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The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEROEN HEUVELMAN,
STEVEN TAYLOR PANCOAST, and CHRISTOPHER COLEY

MAILED
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PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Appeal No. 2000-1062
Application 08/920,751[1]

ON BRIEF

Before THOMAS, KRASS, and MARTIN, Administrative Patent Judges.

MARTIN, Administrative Patent Judge.

DECISION ON APPEAL

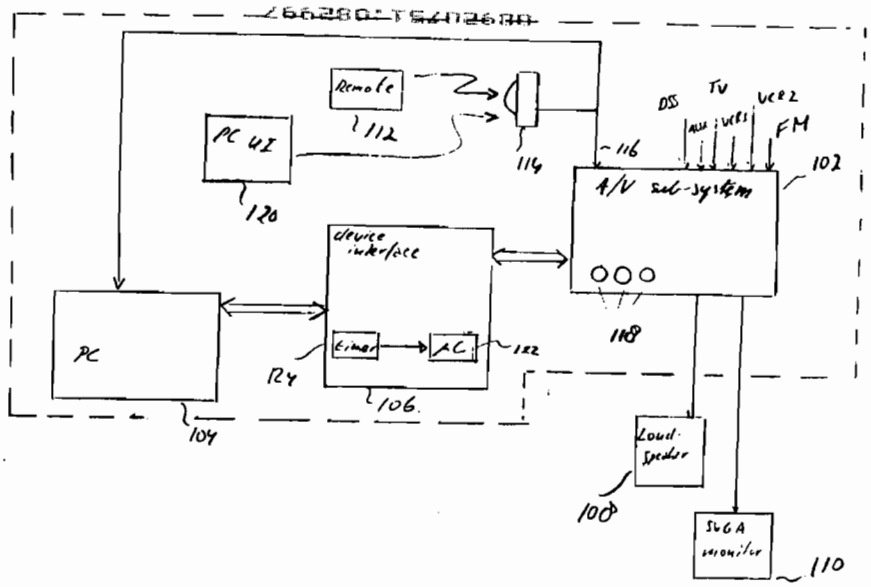
This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-9, all of the pending claims, under 35 U.S.C. §§ 102(e)(claims 1-3) and 103(a)(claims 4-9).[2] We affirm-in-part.

[1] Filed August 29, 1997.

[2] Because the amendment filed with the appeal brief has not been entered, the claims before us are those as set forth in Appendix A to the brief rather than in Appendix B.

A. The invention

The invention is a control system which permits an audio-visual subsystem (e.g., an FM receiver, digital satellite receiver, or VCR) to be controlled by the user either by software run on a personal computer (PC) or independently from the PC, such as during PC failure. Appellants' Figure 1, reproduced below, is a block diagram of such a system.



The A/V subsystem has manually controllable "front keys" 118 and also is capable of receiving infrared (IR) commands via connection 116 from an IR eye 114 responsive to a remote control device 112 and a PC user interface 120, which may take the form

of a wireless keyboard and a wireless mouse for communicating with PC 104. Specification at 5, ll. 7-20. PC 104 is connected to A/V subsystem 102 via a device interface 106.

Remote control device 112 and PC user interface 120 have different IR communication protocols or different command sets. Id. at 5, ll. 20-21. When the user employs remote control device 112 to adjust a subsystem parameter (e.g., the sound level), a microcontroller 122 in device interface 106 informs PC 104 of that fact, so that the graphical user interface generated by the PC software for display on monitor 110 accurately reflects the status of that parameter. Id. at 6, ll. 5-9. When the user employs PC user interface 120 to control a subsystem parameter, the IR command is detected by IR eye 114 and communicated via device interface 106 to PC 104. Id. at 6, ll. 2-3.

Device interface 106 also contains a fail safe timer 124 which determines whether PC 104 is generating a "heart beat" signal that indicates the PC is still running. Id. at 6, ll. 10-16. If the timer stops receiving a heart beat signal, A/V subsystem 102 can be operated independently of the PC with the help of a simplified on-screen display. Id. at 6, ll. 16-19.

