

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. 35

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AKIHIRO TAKAHASHI and KOUHEI IKETANI

Appeal No. 2002-0303
Application No. 08/831,872

Heard: January 7, 2003

Before HAIRSTON, DIXON, and SAADAT, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-3, 5-8, 10-13, 15, 16, 18-21, 23-26, 28, 29, 31-34, and 36-41, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

Appellants' invention relates to a video-signal processing device connectable to an electronic endoscope. The device has a serial digital video signal output from the video signal processing device to a piece of compatible external digital peripheral equipment. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A video-signal processing device connectable to a video processor of an electronic endoscope, comprising:

a system that feeds at least one kind of electric analog video signal, obtained from the video processor of said electronic endoscope, to a piece of analog peripheral equipment;

an insulation coupler, intercepting the electric analog video signal between the video processor of said electronic endoscope and the system, that electrically insulates all electrical connections of the video processor of said electronic endoscope to said device;

an analog-to-digital converter that converts the electric analog video signal into a parallel electric digital video signal; and

a parallel-to-serial converter that converts the parallel electric digital video signal into a serial electric digital video signal, and that feeds the serial electric digital video signal from the video-signal processing device to a piece of compatible external digital peripheral equipment.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

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Kikuchi	4,853,772	Aug. 01, 1989
Nagasaki et al. (Nagasaki)	5,138,458	Aug. 11, 1992

Claims 1-3, 5-8, 10-13, 15, 16, 18-21, 23-26, 28, 29, 31-34, and 36-41 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kikuchi in view of Nagasaki.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 28, mailed Aug. 13, 2001) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 26, filed Jul. 11, 2001) and reply brief (Paper No. 30, filed Oct. 15, 2001) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

At the outset, we note that appellants have elected to group all of the independent claims and their dependent claims together except for dependent claims 5, 10, 15, 18, 20, 23, and 31 which will stand or fall as a second group.¹ (See brief at

¹ Additionally, we note that the examiner has not restated the rejection of dependent claims 5, 10, 15, 18, 20, 23, and 31 in the answer, but did not expressly withdraw the rejection and indicate allowability. Therefore, we will address these claims as rejected in the final rejection.

page 9.) We will select independent claim 1 as the representative claim for group one and dependent claim 5 as the representative claim for group two.

GROUP ONE

Appellants argue that each of the independent claims recites at least a video signal processing device which is connectable to an electronic endoscope and that feeds a serial electric digital video signal from a video-signal processing device to a piece of compatible external digital peripheral equipment which is not taught or rendered obvious by either reference. (See brief at page 9.) We disagree with appellants, and note that both Kikuchi and Nagasaki are directed to imaging with an endoscope, and Nagasaki teaches that a video movie camera may be employed and still images are fetched and stored in “mass storage of a digital VTR, a digital video file, or the like.” (See Kikuchi at column 2, line 34 and Nagasaki at column 10, lines 28-33.) Even though Nagasaki does not specifically address whether the “mass storage of a digital VTR” is the same mass storage 25 which is shown in Figure 8 and discussed in columns 10 and 11, and the examiner did not rely on this portion of Nagasaki as the external peripheral, it is our opinion that the parallel to serial and serial to parallel conversions and data compression and decompression would have either implied or taught the use of an external digital peripheral or would have suggested to one of

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ordinary skill in the art to use an external digital peripheral for storage and later retrieval for archiving thereof. Therefore, we find that Nagasaki teaches and fairly suggests the output of both an analog video output signal and a digital video output signal to peripheral devices.

Appellants argue that the term “peripheral equipment” is clear and well defined. Appellants have proffered the definition from the Microsoft Computer Dictionary that refers to devices that are connected to a computer and are controlled by its microprocessor. The IEEE Dictionary and the McGraw-Hill Dictionary tend to focus on the fact that the unit is external to the basic unit and not part of the unit itself. All of these definitions appear to be reasonable though slightly varied. Appellants argue that the common denominator is that the equipment is nonessential to the basic unit, but working together with the basic unit. (See brief at page 11.) We accept this definition as a reasonable version of the ordinary definition.

With the above definition, appellants argue that Kikuchi does not disclose a video signal processing device which is connectable to an electronic endoscope and that feeds a serial electric digital video signal from a video signal processing device to a piece of compatible external digital peripheral equipment as set forth in the independent claims. (See brief at pages 12-13.) We agree with appellants.

