**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

COMCAST CABLE COMMUNICATIONS, LLC,
Petitioner

v.

ROVI GUIDES, INC.
Patent Owner

Patent No. 6,418,556
Filing Date: September 9, 1993
Issue Date: July 9, 2002
Title: ELECTRONIC TELEVISION PROGRAM GUIDE SCHEDULE SYSTEM AND METHOD

*Inter Partes* Review No.: Unassigned

# PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. § 42.100 *et seq.*

**Tuning System Claims 1-4, 6/1, 7/(1-4), 10/(1-4), 14, 16, 18/(14,16), 19-21, 28, 30, 33, 35/(14, 16, 18/(14, 16)), 36/(1-4, 20), 37/(1-4, 20), 38/(2-4, 14, 16, 20), 39 and 40 – Moro Secondary Reference**

## Table of Contents

## EXHIBITS

| | |
|---|---|
| Ex-1001: | U.S. Patent No. 6,418,556 to Bennington ("the '556 Patent") |
| Ex-1002: | PCT Publication WO 92/04801 Young ("Young '801") |
| Ex-1003: | Published EP Pat. App. No. 0 444 496 A1 to Moro ("Moro") |
| Ex-1004: | Reserved |
| Ex-1005: | Reserved |
| Ex-1006: | Certified Copy of Prosecution History of U.S. Patent No. 6,418,556 |
| Ex-1007: | "Stay Tuned for Smart TV," Popular Science, November 1990 |
| Ex-1008: | Prosecution History of U.S. Application No. 10/787,508 |
| Ex-1009: | Declaration of Anthony Wechselberger |
| Ex-1010: | Reserved |
| Ex-1011: | Reserved |
| Ex-1012: | U.S. Patent No. 4,965,825 to Harvey ("Harvey") |
| Ex-1013: | Joint identification of disputed claim terms – ITC No. 337-TA-1001 |
| Ex-1014: | RocGen RG300C User's Manual |
| Ex-1015: | U.S. Patent No. 6,356,316 to Mistrot ("Mistrot") |
| Ex-1016: | U.S. Patent No. 4,633,297 to Skerlos et al. ("Skerlos") |
| Ex-1017: | U.S. Patent No. 4,894,789 to Yee ("Yee") |
| Ex-1018: | U.S. Patent No. 5,373,315 to Dufresne et al. ("Dufresne") |

Ex-1019: U.S. Patent No. 5,146,336 to Tessier et al. (“Tessier”)

# I. MANDATORY NOTICES PURSUANT TO 37 C.F.R. § 42.8(A)(1)

## A. 37 C.F.R. § 42.8(b)(1)&(2): Real Parties in Interest & Related Matters

The real parties-in-interest for this petition are (i) Comcast Corporation, (ii) Comcast Business Communications, LLC, (iii) Comcast Cable Communications Management, LLC, (iv) Comcast Cable Communications, LLC, (v) Comcast Financial Agency Corporation, (vi) Comcast Holdings Corporation, (vii) Comcast of Houston, LLC, (viii) Comcast Shared Services, LLC, and (ix) Comcast STB Software I, LLC. These entities are referenced below as "Comcast entity __" or as "Comcast entities __," where "__" is one of or more of (i) through (ix).

The '556 Patent has been asserted against Comcast entities (i) - (iv) and (vi) - (viii), as well as other defendants, in *Rovi Guides, Inc. v. Comcast Corporation, et al.*, U.S. District Court for the Eastern District of Texas, Case No. 2:16-cv-00322 ("EDTX litigation"), which has now been transferred to *Rovi Guides, Inc. v. Comcast Corp.*, U.S. District Court for the Southern District of New York, Case No. 1:16-cv-09826. The earliest date of service on any of the Comcast entities named in the EDTX litigation was April 25, 2016.

The '556 Patent has been asserted against Comcast entities (i)–(iv), (vi), and (viii) in U.S. International Trade Commission Investigation No. 337-TA-1001,

styled *In the Matter of Certain Digital Video Receivers and Hardware and Software Components Thereof* ("ITC Case").

The '556 Patent is at issue in *Comcast Corporation, et al. v. Rovi Corporation, et al.*, U.S. District Court for the Southern District of New York, Case No. 16-cv-3852 ("SDNY litigation"). The SDNY litigation was brought by Comcast entities (i)–(iv) and (vi)–(ix). The SDNY litigation does not challenge the validity of any claim of the '556 Patent.

Petitioner is also concurrently filing herewith 7 other petitions against the '556 Patent, which have not yet been assigned serial numbers. Each of the grounds for unpatentability in the 8 petitions includes either Moro, Reiter or Remillard as one of the prior art references. The claims are also grouped according to: (a) method or system; and (b) "tuning" or "reminder." The following table generally shows how the 8 petitions are related.

| | Tuning Claims | | Reminder Claims | |
|---|---|---|---|---|
| | System Claims | Method Claims | System Claims | Method Claims |
| Moro Combinations | Petition 1 | | Petition 5 | |
| Reiter Combinations | Petition 2 | | Petition 6 | |
| Remillard Combinations | Petition 3 | | Petition 7 | |
| Combinations with all 3 | | Petition 4 | | Petition 8 |

According to the Office's records from the PAIR system, the '556 Patent does not claim priority to another application. According to the PAIR system, application nos. 08/247,101 (U.S. Patent 5,781,246), 08/428,809 (abandoned), 08/464,596 (abandoned), 08/476,215 (U.S. Patent 5,585,866), 08/476,217 (U.S. Patent 5,589,892), 08/668,930 (U.S. Patent 5,822,123), 09/368,198 (U.S. Patent 6,275,268), 09/428,588 (U.S. Patent 6,771,317), 09/604,326 (U.S. Patent 6,357,043), 08/775,479 (U.S. Patent 6,014,184), 09/393,955 (U.S. Patent 6,373,528), 09/406,973 (U.S. Patent 6,331,877), 09/997,659 (U.S. Patent

7,100,185), 10/211,167 (abandoned), 10/346,226 (U.S. Patent 7,225,455), 10/346,245 (U.S. Patent 6,728,967), 10/346,255 (abandoned), 10/346,266 (U.S. Patent 7,398,541), 10/787,508 (abandoned), 11/841,867 (U.S. Patent 8,893,178), and 11/841,869 (abandoned) claim priority to the application that became the '556 Patent.

No unnamed entity is funding, controlling, or directing this Petition, or otherwise has an opportunity to control or direct this Petition or proceeding.

### B. 37 C.F.R. § 42.8(b)(3)&(4): Lead & Back-Up Counsel, Service Information

Petitioner designates counsel listed below. A power of attorney for counsel is being filed with this Petition.

| | |
|---|---|
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## II. COMPLIANCE WITH REQUIREMENTS FOR A PETITION FOR *INTER PARTES* REVIEW

Comcast Cable Communications, LLC, ("Petitioner") petitions for *inter partes* review of claims 1-4, 6/1, 7/(1-4), 10/(1-4), 14, 16, 18/(14, 16), 19-21, 28, 30, 33, 35/(14, 16, 18/(14, 16)), 36/(1-4, 20), 37/(1-4, 20), 38/(2-4, 14, 16, 20), 39 and 40 of U.S. Patent No. 6,418,556 ("the '556 Patent"), attached as Ex-1001.

### A. Payment of Fees

The undersigned authorizes the charge of any necessary fees to Deposit Account No. 19-0733.

### B. Grounds for Standing

Petitioner certifies that the '556 Patent is available for *inter partes* review and that Petitioner is not barred or estopped from challenging any claims on the grounds identified herein.

## III. OVERVIEW OF THE ’556 PATENT

### A. Brief Description of the Alleged Invention

The ’556 Patent relates to “[a]n electronic program schedule system which includes a receiver for receiving broadcast, satellite or cablecast television programs for a plurality of television channels and a tuner for tuning a television receiver to a selected one of the plurality of channels.” (Ex-1001, Abstract.) The specification acknowledges that “[e]lectronic program guides for television systems are known in the art,” (Ex-1001, 1:13-15), but alleges that “prior electronic program guides also lack a method for creating a viewing itinerary electronically while still viewing a program currently appearing on the television receiver.” (Ex-1001, 2:42-45.)

The ’556 Patent discloses a system in FIG. 1 (annotated below) purportedly providing such features.

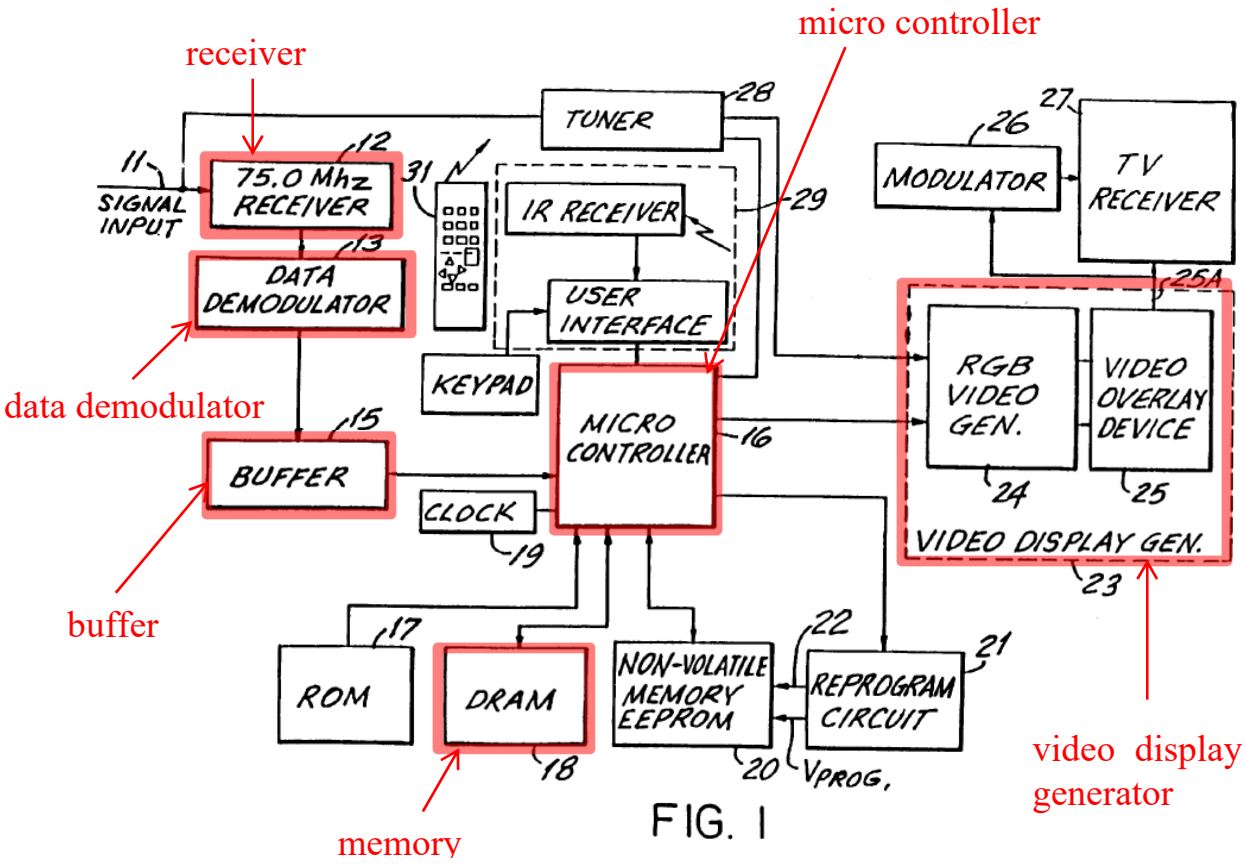


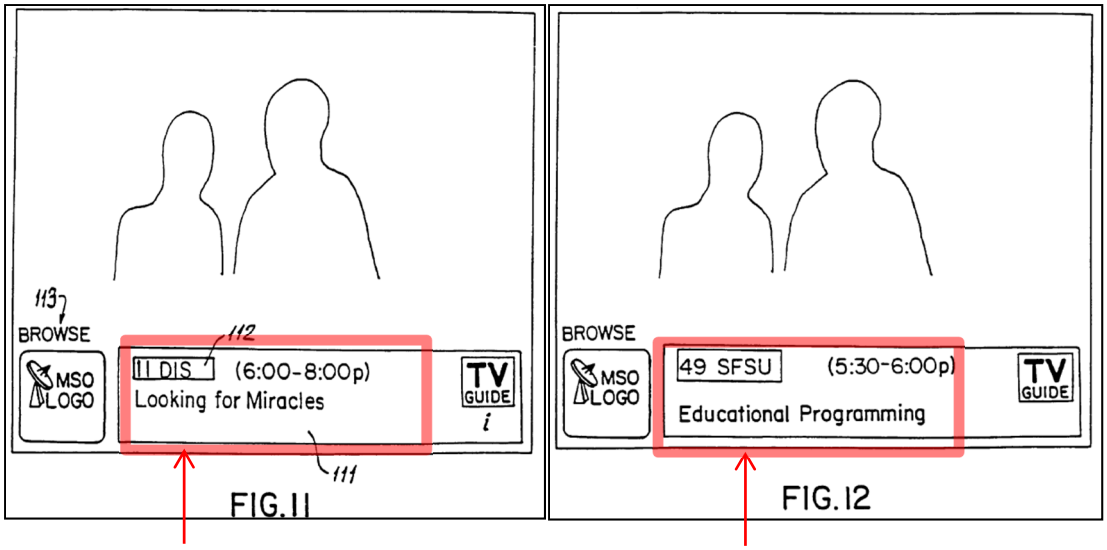

FIG. 1

An input signal 11 containing program schedule information is received at receiver 12, demodulated by data demodulator 13, and stored in buffer 15. Microcontroller 16 receives the schedule information from buffer 15 and stores it in DRAM 18. (Ex-1001, 6:30-35.)

Microcontroller 16 takes schedule information from DRAM 18 and supplies it to video display generator 23, which combines it with a video signal from conventional television tuner 28, and the output is supplied to modulator 26 or TV receiver 27. (Ex-1001, 8:3-36.)

A user navigates through the program schedule using a remote controller (FIG. 3), which "operates on conventional principles of remote control transmitter-receiver logic." (Ex-1001, 8:49-60.)

The operation of the program guide allowing the user to navigate through program listings is explained beginning at 11:21 ("BROWSE MODE") and Figures 11-13. Annotated versions of Figures 11, 12, and 12a are reproduced below. In Browse mode, the user can surf through program schedule information while continuing to a view a TV program. (Ex-1001, 11:29-33.)




As shown in FIG. 11, the user is watching channel 11 (DISNEY, indicated by reference numeral 112 and illustrated by two silhouettes in background), and program information for that channel is shown in graphic overlay 111 including program title ("Looking for Miracles") and broadcast time (6:00-8:00pm). By pressing an arrow button on the remote control,

> program schedule information for either the prior or next channel is displayed in the graphic overlay portion 111 of the television receiver screen 27, **while the tuner remains tuned to the channel program that appeared on the television receiver at the time the user entered the BROWSE mode, as shown in FIG. 12.** . . . Each successive depression of the up or down direction arrow key produces

corresponding program schedule information for the selected channel. (Ex-1001, 11:44-54 (emphasis added).)

Namely, the user can "surf" through program information for other channels, one at a time, while continuing to watch the current channel.

> If, at any time during scanning of the program schedule information in the BROWSE mode, the user desires to tune the television receiver 27 from the program channel currently being viewed to the program channel indicated in the schedule information in the graphic overlay, he simply depresses the ENTER button 44 and the tuner 28 will be tuned to that channel. (Ex-1001, 12:1-7.)

