit 114 is a TV tuner in a TV set to which the combiner is connected in embodiments where the receiver 16 is a TV.

Alternatively, a POSITA would also find it obvious that Marler's receiver 16 could receive TV content via cable or satellite, and therefore that Marler's RCVR 114 would connect to a STB the cable or satellite system operator provides.

**4. [1c]/[13b]**

Marler discloses these limitations. EX1033, ¶¶86-91. Marler discloses that the receiver 16 (including the combiner circuit as discussed above) receives video signals through a first network identified as the "transport medium 22," which includes "terrestrial, cable, satellite, or other type of link." EX1007, ¶¶[0014], [0029].

Marler separately discloses that the receiver 16 is connected to a distinct second network used for Internet or digital data, identified as the "secondary link 20," which may be "the Internet." EX1007, ¶¶[0016], [0029].

Marler explicitly distinguishes these two networks as separate and independent. It states that enhancement data is transmitted "over a link that is separate from the transport medium used to transmit A/V content," and explains that that that A/V content is transmitted over the transport medium 22 while enhancement data is transmitted over the secondary link 20. EX1007, ¶[0023].

The combiner in the receiver 16 is connected to both the transport medium 22 via the receiver/tuner 114 and to the secondary link 20 via the transceiver 116, network driver 132, and TCP/IP stack 134 as shown in the excerpt of Fig. 2 below.

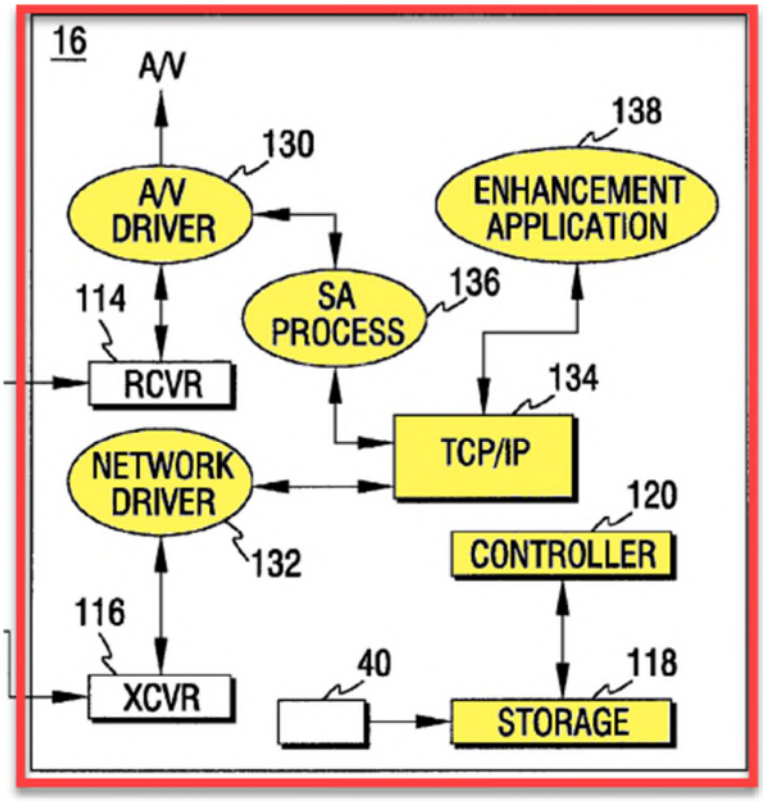



FIG. 2

As further relevant to limitations below, Marler discloses or renders obvious that the enhancement data delivered over the secondary link 20 includes the announcement, resource, and trigger components. EX1007, ¶¶[0016], [0020]-[0022].

**5. [1d]/[13c]**

Marler discloses or renders obvious these limitations. EX1033, ¶¶92-94. Marler explains that the video signals originate from a broadcast content source and are delivered to the user's premises through the transport operator system using the transport medium 22. EX1007, ¶¶[0013], [0014]. Marler separately discloses that the overlay-enabling digital data originates from servers or other data

sources and is delivered by a different resource, namely the secondary link 20, which may be the Internet or another data network. EX1007, ¶¶[0016], [0023]. These inputs are mutually distinct and independent because the A/V content is broadcast, while the enhancement data is sent via an Internet link.

**6. [1e]/[13d]**

Marler discloses "overlay-enabling digital data" as discussed above and below for limitations [1f]/[13e], [1g]/[13f] and [1h]/[13g]; EX1033, ¶94.

**7. [1f]/[13e]**

Marler discloses or renders obvious these limitations. EX1033, ¶¶95-98. Marler discloses that the enhancement data may include a web page. EX1007, ¶[0002]. Marler further discloses that the enhancement data may include three components: (1) an announcement, (2) a resource, and (3) a trigger. EX1007, ¶[0020]. Marler discloses that in some embodiments the enhancement data may be transmitted over a separate link such as the general-purpose data link 20 to the Internet using IP (Internet Protocol) multi-cast. EX1007, ¶¶[0023]-[0024], [0029].

Marler discloses that the announcement stream includes an icon locator that may be a Web link used to retrieve an icon image via the Internet, and that the icon image can be/include a hyperlink that includes a URL (a Web link), that identifies a website where the associated enhancement content is stored. EX1007, ¶[0035],

¶[0032] ("the icons 32, 34, and 36 may be hyperlinks that allow the user to mouse click on the icon . . . to jump immediately to the ancillary information."). Marler's receiver then retrieves the icon information, which again can be/include an image and a hyperlink, and displays it as shown in steps 46 and 48 of Fig. 5. EX1007, ¶[0040] (discussing a script that causes a transparent overlay to be produced over the display image on the display 30 of receiver 16); ¶ [0041] (discussing accessing the icon information using the icon locator at step 46 and displaying the retrieved icon at step 48). In this embodiment, the hyperlink that is retrieved along with the icon image via the Internet on link 20 is the claimed "Weblink" of [1f] and [13e]. The enhancement data including the announcement, the resource and the trigger together with information about an icon retrieved using the icon locator all constitute IP data that is "overlay-enabling digital data" downloaded via the Internet.

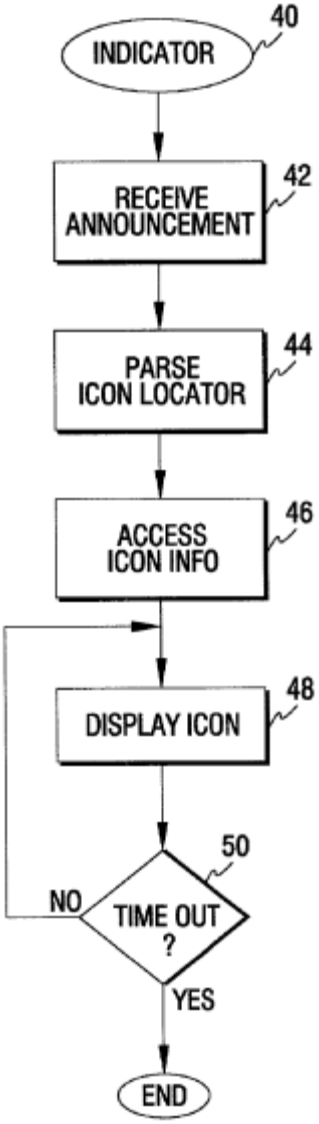



**FIG. 5**

Alternatively, it would have been obvious to a POSITA that the Weblink is included in the announcement stream along with the icon locator. Marler discloses that enhancement data can include a resource, and "a resource includes one or more files that contain the enhancement data." EX1007, ¶¶[0020]-[0021]. Marler also identifies that the enhancement data includes web pages and other digital

resources accessible via the URL. EX1007, ¶[0013]. Thus, a POSITA would have found it obvious to include filenames in the form of URLs that point to web pages in the announcement stream together with the icon locator information.

Because the enhancement data comprising the announcement–resource–trigger components are transmitted using IP multicast (i.e., over the secondary link 20, the Internet path), they are IP content that is Internet-delivered. EX1007 ¶¶[0016], [0020]-[0021], [0023], [0038]-[0041].

**8. [1g]/[13f]**

Marler discloses these limitations. EX1033, ¶¶99-100. Marler explains that the overlay-enabling digital data includes an image/icon indicative of the ancillary or enhancement content. Marler describes multiple icons ("chevron-shaped indicator 32," "additional indicator 34," "additional indicator 36") that provide information about the associated ancillary information. EX1007, Fig. 3; ¶[0031]. The chevron-shaped icons 32 are indicative of the presence of ancillary information/enhancement content, and the indicators 34 indicate the type of content.

Consistent with the analysis for limitations [1c]/[13b] and [1f]/[13e], Marler discloses that the "enhancement data and special announcements may be" "transmitted over the secondary link 20" which "may be a data delivery communications channel such as the Internet," and that this Internet-delivered

enhancement data includes a trigger that can include an "icon locator" such as a "uniform resource locator (URL)" where the URL "may point to an Internet web address containing information about a suitable icon that may be displayed." EX1007, ¶¶[0016], [0026], [0035]; see also limitation [1h]. A POSITA would understand that, in embodiments where the icon locator points to an Internet web address containing information about a suitable icon, the suitable icon is retrieved from that Internet web address.

**9. [1h]/[13g]**

Consistent with § VI.A, Marler discloses or renders obvious these limitations. EX1033, ¶¶101-102. Marler discloses or renders obvious an "overlay activation criterion" in the form of a "trigger" and that the trigger can be a component of the enhancement data that is delivered in some embodiments to the receiver over the Internet path (secondary link 20) using IP multicast. EX1007 ¶[0020] (defining enhancement data as including announcements, resources and triggers), ¶[0021] (explaining that announcements describe the locations of both resource streams and trigger streams), and ¶[0023] (discussing transmission of enhancement data over secondary/Internet link 20]; see also ¶¶[0038]-[0041]. Marler explains that the triggers are "real time events delivered for enhanced television programs" and are "utilized as a signal to notify users of enhanced content availability." EX1007, ¶[0038]. Specifically, Marler discloses or renders

obvious that the trigger governs when the icon/overlay appears and how long it persists, because the receipt of the trigger causes the receiver 16 to display the icon independent of any user command, and an expiration date included with the trigger causes the receiver 16 to stop displaying the trigger. EX1007 ¶[0041]. "The expiration date in connection with triggers utilized to announce the arrival of a particular type of content may provide for a limited duration of display of the icon." *Id*. These trigger-based and timing-based conditions constitute an overlay activation criterion that originates from the Internet and governs when the overlay is generated.

**10. [1i]/[13h]**

Marler discloses these limitations. EX1033, ¶¶103-104. The phrase "at the user's premises" was addressed above in limitation [1pre]. EX1007, ¶13. Marler discloses receiving the ancillary/enhancement data at the receiver and using that information to determine whether an overlay should be generated. As shown in Fig. 5, the receiver "receiv[es] an announcement stream" (42), parses it to locate the icon locator (44), and then accesses icon information (46). EX1007, ¶[0034]. This is the processing of the overlay-enabling digital data.

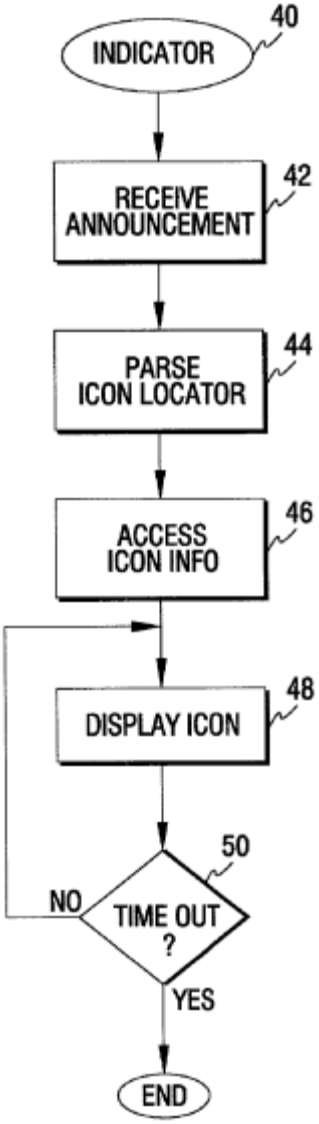



**FIG. 5**

Marler further discloses generating the overlay only if the overlay activation criterion is met. As described for limitation [1h], Marler uses trigger-based conditions contained within the ancillary/enhancement data, including expiration-time checks, to determine whether the icon/overlay should appear. Marler states that a trigger "may optionally also include" "an expiration date"

EX1007, ¶[0038]. Marler discloses that the receiver performs a conditional check: "If an expiration time was transmitted with the trigger data, a check at diamond 50 determines whether the expiration time has occurred. If so, the flow ends. Otherwise, the icon persists." EX1007, ¶[0041]; Fig 5. These trigger-based conditions (provided in the ancillary data itself and applied automatically by the receiver) constitute an overlay activation criterion.

**11. [1j]/[13i]**

Marler discloses these limitations. EX1033, ¶¶105-107. As previously addressed for limitation [1pre], Marler's receiver 16 operates at the user's premises. EX1007, ¶[0013].

Marler discloses a display composed of the underlying A/V program and an overlaid image/icon corresponding to the enhancement data. FIG. 5 shows the block "DISPLAY ICON" (48), which results in a graphical icon being rendered over the television image. Marler's system "may include script that causes a transparent overlay to be produced over the display image on the display 30 of a receiver 16." EX1007, ¶[0040].

