

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte TOSHIO KOYAMA, MICHIKO MOCHIZUKI,  
KAYANO HASHIMOTO, and SATOSHI YAMAMOTO

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Appeal No. 96-0139  
Application 08/037,683<sup>1</sup>

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HEARD DECEMBER 8, 1998

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

MARTIN, Administrative Patent Judge.

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<sup>1</sup> Application for patent filed March 25, 1993, as a  
continuation of Application Serial No. 07/778,592, filed  
October 17, 1991. Appellants claim the benefit under 35  
U.S.C. § 119 of the following application:

P300284/90            Japan            November 6, 1990

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**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 3-5 and 7, all of the pending claims, under 35 U.S.C. §§ 112 and 103.<sup>2</sup> We reverse both rejections.

The invention relates to video tape recorders (VTRs) having a built-in camera unit and an electronic viewfinder. In the prior art VTR shown in Figure 1, the camera unit 1 includes an imager device 3 supplying an analog signal to signal processor 4, which generates an composite analog video signal V on line 5 (Spec. at 1, lines 18-25). The electronic viewfinder 7 includes a circuit 8 for separating the Y and C components and applying them to a decoder 9, which applies analog R, G, and B signals to LCD (liquid crystal display) driver 10 for driving LCD 11 (Spec. at 1, line 26 to 2, line 3). This circuit arrangement is described as suffering from the problem that "the waveform of the analog composite video signal V is

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<sup>2</sup> Claim 2, which was rejected in the final Office action, was canceled by the "THIRD AMENDMENT AFTER FINAL," which was filed and entered approved for entry by the examiner after mailing of the Answer.

distorted by a stray impedance of the line 5 or the like or the waveform of the signal is distorted due to the filter-processing or the like in the Y/C separating circuit 8" (Spec. at 2, lines 15-19), thereby degrading the quality of the LCD image (id. at lines 19-20).

Appellants solve this problem by replacing some of the analog processing circuitry and line 5 with digital circuitry and a bidirectional digital bus. As shown in Figure 2, the analog signal generated by imager device 3 is converted to a digital video signal VD by a signal processor 14, which the specification (at 4, lines 1-4) indicates includes a microprocessor and an analog-to-digital converter. The digital video signal is supplied via a bidirectional bus 15 to a decoder driver 19, which produces the analog signals required to drive the LCD viewfinder 11. The bidirectional bus also permits "the viewfinder 17 . . . to have its own peculiar function. For example, only in the viewfinder 17 side, the color adjustment can be effected in accordance with the user's taste by the microcomputer on the camera 21 side" (Spec. at 5, lines 15-18).

Claim 4 is representative:

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4. A video tape recorder (VTR) having a built in video camera comprising:

a camera unit having an imager device for receiving a light image and converting said light image into an analog image signal representative thereof, and a signal processing circuit supplied with said analog image signal from said imager device and providing a video digital output signal representative thereof for transmission in digital form to a viewfinder for said camera, said signal processing circuit including a microcomputer for controlling said signal processing circuit, and an analog-to-digital converter to convert the analog image signal to a digital output signal; and

a bus transmitting said video digital output signal from said signal processing circuit to said viewfinder and for providing bidirectional communication between said camera unit and said view finder [sic, viewfinder];

said viewfinder having a decoder supplied with said digital video output signal from said signal processing circuit of said camera unit through said bus, said decoder providing an analog output signal representative of said digital video signal thereof, and a liquid crystal display device for receiving said analog output signal from said decoder and providing an image representative thereof which is displayed on said liquid crystal display device.

Although the Answer lists nine references, only the following two references are relied on the new ground of

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rejection given in the Answer, which is the only art rejection argued in the Answer:<sup>3</sup>

Maemori	4,837,817	June 6, 1989
Kondo	5,142,272	August 25, 1992

Prior to addressing the art rejection, we will consider the rejection under § 112, second paragraph. We note that the rejection of claim 5 thereunder as being an improper hybrid claim

has been mooted by the entry of the "THIRD AMENDMENT AFTER FINAL," which replaced the phrase "is fabricated as" with --comprises--. Hence, the § 112 rejection of claim 5 is not repeated in the Supplemental Examiner's Answer.

Claims 3, 4, and 7 stand rejected under the second paragraph of § 112 as "vague and indefinite because the Examiner cannot figure out how the microcomputer is arranged in order to control the signal processing circuit (noting in general, a signal processing circuit includes a gamma circuit, color separating circuit, etc.)" (Answer at 3). This

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<sup>3</sup> Appellants correctly surmise that because the rejections given in the final Office action are not mentioned in the Answer, they should be treated as withdrawn (Reply Brief at 3).

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reasoning does not support a rejection under the second paragraph of § 112. Under that paragraph, an applicant may claim what he regards as his invention as broadly as he wishes, provided the claim is not ambiguous; the question of whether the claimed subject matter is enabled by the application disclosure is an issue under the first paragraph of § 112. See In re Borkowski, 422 F.2d 904, 909, 164 USPQ 642, 645-46 (CCPA 1970):

The first sentence of the second paragraph of §112 is essentially a requirement for precision and definiteness of claim language. If the scope of subject matter embraced by a claim is clear, and if the applicant has not otherwise indicated that he intends the claim to be of a different scope, then the claim does particularly point out and distinctly claim the subject matter which the applicant regards as his invention. That is to say, if the "enabling" disclosure of a specification is not commensurate in scope with the subject matter encompassed by a claim, that fact does not render the claim imprecise or indefinite or otherwise not in compliance with the second paragraph of § 112; rather, the claim is based on an insufficient disclosure (§ 112, first paragraph) and should be rejected on that ground. See In re Fuetterer, 50 CCPA 1453, 319 F.2d 259, 138 USPQ 217 (1963); In re Kamal, 55 CCPA 1409, 398 F.2d 867, 158 USPQ 320 (1968); and In re Wakefield, 164 USPQ [636, 422 F.2d 897 (CCPA 1970)], decided concurrently herewith. [Footnotes omitted; emphasis in original.]