The BROWSE mode also allows viewing program information for future time periods. (Ex-1001, 12:19-40.)

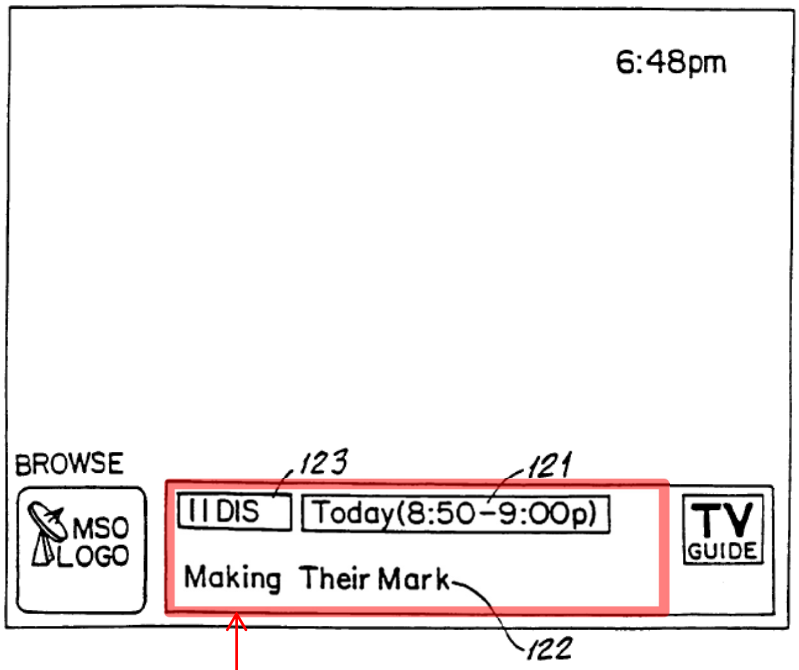



FIG. 12A

Program information for Disney at future time

### B. Prosecution History

The ’556 Patent was filed September 9, 1993 and issued nearly 9 years later. The prosecution history is summarized in Ex-1009 (¶¶53-71), but certain events are summarized below.

The applicant admitted that Young, WO 92/04801 (“Young ’801”), disclosed allowing a user to select programs for recording including “navigating” through a time versus channel grid display of schedule information, but argued that it did not allow the user to view schedule information for other programs on other channels in a window superimposed over a currently aired program. (Ex-1006, pp.442-444.)

On May 7, 1996, the examiner issued an interview summary (Ex-1006, p.939), stating “[a]pplicant agreed to amend the broadest claims to include a tuning function, which would distinguish over the prior art of record. It was also agreed that the claims containing the reminder function were also allowable over the prior art of record.”

On May 23, 1996, many claims were amended to recite “television tuning” commands, and that the data processor was “responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said

schedule information." Applicant also admitted that all claims now required either the "tuning" or "reminder" limitation. (Ex-1006, p.979.)

## IV. IDENTIFICATION OF CHALLENGE AND STATEMENT OF RELIEF REQUESTED

### A. Claims for Which Review is Requested and Grounds on Which Challenge Is Based

| References | Basis | Claims Challenged |
|---|---|---|
| Young '801 and Moro | § 103(a) | 1-4, 6/1, 7/(1-4), 10/(1-4), 14, 16, 18/(14, 16), 19-21, 28, 30, 33, 35/(14, 16, 18/(14, 16)), 36/(1-4, 20), 37/(1-4, 20), 38/(2-4, 14, 16, 20), 39 and 40 |

### B. How Claims Are to Be Construed and Level of Ordinary Skill in the Art

#### 1. How Claims Are to Be Construed

The '556 Patent will expire July 9, 2019. Accordingly, the PTO should apply the broadest reasonable interpretation ("BRI") to the claims. 37 C.F.R. § 42.100(b).

The limitations below should be interpreted as follows for this IPR. For limitations not in this table, the plain and ordinary meaning should apply. For this

IPR, the claim preambles should not be limiting. (Ex-1013, p.17.)

| Limitation | BRI |
|---|---|
| "memory means for storing television program schedule information . . . ." | Not means-plus-function. A memory. (Ex-1001, 6:66-7:6; 7:11-16; Ex-1013, p.26; Ex-1009,¶44.) |
| "user control means for choosing user control commands . . . and transmitting signals in response thereto" | Means-plus-function. A remote controller or equivalent. (Ex-1001, 8:60-9:6; Ex-1013, p.27; Ex-1009, ¶45.) |
| "data processing means for [a] receiving said signals in response to said user control commands . . .[b] controlling said video display generator with said video control commands in response to said user control commands to display each said portion of program schedule information for any chosen one of said television programs . . . in partial overlaying relationship with another | Means-plus-function. A microcontroller or equivalent (Ex-1001, FIG. 1 (element 16)), programmed with an algorithm. To the extent that an algorithm is disclosed, it is in: [a] 8:49-60; [b] 8:3-12 and 49-60; 10:23-34; [c] 12:1-7; [d] 10:43-49. Ex-1013, pp.7-15; Ex-1009, ¶39. |

| | |
|---|---|
| display signal currently being received on said television receiver . . . [c] being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information"[1]<br><br>Note: Only claim 1 includes "[d] for a predetermined display period in partial overlaying relationship." Functions [a] and [c] are identical across all claims. Function [b] is omitted from certain | |

[1] Representative claim 1. Patent Owner identified the same parts of the specification and figures for this limitation, regardless of wording and claim scope among the claims. (Ex-1013, pp.7-15.)

| | |
|---|---|
| claims, and worded more broadly in others. | |
| "a video display generator adapted [a] to receive video control commands from said data processing means and program schedule information from said memory/receiving means [b] for displaying interactively-selected successive portions of said program schedule information in overlaying relationship with another display signal currently appearing on a selected channel in at least one mode of | A class of analog hardware devices that overlay text information onto a video signal.[3] (Ex-1001, 8:3-37, FIGS. 1-2; Ex-1002 (Fig. 22a, element 224); Ex-1011 (Fig. 3, element 136); Ex-1016; Ex-1017; Ex-1009, ¶34.)<br><br>**Alternatively**, a means-plus-function clause, where the recited functions are "receiv[ing] video control commands from said data processing means and |

[3] Under BRI, this is the correct construction. Petitioner has addressed an alternate construction that it believes Patent Owner may assert. In the ITC Case, Patent Owner asserted that this is a means-plus-function clause. (Ex-1013, p.28.)

| | |
|---|---|
| operation of said programming guide" [2] | program schedule information from said memory/receiving means" and "displaying interactively-selected successive portions of said program schedule information in overlaying relationship with another display signal currently appearing on a selected channel in at least one mode of operation of said programming guide." The corresponding structure is an RGB video generator and a video overlay device, and equivalents thereof (Ex-1001 FIGS. 1-2 (24,25); 8:3-48; Ex-1009, ¶¶35-36.) |

[2] Some claims use a broader variation of this limitation that omits function [a]. However, the corresponding structure is the same. (Ex-1009, ¶34; Ex-1013, pp.28-39.)

| | |
|---|---|
| "a program schedule display generator . . . for displaying . . ." | Used interchangeably with video display generator (see above). (Ex-1013, pp.25-26; Ex-1009, ¶37.) |
| "an event schedule display generator . . . for displaying . . ." | Used interchangeably with video display generator (see above). (Ex-1013, p.38-39; Ex-1009, ¶38.) |
| "browse mode"<br>(Claim 19) | A mode that permits a user to interactively scan through program listings in a time and/or channel domain while continuing to view the current program. (Ex-1006, p.977; Ex-1009, ¶43.) |
| "partial overlaying relationship" | Covered-in-part or covering-in-part over. (Ex-1013, p.20; Ex-1009, ¶40.) |
| "partial overlay" | An area covering-in-part over. (Ex-1013, p.20; Ex-1009, ¶40.) |
| "means for receiving television program schedule information" | Means-plus-function. A receiver or equivalent. (Ex-1001, 6:61-62; Ex-1013, p.6; Ex-1009, ¶42.) |

| | |
|---|---|
| "television tuning commands for allowing a user to select any one of said programs for which listing information is displayed in said partially overlayed portion of said schedule information" | Commands allowing a user to select a listed television program and that cause a tuner to tune to the selected television program. (Ex-1001, 12:1-7; Ex-1009, ¶41.) |

### 2. Level of Ordinary Skill in the Art

A person of ordinary skill in the art (POSITA) would have had a bachelor's degree in computer science, computer engineering, electrical engineering, or the equivalent thereof, and 3-5 years of experience in software development in the 1990-1993 time-frame, or the equivalent thereof, and some experience with the television industry (broadcast, cable, or satellite), including television signal processing in consumer appliances. (Ex-1009, ¶30.)

## C. How Construed Claims Are Unpatentable

A detailed explanation of how the claims are unpatentable under 35 U.S.C. § 103 is provided below.

## D. Evidence Supporting Petitioner's Challenge

The evidence supporting Petitioner's challenge appears in the list of Exhibits above.

## V. SUMMARY OF ARGUMENT

The '556 Patent was filed in 1993 but did not issue until 2002. The examiner repeatedly rejected the claims over various combinations of prior art until the applicant agreed to incorporate a "tuning function" into some claims while the remaining claims required a "reminder function." (Ex-1006, p.939.) All claims challenged herein recite the "tuning function."

During prosecution, the applicant repeatedly argued that the prior art did not allow a user to view program schedule information for other channels while watching a currently broadcast program. (Ex-1006, pp.443-444 ("Thus, while a user watches a particular program (or other display signal), he or she can view schedule information for other programs, e.g., in a window superimposed in partial overlaying relationship with the currently aired program, to view a description of what is appearing on other channels while continuing to view the currently aired program. This feature is nowhere disclosed or suggested in the Young reference."); Ex-1006, pp.689-690.)

But both the "tuning function" and the allegedly novel feature of allowing the user to view program information for other channels while watching a currently broadcast program were known in the prior art. Although the examiner initially rejected the claims as anticipated by Young '801, he never considered Young '801

in combination with a European patent, EP 0 444 496 (Moro). Moro discloses allowing a user to tune to and also view program information for other channels while watching a currently broadcast program.

## VI. OVERVIEW OF PRIOR ART

### A. PCT Publication WO 92/04801 ("Young '801")

Young '801 (Ex-1002) published March 19, 1992, making it prior art under 35 U.S.C. § 102(b).

Young '801 discloses an interactive user interface that displays program guide listings and receives user control commands. The user can navigate through displayed program listings, view additional listings, and select a program for recording. Additional details are described below and in Ex-1009 (¶¶72-83).

### B. Published European Pat. App. No. 0 444 496 A1 ("Moro")

Moro (Ex-1003) is a European patent application published September 4, 1991, making it prior art under 35 U.S.C. § 102(b).

Moro discloses displaying on-screen program information for other channels without interrupting a currently viewed program. Moro's system displays a video signal of a first program while superimposing program information for other currently-available channels (Ex-1003, FIG. 2), and allows a user to tune to one of the superimposed channels. Moro is in the television menu art, which is

analogous to program guide art and is reasonably pertinent to the problem faced by the inventor. (Ex-1009, ¶84.) Additional details are described below and in Ex-1009 (¶¶84-90).

## VII. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A petition for *inter partes* review must demonstrate "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). This Petition meets this threshold. As demonstrated by a preponderance of the evidence, including the Declaration of Anthony Wechselberger, the prior art renders the challenged claims obvious.

### A. Grounds For Unpatentability Are Different From Arguments Presented During Prosecution

Although Young '801, relied upon herein, was cited during prosecution, it was not combined in the manner set forth herein.

A different examiner of a later-filed continuation application of the '556 Patent prosecuted by the same assignee, Ser. No. 10/787,508, uncovered Moro, which was not considered during prosecution. As explained below, Moro clearly shows the claimed "without changing" and "tuning" limitations. That examiner indicated that Moro "discloses a system and method for displaying a plurality of program listings simultaneously with at least a substantial portion of a video."

(Ex-1008, p.75.) In response to this Office action, the applicant expressly abandoned the application. (Ex-1008, pp.5-7.) The grounds herein therefore rely on new prior art not previously considered.

### B. The Ground Relied on Herein Is Not Redundant of Other Grounds in Other Petitions

The combinations relied on herein that include Moro are different from the combinations in other IPR petitions filed concurrently herewith that include Reiter and Remillard. Moro, Reiter, and Remillard teach different overlays and distinct use cases therefor.

## VIII. SPECIFIC GROUND FOR UNPATENTABILITY

The challenged claims are unpatentable for obviousness. Each ground relies on the teachings of the references cited above as would have been understood by a POSITA, and explains the scope and content of the prior art, considers the differences between the claimed invention and the prior art, and resolves the level of ordinary skill in the art as illustrated in the prior art. *See Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Considering the knowledge, experience, and creativity of a POSITA, such a person would have found the claims to be "a predictable use of prior art elements according to their established functions," and

therefore obvious in view of this prior art. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007).

### A. The Claims Are Obvious Over Young '801 In View of Moro

The challenged claims would have been obvious over Young '801 in view of Moro. Young '801 discloses all of the limitations of the independent claims, except for displaying program information in an overlaying relationship with a currently tuned program. Moro teaches an overlaying technique to overlay information over a program. Moro also discloses the "tuning" function that the examiner believed to be missing from Young '801.[4]

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[4] The examiner apparently believed that Young '268, which has the same disclosure as Young '801, did not disclose the claimed tuning feature. Although Young '801 primarily describes a system for recording programs, including selecting a program for recording (which causes the tuner to tune to the selected channel, *see* Ex-1002, 26:11-21), FIG. 22A also shows a programmable TV tuner 202 and the use of channel up/down commands to change the tuner channel. (Ex-1002, 13:17-20.) Petitioner, however, does not rely on Young '801 for this feature, but instead on Moro, which clearly shows it.