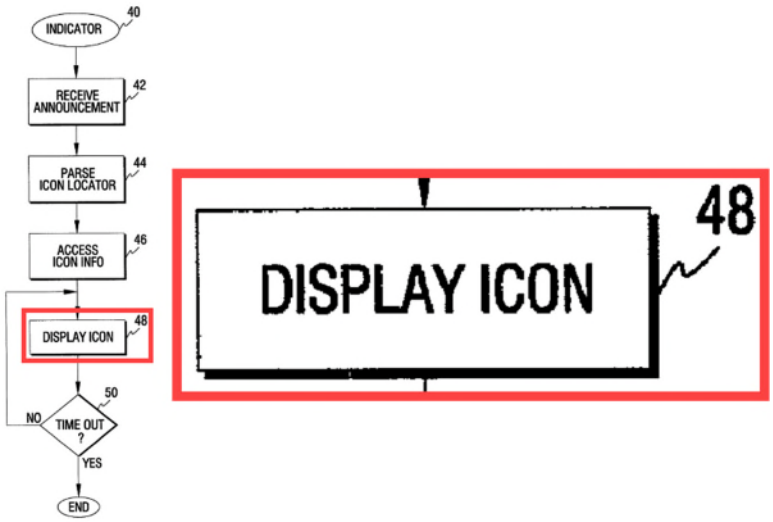



FIG. 5

Marler explains that icons "may be displayed to provide the user with information about the content contained within the ancillary information", and that these indicators are "displayed on the display 30" along with the television content (EX1007, ¶¶[0031], [0035]); see also Fig. 3.

**12. [1k]/[13j]**

Marler discloses these limitations. EX1033, ¶¶108-109. Marler discloses the association between the displayed icon and a corresponding Web link (URL). Marler explains that the icon locator may be a URL, which "point[s] to an Internet web address containing information about a suitable icon" or content accessible through that icon. EX1007, ¶[0035]. Marler further discloses that the icon "may be [a] hyperlink[s] that allows the user to mouse click on the icon (or use another pointing device) and to jump immediately to the ancillary information." EX1007, ¶[0032]. In this embodiment, the hyperlink is the claimed "Weblink."

Alternatively, it would have been obvious to a POSITA that the Weblink is included in the announcement stream itself along with the icon locator rather than being retrieved together with the icon image information as discussed above for limitation [1f]. It would have been obvious to a POSITA to associate the Weblink with the icon so that when the icon is clicked the content at the Weblink is retrieved to mirror the hyperlink functionality.

Once activated, the system retrieves the Web-addressed content and presents it. Marler explains that the enhancement data including web pages and digital files is accessed and displayed after the icon is selected as discussed above. This leads to a presentation of enhancement information, which corresponds to the recited "second video display screen" that includes at least a portion which corresponds to the content at the hyperlink/Weblink.

**13. [1l]/[13k]**

Marler at least inherently discloses or renders obvious these limitations in view of Zigmond. EX1033, ¶¶110-112. Regarding limitation [1l], Marler's receiver generates and presents user-selected content on the television display, the system retrieves the linked content and renders a second video display screen. Marler explains that receivers may include set-top boxes or televisions operating "at various receiving sites, including homes," and it depicts the on-screen rendering on the "display 30 of a receiver 16." EX1007, ¶¶[0013]-[0014], [0031].

A POSITA would understand that, in the set-top box embodiment, the rendered second screen is provided as video to the TV's input (and in the integrated-TV embodiment the same occurs internally); thus, the second video display screen is input to the TV set.

Regarding limitation [13k], Marler's "video output interface" is the A/V device driver routine 130, which "forwards the received A/V content to application software adapted to process and present the A/V content in the receiving system," and shows that the resulting combined/overlaid presentation is displayed on "display 30 of a receiver 16." EX1007, ¶¶[0029], [0031], [0040]. A POSITA would understand that this output path (A/V device driver 130) is coupled to the TV's video input to display either the first overlay screen or, after selection, the subsequent screen. EX1007, Fig. 2. As discussed above, the A/V device driver is code that is executed on the controller 120 as shown in Fig. 2. If the limitation is construed to require hardware, it would have been obvious to a POSITA to output the combined A/V content as discussed in EX1007, ¶[0030] through a port of the controller 120 (the claimed "video output interface"). Alternatively, in embodiments where the receiver 16 is implemented as a set top box ("STB") configured for connection to an external television, it would have been obvious to incorporate a video encoder such as Zigmond's video encoder 26, as discussed

below in Ground 6, limitations [1l] and [13k], into Marler's system to provide video suitable for input to a TV.

### C. Claim 5

Marler discloses or renders obvious claim 1, and also discloses this claim. EX1033, ¶¶113-114. Marler teaches that the overlay-enabling digital data includes second images, because Marler discloses icons (32, 34, 36) representing the associated ancillary content, and explains that "the receiver may be loaded with a plurality of content-identifying icon images." EX1007, ¶¶[0031], [0037]. Marler also discloses that each such image is associated with a respective website address, because that the icon image can be/include a hyperlink that includes a URL (uniform resource locator), *i.e.*, a Web link, that identifies a website where the associated enhancement content is stored. EX1007, ¶[0032] ("…the icons 32, 34, and 36 may be hyperlinks…to jump immediately to the ancillary information."). Thus, the hyperlink constitutes a "web site address where IP content associated with the respective second image is stored."

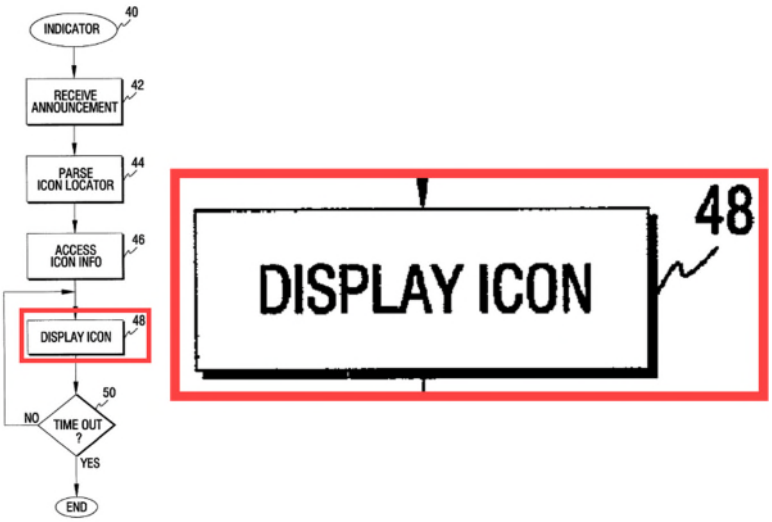



FIG. 5

Marler further discloses generating the overlay by displaying these images within the first display, because the receiver retrieves the icon information and displays "one or more icons" as part of the transparent overlay. EX1007, ¶¶[0034]-[0041]; Fig. 5. If construed to require multiple second images, Marler's icons 32-36 disclose them.

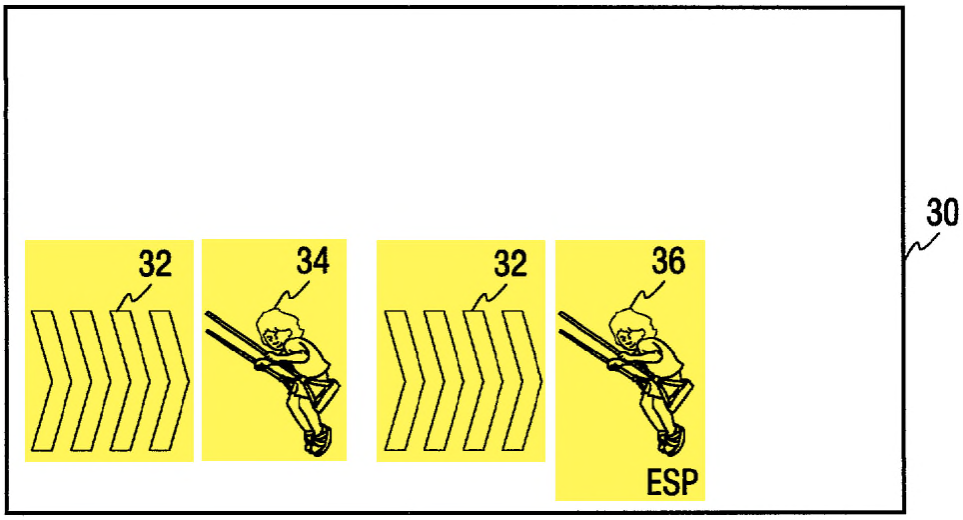



**FIG. 3**

### D. Claim 6

Marler discloses claim 1 as discussed above and also discloses this claim. EX1033, ¶115. Marler discloses that overlay-enabling digital data (ancillary/enhancement data) is provided in addition to the underlying A/V content and is intended to supplement or enhance the viewer's experience (e.g., by "the option of viewing advertisements, educational information", or other content displayed "while watching regular television programming"). EX1007, ¶¶[0003], [0031], [0040]. Because Marler's enhancement data is presented as an overlay and is expressly described as additional information accompanying the program, it is supplementary or complementary.

### E. Claims 7 and 18

Marler discloses or renders obvious claims 1 and 13 and also discloses the limitations of claims 7 and 18. EX1033, ¶¶116-118. Marler's overlay icons (i) provide an indication of the nature of the Internet/ancillary content, and (ii) indicate to the user that Internet-delivered digital data is being provided.

Marler discloses that the receiver displays multiple on-screen indicators/icons that communicate the type/nature of the associated ancillary/enhancement content: e.g., "an additional indicator 34 may be provided to give information about the particular type of content," "the indicator 34 may be

indicative of children's content," and "an additional indicator 36 may be provided to indicate that the children's content is available in Spanish." EX1007, ¶[0031].

Marler further explains that these indicators "give[] the user greater information about the ancillary information," thereby enabling "an informed decision" whether to access it. EX1007, ¶[0032]. Marler's indicators therefore indicate to a user that digital data from Internet content is currently being provided, and further provide an indication of the nature of that content.

### F. Claim 10

#### 1. [10 pre]

Marler discloses or renders obvious claim 5. EX1033, ¶119.

#### 2. [10a]

Marler discloses or renders obvious this limitation. EX1033, ¶120. Marler discloses periodic receipt of Internet-delivered enhancement data because "announcements, resources and triggers associated with an A/V channel [television program] may be delivered at about the same times as, and with the transmission of, the A/V content on that channel" (EX1007, ¶[0020]-[0022]), and Marler's receiver 16 "receiv[es] an announcement stream" and other enhancement data whenever transmitted (EX1007, ¶[0034]). Marler explains that the enhancement data is delivered over the "secondary link 20" "such as the Internet" (EX1007, ¶[0016]), and repeatedly received by the receiver's network stack (EX1007, ¶¶[0029]-[0030]). It was well-known to a POSITA at the time of the alleged

invention of the '328 patent that TV programs aired periodically (e.g., half-hourly or hourly), and individual programs aired on similar periodic cycles (e.g., daily or weekly). A POSITA would therefore have understood that enhancement data including overlay-enabling digital data would be downloaded periodically from a web-based source.

**3. [10b]**

Marler discloses or renders obvious this limitation. EX1033, ¶121. As discussed above for limitations [1e]-[1h], Marler discloses that the receiver parses the announcement stream to identify an icon locator which is used to retrieve icon images and that "[i]n some cases, the icons 32, 34, and 36 may be hyperlinks that allow the user to mouse click on the icon (or use another pointing device) and to jump immediately to the ancillary information.") EX1007, ¶[0032]. In embodiments where the icon images (each a "second image") include or are hyperlinks, each hyperlink is a "respective web site corresponding to" a "second image." As discussed for claim 5, Marler discloses multiple icons/second images including at least icons 32-36 in Fig. 5.

**4. [10c]**

Marler discloses or renders obvious this limitation. EX1033, ¶122. As discussed above for limitations [1k] and [10b], in some embodiments, each of the icons are or include a hyperlink to a respective website from which content may be

retrieved. A POSITA would have understood or at least found obvious that the content is retrieved and at least temporarily stored when the user clicks on the hyperlink. Alternatively, as discussed for limitations [1k] and [10b], a POSITA would have found it obvious to configure Marler's system so that a Weblink is downloaded and associated with the icon locator information so that the content associated with the Weblink is retrieved when the user clicks on the icon.

**5. [10d]**

Marler discloses this limitation. EX1033, ¶¶123-124. See discussion of triggers and the display of icons resulting from the triggers in limitation [1i]. Marler discloses that triggers "generally include a URL" and may include timing information such as an "expiration date" governing when the icon/overlay is displayed. EX1007, ¶[0038]. If the expiration condition is met, the receiver checks the trigger at 50 and either displays or suppresses the icon. EX1007, ¶[0041]; Fig. 5.