See also In re Cormany, 477 F.2d 998, 999-1000, 177 USPQ 450, 451 (CCPA 1973) (indefiniteness of claim language and

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inadequate support for it in the specification are distinct questions); and

In re Miller, 441 F.2d 689, 693, 169 USPQ 597, 600 (CCPA 1971) (breadth should not be confused with indefiniteness). Because the examiner has not demonstrated (or even alleged) that the claims are ambiguous, the rejection of claims 4 and 7 under the second paragraph of § 112 is reversed.

Turning now to the art rejection, claims 3-5 and 7 stand rejected under § 103 for obviousness over Kondo in view of Maemori. Kondo discloses methods and apparatus for compressing digital color signals to reduce the size of the memory required to store data representing a color image (col. 1, lines 10-38; col. 2, lines 23-26). Referring to Figure 1 of Kondo and to column 4, line 44 to column 5, line 6, Kondo's system includes a video camera 1 for generating analog signals, A/D converters 2R, 2G, and 2B for converting the analog signals to digital R, G, and B video signals, VRAMs 3R, 3G, and 3B for temporarily storing 8-bit R, G, and B color data for each pixel of a 2048 x 2048 pixel picture, a CPU 5, ROM 6, and RAM 7 for compressing the color data into compressed color display data dd, a recording

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device 8, such as a hard disk or floppy disc, for storing the compressed color display data, a modem 9 for transmission of the compressed color display data, and a color video display circuit 10 for decoding the compressed color display data into analog R, G, and B signals for driving a color monitor CRT (cathode-ray tube) 20 (col. 5, lines 5-6). Referring to Figure 6, color video display circuit 10 includes a display memory 11 having a capacity of (pixels of one image) x 8 bits (col. 7, lines 5-6) and also includes memories 12R, 12G, and 12B which function as a color look-up table (col. 7, lines 17-20). The compressed color display data dd may be applied directly to display memory 11 as it is generated or after it has first been stored in RAM 7 (col. 9, lines 4-8). Alternatively, the compressed color display data can be stored in a floppy disc 8 or the like (col. 17, lines 24-27).

Maemori discloses a video tape recorder (see magnetic head 19 in Fig. 3, described at col. 2, lines 45-48) having a camera body 1 containing a CCD imager device 15 (Fig. 3). Detachably mounted on the camera body is a unit 9 which includes an LCD viewfinder display 7 and remote control

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switches 8 for controlling zooming and exposure adjustment of the camera as well as the start/stop, rewinding, fast forwarding, reproducing and temporary stop operations of the recording deck (col. 2, lines 1-22). The detachable unit can be used as a remote control device when it is connected to the camera body via a cable 12, as shown in Figure 2, in which case the LCD display 7 still functions as a viewfinder (col. 2, line 65 to col. 3, line 5). In camera body 1, the output of the CCD imager 15 is fed to a matrix (not shown), which generates color difference signals and luminance signals (col. 2, lines 33-38), which are applied to color coder 16, which outputs a video signal (col. 2, lines 38-40). In signal processing circuit 17 this signal is converted to a recording format, such as FM (col. 2, lines 40-44). When the viewfinder is in operation, color coder 16a in the camera body converts the FM signal back to color difference and luminance signals for application via cable 12 to detachable control section 9, where those signals are converted by YC signal processor 21 into video signals suitable for application to LCD driver 22 (col. 2, line 53 to col. 3, line 5). Though Maemori does not

state that the color difference and luminance signals sent from camera body 1 to the detachable unit are analog rather than digital, that appears to be the case (the examiner does not contend otherwise). However, Maemori's cable clearly is bidirectional because it passes video signals in one direction and remote control signals in the other.

The examiner contends<sup>4</sup> that (1) it would have been obvious in view of Maemori to replace Kondo's CRT 20 with an LCD device and (2) in Kondo thus modified the color video display circuit 10 and the substituted LCD device will function as the claimed "viewfinder": "[A]lthough Kondo does not name the CRT 20 and display circuit 10 as a viewfinder, one of ordinary skill in the art would recognize the combination as a viewfinder, because a viewfinder is nothing but a CRT and display circuit is [sic, omit 'is'?] attached to a video camera for viewing an image object being taken by the camera" (Answer at 8). We agree with the examiner and appellants that the term "viewfinder" as used in appellants' claims requires an electronic display which is mounted (either permanently or

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<sup>4</sup> Answer at 6.



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This reference discloses video camera circuitry for used in a VTR having an electronic viewfinder (col. 2, lines 58-65). The circuitry shown in Figure 25 includes a solid state imaging device 202, an A/D converter 501, a digital processing circuit 502, whose output is connected to an electronic viewfinder 209 via a D/A converter 503 and a gate circuit 601. However, even if it is assumed for the sake of argument that it would have been obvious in view of Maemori to implement Kinugasa's viewfinder 209 as an LCD, the resulting combination would not satisfy the "bidirectional communication" requirement of the appealed claims.

REVERSED

	)	
JAMES D. THOMAS	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
JOHN C. MARTIN	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JAMES T. CARMICHAEL	)	

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Administrative Patent Judge )

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