Young ’801 (Ex-1002) discloses an interactive program guide in Fig. 6 (annotated below) including program schedule information that allows a user to navigate through the guide using a movable cursor to select programs for recording by a television tuner:

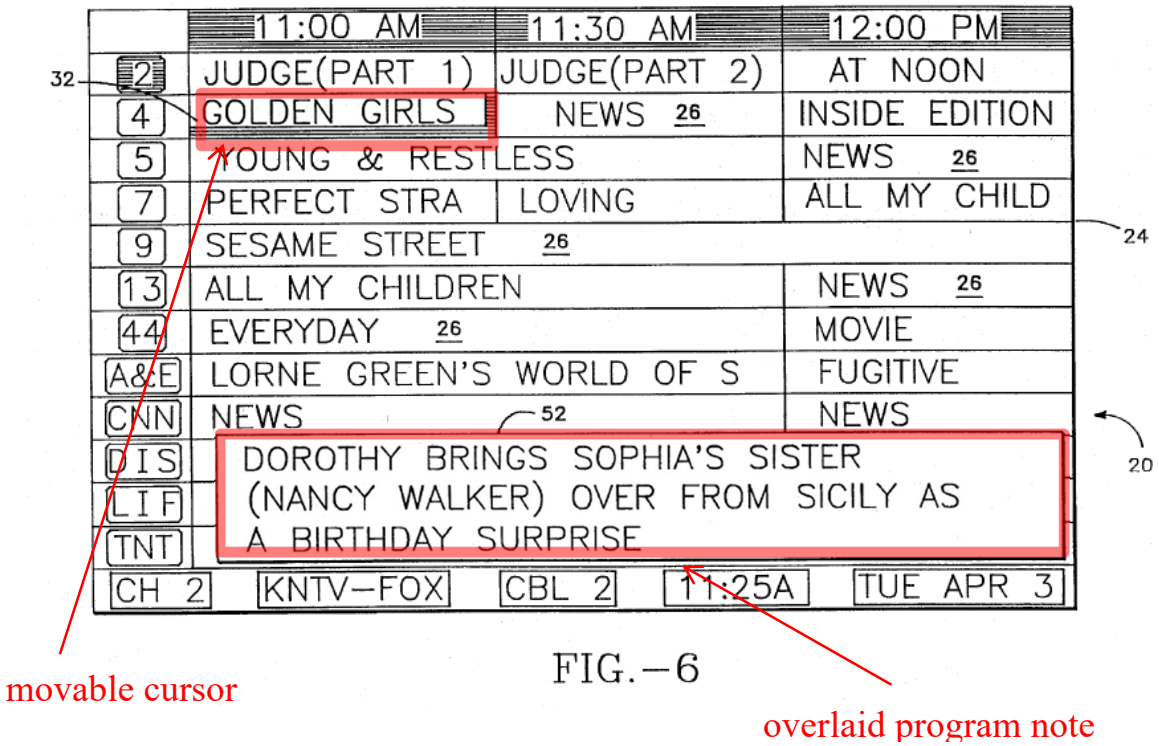


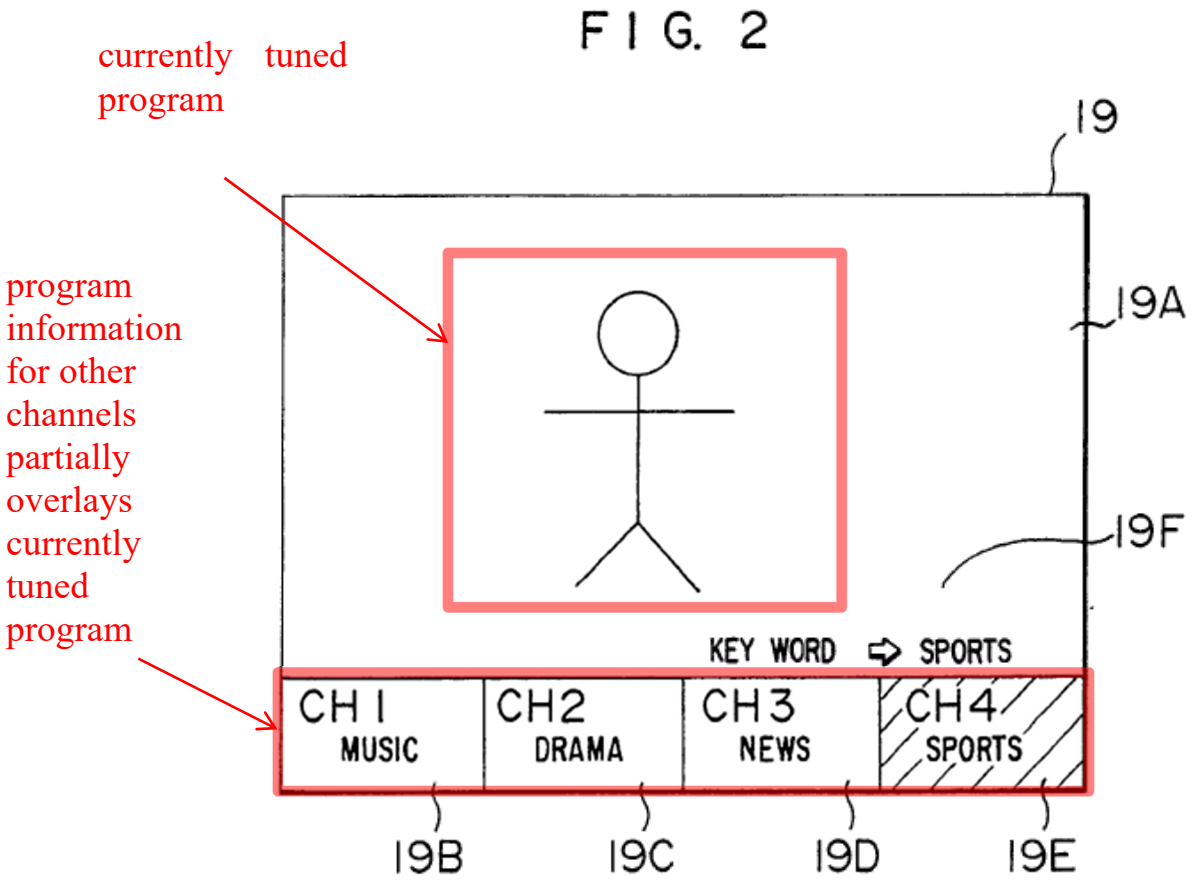

FIG.–6

movable cursor

overlaid program note

Young’s interactive guide, annotated above, is apparently not displayed at the same time a program is displayed. Young ’801 requires a viewer who wishes to view the program schedule information to interrupt viewing a program to view the guide. Therefore, Young ’801 does not explicitly disclose program schedule information overlaying a currently tuned and displayed program.

Moro (Ex-1003) teaches a technique for simultaneously displaying program information for other channels overlaying a currently tuned and displayed program. See Fig. 2 below (annotated):




Moro teaches partially overlaying program information for other non-tuned channels over a currently tuned and displayed program: "**As a result, it becomes possible to know the content of the program on the air based on the first video signal without interrupting the receiving of the second video signal.**" (Ex-1003, 2:48-52 (emphasis added).)

Moro also allows the viewer to tune to one of the other channels for which program information is shown on the display. (Ex-1003, 5:37-41.)

As explained below, it would have been obvious to modify Young '801 to use Moro's known overlaying technique to overlay program schedule information over a currently tuned and displayed program and to tune to one of the other channels shown on the display.

Because claim limitations are identical or very similar across the claims, the analysis below begins with the limitations of independent claim 2. The other claims are then analyzed referring to claim 2.

**1. Independent Claim 2**

**"2[A]. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising:"**

Young '801 discloses this:

"The present invention relates generally to **a system and process that allows a television viewer to access on screen television program listings and use the program listings in an easy and convenient way** to control operation of a video cassette recorder (VCR) or other recording device." (Ex-1002, 1:4-9

(emphasis added); 4:15-18.) Young '801 includes a television tuner and television monitor. (Ex-1002, Fig. 22B, elements 207 and 210), and shows television programs and an electronic programming guide that includes television program schedule information on a television. (Ex-1002, Fig. 1, Fig. 10, 12:27-32, 14:30-32 (while watching television); Ex-1009, ¶¶93-96.)

**"2[B]. memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels;"**

Young '801 discloses this:

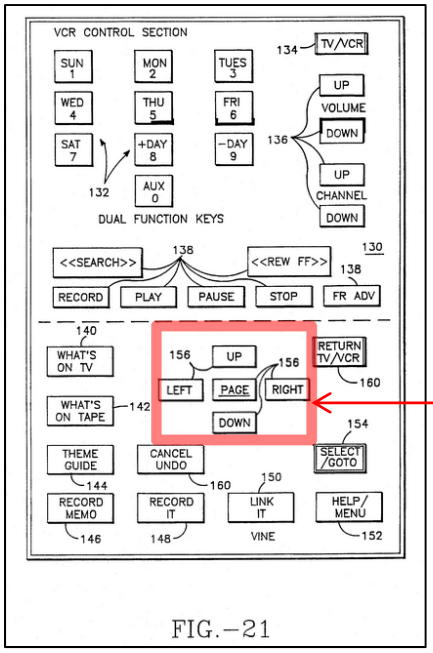
> When update is required, programmable tuner 202 will be tuned automatically to the station or cable channel carrying the data. **After the VBI signal is processed by CPU 228, the listing data is stored in schedule memory 232**, while the cable channel assignment data is stored in cable-specific RAM memory 238. (Ex-1002, 25:26-33, *(emphasis added)*, FIG. 22A (schedule memory 232); Ex-1009, ¶97.)

**"2[C]. user control means for choosing user control commands, including television tuning and guide time-control commands, and transmitting signals in response thereto;"**

Young '801 discloses a remote controller ("user control means") for choosing user control commands and transmitting signals in response thereto:

> FIG. 21 shows a front panel 130 for a **remote controller** of the schedule system. . . . The lower half of the front panel 130 contains control keys that are specific to the schedule system. Included are a . . . **Record It key 148**, a Link It key 150, a Help/Menu key 152, **a Select/Goto key 154**, **Left, Right, Up, Down and Page Cursor keys 156**, a Return TV/VCR key 158 . . . . The use of these keys has either been explained above or is apparent from their labels. (Ex-1002, 24:17-33 *(emphasis added)*.)

The user-activated cursor keys allow the user to move through the guide both by time period (i.e., showing program information for current and future time periods), and by channel (i.e., showing program information for different channels at the current time). The left and right cursor keys allow a user to navigate through the program listings by time, and thus, teach "guide time-control commands." The up and down cursor keys allow a user to navigate through the program listings by channel, and thus, teach "channel-control commands."




keys for navigation through the guide to select channels and programs

FIG.–21

(Ex-1002, Fig. 21 (annotated above -- remote control with cursor keys and SELECT key), Fig. 22A element 212; Ex-1009, ¶¶98-100.)

During prosecution, the examiner suggested that claims rejected based on a combination including Young '268 (same disclosure as Young '801) would be allowable if amended to include a tuning function. (Ex-1006, p.939.)

Moro teaches a remote control device that allows the user to tune to a user-selected one of the other programs appearing at the bottom of the screen:

> When the user is desirous of viewing a sport program, he or she operates the MAC information search button of the remote controller 21 sometimes, so that as shown in Fig. 2, the character information is displayed on the display areas 19B to 19E. In the case where the character indicates a sport program at the fourth channel of the

> satellite broadcast in the display area 19E, for example, **the remote controller 21 or the like is operated to switch to the fourth channel of the satellite broadcasting**. (Ex-1003, 5:37-41 (emphasis added); Ex-1009, ¶101.)

It would have been obvious to modify Young '801 to allow for television tuning, as taught by Moro, to allow users to use Young '801's guide to change currently tuned channels in addition to selecting a channel for recording. (Ex-1009, ¶102.) Such a modification merely involves combining prior art elements according to known methods to yield predictable results. (Ex-1009, ¶103.) The known elements are the navigable program listing in Young '801 and the tuning feature disclosed in Moro. The predictable results are allowing the viewer to immediately tune to a program included in the program listing. Moro explicitly explains that a viewer would want to tune to one of the other programs shown on the screen. (Ex-1003, p.5 ("When the user is desirous of viewing a sport program . . . the remote controller 21 or the like is operated to switch to the fourth channel . . . ")). A POSITA would have had the skills and knowledge to carry out the above-described combination. (Ex-1009, ¶104.)

**"2[D]. data processing means for receiving said signals in response to said user control commands; and"**

Young '801 discloses a CPU (a microcontroller or equivalent) that receives signals in response to user control commands. (Ex-1002, Fig. 22A (**CPU 228** connected to IFR receiver 264, which receives signals from remote controller 212), 27:1-13 (explaining CPU processing of commands from the remote controller), 24:17-33 (same); Ex-1009, ¶105.)

Young '801 also discloses an algorithm for [a] receiving signals in response to commands issued from the remote control that is the same as or equivalent to what is disclosed in the '556 Patent. (Ex-1002, 12:15-16 ("SELECT command"), 26:5-10 ("What's on TV request"), 27:1-13; Ex-1009, ¶106.)

Additionally, Moro teaches that its microcomputer 17 receives "television tuning" commands from remote controller 21, and discloses an algorithm that is the same as or equivalent to what is disclosed in the '556 Patent. (Ex-1003, FIG. 1 (elements 17, 20, 21), 5:16-17, 5:37-41; Ex-1009, ¶109.) It would have been obvious to modify the algorithm in Young '801 to receive tuning commands from a remote control to allow users to select television programs and change channels with a remote control, as taught by Moro. (Ex-1009, ¶108.)

**"2[E]. a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a currently tuned channel in overlaying relationship with another display signal currently appearing on said channel in at least one mode of operation of said programming guide;"**

Young '801 discloses a video display generator that receives video control commands from a data processor and program schedule information from a schedule memory:

> For a What's on TV request, the listing stored in schedule memory 232 is retrieved, processed by CPU 228, and outputted to **video display generator 224**. Video switcher 226 is enabled by CPU output 246 to select the **video display generator** 224 **output whenever schedule data is to be presented to the TV/monitor** 210. (Ex-1002, 26:5-10 (emphasis added).)

Young '801 discloses the "**currently tuned channel**" in FIG. 2 among others (annotated below):

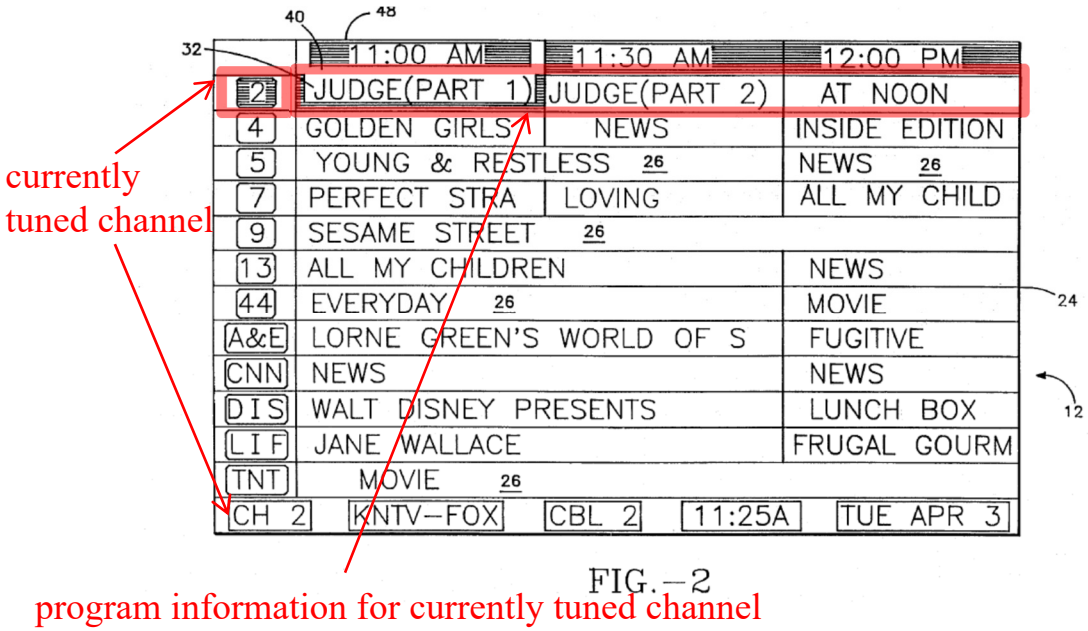



FIG.—2

As seen above, the currently-tuned channel is channel 2 (highlighted "2" on the left), and the program information (e.g., names of current and future programs, such as "JUDGE(PART 1)" for the 11:00 AM time period, "JUDGE(PART 2)" for the 11:30 AM time period, and "AT NOON" for the 12:00 PM time period) for that channel is displayed to the right of the channel number. "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56 [see annotated FIG. 1 below]." (Ex-1002, 13:5-7.) "When a guide is first opened, as shown in FIG. 2 [above], both the cursor 32 and the current channel 56 are situated on the same row 30 of the grid 24." (Ex-1002, 13:28-30.)