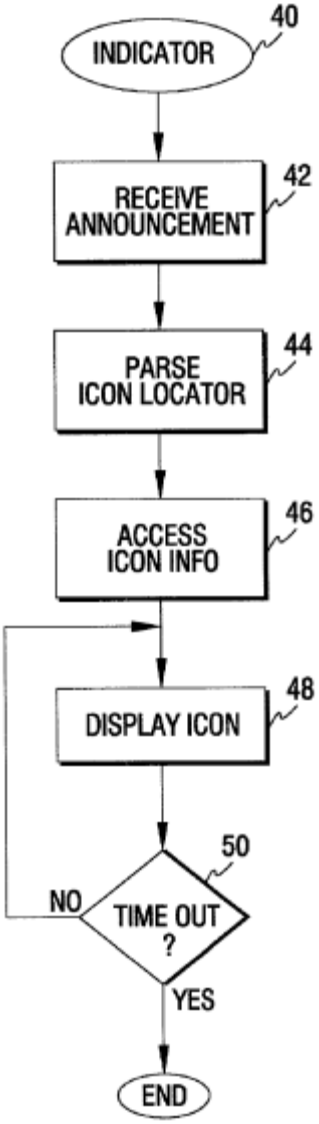



**FIG. 5**

Marler also discloses that the user may "mouse click on the icon (or use another pointing device)" to access the associated content (EX1007, ¶[0032]), after which the receiver retrieves and displays the content. (EX1007, ¶[0022], ¶[0037]). A POSITA would have found it obvious to buffer the content before displaying it,

particularly when the content corresponds to streaming media such as streaming video as discussed in Scott in Ground 5 below.

### G. Claim 11

Marler discloses or renders obvious claim 5 and also discloses this claim. EX1033, ¶125. Marler teaches that when a user selects one of the overlaid second images (icons), the system retrieves and displays the corresponding Internet-based enhancement content. In particular, Marler discloses that the icons "may be hyperlinks that allow the user to mouse click on the icon (or use another pointing device) and to jump immediately to the ancillary information," which is Internet-delivered enhancement content identified by the associated URL. EX1007, ¶¶[0032], [0035]. Marler further explains that this content—delivered via the Internet-based secondary link and stored or buffered in the receiver—can then be accessed and presented to the viewer. EX1007, ¶¶[0016], [0022], [0029]-[0030].

### H. Claim 17

#### 1. [17 pre]

Marler discloses or renders obvious claim 13 and also discloses claim 17. EX1033, ¶¶126-131. For this preamble, see claim 5.

#### 2. [17a]

See limitations [10a]-[10d].

#### 3. [17b]

See limitation [10a].

**4. [17c]**

See limitation [10b].

**5. [17d]**

See limitation [10c].

**6. [17e]**

See limitation [10d].

## VIII. GROUND 2: MARLER AND RASMUSSEN RENDER OBVIOUS CLAIMS 2, 12, 14, 21

### A. Summary of Rasmussen

Rasmussen is directed toward a system that displays interactive access points, or "hot spots," overlaid on top of a television program that a user can select to link to enhanced content. EX1015, ¶¶[0007]-[0011], [0023]-[0026]. A hot spot can take the form of a geometric shape such as the shapes 202, 204, and 206 overlaid on a TV program such as shown in Fig. 2 below.

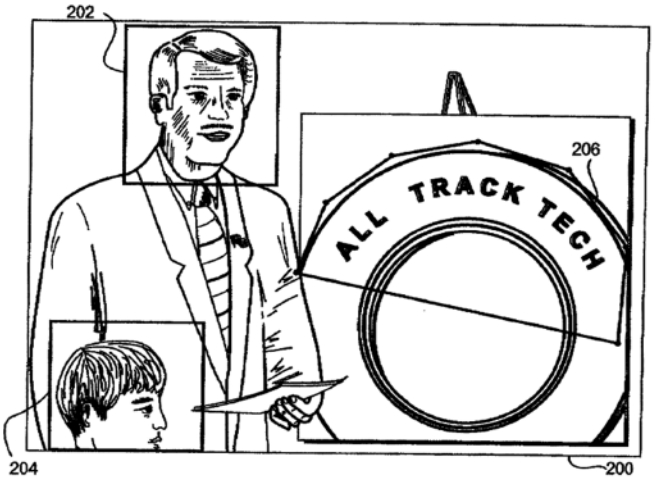



FIGURE 2

### B. Claims 2 and 14

Marler discloses or renders obvious claims 1 and 13 as discussed above. The combination of Marler and Rasmussen renders obvious claims 2 and 14. EX1033, ¶¶132-138.

Rasmussen's "hot spots" are similar to Marler's icons/overlays in that both alert the user that additional content is available and can be activated by a user to obtain the display of that additional content. Rasmussen discloses that hot spots may be tailored to a user's buying habits, interests, and demographic segments (each of which is a criterion), and a distributor of the content may only make the hot spot available to users who satisfy the criterion. EX1015, ¶[0032]. A POSITA would have understood or found obvious that to limit hot spots to users meeting a given criterion, the distributor would have the relevant user information before transmitting the hot spot (e.g., in Marler, before transmitting enhancement data/ancillary information). If the information is available before transmission, it is pre-stored, and such pre-stored criterion-related information is a user profile.

It would have been obvious to a POSITA to combine Marler and Rasmussen by modifying Marler's delivery infrastructure (e.g., the transport operator system and/or server(s) for the secondary link) to pre-store profile information for users and to use it to tailor transmission of Marler's overlay-enabling digital data (e.g., announcements/resources/triggers and associated enhancement data for the

overlay/icon) so that such overlay-enabling digital data is received at the user premises according to the pre-stored user profile, as taught by Rasmussen. Marler expressly contemplates server-side storage and delivery of enhancement data over a separate data link (e.g., Internet) to receivers at user premises, including embodiments where "enhancement data may be stored" at "more than one server" and delivered over the "secondary link" to receivers. EX1007, ¶¶[0016], [0023], [0028]- [0029]. Marler also expressly contemplates "a viewer" "presented with the option of viewing advertisements," "while watching regular television programming." EX1007, ¶[0003].

A POSITA would have been motivated to improve user experience and advertisement relevance by avoiding hot spots/icons tied to content where the user is uninterested. A POSITA would have had a reasonable expectation of success in doing so because such modifications require only routine skill and were well-known in the art at the time of the alleged invention of the '328 patent.

### C. Claims 12 and 21

Marler discloses claims 1, 7, 13 and 18 as discussed above. Marler also contemplates displaying multiple icons/indicators corresponding to different types of content (*e.g.*, multiple indicators/icons in EX1007, Fig. 3, and embodiments where a "plurality of icons indicating available content may be displayed alternately" (EX1007, ¶[0040])). EX1033, ¶¶139-142.

The combination of Marler and Rasmussen renders obvious the limitations of claims 12 and 21. As discussed above for Marler's disclosure of overlaid icons/indicators that identify available ancillary/enhancement content (including embodiments with multiple icons indicating available content), a POSITA would have found it obvious to facilitate user selection among the overlaid icons/content using color coding and corresponding color-coded remote-control buttons as taught by Rasmussen.

Rasmussen expressly teaches that hot spot borders (and related visual cues) may be different colors, and that "the colors of each border may correspond with a button on an input device, such as a remote control or keyboard," *i.e.*, the user selects content by pressing the corresponding color-coded button. EX1015, ¶[0030].

Thus, a POSITA would have found it obvious to modify Marler's overlaid icon/indicator presentation to use colored icons (or colored frames/borders) and to equip a remote control with matching color-coded buttons for selecting Internet or ancillary content, as taught by Rasmussen. A POSITA would be motivated to do so to improve usability in a TV/set-top-box interface by creating an intuitive one-to-one mapping between each displayed icon and its input, with a reasonable expectation of success given Rasmussen's teachings in the same interactive television context.

# IX. GROUND 3: MARLER AND ZIGMOND RENDER OBVIOUS CLAIMS 3 AND 15

## A. Summary of Zigmond

See Section XII.A (Ground 6, Section A).

## B. Claims 3 and 15

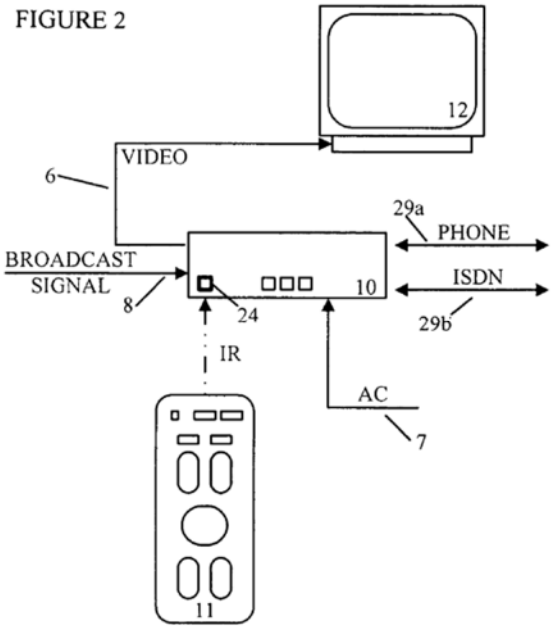
### 1. [3pre]/[15pre]

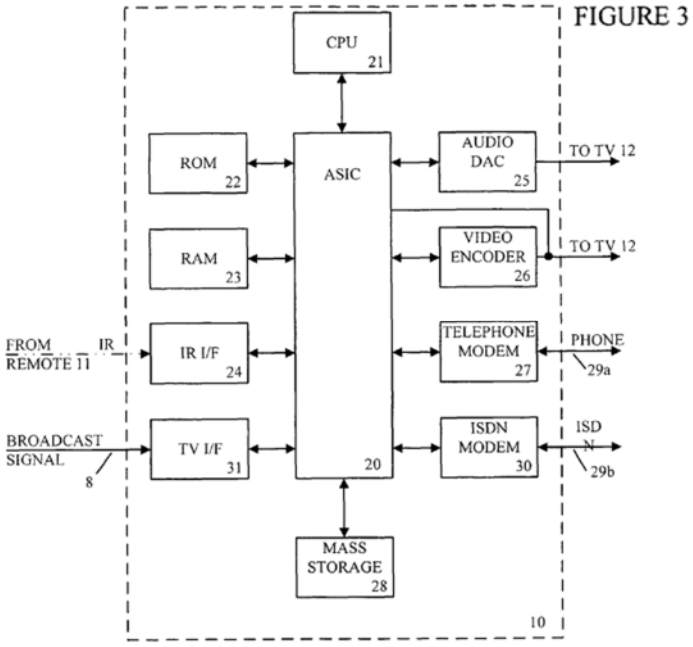
Marler discloses or renders obvious claims 1 and 13 as discussed above.

### 2. [3a]/[15a]

Marler in view of Zigmond renders obvious limitations [3a]/[15a]. EX1033, ¶¶143-147. Marler teaches that the user can issue a command at the user premises by selecting the overlaid icon, *e.g.*, "the icons" "may be hyperlinks that allow the user to mouse click on the icon (or use another pointing device) and to jump immediately to the ancillary information," which is a user-initiated command received at the receiver in the user premises. EX1007, ¶[0032].

Zigmond discloses these limitations. Zigmond discloses that the STB 10 includes a command interface in the form of an IR IF (infrared interface) 24 for receiving infrared commands from a remote control 11 operated by a user at the user's premises. EX1008, 6:12-14, 6:38-39; Figs. 2-3. The receipt of a command is discussed for limitations [3b]/[15b].




It would have been obvious to a POSITA to implement Marler's user command for selecting the overlaid icon using Zigmond's remote-control command input (IR I/F 24), because both systems are interactive TV/set-top-box environments where a user at the premises provides a command to access Internet/ancillary content associated with an on-screen icon. Marler teaches that "the icons" "may be hyperlinks" allowing the user to "mouse click on the icon (or use another pointing device)" to jump to the ancillary information, i.e., a user command received at the premises. EX1007, ¶[0032]. Zigmond teaches a command interface at the premises via IR IF 24 receiving commands from "remote control 11." EX1008, 6:12-14, 6:38-39; Figs. 2-3. Zigmond further refers to remote control 11 as "User interface selection device 11," reinforcing that its function is

selection among displayable content. EX1008, 6:12. A POSITA would have had a reasonable expectation of success because substituting a known remote-control input for another known user-input mechanism (mouse/pointing device) to select the same icon yields predictable results and requires only routine implementation.

**3. [3b]/[15b]**

Marler in view of Zigmond renders obvious limitations [3b]/[15b]. EX1033, ¶¶148-151. As discussed above for limitations [3a]/[15a], Marler discloses receiving a user command via icon selection (EX1007, ¶[0032]) and Zigmond teaches a command input (IR I/F 24) for receiving remote-control commands at the user premises (EX1008, 6:12-14, 6:38-39; Figs. 2-3).

Zigmond discloses these limitations. Zigmond discloses that a user can use the remote control 11 to send a "Go" command as discussed above for limitations [1k]/[13j] which results in the display of translucent panel 900 that includes a "Go to Web Page" button that causes retrieval via the Internet of the Web page content associated with the icon. EX1008, 10:60-11:19; Figs. 8-10. Zigmond further discloses that in some embodiments, the STB 10 is configured to replace the display of the television program 500 with the display of the Web page and display the TV program in a window within that Web page when retrieval of the Web page completes. EX1008, 11:12-19. In that embodiment, the TV program must be resized to fit within that window, which Zigmond discloses is performed by

dedicated video processing circuitry in ASIC 20 constituting the claimed frame adjuster. EX1008, 6:30-37. The user's selection of the "Go to Web Page" button 920 is thus a command to which the STB 10 responds by resizing the TV program 500 corresponding to the claimed first portion of the first display screen.