B. The claims

Claims 1 and 9, the only independent claims, read as follows:

1. An information processing system comprising:

- an [sic] sub-system for selectively providing specific content information;

- a computer coupled to the sub-system for running a software application to control the providing of the specific content information;

- a first user-interface structure coupled to the computer for user-control of the specific content information via the interaction with the software application; and

- a second user-interface structure coupled to the sub-system for user-control of the specific content information independently of the computer.

9. A device interface for interconnecting a computer and a sub-system for selectively providing specific content information, wherein the device interface comprises disabling circuitry for testing if the computer is capable of controlling the sub-system and for disabling influence of the computer over the specific information content [sic, content information] upon a negative test result.

C. The references, rejection, and level of skill in the art

The examiner relies on the following U.S. patents:

Humphries et al. (Humphries)	5,621,662	Apr. 15, 1997
Warman et al. (Warman)	5,657,221	Aug. 12, 1997

Claims 1-3 stand rejected under 35 U.S.C. § 102(e) for anticipation by Warman.

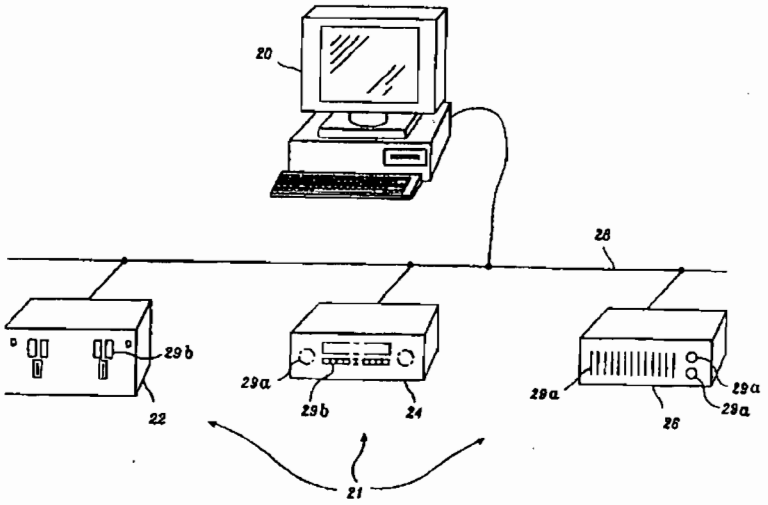
Claims 4-9 stand rejected under 35 U.S.C. § 103(a) for obviousness over Warman in view of Humphries.

D. Appellants' burden on appeal

Anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference. In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986). Thus, appellant's burden on appeal with respect to a rejection for anticipation is to identify at least one claimed element that the examiner has failed to show is disclosed or inherent in the reference. See Gechter v. Davidson, 116 F.3d 1454, 1460, 43 USPQ2d 1030, 1035 (Fed. Cir. 1997) ("[W]e expect that the Board's anticipation analysis be conducted on a limitation by limitation basis, with specific fact findings for each contested limitation and satisfactory explanations for such findings [footnote omitted]."). Similarly, "[o]n appeal to the Board, an applicant can overcome a [35 U.S.C. § 103(a)] rejection by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness." In re Rouffet, 149 F.3d 1350, 1355 47 USPQ2d 1453, 1455 (Fed. Cir. 1998).

E. The merits of the § 102(e) rejection

Warman's Figure 1, reproduced below, shows a system which uses a PC 20 to control various non-computer system devices, such as a two-channel amplifier 22, a tuner 24, and a graphic equalizer 26 (col. 6, ll. 31-38).