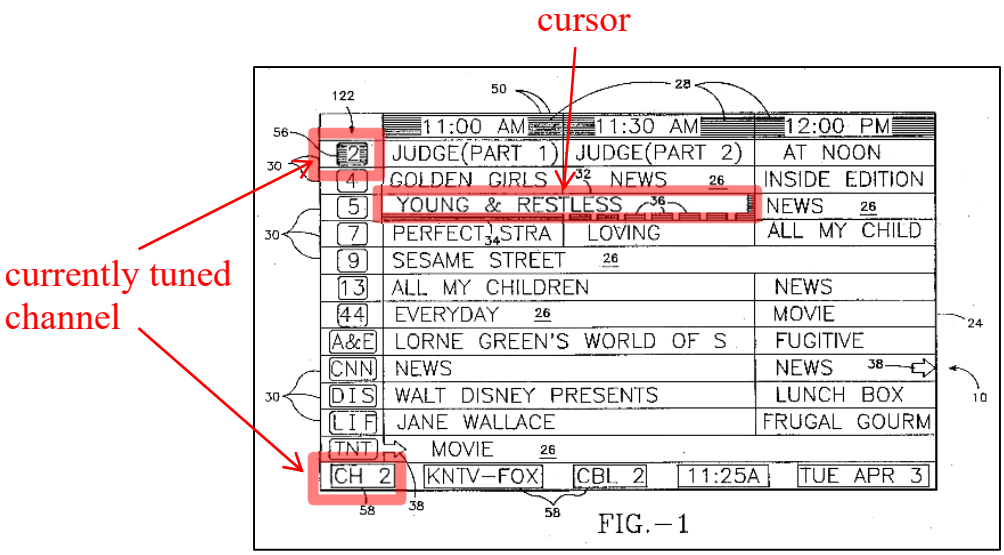


FIG.-1

Young '801 describes an interactive program guide including program schedule information stored in schedule memory 232 and outputted to video display generator 224. (Ex-1002, 26:5-7.) The grid allows a user to navigate through the guide using a movable cursor to select programs for recording by a television tuner. In the scenario of FIG. 6 (annotated below), a user moved the cursor down from the program ("JUDGE(PART 1)") on the currently tuned channel to another program ("GOLDEN GIRLS") on a different channel.

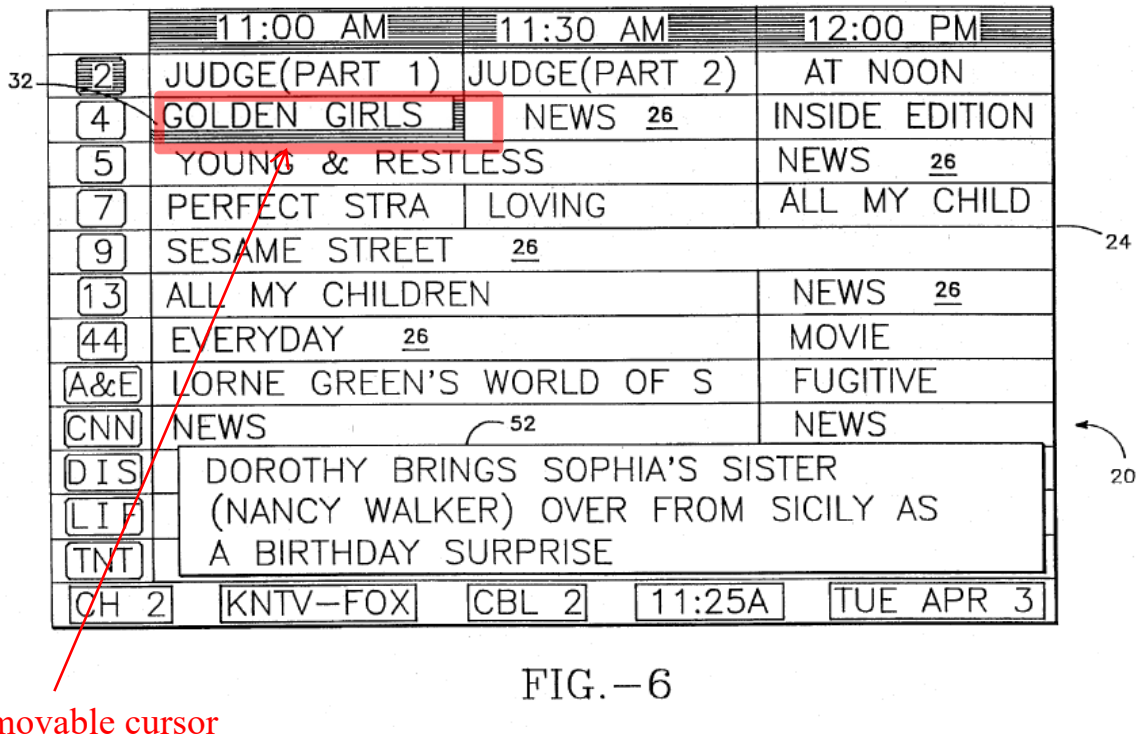


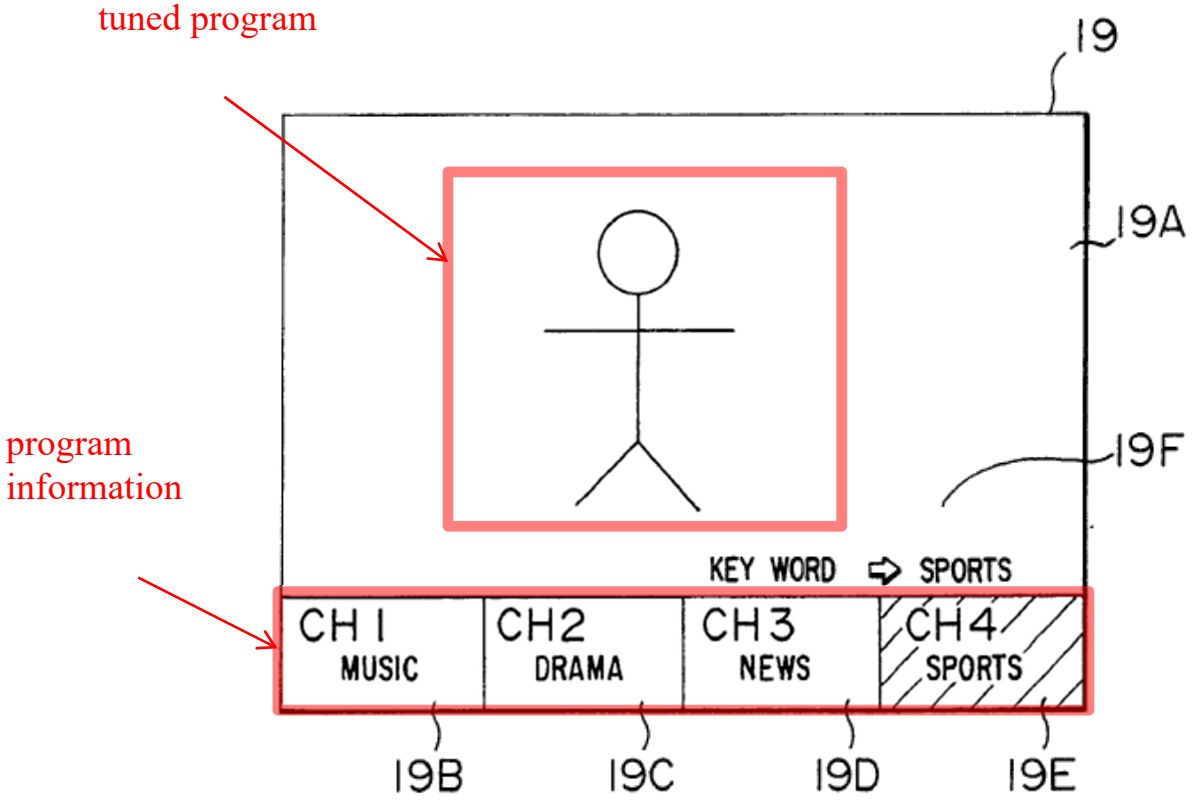

FIG.—6

In another scenario, the user would have used cursor keys to move the cursor from a first program ("JUDGE(PART 1)") on the currently tuned channel (channel 2) to the right to a second program ("JUDGE(PART 2)") on the same currently tuned channel and again to the right to a third program ("AT NOON") on the same currently tuned channel. Young '801 thus teaches displaying interactively-selected successive portions of the schedule information for a currently tuned channel.

Young's interactive program guide is apparently not displayed at the same time ("in overlaying relationship") that a program is displayed, requiring a viewer who wishes to view the program schedule information to interrupt viewing a program to view the guide.

Moro teaches simultaneously displaying program information for other channels overlaying a currently tuned program, shown in FIG. 2 (annotated below):

FIG. 2




Moro, in describing Figure 2, explains:

> Numeral 19A designates an image display area due to the terrestrial broadcast PAL signal, and numerals 19B, 19C, 19D and 19E display areas of the character information representing the contents of the present broadcast program of the first, second, third and fourth channels of the satellite broadcast respectively. (Ex-1003, 5:6-9.)

> The **character generator section 18** generates a character signal under the control of the microcomputer 17 and **superposes** the particular character signal on the PAL signal selected at the switch 16. The PAL signal, upon production from the character generator section 18, is supplied to the monitor 19 for image reproduction. (Ex-1003, 3:55-58.)
>
> In the case where the second video signal selected in the manner mentioned above is supplied to a monitor for image display, a character based on the character signal is displayed in a part of the image thereby to **display a character representing the program content based on the first video signal on the air**. **As a result, it becomes possible to know the content of the program on the air based on the first video signal without interrupting the receiving of the second video signal**. (Ex-1003, 2:48-52.)

Accordingly, Moro teaches partially overlaying program information for other channels over a currently tuned and displayed program so that the viewer can continue to view the program while also viewing the program information for the other channels. Moro thus provides an explicit motivation to modify Young '801.

It would have been obvious to modify Young '801 to allow the currently tuned program and program schedule information to be viewed at the same time in

view of Moro. It would have been obvious to use Moro's known overlaying technique to overlay program schedule information, including interactively-selected portions of schedule information for a currently tuned channel and interactively-selected portions of schedule information for programs on channels different from the currently tuned channel (both scenarios taught by Young '801), over a display signal currently appearing on the tuned channel to allow a viewer to view the program information without interrupting the currently tuned and displayed program as taught by Moro. (Ex-1009, ¶¶111-117.) Such a modification merely involves use of a known technique (Moro) to improve similar devices and methods (Young '801) in the same way. (Ex-1009, ¶117.)

Moreover, modifying Young '801 to display program schedule information, including program schedule information for a currently tuned channel, in an overlaying relationship with a currently tuned and displayed program would have merely involved combining prior art elements according to known methods to yield predictable results. (Ex-1009, ¶¶118-119.) The known prior art elements are the currently tuned program and program schedule information found in Young '801. The known method is the overlaying technique disclosed in Moro. The predictable results are allowing the viewer to view the program schedule information without interrupting the currently tuned and displayed program. It

would have been apparent to a POSITA that Young '801's program guide could be reduced in size to prevent it from obscuring most of the currently tuned and displayed program, (Ex-1009, ¶124) and in view of Young '801's teaching that "supplemental schedule information is presented in overlays that obscure a minimum amount of useful other information." (Ex-1002, 4:15-18.)

The prosecution history also shows that it would have been obvious to combine a currently tuned program and program schedule information with the known partial overlaying technique. (Ex-1009, ¶¶120-123.)

It would have been obvious to replace or modify Young '801's video display generator 224 and video switcher 226 with Moro's character generator section 18 to implement the functions described above in the combination. (Ex-1009, ¶126.) Character generator section 18 converts character information received from microcomputer 17 and superposes (overlays) the character information onto video signals that are sent to monitor 19 for display. (Ex-1003, 3:55-58; Fig. 1.) Therefore, Moro's character generator section 18 meets the definition of "video display generator" because it is an analog hardware device that overlays text on a video signal. (Ex-1009, ¶127.) Character generator section 18 is also an example of an on screen display circuit that was widely available prior to 1992. (Ex-1009, ¶127.)

If "video display generator" is interpreted as a means-plus-function limitation, Young '801 in view of Moro also discloses this limitation, because Moro's character generator section 18 constitutes structure equivalent to what is shown in the '556 Patent. (Ex-1009, ¶128.)

Finally, it would have been obvious to implement Moro's character generator section 18 using a video graphics card having an ability to overlay text on a video signal, in view of trends in the television industry to incorporate computer components such as graphics cards, and in view of the knowledge of those of skill in the art at the time of the alleged invention. (Ex-1009, ¶¶129-130.)

**"2[F]. said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs scheduled to appear on said currently tuned channel and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods for which program schedule information is stored in said memory means, said data processing means**

**being responsive to said television tuning commands for allowing a user to select any one of said programs for which listing information is displayed in said partially overlayed portion of said schedule information."**

This is disclosed by Young '801 in view of Moro. In summary, this clause requires that:

(1) the data processing means [b] controls the video display generator to display program schedule information partially overlaid on the "currently appearing" [i.e., currently tuned] display signal;

(2) the program schedule information includes listing information for television programs over sequential time periods including programs scheduled to appear on the currently tuned channel and the user can "successively navigate" through those listings using the guide control commands;

(3) the program schedule information is stored in the memory; and

(4) the data processing means [c] is responsive to the television tuning commands to allow the user to select any of the listed programs.

Regarding (1) and (3), these are disclosed by Young '801 in view of Moro. As to (3), as explained above, Young '801's CPU 228 controls its video display generator 224 and retrieves information from schedule memory 232 to generate interactive schedule screens. (Ex-1002, 26:5-7; Ex-1009, ¶132.)

As to (1), Young '801's CPU 228 sends signals to control the video display generator 224 and generates program schedule information to display on a television/monitor 210. (Ex-1002, 26:5-10.)