It would have been obvious to a POSITA to incorporate Zigmond's known windowing/resizing technique into Marler's receiver. This is a straightforward substitution of a known UI behavior for predictable benefit (better concurrent viewing of TV and retrieved Internet content) with a reasonable expectation of success.

## X. GROUND 4: MARLER AND GRAY RENDER OBVIOUS CLAIMS 8 AND 19

### A. Summary of Gray

Gray is directed to a "system and method for enhanced hot key delivery." EX1018, Title. A hot key indicates the availability of alternate content, which may be an advertisement. EX1018, ¶¶[0028], [0032]. Gray discloses several forms of hot keys, including one example hot key 105 shown in Fig. 1c that indicates the subscriber may press 1 to accept the alternate content or 2 to decline the alternate content. EX1018, ¶[0029]; Fig. 1c.

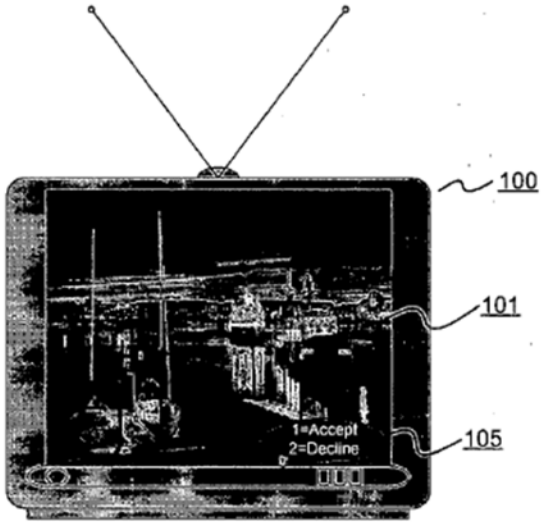



**Figure 1C**

### B. Claims 8 and 19

Marler discloses or renders obvious claims 1 and 13 as discussed above. Gray discloses the limitations of claims 8 and 19. EX1033, ¶¶152-154. Gray discloses the display of an icon 105 that indicates the subscriber may press 1 to accept the alternate content or 2 to decline the alternate content indicated by the image/icon and optionally retrieve another icon/image for other alternate content as discussed in Gray at ¶¶[0029], [0134] and Fig. 13 (discussing a return process 1330 that in one embodiment presents the subscriber with a hot key/icon for other alternative content). It would have been obvious to modify Marler's overlaid icon images—which Marler teaches may include human-readable text—to incorporate the selection instructions taught by Gray for remote-control button input and optional retrieval of hot spots/icons. EX1007, ¶¶[0032], [0038]. A POSITA would

have been motivated to do so to improve user interaction and avoid the need for specialized input buttons on the remote.

## XI. GROUND 5: MARLER AND SCOTT RENDER OBVIOUS CLAIMS 4 AND 16

### A. Summary of Scott (EX1019)

Scott discloses an interactive TV system 22 where a user can select a link 44 which can be an icon shown on a display screen 25 to view a web page as shown in Fig. 2 below. EX1019, 4:30-45, 5:20-53. Scott discloses downloading of a video prior to link selection so that when the user selects the link 44, video is immediately displayed to the user, and the web page is displayed to the user afterward. EX1019, 4:30-45.

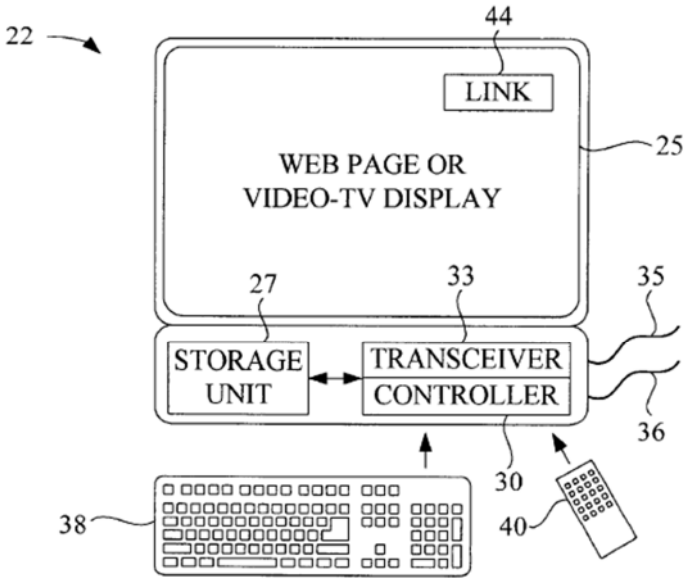



FIG. 2

### B. Claims 4 and 16

#### 1. [4 pre]/[16 pre]/[16a]

Marler discloses or renders obvious the limitations of claims 1 and 13 as discussed above in Ground 1, and Marler and Scott disclose and render obvious the preambles and limitations of these claims. EX1033, ¶¶155-157. Marler discloses that enhancement data which can include content such as "web pages, multimedia information or other digital files" (which a POSITA would have understood or found obvious to include video data) is delivered to Marler's receiver 16 via the secondary link 20, "a data delivery communications channel such as the Internet." EX1007, ¶¶[0002], [0013], [0016]; *see also* limitations [1e]-[1g] in Ground 1. Scott also discloses downloading enhancement data in the form of streaming video content over the Internet from a website corresponding to a Web link. EX1019, 6:16-28. Marler also discloses that the URL in the overlay-enabling data "may point to an Internet web address" for an icon used to indicate the availability of the enhancement data. (EX1007, ¶[0035]); limitation [1f] in Ground 1. See discussion of limitations [4a]/[16b] for the remainder of these limitations.

#### 2. [4a]/[16b]

Marler and Scott render obvious these limitations. EX1033, ¶¶158-161. As discussed above for limitation [1f] in Ground 1, Marler discloses that the icon image can be a hyperlink that includes a URL, *i.e.*, a Web link, that identifies a

website where the associated enhancement content, which can be audio-visual content as discussed above, is stored.

Marler does not provide details about how a video is retrieved in response to activation of the icon. Scott discloses a technique that allows a video to be displayed immediately upon selection an icon. In particular, Scott discloses an embodiment where video content corresponding to a web link may be downloaded and stored while the link is displayed—when bandwidth allows—so the video can begin playing immediately when the user clicks the link. EX1019, 6:16-22. Scott further discloses that the video content "need not be completely downloaded to mass storage unit 27 before display of that content begins." EX1019, 6:27-27.

Downloading part of the video prior to link selection is the claimed prefetching and buffering. And if claims 4 and 16 are construed to require video streaming, Scott's disclosures—partial pre-download plus continued download during playback after selection—meets video streaming as a POSITA would understand it.

It would have been obvious to a POSITA to configure Marler's receiver to pre-download video upon icon display per Scott. A POSITA would have been motivated to enable immediate viewing and would have a reasonable expectation of success, given that this is a known technique in a known manner to improve a known system ready for improvement and involved only routine skill.

## XII. GROUND 6: ZIGMOND RENDERS OBVIOUS CLAIMS 1, 3, 6, 13, 15

### A. Summary of Zigmond (EX1008)

Zigmond, like the '328 patent, is directed to a system and method for "interactive television viewing of a television program and related content." EX1008, 2:64-66. In Zigmond's system, a user watching a television program is presented with an icon 700, for example a translucent letter "i" in the upper right-hand corner of a television program 500 shown on the user's television as shown in Fig. 7 below. EX1008, 10:4-14; Fig. 7 (highlighting added). The icon 700 signals to the viewer that Internet content at a logical address link related to the program is present. *Id*.

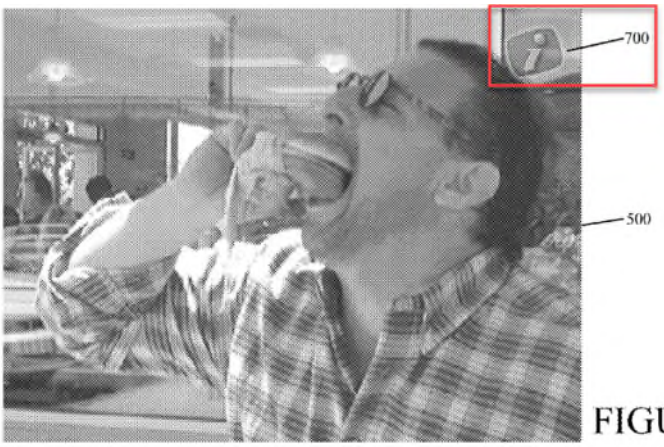


FIGURE 7

In some embodiments, the links corresponding to the icon 700 are "batch mode logical address links" that are delivered to a client system from a Web server in advance of the broadcast of the television program 500. EX1008, 7:14-27. These batch mode links typically define a time interval such as by including a start and stop time indicating when the link is to be made available to the viewer.

EX1008, 7:29-35. A user can select the link using a remote control if the user is interested in seeing the content associated with the icon 700 and cause Zigmond's system to retrieve and display the content from the Web page associated with the link via the Internet. EX1008, 10:37-11:2; Figs. 8-10.

### B. Claims 1 and 13

#### 1. [1pre]/[13pre]

If the preambles of claims 1 and 13 are limiting, Zigmond discloses them. EX1033, ¶¶162-169. Zigmond discloses a TV-Internet Integration circuit in the form of a STB 10 located at a user's premises and connected to a user's TV 12 via video link 6 as shown in Fig. 2 below. EX1008, 5:60-6:4. The STB 10 can be a standalone device as shown in Fig. 2 reproduced below or alternatively be built into the TV 12. *Id*.

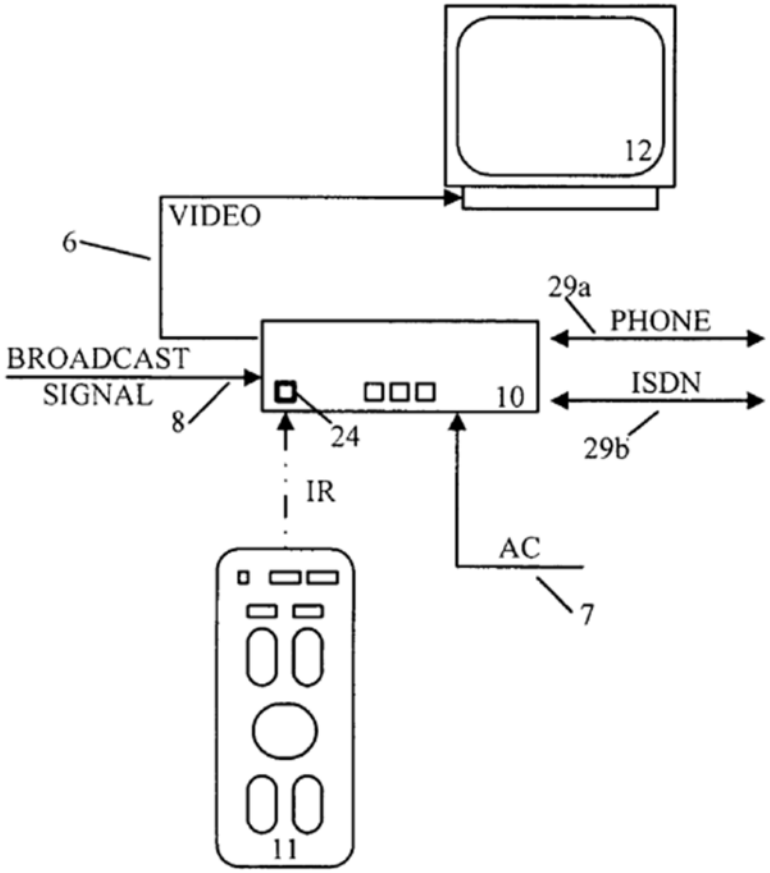



FIGURE 2

Zigmond further discloses that the STB 10 generates an overlay, e.g., an icon 700 which is overlaid over a television program 500, and which is transmitted from the STB 10 and displayed on the user's TV 12 as shown in Fig. 7. EX1008, 10:4-14.




FIGURE 7

Zigmond discloses that the STB 10 generates the overlay shown in Fig. 7 using first data and second data. The first data corresponds to a broadcast television program video signal 8 as shown in Fig. 2 above. EX1008, 6:5-7. The second data correspond to "batch mode logical address links" as discussed above as well as other data received via the Internet as will be discussed in further detail below. EX1008, 7:14-35; see also limitations [1f]-[1h] below.

Regarding claim 1's preamble, Zigmond also discloses a method performed by the STB 10 for generating the overlay of Fig. 7 using the first and second data as discussed in further detail below for limitations [1a]-[1k].

**2. [1a]/[13a]**

Zigmond discloses or renders obvious these limitations. EX1033, ¶¶170-171. Zigmond's STB 10 includes a combiner circuit, namely the combination of the ASIC (application specific integrated circuit) 20 and CPU 21 shown in Fig. 3 below. Zigmond explains that ASIC 20 is under the control of the CPU 21 and serves as a bus that couples the other illustrated components of Fig. 3 below.