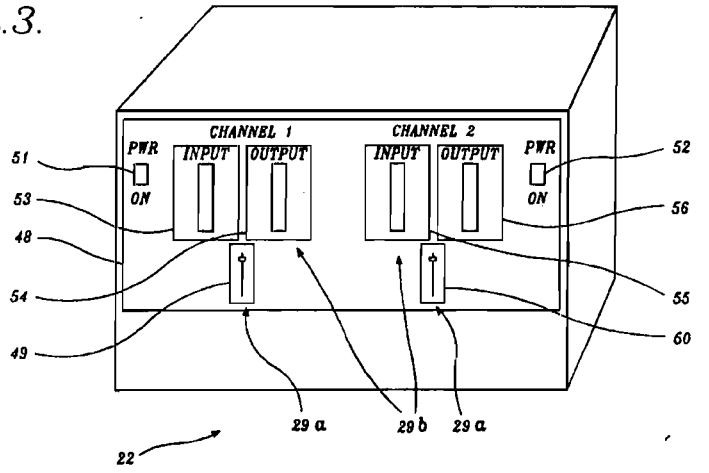
Warman explains that

> [t]ypically, non-computer system devices come equipped with a variety of internal and external feature controls 29a and feature displays 29b that are used to control and monitor the operation of such devices, including but not limited to volume controls, channel selectors, power switches, input and output meters, etc. (in FIG. 1, internal controls and displays are represented by phantom lines, while external controls and displays are represented by solid lines).

Col. 7, ll. 49-56. External controls are manually operable controls (col. 11, ll. 11-15). As shown in Figure 3, reproduced

below, the two-channel audio amplifier includes external controls in the form of power on/off switches 51 and 52 and faders 49 and 50 and displays in the form of level indicators 53-56.

Fig. 3.



Referring to Figure 6, the PC causes the amplifier controls and indicators to be depicted in a display screen window as visual device controls (VDCs) 49a-56a.

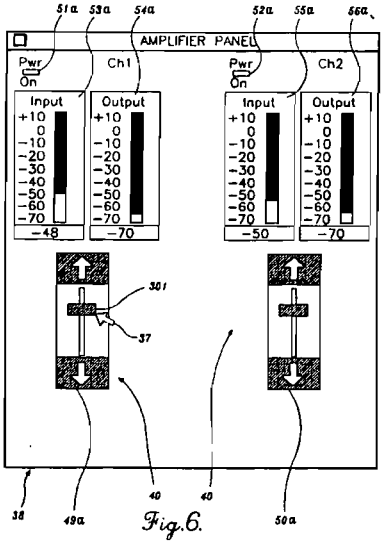


Fig. 6.

The levels in amplifier 22 can be controlled by using a mouse to move "knob" 301 up or down (col. 11, ll. 42-66).

As shown in Figure 2, depicted below, PC 20 includes an RS232 card 43 for communicating via bridge 45 and bus network 28 with interfaces 35 in the non-computer system devices.