Young '801 also discloses the "**currently tuned channel**" in FIG. 2 among others (annotated below):

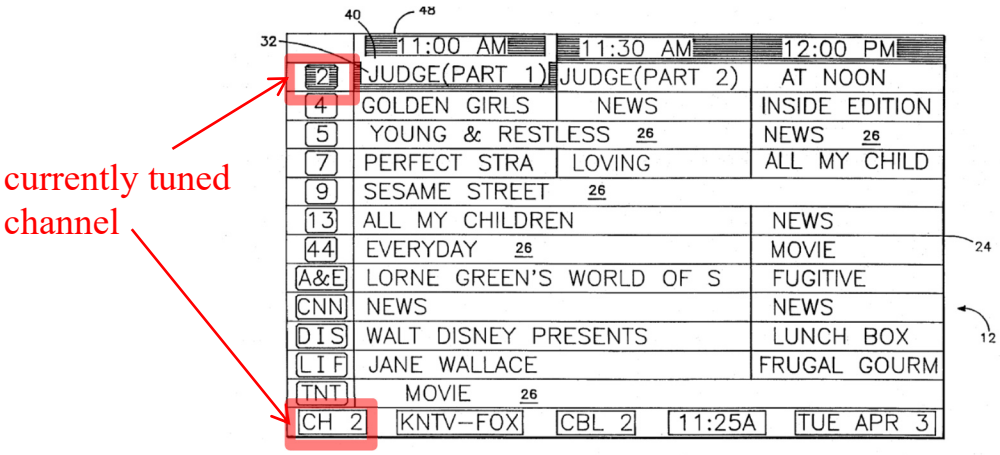
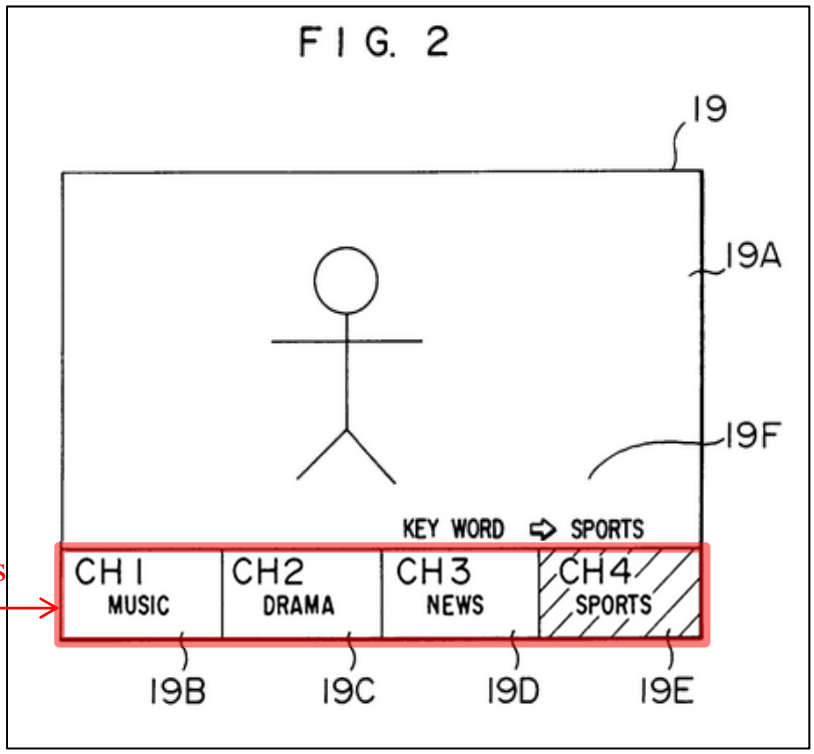



FIG.—2

As seen above, the currently-tuned channel is channel 2 (indicated by the highlighted "2" on the left side of the guide), and the program information for that program is displayed to the right of the channel number (JUDGE (part 1) and 11am time period. "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56 [FIG. 1]" (Ex-1002, 13:5-7.) "When a guide is first opened, as shown in Figure 2, both the cursor 32 and the current channel 56 are situated on the same row 30 of the grid 24." (Ex-1002, 13:28-30.) As

explained above, Young '801 does not explicitly disclose displaying a currently-tuned channel at the same time that the program guide is displayed.

Moro discloses displaying program information in a "partially overlaying relationship" with a currently broadcast (tuned and displayed) program:




As described above, it would have been obvious to modify Young '801 to include the partial overlay feature of Moro to allow the currently tuned program and program schedule information to be viewed at the same time. (Ex-1009, ¶134.) It would have been obvious to modify the algorithm in Young '801 to display program schedule information partially overlaid on the "currently appearing" [i.e., currently tuned] display signal to allow a user to view the program

information without interrupting the currently tuned and displayed program as taught by Moro and described above. (Ex-1009, ¶134.) The resulting algorithm that [b] controls the video display generator to display program schedule information partially overlaid on the "currently appearing" [i.e., currently tuned] display signal is the same as or equivalent to what is disclosed in the '556 Patent. (Ex-1009, ¶134.) Therefore, Young '801 in view of Moro discloses (1) and (3). (Ex-1009, ¶¶132-134.)

As to (2), Young '801 discloses a display method for highlighting program listings as a user navigates the listings using cursor keys on the remote control. (Ex-1002, 8:28-9:29.) This includes navigation by time and/or channel. (Ex-1002, 3:14-17, 4:27-5:3, 13:5-15:2, FIG. 7.) Young '801 therefore shows "successively navigating" through the "sequential time periods" of program schedule information, including program schedule information for programs scheduled to appear on the currently tuned channel, using guide control commands. (Ex-1009, ¶135; *see also*, Ex-1002, FIG. 2; FIG. 7; 14:6-13 (navigating by time periods for a particular channel).)

As to (4), the combination of Young '801 and Moro includes a data processing means responsive to the television tuning commands to allow the user to select any of the listed programs, including the "television tuning" function.

(*See* VIII.A.1 (2[C] and 2[D], *supra*). As to the data processing means algorithm [c], Moro teaches that its microcomputer 17 is responsive to "television tuning" commands from remote controller 21, to allow a user to select any one of the television programs. (Ex-1003, FIG. 1 (elements 17, 20, 21), 5:16-17, 5:37-41; Ex-1009, ¶¶136-137.) A POSITA would have found it obvious to modify the algorithm in Young '801 to receive tuning commands from a remote control to allow users to select television programs and change channels with a remote control, as taught by Moro and for reasons provided above in 2[C]. (Ex-1009, ¶136.) The resulting algorithm is the same as or equivalent to the general algorithm disclosed in the '556 Patent. (Ex-1009, ¶137.)

Consequently, Young '801 in view of Moro discloses claim 2. (Ex-1009 ¶137.)

### 2. Independent Claim 1

Independent claim 1 is very similar to claim 2, with differences from claim 2 highlighted in **bold** in the chart below.

| | Claim | Comparison/Analysis |
|---|---|---|
| 1[A]-1[B] | | Identical to 2[A] and 2[B]. |
| | | *See* 2[A] and 2[B]. |
| 1[C] | user control means for choosing user control commands, including | Identical to 2[C], except this also requires **guide channel-control commands.** |
| | | *See* 2[C] above, which already includes |

| | Claim | Comparison/Analysis |
|---|---|---|
| | television tuning, **guide channel-control** and guide time-control commands, and transmitting signals in response thereto; | the guide channel-control commands, allowing the user to move through the guide by channel (and by time); (Ex-1009, ¶138.) |
| 1[D] | | Identical to 2[D].<br>*See* 2[D]. |
| 1[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said program schedule information in overlaying relationship with another display signal currently appearing on **a selected** channel in at least one mode of operation of said programming guide; | Nearly identical to 2[E], except:<br><br>(a) this does not require that the program schedule information be "for a currently tuned channel;" and<br><br>(b) whereas 2[E] recites "another display signal currently appearing on said channel," this recites another display signal currently appearing on **a selected** channel.<br><br>As to (a), since this is broader than 2[E], it is disclosed by the prior art cited for 2[E]. (Ex-1009, ¶138.)<br><br>As to (b), the antecedent basis for "said channel" in 2[E] is "a currently tuned channel." A "selected channel" is broader than "a currently tuned channel." Therefore, this is disclosed by the prior art cited for 2[E]. (Ex-1009, ¶138.) |
| 1[F] | said data processing means controlling said video display generator **with said video control commands in response to said user control commands** to display each said portion of program | Nearly identical to 2[F], except that:<br><br>(a) this includes controlling the video display generator "with said video control commands in response to said user control commands;" |

| | Claim | Comparison/Analysis |
|---|---|---|
| | schedule information **for any chosen one of said television programs for a predetermined display period** in partial overlaying relationship with **another** display signal **currently being received on said television receiver**;<br>each said portion being displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods **or programs** for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | (b) this requires that the program schedule information is displayed "for any chosen one of said television programs for a predetermined display period;"<br><br>(c) whereas 2[F] recites displaying in partial overlaying relationship with "said currently appearing" display signal, this recites "another display signal currently being received on said television receiver;"<br><br>(d) this claim does not require each said portion "comprising listing information for each successive one of said television programs scheduled to appear on said currently tuned channel and being consecutively" displayed; and<br><br>(e) whereas 2[F] recites navigating through listing information for sequential time periods, this recites navigating through listing information for sequential time periods **or programs.** |
| | | As to (a), *see* 2[F] and Ex-1002, 24:17-33, which shows the What's on TV request initiated with a user control command at the remote control and 26:5-10 which shows CPU 228 controlling the video display generator. (Ex-1009, ¶138.)<br><br>As to (b), *see* 2[F] regarding displaying portions for the program schedule information and corresponding algorithm |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | used by the data processing means. Moro also teaches displaying schedule information "for a predetermined period." (Ex-1003, 5:21-22.) A POSITA would have appreciated that displaying schedule information for a predetermined time period, as shown in Moro, would provide the information while limiting distractions. (Ex-1009, ¶138.)<br><br>It would have been obvious to further modify Young '801 to display schedule information for a predetermined time period to provide the information while limiting distractions, as taught by Moro. Such a modification merely involves combining prior art elements according to known methods to yield predictable results. The known elements are the display of schedule information in Young '801 and the predetermined time period in Moro. The predictable results are providing the information while limiting distractions and input requirements of the user. Moreover, the algorithm disclosed in Young '801, as modified by Moro to include television tuning commands and the "predetermined period" function, is equivalent to what is disclosed in the '556 Patent at 10:43-49 because Moro discloses similar details for this structure in Ex-1003, 5:21-23. (Ex-1009, ¶138.)<br><br>As to (c), see 2[F], which describes how the combination of Young '801 and Moro discloses displaying program information in a "partially overlaying relationship" |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | with a currently tuned channel. (Ex-1009, ¶138.)<br><br>As to (d), since this is broader than 2[F], it is disclosed by the prior art cited for 2[F]. (Ex-1009, ¶138.)<br><br>As to (e), since this is broader than 2[F], it is disclosed by the prior art cited for 2[F]. (Ex-1009, ¶138.) |

### 3. Independent Claim 3

Independent claim 3 is very similar to claim 2, with differences from claim 2 highlighted in **bold** below.

| | Claim | Comparison/Analysis |
|---|---|---|
| 3[A]-3[B] | | Identical to 2[A] and 2[B].<br>See 2[A] and 2[B]. |
| 3[C] | user control means for choosing user control commands, including television tuning, **guide channel-control** and guide time-control commands, and transmitting signals in response thereto; | Identical to 2[C], except this also requires **guide channel-control** commands**.**<br>See 2[C] above, which already includes the guide channel-control commands, allowing the user to move through the guide by channel (and by time). (Ex-1009, ¶139.) |
| 3[D] | | Identical to 2[D].<br>See 2[D]. |
| 3[E] | a video display generator adapted to receive video control commands from said data processing means and | Identical to 2[E], except this requires displaying schedule information for **a set of channels different from a currently tuned channel** instead of for a currently |

| | Claim | Comparison/Analysis |
|---|---|---|
| | program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for **a set of channels**, **including ones different from a currently tuned channel**, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide; | tuned channel.<br><br>*See* 2[E] above – this is disclosed in 2[E]. (Ex-1002, FIG. 1.) The currently-tuned channel is 2, as indicated by **highlight 56**, and schedule information is shown for a set of **channels different from the currently-tuned channel (e.g., channels 4, 5, 6, 7, etc.)**. "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56." (Ex-1002, 13:5-7; Ex-1009, ¶139.) |
| 3[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs **scheduled to appear on said set of channels** and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods **or programs** for which program | Identical to 2[F], except that:<br><br>(a) whereas claim 2[F] recites listing information for programs scheduled to appear **on the currently tuned channel**, this recites listing information for programs scheduled to appear **on said set of [non-tuned] channels**;<br>and<br><br>(b) whereas 2[F] recites navigating through listing information for sequential time periods, this recites navigating through listing information for sequential time periods **or programs.**<br><br>As to (a), see 2[F] above, which discloses showing schedule information both for the currently tuned channel and for another set of channels beyond the currently-tuned channel. |

| | Claim | Comparison/Analysis |
|---|---|---|
| | schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | See also Ex-1002 at FIG. 1, which shows schedule information for both the currently-tuned channel (i.e., channel 2 as indicated by highlight 56) and other non-tuned channels (i.e., channels 4, 5, 7, 9).<br><br>And Young '801 makes clear that the user can navigate both through time and programs. (Ex-1002, 3:14-18, 4:27-5:3, 14:6-29, FIG. 7; Ex-1009, ¶139.)<br><br>As to (b), since this is broader than 2[F], it is disclosed by the prior art cited for claim 2[F]. (Ex-1009, ¶139.) |

### 4. Independent Claim 4

Independent claim 4 is very similar to claim 2, with differences from claim 2 highlighted in **bold** below.

| | Claim | Comparison/Analysis |
|---|---|---|
| 4[A]-4[B] | | Identical to 2[A] and 2[B]. |
| | | *See* 2[A] and 2[B]. |
| 4[C] | user control means for choosing user control commands, including television tuning, guide time-control **and guide channel-control commands**, and transmitting signals in response thereto; | Identical to 2[C], except this also requires **guide channel-control commands.** |
| | | *See* 2[C], which already includes the guide channel-control commands, allowing the user to move through the guide by time and by channel. (Ex-1009, ¶140.) |

| | Claim | Comparison/Analysis |
|---|---|---|
| 4[D] | | Identical to 2[D]. |
| | | *See* 2[D]. |
| 4[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said program schedule information in overlaying relationship with another display signal currently appearing on a currently tuned channel in at least one mode of operation of said programming guide; and | Identical to 2[E], except that it is not limited to displaying schedule information **for a currently-tuned channel.** |
| | | *See* 2[E]. Since this is broader than 2[E], it is disclosed by the prior art cited for 2[E] above. (Ex-1009, ¶140.) |
| 4[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs scheduled to appear **on a channel different from said currently tuned channel** and being consecutively displayed in response to corresponding consecutive ones of said | Identical to 2[F], except that:<br><br>(a) whereas 2[F] recites listing information for programs scheduled to appear **on the currently tuned channel,** this recites listing information for programs scheduled to appear on **a channel different from said currently tuned channel**; and<br><br>(b) whereas 2[F] recites navigating through listing information for sequential time periods, this recites navigating through listing information for sequential time periods **or programs**. |
| | | As to (a), *see* 2[F] and Ex-1002 at FIG. 2 (shows programs scheduled to appear on |

| | Claim | Comparison/Analysis |
|---|---|---|
| | guide control commands for successively navigating through listing information for sequential time periods **or programs** for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | a currently tuned channel and other channels.) (Ex-1009, ¶140.)<br><br>As to (b), *see* 2[F] and Ex-1002 at FIG. 2 (shows a program guide that allows the user to navigate listings by time periods or programs). (Ex-1009, ¶140.) |

### 5. Dependent Claim 6 (As Dependent From Claim 1)

**"6. The electronic programming guide according to claims 1 or 5 wherein said predetermined display period is a user-selectable variable time period chosen in response to a user control command."**

As dependent on claim 1, Moro (in combination with Young '801) would have rendered this obvious.

As described above, Young '801 discloses displaying a programming guide for displaying television schedule information, but does not describe displaying the program schedule information for a user selectable variable time period. Moro

discloses that the displayed program schedule "may be adapted to disappear automatically a predetermined time after starting display." (Ex-1003, 5:21-26.)

It would have been obvious to modify Young '801 to make the program schedule information disappear automatically a predetermined time after starting display, as taught by Moro. It would further have been obvious to allow the user to configure the predetermined time ("chosen in response to a user control command") for displaying the program listings. It was widely-known that many predetermined values could be user-configurable, thereby providing a customized user experience. (MPEP § 2144.04 ("making adjustable"); Ex-1009, ¶¶142-143.) Modifying the combination of Young '801 and Moro to make the program schedule information disappear after a user-selectable variable time period merely involves combining prior art elements according to known methods to yield predictable results. (Ex-1009, ¶¶142-144.)