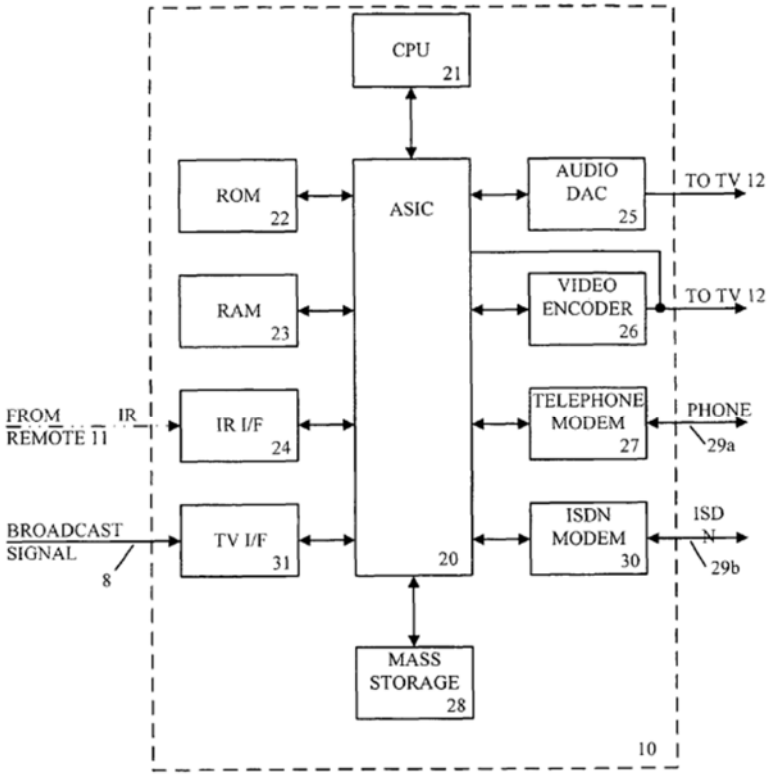



FIGURE 3

The combiner circuit in the STB 10 is located at the user's premises because it is shown attached to the user's TV 12 in Fig. 2 shown below, and because Zigmond further discloses that the STB 10 may be integrated into the user's television. EX1008, 5:60-6:4; Fig. 2. See also limitations [1b]-[1d] below, which discuss the processing performed by the CPU 21 and ASIC 20 (the combiner circuit). The requirement in limitation [13a] for the combiner circuit to be "coupled to a separate TV tuner box or TV tuner" is addressed for limitation [1b] below.

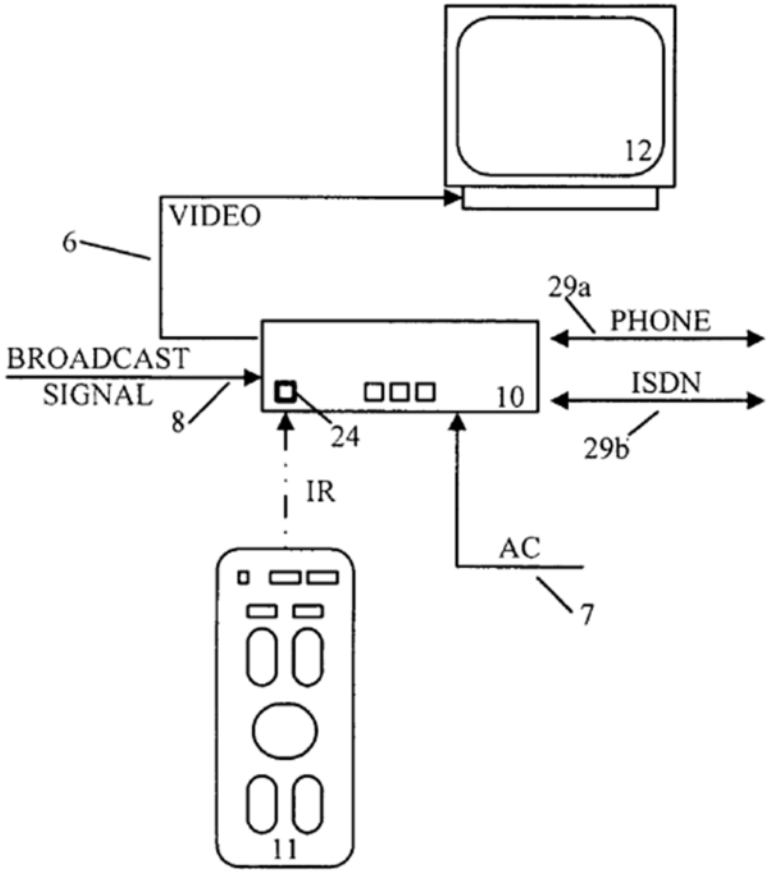



FIGURE 2

**3. [1b]**

Zigmond discloses or renders obvious these limitations. EX1033, ¶¶172-173. As shown in Fig. 3 below, the CPU 21 and ASIC 20 that constitute the claimed combiner circuit are coupled to the TV 12 (also shown in Fig. 2) via the video encoder 26. EX1008, 6:1-4, 6:24-32, 9:44-47; Figs. 2-3.

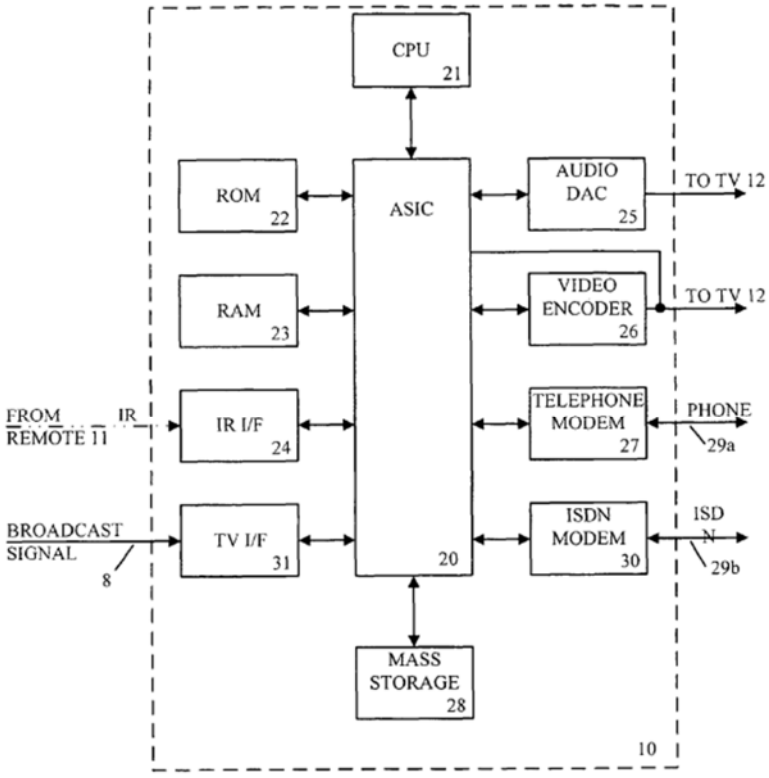



FIGURE 3

The CPU 21 and ASIC 20 are coupled to a broadcast TV signal 8 via the TV IF (interface) 31 as shown in Fig. 3 above. Zigmond discloses that TV IF 31 receives terrestrial broadcast video signals such as an NTSC television signal. EX1008, 6:40-41. It was well-known in the art that reception of a broadcast NTSC television signal requires a tuner, and therefore it would have been obvious if not inherent that TV IF 31 includes a TV tuner. See, e.g., EX1007, ¶[0029] ("the receiving circuit 114 (*e.g.*, a TV tuner card) is adapted to receive content over the transport medium 22."). As discussed above, Zigmond discloses that the STB 10 including the TV IF 31, CPU 21, and ASIC 20 can be integrated into a TV set, which almost always included at the time of the alleged invention of the '328

patent an input for receiving a terrestrial broadcast television signal. EX1008, 5:63-65. Alternatively, Zigmond discloses that the TV IF 31 may be connected to receive the broadcast TV signal 8 via cable TV or digital satellite. EX1008, 5:53-56. In that case, a POSITA would have found it obvious that the broadcast signal 8 of Figs. 2-3 would be received via a separate cable or satellite STB including a tuner (each a claimed "separate TV tuner box") because such signals were typically pay television signals which were broadcast in encrypted form and required decryption which was typically accomplished in a proprietary STB at that time. *See*, *e.g.*, EX1013, 3:36-39; Figs. 1-2 (discussing "cable box 20 channel selector," including a tuner).

**4. [1c]/[13b]**

Zigmond discloses or renders obvious these limitations. EX1033, ¶¶174-176. ASIC 20 and CPU 21 are connected to receive a broadcast signal 8 via a terrestrial broadcast television network or via a digital satellite or cable network as discussed above for limitation [1b]. Zigmond further discloses that ASIC 20 and CPU 21 are connected to a telephone modem 27 and an ISDN modem 30 as shown in Fig. 3:

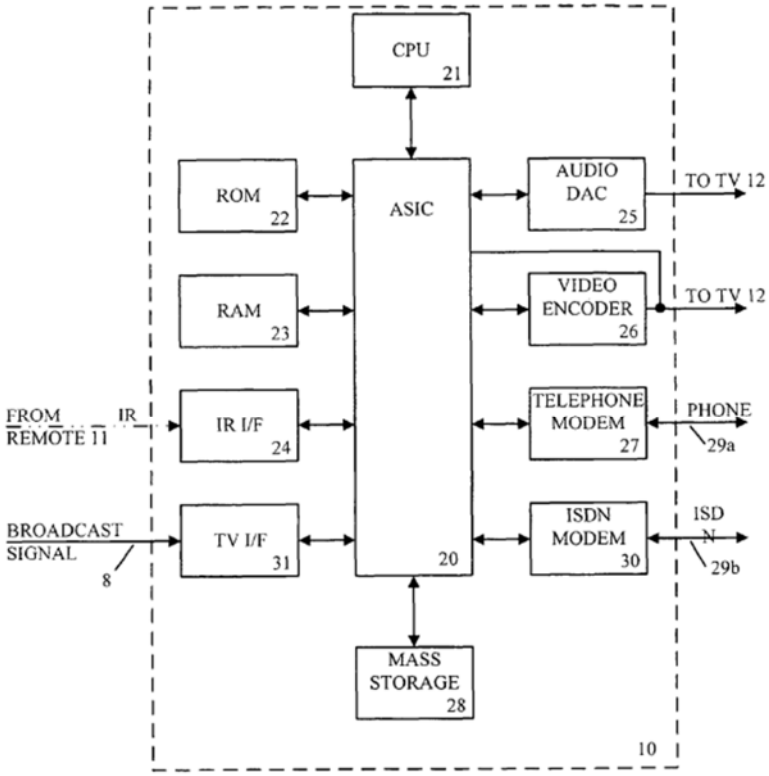



FIGURE 3

Either telephone modem 27 or ISDN modem 30 connects via phone network 29a or ISDN network 29b (Fig. 3 above) to the Internet 3 and servers 4 and 5—each an Internet data source—as shown in Fig. 1, where each client 1 is an STB 10.. EX1008, 4:54-67; Fig. 1.

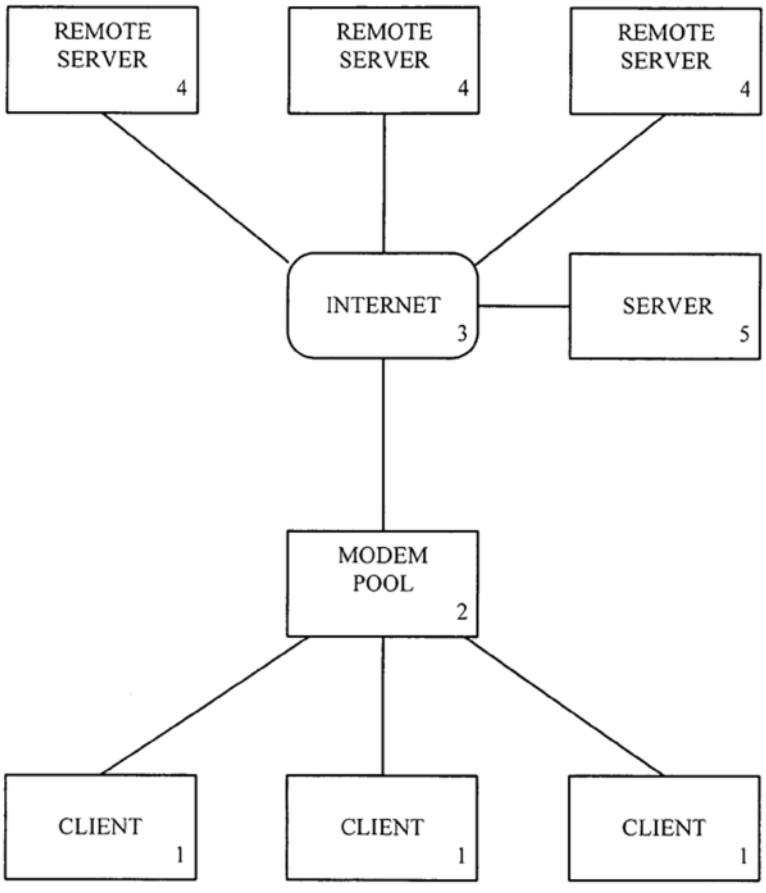



FIGURE 1

The server 5 supports the clients 1. EX1008, 4:64-65. The server 5 provides overlay-enabling digital data over the Internet as discussed in detail below for limitations [1d]-[1h]. The phone and ISDN networks (29a, 29b) in Fig. 3, which deliver the Internet connection and the overlay-enabling digital data, are distinct from the terrestrial, cable, or satellite networks that carry the TV broadcast signal 8..