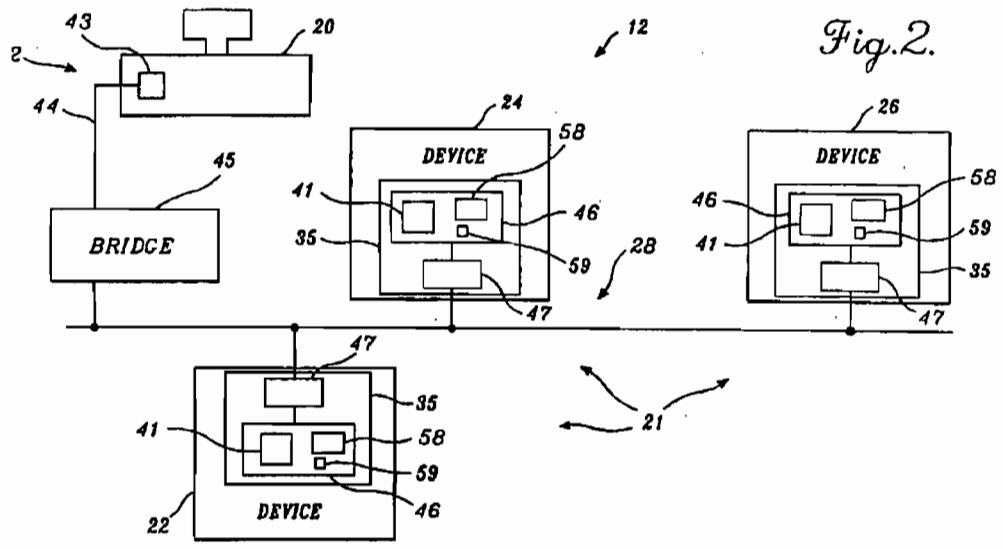


Fig. 2.

Each interface includes an input/output board 47 and a processor board 46, which includes a processor 41, a RAM 59, and an EEPROM 58 for storing part of the visual network operating system (col. 9, ll. 5-22), the major portion of which is stored in PC 20 (col. 12, ll. 41-45). The processor is used to send data packets to PC 20 advising it of manually effected changes of the manual (i.e., external) controls and is also responsive to data packets

sent from PC 20 to set the internal or external (manual) controls of the non-computer system to the values selected using PC 20 (col. 7, ll. 31-47).

The examiner reads claim 1 on Warman as follows. The recited "sub-system for selectively providing specific content information" is read on amplifier 22. The recited "computer coupled to the sub-system for running a software application to control the providing of the specific content information" is read on PC 20. The recited "first user-interface structure coupled to the computer for user-control of the specific content information via the interaction with the software application" is read on the graphical user interface shown in Figure 6. The recited "second user-interface structure coupled to the sub-system for user-control of the specific content information independently of the computer" is read on the amplifier's manually operable faders 49 and 50, shown in Figure 3.

Appellants argue that the manually operable amplifier controls are not independent of the computer for two reasons, neither of which is persuasive. The first reason is that because manual adjustments are reported to the computer so as to be reflected in the displayed VDCs (col. 12, ll. 7-14), "the manual control devices have a functional relationship with the

controlling system" and therefore "cannot be said to be independent of the controlling system" (Brief at 3). As correctly noted by the examiner, the recited "independence" is limited to control of the sub-system and therefore does not preclude reporting of manually effected control to the computer, which also occurs in Appellants' invention as disclosed (discussed supra) and as recited in Appellants' claim 3.

The second reason Appellants give for the lack of the required independence appears to be that processor board 46, which includes EEPROM 58 and processor 41, in the non-computer system device (1) is dependent on the portion of the visual network operating system which is stored in PC 20 and (2) is involved in manual control of the non-computer system device. Brief at 3-4. In support of the first point, Appellants correctly note that EEPROM 58 stores only part of the visual network operating system, of which the major part is stored in PC 20. However, claim 1 requires independence from the computer, not from the operating system and Appellants have not argued, let alone demonstrated, that the part of the operating system stored in EEPROM 58 is dependent on the part stored in PC 20.

Nor are we persuaded that EEPROM 58 and processor 41 are involved in manual control of the non-computer system device, as

argued by Appellants. In support of this argument, Appellants point to Warman's statements that "[t]he EEPROM 58 is used by the processor 41 for controlling the functionality of the amplifier 22 and stores a portion of the visual network operating system" (col. 9, ll. 15-17) and "[t]he processor boards 46 in the non-computer system devices 21 are further connected to these controls [29a] and displays [29b] to either control the devices directly or to control the devices in conjunction with other processors or controllers within the devices based upon packets received over the bus network 28" (col. 7, ll. 55-61). Brief at 3. These statements appear to be directed to PC control rather than manual control, the discussion of which begins at column 11, line 8-23 (by explaining that manual, external controls are optional). Thus, we do not agree with Appellants that the term "directly" in the second quoted statement means "manually." Instead, this statement means that the processor board is responsive to packets received over bus network 28 (e.g., from PC 20) to control the non-computer system device either (a) indirectly, via other processors or controllers within the non-computer system device, or (b) directly, i.e., without using other processors or controllers within the non-computer system device. Furthermore, the fact that processor board 41 is

connected to an external (i.e., manually operable) control so as to change its position in response to data packets from PC 20 does not imply that the processor board has a controlling function during manual adjustment of the external control. Consequently, we agree with the examiner (Answer at 4-5) that the only role Warman attributes to processor 41 during manual control is to communicate any manually effected changes to PC 20, which function, as noted above, is not inconsistent with independent control of the non-computer system device.