### 6. Dependent Claim 7 (As Dependent From Claims 1-4)

**"7. The electronic programming guide according to claims 1, 2, 3, 4, or 5 wherein said schedule information displayed by said video display generator comprises at least program title and program channel."**

This is disclosed by Young '801 in view of Moro. Young '801 (Ex-1002) shows including program titles and program channels in the schedule information, as shown in FIG. 1 below:

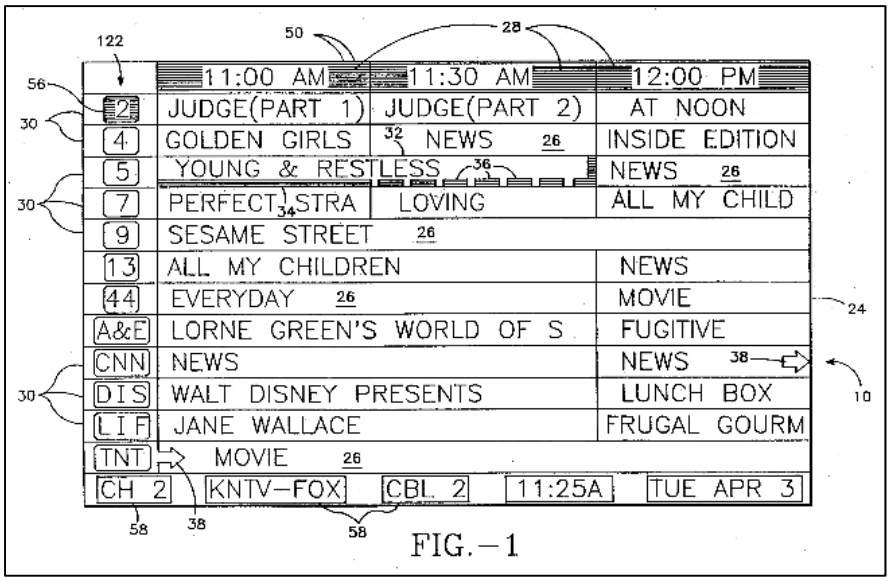


FIG.—1

(Ex-1009, ¶145.)

### 7. Dependent Claim 10 (As Dependent From Claims 1-4)

**"10. The electronic programming guide according to claims 1, 2, 3, 4, or 5 wherein said another display signal is a television program."**

This is disclosed by Young '801 (Ex-1002), which shows displaying program information (see FIG. 1 below):

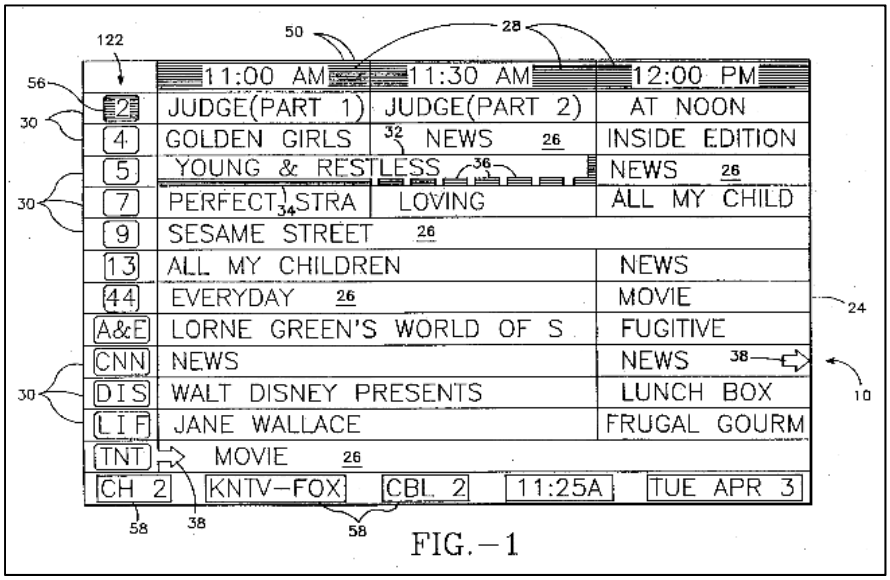


FIG.—1

Young '801 also describes "said another display signal" being a television program. (Ex-1002, 14:30-32 (while watching television); Ex-1009, ¶146-148.)

### 8. Independent Claim 14

Independent claim 14 is very similar to claim 2. The chart below shows where all the limitations can be found in Young '801 in view of Moro, with differences from claim 2 highlighted in **bold**.

| | Claim | Comparison/Analysis |
|---|---|---|
| 14[A] | 14. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: | Young '801 discloses:<br>"The present invention relates generally to a system and process that allows a television viewer to access on screen television program listings and use the program listings in an easy and convenient way to control operation of a video cassette recorder (VCR) or other recording device." (Ex-1002, 1:4-9.)<br><br>"Video switcher 226 is enabled by CPU output 246 to select the video display generator 224 output whenever schedule data is to be presented to the TV/monitor 210." (Ex-1002, 26:7-10.) |
| 14[B] | memory means for storing television program schedule information; | Broader than 2[B] because it does not require storing television program schedule information "**for a set of television programs scheduled to appear on said plurality of television channels**." |
| | | *See* 2[B]. Because this is broader than 2[B], it is disclosed by the prior art discussed above in 2[B]. (Ex-1009, ¶149.) |
| 14[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; | Identical to 2[C], except this also requires **guide channel-control commands**. |
| | | *See* 2[C], which already includes the guide channel-control commands. (Ex-1009, ¶149.) |

| | Claim | Comparison/Analysis |
|---|---|---|
| 14[D] | | Identical to 2[D]. |
| | | See claim 2[D]. |
| 14[E] | **a program schedule display generator coupled to** said data processing means and said memory means for displaying, **in a partial overlay** on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, | Similar to claim 2[E], except that:<br><br>(a) instead of a "video display generator," this recites a "**program schedule display generator;**"<br><br>(b) whereas 2[E] requires that the generator receive video control commands from the data processing means and program schedule information from the memory means, this more broadly recites that the generator is "**coupled to**" the data processing means and memory means;<br><br>(c) whereas 2[E] recites that the generator "display[s] interactively-selected successive portions of said schedule information . . . in **overlaying relationship**", this recites that the generator "display[], in a **partial overlay** on said display signal, user-selected portions of said schedule information; and<br><br>(d) whereas 2[E] recites that the schedule information is for "**a currently tuned channel**," this recites that the schedule information is for "at least **one program different from said display signal**." |
| | | *See* 2[E].<br><br>As to (a), because "program schedule display generator" is used |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | interchangeably with "video display generator," the prior art for 2[E] discloses this. (Ex-1009, ¶149.)<br><br>As to (b), because this is broader than 2[E], the prior art for 2[E] discloses this. (Ex-1009, ¶149.)<br><br>As to (c), although worded differently from 2[E], it does not differ materially from 2[E]. As explained above for 2[E], Moro discloses displaying program schedule information in both "overlaying relationship" and a "partial overlay" on another signal, such as a currently-broadcast signal. (Ex-1009, ¶149.)<br><br>As to (d), this is disclosed in 2[E]. (Ex-1002, FIG. 1.) The currently-tuned channel is 2, as indicated by highlight 56, and schedule information is shown for channels different from the currently-tuned channel (e.g., channels 4, 5, 6, 7, etc.). "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56." (Ex-1002, 13:5-7; Ex-1009, ¶149.) |
| 14[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control | Similar to 2[F] (using slightly different wording) and is broader in several respects, including:<br><br>(a) it does not require that the data processing means control the video display generator; |

| | Claim | Comparison/Analysis |
|---|---|---|
| | commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | (b) it is not limited to displaying schedule information for the currently-tuned channel; and<br><br>(c) the listing information can be for sequential time periods **or programs**. |
| | | *See* 2[F].<br><br>Because this is broader in several respects and uses only slightly different wording for the limitations of 2[F], it is disclosed by the prior art discussed above for 2[F]. (Ex-1009, ¶149.) |

### 9. Independent Claim 16

Independent claim 16 is very similar to claim 14. The chart below shows where all the limitations can be found in Young '801 in view of Moro, with differences from claim 14 highlighted in **bold**.

| | Claim | Comparison/Analysis |
|---|---|---|
| 16[A]-16[E] | | Identical to 14[A]-14[E]. |
| | | *See* 14[A]-14[E]. |
| 16[F] | each said portion of said schedule information being interactively selected . . . | Identical to the first half of 14[F]. |
| | | *See* 14[F]. |
| 16[G] | **said navigation including deleting at least one** | Young '801 allows the user to "page" through program listings, which replaces |

| | Claim | Comparison/Analysis |
|---|---|---|
| | **program listing appearing in the overlay and adding at least another program listing in the overlay, and** | one page of listings with another, thereby causing at least one program listing appearing in the overlay to be deleted and another program listing to be added. (Ex-1002, 13:5-16; Ex-1009, ¶150.) |
| 16[H] | said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | Identical to the second half of 14[F].<br>*See* 14[F]. |

**10. Dependent Claim 18 (As Dependent From Claims 14 or 16)**

**"18. The television schedule system according to claims 14, 15, 16, or 17 wherein the navigation is controlled by user-activated direction keys provided on said user control means."**

Young '801 discloses this:

> FIG. 21 shows a front panel 130 for **a remote controller of the schedule system**. . . . Included are a **. . . Left, Right, Up, Down and Page Cursor keys 156 . . . .**(Ex-1002, 24:17-33 (emphasis added), FIG. 21 (remote control); Ex-1009, ¶151.)

### 11. Independent Claim 19

Independent claim 19 is very similar to claim 14 (above). The chart below shows where all the limitations can be found in Young '801 in view of Moro, with differences from claim 14 highlighted in **bold**.

| | Claim | Comparison/Analysis |
|---|---|---|
| 19[A] | | Identical to 14[A]. |
| | | *See* 14[A]. |
| 19[B] | **means for receiving television program schedule information;** | Whereas claim 14[A] recites "**memory means for storing**" the recited television program schedule information, claim 19[B] recites "**means for receiving**" such information. |
| | | Young '801 discloses receiving the program schedule information at a receiver 202 through a broadcast. (Ex-1002, FIG. 22A (programmable TV tuner/cable decoder 202); 25:16-25 (schedule information is transmitted in the VBI of a broadcast); Ex-1009, ¶152.) |
| 19[C] | user control means for choosing user control commands, including television tuning commands **and guide control commands**, and transmitting signals in response thereto; | Nearly identical to 14[C], except that 14[C] recites "guide time-control commands" and "guide channel control" commands instead of "guide control commands." |
| | | *See* 14[C] above. Because this is broader than 14[C], this is disclosed by the prior art for 14[C]. (Ex-1009, ¶152) |
| 19[D] | | Identical to 14[D]. |
| | | *See* 14[D]. |
| 19[E] | a program schedule display generator coupled to said data processing means and **said** | Identical to 14[E], with minor wording differences, except that: |

| | Claim | Comparison/Analysis |
|---|---|---|
| | **receiving means** for displaying program schedule information **in a browse mode of operation** of said electronic programming guide for allowing a user to interactively select display listing information, including for programs other than a currently appearing display signal, using said guide control commands, said program schedule display generator displaying said selected program schedule information in a partial overlay on said currently appearing display signal in said browse mode, | (a) this requires that the program schedule display generator be coupled to **the receiving means** rather than the memory means, and<br><br>(b) this recites "**in a browse mode of operation**," which does not appear in claim 14. |
| | | *See* 14[E].<br><br>As to (a), Young '801 discloses that the video display generator ("program schedule display generator" in this claim) is coupled to a receiver ("receiving means") through a CPU ("data processing means"). (Ex-1002, FIG. 22A (video display generator 224 coupled to CPU 228, which is coupled to tuner 202 through VBI decoder 222); 25:16-25; Ex-1009, ¶152.)<br><br>As to (b) the "browse mode of operation," as applied to the prior art, "permit[ting] a user to interactively scan through program listings in a time and/or channel domain while continuing to view the current program" is shown by the combination of Young '801 and Moro described above. *See* discussion above in claim 14 regarding Young '801 including FIG. 1. Moro shows scanning through program listings while continuing to view the current program. (Ex-1009, ¶152.) |
| 19[F] | | Identical to the second half of 14[F]. |
| | | *See* 14[F]. |

### 12. Independent Claim 20

Independent claim 20 is very similar to claim 2, with differences from claim 2 highlighted in **bold** below.

| | Claim | Comparison/Analysis |
|---|---|---|
| 20[A]-20[B] | | Identical to 2[A] and 2[B]. |
| | | *See* 2[A] and 2[B] above. |
| 20[C] | user control means for choosing user control commands, including television tuning and **guide channel-control commands**, and transmitting signals in response thereto; | Identical to 2[C], except this also requires **guide channel-control commands.** |
| | | *See* 2[C] above, which already includes the guide channel-control commands, allowing the user to move through the guide by channel (and by time); (Ex-1009, ¶153.) |
| 20[D] | | Identical to 2[D]. |
| | | *See* 2[D] above. |
| 20[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively- | Identical to 2[E], except that 2[E] recites displaying schedule information **for a currently tuned channel**, whereas this claim recites displaying schedule information **for programs appearing on channels different from a currently tuned channel**. |

| | Claim | Comparison/Analysis |
|---|---|---|
| | selected successive portions of said schedule information for **programs appearing on channels different from a currently tuned channel**, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide; | *See* 2[E] above – this is disclosed in 2[E]. (Ex-1002, FIG. 1.) The currently-tuned channel is 2, as indicated by **highlight 56**, and schedule information is shown for **channels different from the currently-tuned channel (e.g., channels 4, 5, 6, 7, etc.)**. "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56." (Ex-1002, 13:5-7; Ex-1009, ¶153.) |
| 20[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs scheduled to appear on a channel different from said | Identical to 2[F], except that:<br><br>(a) this recites displaying schedule information for programs on a channel **different from the currently tuned channel at the same time as the currently appearing display signal**; and<br><br>(b) the navigation is through listing information **for sequential programs** instead of for sequential time periods. |

| | Claim | Comparison/Analysis |
|---|---|---|
| | currently tuned channel **at the same time as the currently appearing display signal** on said currently tuned channel and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information **for sequential programs** for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | *See* 2[F].<br><br>As to (a), as explained in claim 2 above, Young '801 in view of Moro discloses a system that displays schedule information for a plurality of different channels overlaid on a television signal ("**at the same time as the currently appearing display signal**"), so that the viewer can see the schedule information while watching a currently-viewed program. (Ex-1009, ¶153.)<br><br>As to (b), 2[F] shows that the user can navigate through either sequential time periods or sequential programs using the cursor. (Ex-1009, ¶153.) |

### 13. Dependent Claim 21

**"21. The electronic programming guide according to claim 20 wherein said portion of displayed program schedule information comprises at least program title and program channel."**

This is disclosed by Young '801 and Moro. Young '801 (Ex-1002) shows including program titles and program channels in the schedule information, as shown in FIG. 1 below:

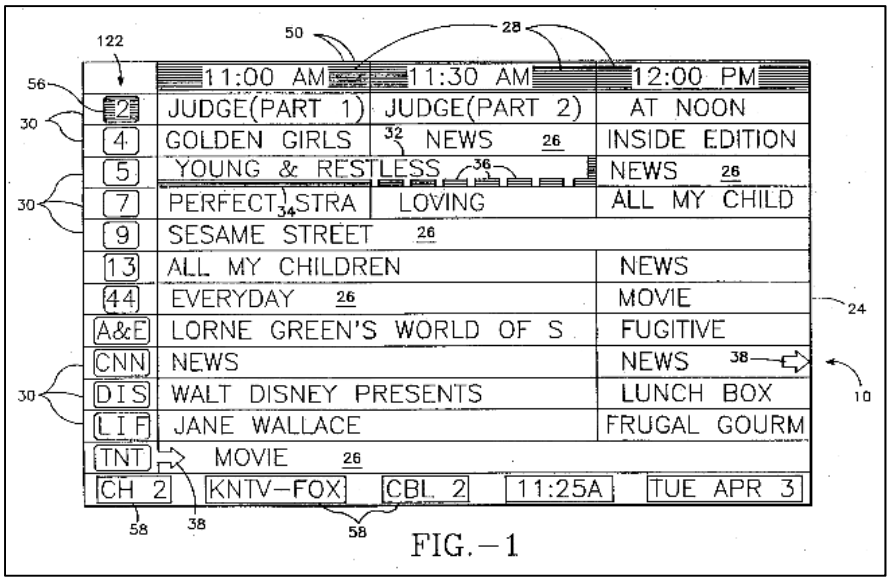


FIG.—1

(Ex-1009, ¶154.)