**5. [1d]/[13c]**

Zigmond discloses or renders obvious these limitations. EX1033, ¶¶177-178. As discussed above for limitation [1c], the broadcast TV signals 8 (the video

signals) are received at the STB 10 (including ASIC 20 and CPU 21) via a terrestrial broadcast, cable or satellite network, whereas the overlay-enabling digital data is received from a server 5 via the Internet and phone or ISDN networks 29a, 29b. These networks are different resources and signals and data are received as mutually distinct and independent inputs as shown in Figs. 2 and 3 below.

FIGURE 2

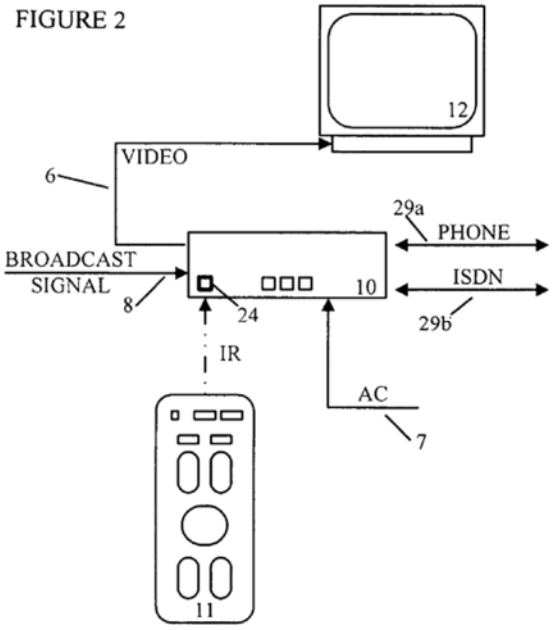
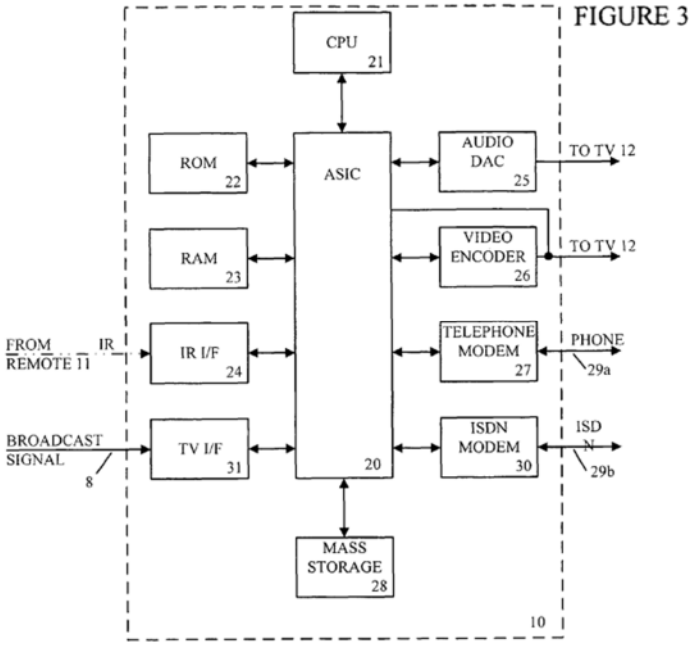



FIGURE 3




**6. [1e]/[13d]**

Zigmond discloses or renders obvious these limitations. EX1033, ¶179. Zigmond discloses overlay-enabling digital data as discussed above that includes the components discussed below for limitations [1f]-[1h].

**7. [1f]/[13e]**

Zigmond discloses these limitations. EX1033, ¶180. As discussed above in the summary of Zigmond, Zigmond discloses "batch mode logical address links" that are delivered to a client system from a Web server over the Internet in advance of the broadcast of the television program 500. EX1008, 7:14-27; Figs. 8-10. These batch mode links are one type of a "logical address" disclosed in Zigmond (other types include links embedded in TV signals as discussed at 5:3-5) that can be a link to the Internet and in particular can be a URL. EX1008, 5:1-21.

**8. [1g]/[13f]**

Zigmond discloses and/or renders obvious these limitations. EX1033, ¶¶181-186. Zigmond discloses an image in the form of a translucent icon 700 as shown in Fig. 7 below (highlighting added). The icon 700 indicates the presence of a logical address link which can be used to retrieve associated content from a Web server. EX1008, 5:5-44, 10:4-7, 9:57-63; Fig. 7.




FIGURE 7

Zigmond discloses that the same icon 700, i.e. the stylized "i" shown in Fig. 7, is used to alert the user to the presence of all related content. EX1008, 12:41-43. The icon 700 is therefore indicative of the presence of the related content. Zigmond does not explicitly disclose how the icon is delivered to STB 10 and the CPU 21/ASIC 20 in this embodiment. However, given that a single icon 700 is used in this embodiment, a POSITA would have found it obvious to include the icon 700 with the program code executed by the CPU 21 and/or ASIC 20, *e.g.*, as an image file that is retrieved from memory when the icon 700 is to be displayed.

Zigmond also discloses that different icons may be used, and gives as an example different icons used to distinguish between program-related content and advertising-related content. EX1008, 12:41-45. Each of these two icons is therefore indicative of the type/subject matter of the related content associated with the Web link, i.e., that the content is either advertising-related or program-related. Given that only two icons are used in this example, it would again have been obvious to a POSITA to include these icons with the program code executed by the CPU 21 and/or ASIC 20.

Zigmond further discloses that the program code may be downloaded to the STB via the Internet. In particular, Zigmond discloses that software may be downloaded over network connection 29 and stored in mass storage 28, shown below in Fig. 3. EX1008, 6:54-60. A POSITA would have understood or found

obvious that the downloaded code stored in the mass storage 28 would (perhaps after a checksum was performed) be transferred from the mass storage 28 to the EPROM/flash 22 for execution by the CPU 21 and/or ASIC 20. Thus, in embodiments where only one or two icons are used, it would have been obvious to a POSITA that these icons would be received via the Internet as part of a program code update. That they are received as part of a program code update rather than in the same message as the batch mode logical address links is of no moment because there is no requirement in claims 1 or 13 for the image of limitations [1g]/[13f] to be received in the same message or at the same time as the Web link of limitations [1f]/[13e].

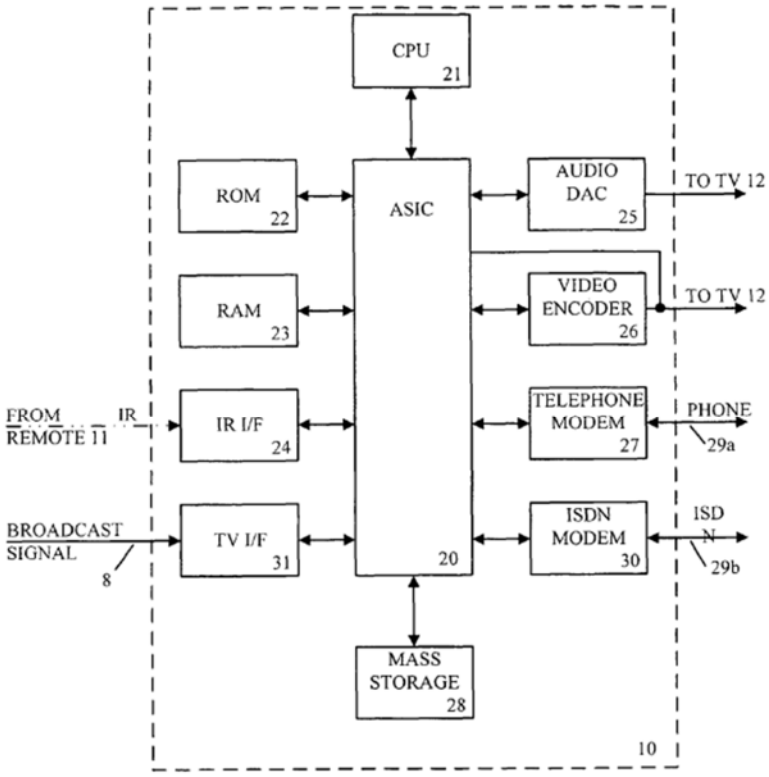



FIGURE 3

**9. [1h]/[13g]**

Zigmond discloses these limitations. EX1033, ¶187. Zigmond's batch mode links typically define a time interval such as by including a start and stop time indicating when the link is to be made available to the viewer. EX1008, 7:29-35. Zigmond discloses that these limitations are received via the Internet. EX1008, 7:19-34.

**10. [1i]/[13h]**

Zigmond discloses and renders obvious these limitations. EX1033, ¶188. Zigmond discloses that overlay activation criterion (the interval defined by the start and stop times included with the batch mode logical address links) is processed by Zigmond's combiner circuit (ASIC 20 and CPU 21) to generate an icon overlaid on a television program such as shown in Fig. 7 if the current time is within the interval where the content associated with the batch mode logical address link is to be made available to the user. EX1008, 7:29-35. If Zigmond does not expressly disclose that ASIC 20 and CPU 21 perform the processing necessary to implement the description at 7:29-35, the same would have been obvious to a POSITA in view of Zigmond's disclosure that ASIC 20 and CPU 21 perform other processing discussed therein.

**11. [1j]/[13i]**

Zigmond discloses and renders obvious these limitations. EX1033, ¶189. As discussed above, Zigmond discloses the generation of a display screen on a user's

TV 12 including a first portion in the form of a TV program 500 and a second portion in the form of a translucent icon 700 overlaid on the TV program 500. EX1008, 10:4-14; Fig. 7. As discussed above, Zigmond discloses that ASIC 20 and CPU 21 generate the video signals output to the TV 12 via the video encoder 26. EX1008, 6:24-37. If not explicitly disclosed in Zigmond, configuring ASIC 20 and CPU 21 to generate the video signals output to the TV 12 via the video encoder 26 would have been obvious to a POSITA.

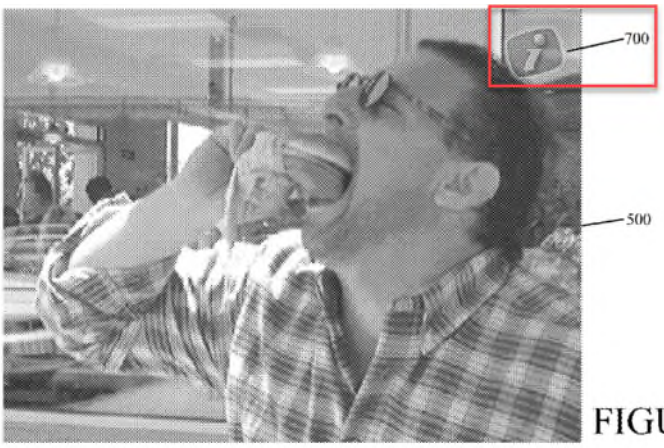



FIGURE 7

**12. [1k]/[13j]**

Zigmond discloses and renders obvious these limitations. EX1033, ¶¶190-191. Zigmond discloses that a logical address link, which a POSITA would have understood to include a batch mode logical address link, is associated with the icon 700 in the second portion of the first display screen. EX1008, 10:4-33. The association allows the user to cause the combiner circuit to retrieve the content associated with the logical address link by performing a series of steps starting with, e.g. pressing a "Go" button on an input device such as a remote control to

indicate an interest in the content associated with the icon (step 810 of Fig. 8). EX1008, 37-45.

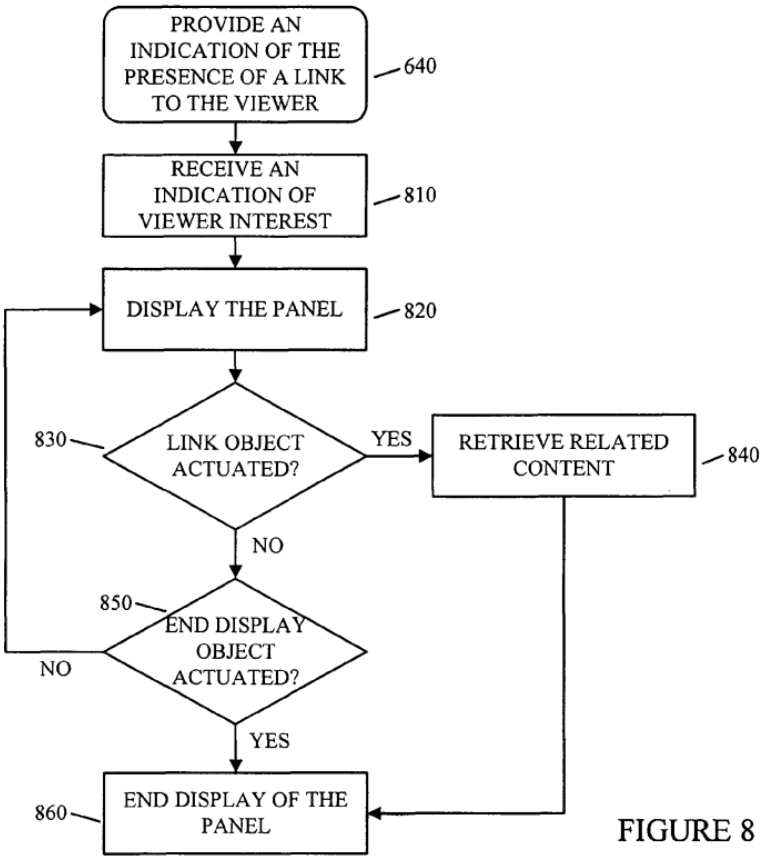



FIGURE 8

This results at step 820 in the display of a translucent panel 900 as shown in Fig. 9 below. The translucent panel 900 includes a "Go to Web Page" button 920 that, when selected at step 830, causes at step 840 the retrieval via the Internet of the Web page content associated with the icon 700 for display to the user. EX1008, 10:60-11:19; Figs. 8-10. If not explicitly disclosed in Zigmond, configuring ASIC 20 and CPU 21 to perform the processing associated with Figs. 8-10 would have been obvious to a POSITA.