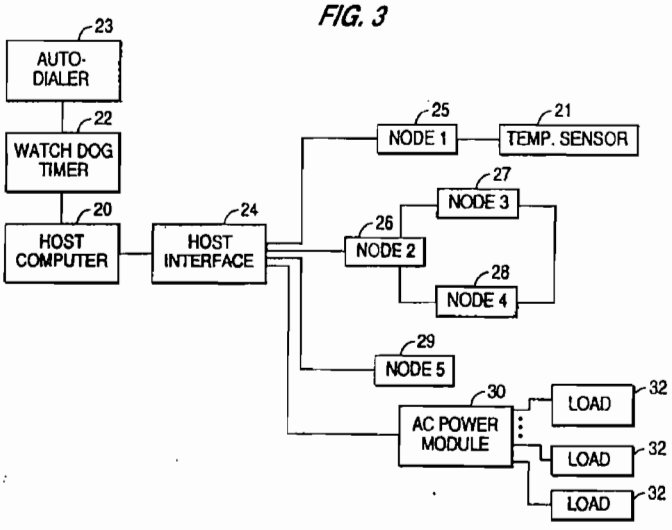
For the foregoing reasons, the § 102(e) rejection of claim 1 as anticipated by Warman is affirmed, as is the rejection on the same ground of claims 2 and 3, which Appellants treat as standing or falling with claim 1. Brief at 3.

We note that where, as suggested by Warman, a second personal computer is connected to the network (col. 12, ll. 5-7), the claim language does not appear to preclude the recited first user-interface structure from being read on the first personal computer and the recited second user-interface structure from being read on the second computer.

F. The merits of the § 103(a) rejection

Humphries discloses home automation system which comprises a number of sub-systems for controlling various aspects of a house, such as a security sub-system, an HVAC sub-system, a lighting control sub-system, and an entertainment sub-system. As generally shown in FIG. 3, reproduced below, the system includes a circuit which is referred to as a "watch dog timer" 22.

FIG. 3



The watch dog timer periodically monitors the host computer 20 to verify that the home automation system remains active; if the system fails to indicate that it still is on line, the watch dog timer 22 can initiate a call over the telephone lines to an off-site location and indicate that the system is not active.

Column 8, lines 48-54. The watch dog timer includes a "power-up reset circuit" in the form of elements which "provide a time constant which holds the input to the base of a transistor for sufficient time to permit the system to power up." Column 9, lines 7-14. We agree with Appellants (Brief at 5) that the function of the power-up reset circuit is to prevent the watch dog timer circuit from giving a false indication during power up, not to reset the system in the event the watch dog timer circuit determines that the system is no longer on-line, as asserted by the examiner (Answer at 6). Consequently, the examiner is incorrect to argue that it would have been obvious to "incorporate the watch dog timer circuitry of Humphries ('662) into the apparatus of Warman ('221) because it provides a means to monitor the system of [sic] errors and enable rebooting of the system while enabling a user to control over the sub-system." Id.

Consequently, we cannot sustain the § 103 rejection of claims 4-9 based on Warman in view of Humphries.

G. Summary

The § 102(e) rejection of claims 1-3 based on Warman is affirmed. The § 103(a) rejection of claims 4-9 based on Warman in view of Humphries is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JAMES D. THOMAS Administrative Patent Judge	)
ERROL A. KRASS Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
JOHN C. MARTIN Administrative Patent Judge	)

JCM/sld

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