### 14. Independent Claim 28

Independent claim 28 is very similar to claim 14 (above). The chart below shows where all the limitations can be found in Young '801 in view of Moro, with differences from claim 14 highlighted in **bold**.

| | Claim | Comparison/Analysis |
|---|---|---|
| 28[A] | | Identical to 14[A]. |
| | | *See* 14[A]. |
| 28[B] | **means for receiving television program schedule information;** | Whereas 14[A] recites "**memory means for storing**" the recited television program schedule information, 28[B] recites "**means for receiving**" such information. |
| | | Young '801 discloses receiving the program schedule information at a receiver 202 through a broadcast. (Ex-1002, FIG. 22A (programmable TV tuner/cable decoder 202), 25:16-25 (schedule information is transmitted in the VBI of a broadcast); Ex-1009, ¶155.) |
| 28[C]-28[D] | | Identical to 14[C] and 14[D]. |
| | | *See* 14[C] and 14[D]. |
| 28[E] | a program schedule display generator coupled to said data processing means **and said means for receiving** for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said | Identical to 14[E], except that whereas 14[E] recites that the program schedule display generator is coupled to "**said memory means**," this recites that the program schedule display generator is coupled to "**said means for receiving**." |
| | | *See* 14[E].<br><br>Young '801 discloses receiver 202 (means for receiving) coupled to the |

| | Claim | Comparison/Analysis |
|---|---|---|
| | display signal, | video switcher 226. (Ex-1002, FIG. 22A; Ex-1009, ¶155.) |
| 28[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information **has been received**, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. | Identical to 14[F], except that whereas 14[F] recites "schedule information is stored in said memory means" this recites schedule information **has been received.** |
| | | *See* 14[F]. Young '801 discloses receiving the program schedule information at a receiver 202 through a broadcast. (Ex-1002, FIG. 22A (programmable TV tuner/cable decoder 202), 25:16-25 ; Ex-1009, ¶155.) |

### 15. Independent Claim 30

Independent claim 30 is very similar to claim 28 (above). The chart below shows where all the limitations can be found in Young '801 in view of Moro, with differences from claim 28 highlighted in **bold**.

| | Claim | Comparison/Analysis |
|---|---|---|
| 30[A]-30[E] | | Identical to 28[A]-28[E]. |
| | | *See* 28[A]-[E]. |
| 30[F] | | Identical to the first clause of 28[F] |
| | | *See* 28[F]. |
| 30[G] | **said navigation including deleting at least one program listing appearing in the overlay and adding at least another program listing in the overlay,** | Not in claim 28. |
| | | Young '801 allows the user to "page" through program listings, which replaces one page of listings with another, thereby causing at least one program listing appearing in the overlay to be deleted and another program listing to be added. (Ex-1002, 13:5-16; Ex-1009, ¶156.) |
| 30[H] | and said data processing means being responsive to said television tuning commands . . . . | Identical to the last clause of 28[F]. |
| | | *See* 28[F]. |

### 16. Independent Claim 33

Independent claim 33 is very similar to claim 14 (above). The chart below shows where all the limitations can be found in Young '801 in view of Moro, with differences from claim 14 highlighted in **bold**.

| | Claim | Comparison/Analysis |
|---|---|---|
| 33[A] | 33. An electronic guide . . . | Identical to 14[A], except that it omits "programming" from "electronic programming guide." |
| | | *See* 14[A]. |
| 33[B] | memory means for storing information regarding scheduled events; | Nearly identical to 14[B], except that instead of "television program schedule information," this is broader and uses "information regarding scheduled events." |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | *See* 14[B] above. This is broader than claim 14[B] and disclosed by the prior art discussed above in claim 14[B]. (Ex-1009, ¶157) |
| 33[C]-33[D] | | Identical to 14[C] and 14[D].<br>*See* 14[C] and 14[D]. |
| 33[E] | an **event schedule display generator** coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for **at least one receivable signal different from said display signal**, | Identical to 14[E], except that:<br><br>(a) whereas 14[E] recites "**a program schedule display generator**" that is coupled to the data processing means and memory means for performing the recited functions, this recites "**an event schedule display generator**;" and<br><br>(b) 14[E] recites "**at least one program different from said display signal**" and this recites "**at least one receivable signal different from said display signal**."<br><br>*See* 14[E] above.<br><br>As to (a), there is no meaningful difference between the "program schedule display generator" of claim 14 and the "event schedule display generator" of this claim and the prior art for 14[E] discloses this. (Ex-1009, ¶157.).<br><br>As to (b), the term "one receivable signal" is not meaningfully different from "one program" and the prior art in claim 14[E] discloses this. (Ex-1009, ¶157.) |
| 33[F] | each said portion of said | Identical to 14[F] except that 14[F] |

| | Claim | Comparison/Analysis |
|---|---|---|
| | schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing said user to select any one of **said receivable signals** for which listing information is displayed in said partially overlayed portion of said schedule information. | recites "any one of said television programs" and this recites "any one of **said receivable signals."** |
| | | The term "receivable signal" is not meaningfully different from "television program" and the prior art in claim 14[E] discloses this. (Ex-1009, ¶157.) |

### 17. Dependent Claim 35 (As Dependent From Claims 14, 16, and 18 (14, 16))

**"35. The television schedule system according to claims 14, 15, 16, 17, or 18 wherein said display signal is chosen from the group consisting of a television program, promotional video clip or an advertisement."**

This is disclosed by Young '801 and Moro. As explained in section VII.A.1, Young '801 discloses a television program and a program guide, and Moro

provides a rationale for combining the two in an overlay format. (Ex-1009, ¶¶158-159.)

### 18. Dependent Claim 36 (As Dependent From Claims 1-4, and 20)

**"36. The electronic programming guide according to claims 1, 2, 3, 4, 5 or 20 wherein said another display signal is an advertisement."**

As explained in section VII.A.1, Young '801 discloses a television program and a program guide and Moro provides a rationale for combining the two in an overlay format. It was well-known that television programs are broadcast with advertisements. The display of television programs would inherently include advertisements. (Ex-1009, ¶¶160-162.) Alternatively, it would have been obvious to include advertisements as part of television broadcasts to generate revenue to support the television programming, as was well-known. (Ex-1009, ¶160.)

### 19. Dependent Claim 37 (As Dependent From Claims 1-4 and 20)

**"37. The electronic programming guide according to claims 1, 2, 3, 4, 5, or 20 wherein said another display signal is a promotional video clip."**

As described above with respect to 2[E], Young '801 in combination with Moro teaches program information overlaid on a television broadcast, which is "said another display signal." (Ex-1002, Figs. 9-10; 14:30-15:2.) It was well-known that television programs were broadcast with promotions for movies and

other videos, before the filing date of the '556 Patent. Therefore, the disclosure of television program broadcasts would have inherently (or at least obviously) included display signals having promotional video clips, such as portions of movies. (Ex-1009, ¶163.)

### 20. Dependent Claim 38 (As Dependent From Claims 2-4, 14, 16 or 20)

**"38. The electronic programming guide according to claims 2, 3, 4, 14, 15, 16, 17 or 20 wherein said program schedule information is displayed for a display period and wherein said display period is a user-selectable variable time period chosen in response to a user control command."**

As dependent on claims 2-4, 14, 16 and 20, Moro (in combination with Young '801) would have rendered this obvious.

As described above, Young '801 discloses a programming guide for displaying television schedule information, but does not describe displaying the program schedule information for a user selectable variable time period. Moro discloses that the displayed program schedule "may be adapted to disappear automatically a predetermined time after starting display . . . .." (Ex-1003, 5:21-23.)

It would have been obvious to modify Young '801 to make the program schedule information disappear a predetermined time after starting display, as taught by Moro. (Ex-1009, ¶166; *see also* Secs. VIII.A.2 (claim limitation 1[F]) and VIII.A.5 (claim 6), *supra*.))

It would have been obvious to allow the user to configure the predetermined time ("chosen in response to a user control command") for displaying the program listings for the reasons provided when addressing claim 6. (Ex. 1009, ¶163.)

### 21. Independent Claim 39

Independent claim 39 is very similar to claim 2, with differences from claim 2 highlighted in **bold** in the chart below.

| | Claim | Comparison/Analysis |
|---|---|---|
| 39[A] | 39. An electronic programming guide for use with a video display for displaying program schedule information for television programs appearing on a plurality of television channels comprising: | Similar to 2[A] with slight wording differences. Broader than 2[A] because it doesn't require a television receiver. |
| | | See 2[A]. (Ex-1009, ¶168.) |
| 39[B] | **means for receiving** television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; | Similar to 2[B], but whereas 2[B] recites "**memory means for storing**" television program schedule information, this recites "**means for receiving**" the same information. |
| | | Young '801 discloses receiving the program schedule information at a **receiver 202** through a broadcast. (Ex- |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | 1002, FIG. 22A (programmable TV tuner/cable decoder 202), 25:16-25; Ex-1009, ¶168.) |
| 39[C] | user control means for choosing user control commands, including television tuning, guide time-control **and guide channel control commands**, and transmitting signals in response thereto; | Identical to 2[C], but also recites **guide channel control commands**. |
| | | See 2[C] above. The guide channel control commands are disclosed in the prior art cited for 2[C] above. (Ex-1009, ¶168.) |
| 39[D] | | Identical to 2[D]. |
| | | *See* 2[D]. |
| 39[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information **from said receiving means** for displaying interactively-selected successive portions of said program schedule information **for a set of channels, including ones different from a currently tuned channel**, **simultaneously with another display signal** appearing on said video display in at least one mode of operation of said programming guide; | Similar to 2[E], except that:<br><br>(a) whereas 2[E] recites that the video display generator receives program schedule information **from said memory means**, this recites receiving the same information **from said receiving means**;<br><br>(b) whereas 2[E] recites displaying schedule information **for a currently tuned channel**, this recites displaying schedule information **for a set of channels, including ones different from a currently tuned channel**; and<br><br>(c) whereas 2[E] recites displaying the schedule information "**in overlaying relationship**" with the display signal, this is broader because it merely requires displaying the information "**simultaneously with another display signal**." |
| | | *See* 2[E]. |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | As to (a), Young '801 discloses that the video display generator is coupled to a receiver ("receiving means") through a CPU ("data processing means"). (Ex-1002, FIG. 22A (video display generator 224 coupled to CPU 228, which is coupled to tuner 202 through VBI decoder 222), 25:16-25; Ex-1009, ¶168.)<br><br>As to (b), see 2[E] – this is disclosed in the prior art cited for 2[E]. (Ex-1002, FIG. 1.) The currently-tuned channel is 2, as indicated by highlight 56, and schedule information is shown for channels different from the currently-tuned channel (**e.g., channels 4, 5, 6, 7, etc.**). "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56." (Ex-1002, 13:5-7; Ex-1009, ¶168.)<br><br>As to (c), because this is broader than 2[E], it is disclosed by the prior art discussed above in claim 2[E]. (Ex-1009, ¶168.) |
| 39[F] | said data processing means controlling said video display generator **with said video control commands in response to said user control commands** to display each said selected portion of program schedule information, each said portion comprising listing information for each | Similar to 2[F], except that:<br><br>(a) whereas 2[F] recites that the program schedule information is displayed in **partial overlaying relationship with the display signal**, this is broader because it merely requires that the schedule information appear **simultaneously with said another display signal**;<br><br>(b) whereas 2[F] recites navigating |

| | Claim | Comparison/Analysis |
|---|---|---|
| | successive one of said television programs scheduled to appear on said set of channels, **simultaneously with said another display signal** currently appearing on said video display, each said portion consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential **time periods or programs for which program schedule information has been received**, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed. | through listing information for **sequential time periods**, this is broader because it recites "**time periods or programs**;"<br><br>(c) this recites "**with said video control commands in response to said user control commands**;" and<br><br>(d) whereas 2[F] recites "for which program schedule information is stored in said memory means," this recites "**for which program schedule information has been received**." |
| | | *See* 2[F].<br><br>As to (a), because this is broader than 2[F], this is disclosed by the prior art cited for 2[F]. (Ex-1009, ¶168.)<br><br>As to (b), because this is broader than 2[F], this is disclosed by the prior art cited for 2[F]. (Ex-1009, ¶168.)<br><br>As to (c), *see* 2[F] and Ex-1002, 24:17-33, which shows the What's on TV request initiated with a user control command at the remote control. (Ex-1009, ¶168.)<br><br>As to (d), *see* 2[F]. Young '801 discloses receiving the program schedule information at a receiver 202 through a broadcast. (Ex-1002, FIG. 22A (programmable TV tuner/cable decoder 202), 25:16-25; Ex-1009, ¶168.) |

### 22. Independent Claim 40

Independent claim 40 is very similar to claim 2, with differences from claim 2 highlighted in **bold** in the chart below.

| | Claim | Comparison/Analysis |
|---|---|---|
| 40[A] | 40. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: | Similar to 2[A] with slight wording differences. Broader than claim 2[A] because it doesn't require a television receiver. |
| | | *See* 2[A]. (Ex-1009, ¶169.) |
| 40[B] | memory means for storing **television program schedule information**; | Similar to 2[B], but broader in that whereas 2[B] recites storing program schedule information "**for a set of television programs scheduled to appear on said plurality of television channels**," this merely recites storing "**television program schedule information**." |
| | | *See* 2[B] above. Because it is broader than 2[B], the prior art regarding 2[B] above discloses this. (Ex-1009, ¶169.) |
| 40[C] | user control means for choosing user control commands, including television tuning, **guide channel-control** . . . | Identical to 2[C], but also recites **guide channel-control commands**. |
| | | *See* 2[C] above. The guide channel control commands are disclosed in the prior art cited for 2[C] above. (Ex-1009, ¶169.) |
| 40[D] | | Identical to 2[D]. |
| | | *See* 2[D]. |
| 40[E] | a **program schedule display generator coupled to said data processing means** and | Similar to 2[E], except that:<br><br>(a) whereas 2[E] recites a "video display |

| | Claim | Comparison/Analysis |
|---|---|---|
| | said memory means for **displaying, simultaneously with said display signal**, user-selected portions of said schedule information comprising listing information for at least **one program different from said display signal**, | generator," this recites a "**program schedule display generator**;"<br><br>(b) whereas 2[E] recites that the video display generator is "adapted to receive video control commands from said data processor," this requires that the program schedule display generator is "**coupled to said data processing means**."<br><br>(c) whereas 2[E] recites displaying the schedule information "**in overlaying relationship with another display signal**," this more broadly recites "**displaying, simultaneously with said display signal**;" and<br><br>(d) whereas 2[E] recites displaying schedule information "**for a currently tuned channel**," this recites displaying schedule information "**for at least one program different from said display signal**." |
| | | *See* 2[E]. (Ex-1009, ¶169.)<br><br>As to (a), there is no meaningful difference between "program schedule display generator" and the "video display generator" of 2[E].<br><br>As to (b) "**coupled to said data processing means**" is broader than "adapted to receive video control commands from said data processor." The prior art for 2[E] discloses this. |

| | Claim | Comparison/Analysis |
|---|---|---|
| | | As to (c), because this is broader than 2[E], the prior art discussed above regarding 2[E] discloses this.<br><br>As to (d), *see* 2[E] – this is disclosed in 2[E]. (Ex 1002, FIG. 1.) The currently-tuned channel is 2, as indicated by highlight 56, and schedule information is shown for channels different from the currently-tuned channel (**e.g., channels 4, 5, 6, 7, etc.**). "When a channel to which the tuner is tuned is displayed on the grid 24, it is highlighted, as shown at 56." (Ex-1002, 13:5-7.) |
| 40[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for **sequential time periods or programs** for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed. | Similar to 2[F], except that whereas 2[F] recites navigating through sequential time periods, this more broadly recites "**sequential time periods or programs**."<br><br>*See* 2[F] and Ex-1009, ¶169.<br><br>Because this is broader than 2[F], this is disclosed by the prior art for 2[F]. (Ex-1009, ¶169.) |

## IX. ALLEGED EVIDENCE OF NON-OBVIOUSNESS

Applicant filed a declaration of Bruce Davis purportedly showing (1) copying by others; (2) industry praise; (3) long-felt need; and (4) commercial success. (Ex-1006, pp.1027-1044.) This is insufficient to show non-obviousness.