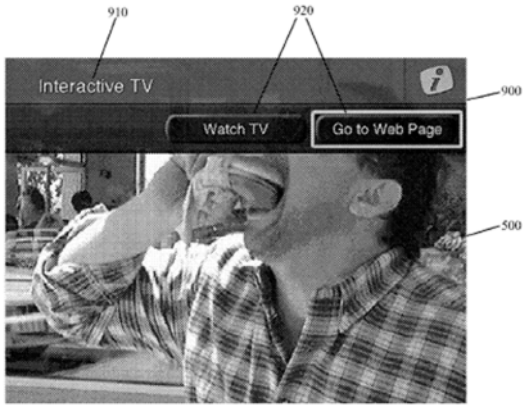


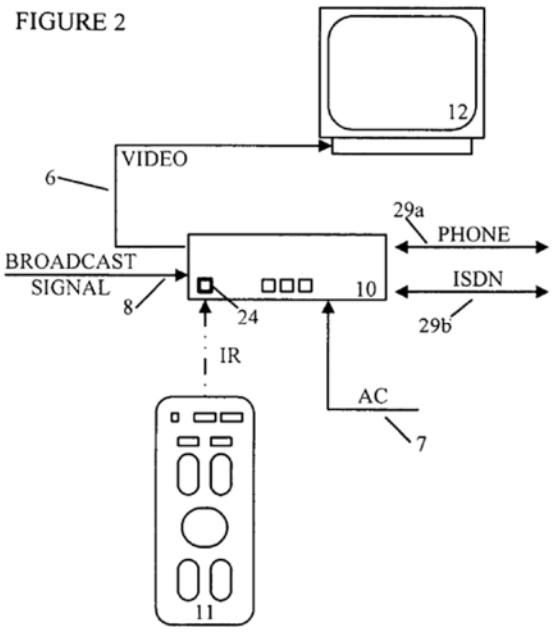

FIGURE 9

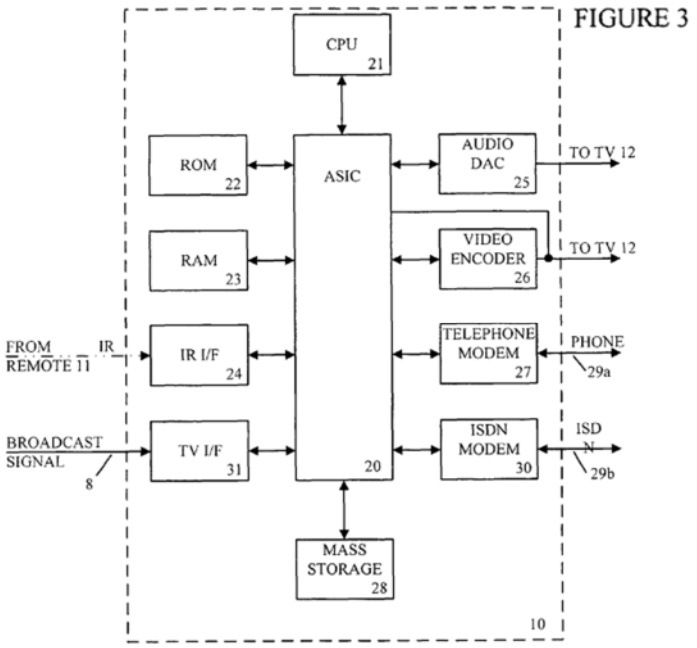



FIGURE 10

**13. [1l]/[13k]**

Zigmond discloses these limitations. EX1033, ¶192. Zigmond discloses that ASIC 20 connects to a video output interface—video encoder 26 (Fig. 3 shown below)—which in turn is coupled to the TV 12's video input (Fig. 2 shown below).. This arrangement allows the first display screen of Fig. 7 and the display that is generated upon completion of the downloading of the Webpage (shown in progress in Fig. 10) to wholly or partially replace the content of Fig. 10 as discussed in EX1008 at 11:12-19.



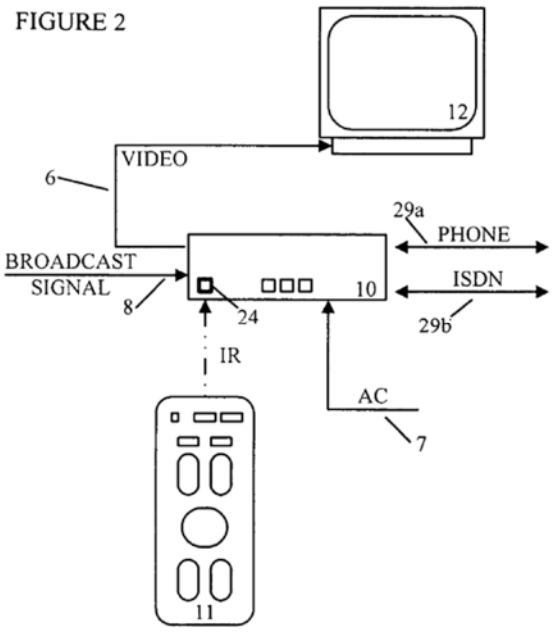

### C. Claims 3 and 15

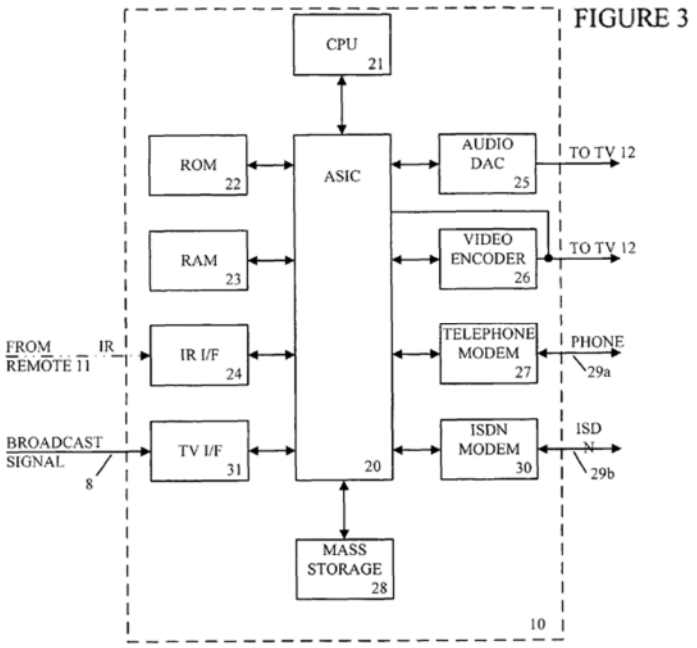
#### 1. [3pre]/[15pre]

Zigmond renders obvious claims 1 and 13 as discussed above.

#### 2. [3a]/[15a]

Zigmond discloses these limitations. EX1033, ¶¶193-194. Zigmond discloses that STB 10 includes a command interface in the form of an IR IF (infrared interface) 24 for receiving infrared commands from a remote control 11 operated by a user at the user's premises. EX1008, 6:12-14, 6:38-39; Figs. 2-3. The receipt of a command is discussed for limitations [3b]/[15b].




**3. [3b]/[15b]**

Zigmond discloses these limitations. EX1033, ¶195. Zigmond discloses that a user can use the remote control 11 to send a "Go" command as discussed above for limitations [1k]/[13j]. As further discussed above for those limitations, this command results in the display translucent panel 900 that includes a "Go to Web Page" button 920 that, when selected at step 830, causes at step 840 the retrieval via the Internet of the Web page content associated with the icon 700 for display to the user. EX1008, 10:60-11:19; Figs. 8-10. Zigmond further discloses that in some embodiments, when the retrieval of the Web page is complete, the STB 10 is configured to replace the display of the television program 500 with the display of the Web page and display the TV program in a window within that Web page. EX1008, 11:12-19. In that embodiment, the TV program corresponding to the first

portion of the display screen must be resized to fit within that window, which Zigmond discloses is performed by dedicated video processing circuitry in ASIC 20 constituting the claimed frame adjuster. EX1008, 6:30-37. The user's selection of the "Go to Web Page" button 920 is thus a command to which the STB 10 responds by resizing the TV program 500 corresponding to the claimed first portion of the first display screen.

### D. Claim 6

Zigmond renders obvious claim 1 as discussed above, and also discloses the limitations of claim 6. EX1033, ¶196. Zigmond discloses that the overlay enabling digital data that can include, e.g., a link to supplemental or complementary information associated with characters and guest starts on a "Seinfeld TV program" shown on the TV. EX1008, 8:14-27.

## XIII. GROUND 7: ZIGMOND AND REDLING RENDER OBVIOUS CLAIMS 1, 5, 7, 10-13, 17-18, 21

### A. Summary of Redling (EX1013)

Redling is directed to an interactive television advertising method where a semi-transparent icon 50 is overlaid on the display of a television program 12 on TV 10 as shown in Fig. 1 below to alert the user to the availability of advertising content. EX1013, 2:36-56. A user may select icon 50 to retrieve the advertising content associated with the icon 50 from an Internet server and display it on the user's TV. *Id*.

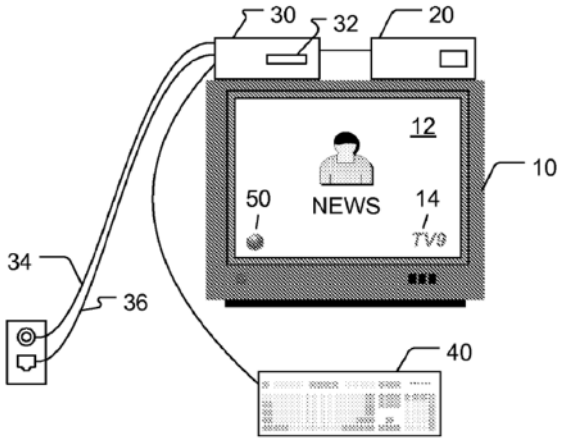



Figure 1

### A. Claims 1 and 13

The analysis for all limitations of claims 1 and 13 other than limitations [1g]/[13f] addressed below is the same as for Ground 6 above. EX1033, ¶¶197-199.

#### 1. [1g]/[13f]

As discussed above, Zigmond discloses either one icon for all additional content or two icons dividing ads and program content.

Zigmond together with Redling renders obvious the inclusion of icon images downloaded to the user's STB 10 along with the Web links of limitations [1f]/[13e] and the start and stop times/overlay activation criterion of limitations [1h]/[13b] (collectively, "overlay-enabling digital data"). EX1033, ¶¶200-202. Redling discloses the use of a semi-transparent icon used for advertising content that "periodically changes to resemble different product trademarks or company

names" and that is used as a link to an advertisement or other product information for the trademark or name. EX1013, 2:46-55. A POSITA would readily envision icons resembling company logos such as Apple's and McDonald's logos. Redling discloses that these icons can be downloaded from the Internet on a periodic basis. EX2013, 4:44-67.

A POSITA would have found it obvious to modify Zigmond to include Redling's periodically changing product- or brand-based icons and deliver them to Zigmond's STB 10 with the corresponding batch-mode logical address links and start/stop times, ensuring that the appropriate icon is shown during each interval. A POSITA would have been motivated to do so to give users a clearer indication of the content associated with each icon. A POSITA would have had a reasonable expectation of success because downloading images and links required only routine skill and was well-known in the art.

**B. Claim 5**

Zigmond and Redling render obvious claim 1 as discussed above, and also disclose or render obvious the limitations of claim 5. EX1033, ¶203. As discussed above for limitation [1g] in this Ground 7, Zigmond and Redling render obvious the display of different images/icons to indicate the availability of IP content such as an advertisement associated with those icons, and downloading those icons along with the batch mode logical address links and start/stop times (collectively,

the claimed overlay-enabling digital data). It would further have been obvious to a POSITA to concurrently display two or more icons overlaid over the TV program to indicate the availability of two or more IP contents as disclosed in, e.g., Marler (EX1007, ¶[0031]; Fig. 3); Rasmussen (EX1015, ¶¶[0024]-[0026]; Fig. 2); and Escobar (EX1016, 14:17-22; Fig. 7C). A POSITA would have been motivated to display icons for multiple contents, improving the user experience by offering more than one IP content choice at a time. A POSITA would have had a reasonable expectation of success because modifying the Zigmond-Redling system to display two content-specific icons at once used known techniques and required minimal skill.

### C. Claim 10

#### 1. [10 pre]

Zigmond and Redling render obvious claims 1 and 5 as discussed above, and also disclose or render obvious the limitations of claim 10. EX1033, ¶204.