First, "where a claimed invention represents no more than the predictable use of prior art elements according to established functions . . . evidence of secondary indicia are frequently deemed inadequate to establish non-obviousness." *Ohio Willow Wood Co. v. Alps South, LLC*, 735 F.3d 1333, 1344 (Fed. Cir. 2013). And, for such evidence to be relevant, there must be a nexus between the *claimed limitations* and the evidence. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 305 n.42 (Fed. Cir. 1985). No such nexus was shown.

Second, no *evidence* of copying by others was provided. Only naked attorney argument was provided that a "Browse" feature was "apparently copied." (Ex-1006, p.1033). "Copying requires evidence of efforts to replicate a specific product . . ." *Wyers v. Master Lock Co.,* 616 F.3d 1231, 1246 (Fed. Cir. 2010). There was no evidence that the entire claimed "browse mode" was used by others, or that the claimed "tuning function" (i.e., "television tuning commands" and a data processor "responsive to said television tuning commands") was included in the alleged copying. And evidence of alleged copying by others is entitled to little

weight where a "substantial question of validity" is raised by the prior art. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.,* 239 F.3d 1343, 1366 (Fed. Cir. 2001).

Third, the alleged evidence of industry praise consisting of a single vague statement concerning a *different company's product* (StarSight Telecast) (an "excellent way to find out what's on" television) (Ex-1006, p.1041) is legally insufficient to overcome a strong case of obviousness. It also fails to show any nexus to the claimed invention.

Fourth, the Federal Circuit has held that "long-felt need is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem." *Texas Instruments v. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993). No such evidence was provided. Instead, a purported survey of users in 1997 —before the claims even issued— who liked the undefined "browse" feature was submitted. This fails to demonstrate any long-felt need for the claimed invention.

Finally, regarding alleged commercial success, no evidence was provided. There is no sales data, much less whether such sales included the later-claimed invention. A vague reference to "contractual arrangements" made by another company—StarSight Telecast—also does not establish "commercial success." It

fails to establish that "the sales were a direct result of the unique characteristics of the claimed invention." *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996). Nor does the existence of a license under a patent overcome a prima facie case of obviousness. *In re Antor Media Corp.*, 689 F.3d 1282, 1294 (Fed. Cir. 2012). And Rovi "has not even shown that the marketed system corresponds to the system disclosed in its patent as embodying the claimed invention." *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1580 (Fed. Cir. 1983).

## X. CONCLUSION

*Inter partes* review should be instituted and the claims should be canceled.

BANNER AND WITCOFF, LTD

Dated: April 10, 2017

By: / Frederic M. Meeker /

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## CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 13,939, as counted by the Word Count feature of Microsoft Word, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i).

Pursuant to 37 CFR § 42.24(a)(1), this word count was generated by the Word Count feature of the word processor and does not include the table of contents, table of authorities, mandatory notices, certificates of service and word count, listing of exhibits, or the claims listing appendix.

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## CERTIFICATE OF SERVICE

Under 37 C.F.R. § 42.105, I certify that I caused a copy of the Petition for *inter partes* review for U.S. Patent No. 6,418,556 and supporting evidence to be served via FedEx Priority Overnight on April 10, 2017, on:

Ropes & Gray LLP

Patent Docketing 39/361

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# CLAIM LISTING APPENDIX

| Designation | Claim Language |
|---|---|
| Claim 1 | |
| 1[A] | 1. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising: |
| 1[B] | memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; |
| 1[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 1[D] | data processing means for receiving said signals in response to said user control commands; and |

| Designation | Claim Language |
|---|---|
| Claim 1 | |
| 1[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said program schedule information in overlaying relationship with another display signal currently appearing on a selected channel in at least one mode of operation of said programming guide; |

| Designation | Claim Language |
|---|---|
| Claim 1 | |
| 1[F] | said data processing means controlling said video display generator with said video control commands in response to said user control commands to display each said portion of program schedule information for any chosen one of said television programs for a predetermined display period in partial overlaying relationship with another display signal currently being received on said television receiver; each said portion being displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 2 | |
| 2[A] | An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising: |
| 2[B] | memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; |
| 2[C] | user control means for choosing user control commands, including television tuning and guide time-control commands, and transmitting signals in response thereto; |
| 2[D] | data processing means for receiving said signals in response to said user control commands; and |
| 2[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a currently tuned channel in overlaying relationship with another display signal currently appearing |

| | |
|---|---|
| | on said channel in at least one mode of operation of said programming guide; |
| 2[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs scheduled to appear on said currently tuned channel and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 3 | |
| 3[A] | 3. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising: |
| 3[B] | memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; |
| 3[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 3[D] | data processing means for receiving said signals in response to said user control commands; and |
| 3[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said schedule information for a set of channels, including ones different from a currently tuned channel, in overlaying relationship |

| Designation | Claim Language |
|---|---|
| Claim 3 | |
| | with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide; |
| 3[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs scheduled to appear on said set of channels and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 4 | |
| 4[A] | 4. An electronic programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising: |
| 4[B] | memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; |
| 4[C] | user control means for choosing user control commands, including television tuning, guide time-control and guide channel-control commands, and transmitting signals in response thereto; |
| 4[D] | data processing means for receiving said signals in response to said user control commands; |
| 4[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of said program schedule information in overlaying relationship with another display signal currently appearing on a currently tuned |

| Designation | Claim Language |
|---|---|
| Claim 4 | |
| | channel in at least one mode of operation of said programming guide; and |
| 4[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information<br>for each successive one of said television programs scheduled to appear on a channel different from said currently tuned channel and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 6 | |
| 6 | 6. The electronic programming guide according to claims 1 or 5 wherein said predetermined display period is a user-selectable variable time period chosen in response to a user control command. |

| Designation | Claim Language |
|---|---|
| Claim 7 | |
| 7 | 7. The electronic programming guide according to claims 1, 2, 3, 4, or 5 wherein said schedule information displayed by said video display generator comprises at least program title and program channel. |

| Designation | Claim Language |
|---|---|
| Claim 10 | |
| 10 | 10. The electronic programming guide according to claims 1, 2, 3, 4, or 5 wherein said another display signal is a television program. |

| Designation | Claim Language |
|---|---|
| Claim 14 | |
| 14[A] | An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: |
| 14[B] | memory means for storing television program schedule information; |
| 14[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 14[D] | data processing means for receiving said signals in response to said user control commands; and |
| 14[E] | a program schedule display generator coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, |

| Designation | Claim Language |
|---|---|
| Claim 14 | |
| 14[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 16 | |
| 16[A] | An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: |
| 16[B] | memory means for storing television program schedule information; |
| 16[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 16[D] | data processing means for receiving said signals in response to said user control commands; and |
| 16[E] | a program schedule display generator coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, |
| 16[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for |

| Designation | Claim Language |
|---|---|
| Claim 16 | |
| | successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, |
| 16[G] | said navigation including deleting at least one program listing appearing in the overlay and adding at least another program listing in the overlay, and |
| 16[H] | said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 18 | |
| 18 | 18. The television schedule system according to claims 14, 15, 16, or 17 wherein the navigation is controlled by user-activated direction keys provided on said user control means. |

| Designation | Claim Language |
|---|---|
| Claim 19 | |
| 19[A] | 19. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said television programming guide comprising: |
| 19[B] | means for receiving television program schedule information; |
| 19[C] | user control means for choosing user control commands, including television tuning commands and guide control commands, and transmitting signals in response thereto; |
| 19[D] | data processing means for receiving said signals in response to said user control commands; and |

| Designation | Claim Language |
|---|---|
| Claim 19 | |
| 19[E] | a program schedule display generator coupled to said data processing means and said receiving means for displaying program schedule information in a browse mode of operation of said electronic programming guide for allowing a user to interactively select display listing information, including for programs other than a currently appearing display signal, using said guide control commands, said program schedule display generator displaying said selected program schedule information in a partial overlay on said currently appearing display signal in said browse mode, |
| 19[F] | said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 20 | |
| 20[A] | 20. An electronic television programming guide for use with a television receiver having a plurality of television channels for displaying television programs and program schedule information for said television programs comprising: |
| 20[B] | memory means for storing television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; |
| 20[C] | user control means for choosing user control commands, including television tuning and guide channel-control commands, and transmitting signals in response thereto; |
| 20[D] | data processing means for receiving said signals in response to said user control commands; and |
| 20[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said memory means for displaying interactively-selected successive portions of |

| Designation | Claim Language |
|---|---|
| Claim 20 | |
| | said schedule information for programs appearing on channels different from a currently tuned channel, in overlaying relationship with another display signal currently appearing on said tuned channel in at least one mode of operation of said programming guide; |
| 20[F] | said data processing means controlling said video display generator to display each said portion of program schedule information in partial overlaying relationship with said currently appearing display signal, each said portion comprising listing information for each successive one of said television programs scheduled to appear on a channel different from said currently tuned channel at the same time as the currently appearing display signal on said currently tuned channel and being consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential programs for which program schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said |

| Designation | Claim Language |
|---|---|
| Claim 20 | |
| | partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 21 | |
| 21 | 21. The electronic programming guide according to claim 20 wherein said portion of displayed program schedule information comprises at least program title and program channel. |

| Designation | Claim Language |
|---|---|
| Claim 28 | |
| 28[A] | 28. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: |
| 28[B] | means for receiving television program schedule information; |

| Designation | Claim Language |
|---|---|
| Claim 28 | |
| 28[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 28[D] | data processing means for receiving said signals in response to said user control commands; and |
| 28[E] | a program schedule display generator coupled to said data processing means and said means for receiving for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, |
| 28[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information has been received, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television |

| Designation | Claim Language |
|---|---|
| Claim 28 | |
| | programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 30 | |
| 30[A] | 30. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: |
| 30[B] | means for receiving television program schedule information; |
| 30[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 30[D] | data processing means for receiving said signals in response to said user control commands; and |
| 30[E] | a program schedule display generator coupled to said data processing |

| Designation | Claim Language |
|---|---|
| Claim 30 | |
| | means and said means for receiving for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, |
| 30[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information has been received, |
| 30[G] | said navigation including deleting at least one program listing appearing in the overlay and adding at least another program listing in the overlay, |
| 30[H] | and said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 33 | |
| 33[A] | An electronic guide for displaying schedule information on a video display on which is displayed a television display signal, said guide comprising: |
| 33[B] | memory means for storing information regarding scheduled events; |
| 33[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 33[D] | data processing means for receiving said signals in response to said user control commands; and |
| 33[E] | an event schedule display generator coupled to said data processing means and said memory means for displaying, in a partial overlay on said display signal, user-selected portions of said schedule information comprising listing information for at least one receivable signal different from said display signal, |
| 33[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to |

| Designation | Claim Language |
|---|---|
| Claim 33 | |
| | consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing said user to select any one of said receivable signals for which listing information is displayed in said partially overlayed portion of said schedule information. |

| Designation | Claim Language |
|---|---|
| Claim 35 | |
| 35 | 35. The television schedule system according to claims 14, 15, 16, 17, or 18 wherein said display signal is chosen from the group consisting of a television program, promotional video clip or an advertisement. |

| Designation | Claim Language |
|---|---|
| Claim 36 | |
| 36 | 36. The electronic programming guide according to claims 1, 2, 3, 4, 5 or 20 wherein said another display signal is an advertisement. |

| Designation | Claim Language |
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| Claim 37 | |
| 37 | 37. The electronic programming guide according to claims 1, 2, 3, 4, 5 or 20 wherein said another display signal is a promotional video clip. |

| Designation | Claim Language |
|---|---|
| Claim 38 | |
| 38 | 38. The electronic programming guide according to claims 2, 3, 4, 14, 15, 16, 17 or 20 wherein said program schedule information is displayed for a display period and wherein said display period is a user-selectable variable time period chosen in response to a user control command. |

| Designation | Claim Language |
|---|---|
| Claim 39 | |
| 39[A] | 39. An electronic programming guide for use with a video display for displaying program schedule information for television programs appearing on a plurality of television channels comprising: |
| 39[B] | means for receiving television program schedule information for a set of television programs scheduled to appear on said plurality of television channels; |
| 39[C] | user control means for choosing user control commands, including television tuning, guide time-control and guide channel control commands, and transmitting signals in response thereto; |
| 39[D] | data processing means for receiving said signals in response to said user control commands; and |
| 39[E] | a video display generator adapted to receive video control commands from said data processing means and program schedule information from said receiving means for displaying interactively-selected successive portions of said program schedule information for a set of channels, including ones different from a currently tuned channel, simultaneously with another display signal appearing on said video |

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| | display in at least one mode of operation of said programming guide; |
| 39[F] | said data processing means controlling said video display generator with said video control commands in response to said user control commands to display each said selected portion of program schedule information, each said portion comprising listing information for each successive one of said television programs scheduled to appear on said set of channels, simultaneously with said another display signal currently appearing on said video display, each said portion consecutively displayed in response to corresponding consecutive ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which program schedule information has been received, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed. |

| Designation | Claim Language |
|---|---|
| Claim 40 | |
| 40[A] | 40. An electronic programming guide for displaying television schedule information on a video display on which is displayed a display signal, said programming guide comprising: |
| 40[B] | memory means for storing television program schedule information; |
| 40[C] | user control means for choosing user control commands, including television tuning, guide channel-control and guide time-control commands, and transmitting signals in response thereto; |
| 40[D] | data processing means for receiving said signals in response to said user control commands; and |
| 40[E] | a program schedule display generator coupled to said data processing means and said memory means for displaying, simultaneously with said display signal, user-selected portions of said schedule information comprising listing information for at least one program different from said display signal, |
| 40[F] | each said portion of said schedule information being interactively selected by a user and consecutively displayed in response to |

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| | consecutive user-activated ones of said guide control commands for successively navigating through listing information for sequential time periods or programs for which schedule information is stored in said memory means, said data processing means being responsive to said television tuning commands for allowing a user to select any one of said television programs for which listing information is displayed. |