#### 2. [10a]

Zigmond discloses that the batch mode logical address links are delivered to the client system in advance of the television broadcast to which they relate. In view of this, a POSITA would have found it obvious to send such links periodically because TV programs (e.g., shows, sitcoms) air periodically (e.g., daily or weekly). If not obvious over Zigmond alone, a POSITA would have looked to other references. Redling expressly discloses that the icons may be

automatically downloaded to the user's STB 30 via the Internet "on a regular basis" such as "early morning of each day or once per week." EX1013, 4:44-59. Accordingly, it would have been obvious to apply Redling's periodic downloading to Zigmond's system given Zigmond's teaching of delivery prior to periodic broadcasts. EX1033, ¶205.

**3. [10b]**

The combination of Zigmond and Redling render this limitation obvious. EX1033, ¶206. Zigmond and Redling render obvious the display of different images/icons, including the concurrent display of multiple different icons, to indicate the availability of IP content as discussed above for limitation [1g] and claim 5 in this Ground 7, and further enable using web links associated with those icons to retrieve content from a Web server for display to the user as discussed for Ground 6, limitations [1k]/[1l]. Zigmond and Redling further render obvious the downloading of both the images/icons and the web links ("batch mode logical address links") which together with time criteria constitute "overlay-enabling digital data" as discussed for limitation [1g] in this Ground 7. A POSITA would have understood that it would have been inherent, or at least found it obvious, to extract the images/icons and websites from this data to accomplish the functionality discussed above.

**4. [10c]**

The combination of Zigmond and Redling render this limitation obvious. EX1033, ¶207. As discussed above for limitation [1k] in Ground 1, clicking on an icon such as icon 700 results in the retrieval of digital content from a website associated with the icon 700, and it would have been obvious to configure the Zigmond-Redling system to display multiple icons concurrently as discussed for claim 5.

**5. [10d]**

The combination of Zigmond and Redling renders this limitation obvious. EX1033, ¶¶208-209. Zigmond discloses displaying an icon during an interval defined by a corresponding start and stop time as discussed for limitation [1h] in Ground 6. Zigmond further discloses a user command in the form of pressing a "Go" button on the remote control to cause the retrieval of the corresponding information from the website as discussed for limitations [1k]/[1l] for Ground 6.

If this claim is construed as requiring the concurrent display of different icons, a POSITA would have found it obvious to configure Zigmond's system to associate different icons displayed on the screen over the TV program with different commands on the user's remote. As one example, a POSITA would have found it obvious to include color coded frames around the icons and provide the remote with corresponding color-coded buttons corresponding to those colored

frames as disclosed in, *e.g.*, EX1015 (Rasmussen, which is discussed in Grounds 2 and 8), ¶[0030]; EX1017, 23:15-23 (discussing colored icons and corresponding colored remote control buttons).

**D. Claim 17**

**1. [17 pre]**

See claim 5.

**2. [17a]**

See claim 10, limitations [10a]-[10d]. A POSITA would have found it obvious to configure Zigmond's CPU 21 and ASIC 20 (the claimed combiner circuit) to perform the functions discussed therein. EX1033, ¶¶210-215.

**3. [17b]**

See limitation [10a].

**4. [17c]**

See limitation [10b].

**5. [17d]**

See limitation [10c].

**6. [17e]**

See limitation [10d].

**E. Claims 7 and 18**

Zigmond and Redling render obvious claims 1 and 13 as discussed above. Zigmond and Redling also render obvious the limitations of claims 7 and 18.

EX1033, ¶216. As discussed above for limitation [1g], Zigmond discloses an image in the form of icon 700, and together with Redling discloses an embodiment in which different icons are used, where one icon indicates availability of program-related content and the other indicates availability of advertising-related content, which are indications of the nature of the content. EX1008, 12:41-45; *see also* limitation [1g]. Zigmond's icons therefore indicate to a user that "digital data from Internet content is currently being provided" and provide an indication of the nature of that content.

### F. Claims 12 and 21

Zigmond and Redling render obvious claims 1, 7, 13 and 18 as discussed above. Zigmond and Redling also render obvious the limitations of claims 12 and 21. EX1033, ¶217. As discussed for limitation [1g] and claim 5, Zigmond and Redling render obvious the concurrent display of multiple different icons to indicate different content such as different advertisements. As discussed above for limitation [10d], a POSITA would have found it obvious to include color-coded frames around those icons and provide the remote with corresponding color-coded buttons as disclosed in, *e.g.*, EX1015, ¶[0030] and EX1017, 23:15-23 (discussing colored icons and corresponding colored remote-control buttons).

### G. Claim 11

Zigmond and Redling render obvious claim 5, and Zigmond and Redling each disclose the limitations of claim 11. EX1033, ¶¶218-219. Zigmond discloses displaying IP content corresponding to a "batch mode logical address link" when a user selects a "Go" button to activate an icon 700 to cause the display of translucent panel 900 then presses a "Go to Web page" button as discussed above for Ground 6, limitation [1k]. If the concurrent display of multiple icons is required by this claim, the same would be obvious to a POSITA as discussed above for limitation [10d] and claim 5.

If claim 11 is construed as requiring the display of IP content from a corresponding web page upon selection of a second image/icon without any further user action, Zigmond renders this obvious. A POSITA would view panel 900 as an obvious design choice to omit and proceed directly to downloading the IP content and displaying Fig. 10. Alternatively, Redling discloses displaying content in response to a user selection of icon without further user action. EX1013, 4:20-5:9; Fig. 3 (steps 110, 130, 140, 150, 160). A POSITA would view the modification to Zigmond as obvious to reduce user actions, with success expected because it only removes a routine intermediate step.

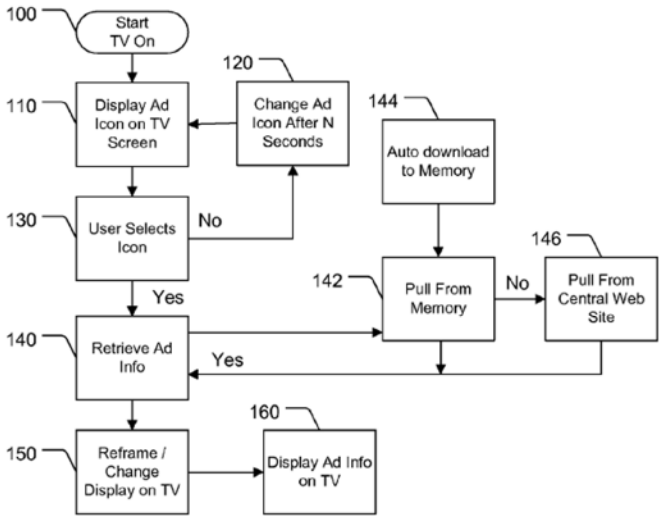



Figure 3

## XIV. GROUND 8: ZIGMOND, ALONE OR IN COMBINATION WITH REDLING, AND FURTHER IN VIEW OF RASMUSSEN RENDER OBVIOUS CLAIMS 2 AND 14

Zigmond, alone or in combination with Redling, discloses or renders obvious claims 1 and 13 as discussed above in Grounds 6-7. The combination of Zigmond and Rasmussen renders obvious the limitations of claims 2 and 14. EX1033, ¶¶220-226.

Rasmussen's hot spots function like Zigmond's icons by notifying users of additional content and enabling access to display that content. Rasmussen also discloses that a distributor may tailor hot spots based on user-specific criteria such as buying habits, interests, or demographics. EX1015, ¶[0032]. A POSITA would have understood—if not found it obvious—that a distributor could accomplish this in several ways.

For example, as Rasmussen teaches (¶[0032]), a POSITA would find it obvious that a user could use a menu to specify and locally pre-store information indicating categories of hot-spot subject matter of interest; this pre-stored information constitutes a user profile. A POSITA would also find it obvious to send a list (e.g., XML) identifying Zigmond's batch-mode logical-address links together with a URL and subject-matter indicator (e.g., sports), which could be encoded as a parameter, and configure Zigmond's STB 10 to download each link whose indicator matches the user's profile.

In a second alternative, it would have been obvious to a POSITA to modify Zigmond's server 5 (shown in Fig. 1) to transmit via the internet batch mode logical address links along with a subject matter indicator for each link (e.g., by including a subject matter parameter in each batch mode logical address link), and to modify Zigmond's STB to discard any batch mode logical address links that do not match the pre-stored user profile.

As a third alternative, it would have been obvious to a POSITA to configure Zigmond's STB to send to the user profile to Zigmond's server 5 (shown in Fig. 1) and to use that profile to tailor the transmission of batch mode logical address links to the users whose profiles correspond to the subject matter associated with those links as taught by Rasmussen.

A POSITA would adopt these alternatives to improve user experience and ad targeting by avoiding hot spots/icons for content where a user is uninterested, with success expected because the changes were routine and well known at the time of the alleged invention of the ’328 patent.

## XV. GROUND 9: ZIGMOND ALONE OR IN COMBINATION WITH REDLING AND FURTHER IN VIEW OF GRAY RENDER OBVOIUS CLAIMS 8 AND 19

Zigmond alone or in combination with Redling, discloses or renders obvious claims 1 and 13 as discussed above in Grounds 6-7. Gray discloses the limitations of claims 8 and 19. EX1033, ¶¶227-228. As discussed in Ground 4 above, Gray discloses the display of an icon 105 with textual instructions indicating the subscriber may press 1 to accept the alternate content or 2 to decline the alternate content and optionally retrieve other icons for other content. It would have been obvious to include such instructions as taught by Gray with the icons used in the Zigler or Zigler-Redling system for the reasons and with an expectation of success discussed above in Ground 4.

## XVI. GROUND 10: ZIGMOND ALONE OR IN COMBINATION WITH REDLING AND FURTHER IN VIEW OF SCOTT RENDER OBVIOUS CLAIMS 4 AND 16

### A. Claims 4 and 16

#### 1. [4 pre]/[16 pre]/[16a]

Zigmond alone or in combination with Redling, discloses or renders obvious claims 1 and 13 as discussed above in Grounds 6-7, and Zigmond and Scott render

obvious the preambles and limitations of these claims. EX1033, ¶¶229-230.

Zigmond discloses that logical address links such as URLs may identify content available over the Internet to be displayed to a user via selection of an icon 700 as discussed above. EX1008, 5:1-25; 7:14-27; *see also* limitations [1e]-[1g]/[1j]-[1l] in Ground 6. It was well-known in the art that internet content can include video files as taught by Scott (EX1019, 3:24-34); see also, *e.g.*, EX1016, 7:7-11. It would have been obvious to a POSITA to configure Zigmond's logical address links, including batch mode logical address links, to include an address for an audiovisual file such as an advertisement or other video data. A POSITA would have been motivated to do so to enable delivery of advertising or other audio/video information to the user. A POSITA would have had a reasonable expectation of success because doing so was a design choice that involved only routine skill. See discussion of limitations [4a]/[16b] below for the remainder of these limitations.

**2. [4a]/[16b]**

Zigmond discloses that content corresponding to a selected icon is retrieved after the link is selected by pressing a "Go" button on a user's remote and after a user presses a "Go to Web Page" button that is displayed on the screen is activated by the user as discussed for limitation [1k] of Ground 6. As discussed above for claim 11 in Ground 7, it would have been obvious to a POSITA to eliminate the display of the translucent panel 900 with the "Go to Web Page" button and instead

immediately begin download of the corresponding content in response to user selection of the icon.

Alternatively, it would also have been obvious to a POSITA to configure Zigmond's system to start downloading video content for Zigmond's icons that link to video content immediately upon display (whether or not the translucent panel 900 is displayed) as taught by Scott to allow display of the video content immediately upon user icon selection for the same reasons discussed for limitations [4a]/[16b] in Ground 5. A POSITA would have been motivated to do so and would have had a reasonable expectation of success for the same reasons discussed for limitations [4a]/[16b] in Ground 5. EX1033, ¶¶231-232.

## XVII. MANDATORY NOTICES UNDER 37 C.F.R. §§ 42.8(B)(1)-(4)

### A. Real Party-In-Interest

Samsung Electronics, Co., Ltd. and Samsung Electronics America, Inc. are the real parties-in-interest.

### B. Related Matters

The '328 patent is subject to the following action: *TVnGO Ltd. v. Samsung Electronics, Co., Ltd. and Samsung Electronics America, Inc.*, Case No. 7:25-cv-00549 (W.D. Tex.).

### C. Lead and Backup Counsel

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### D. Service Information

Service information for lead and backup counsel is provided in the designation of lead and backup counsel above. Petitioner consents to electronic service to lead and back-up counsel and to: DLA-SamsungIPR-TVnGO@us.dlapiper.com.

## XVIII. CONCLUSION

All Challenged Claims of the ’328 patent should be found unpatentable for the reasons discussed in this Petition.

Respectfully submitted,

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## CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner certifies that this petition includes 13,385 words, as measured by Microsoft Word, exclusive of the table of contents, mandatory notices under § 42.8, certificate of service, word count, claim listing, and exhibits.

Date: February 13, 2026

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**CERTIFICATE OF SERVICE**

The undersigned certifies pursuant to 37 C.F.R. §§ 42.6(e) and 42.105 that on February 13, 2026, a true and correct copy of the Petition for *Inter Partes* Review of U.S. Patent No. RE50,328 was served by emailing a copy of same (by agreement) to the following attorneys for the Patent Owner:

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Respectfully submitted,

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