With the above definition, appellants argue that Nagasaki does not disclose a video signal processing device which is connectable to an electronic endoscope and that feeds a serial electric digital video signal from a video signal processing device to a piece of compatible external digital peripheral equipment as set forth in the independent claims. (See brief at pages 14-15.) We disagree with appellants. The examiner maintains that Nagasaki teaches the use of parallel to serial converters and that skilled artisans would have been motivated to incorporate the use thereof into the arrangement of Kikuchi. (See answer at page 4.) The examiner maintains that the motivation would have been for the transmission of the digital signal to a remote location for high quality image. While we would agree with the examiner that this may be a compelling motivation, we find no express teaching in Nagasaki or Kikuchi to suggest this transmission. The examiner appears to modify the rejection in the response to the arguments section where the examiner relies upon assembly 26, 27, 28, and 29 in Figure 8 of Nagasaki as an external peripheral device. (See answer at page 4.) While the examiner leaves a question as to the exact portion of Nagasaki or Kikuchi that would provide the serial electric digital video signal from a video signal processing device to a piece of compatible external digital peripheral equipment as set forth in the independent claims, it is clear from the teachings of Nagasaki and the various embodiments that there are a great number of alternatives in the processing and output

of the imaged data. For example, at column 10, Nagasaki teaches that the embodiment in Figure 1, which uses a video movie camera (see column 5, line 52), may use a storage medium which is not shown. (See column 10, line 22-36.) Nagasaki states that

In the above-described embodiment [Figure 1], a video movie camera is exemplified, which continuously picks up images of a target object every image display period so as to perform image display. Recently, however, various types of electronic still cameras for picking up still images by using the solid-state image pickup element 1 have been developed. For example, while images continuously picked up by a solid-state image pickup element incorporated in an endoscope are monitored, a given image is fetched as a still image and is stored in a mass storage of a digital VTR, a digital video file, or the like.

When the present invention is to be applied to such a digital electronic still system, an arrangement of, e.g., the second embodiment shown in FIG. 8 may be employed. The same reference numerals in FIG. 8 denote the same parts as in FIG. 1.

Here, Nagasaki teaches that the mass storage may be a “digital VTR, a digital video file, or the like,” but does not limit the mass storage device to element 25 in Figure 8. From the teaching of a mass storage device, such as a digital video tape recorder (VTR), we find that these storage devices would be digital peripheral devices which meet the above definition of equipment that is “nonessential to the basic unit, but working together with the basic unit.” In our view, if the mass storage device were element 25, the parallel to serial and serial to parallel converters or the modulator/demodulator would be the point of connection for a VTR or other mass

storage device for retaining or archiving the image data. In our view, in the claimed and disclosed imaging system, the storage of the data is not part of the basic unit or a function of the device. Therefore, the mass storage device would have been an external digital peripheral device.

Appellants argue that Nagasaki teaches away from external peripheral equipment by being integral and internal to the Nagasaki camera. (See brief at page 14.) We find no express support for appellants' conclusion. Appellants provide no citation to Nagasaki to support the finding that the mass storage is required to be integral and internal to the Nagasaki camera. Therefore, this argument is not persuasive.

Appellants argue that the recording modulator would not function absent the [playback] assembly (26-29). Appellants argue that the assembly is essential to the recording modulator. (See brief at page 15.) Appellants argue that under the definitions provided in the brief, the assembly 26-29 cannot be considered an external digital peripheral device. (See brief at page 15-16.) We disagree with appellants as discussed above with respect to the VTR.

Appellants argue that the examiner fails to show motivation to combine the teachings of Kikuchi and Nagasaki. (See brief at page 17-18.) Appellants further argue that there is no motivation to combine the endoscope of Kikuchi and the camera of

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Nagasaki. (See brief at page 18.) We disagree with appellants. From our review, Nagasaki teaches at column 10 that its (video or still) camera can be used in an endoscope. Therefore, we find a similar field of endeavor for the skilled artisan to look for related teachings. Therefore, this argument is not persuasive.

Appellants argue the alternative combination of Kikuchi and Nagasaki at pages 19-24 of the brief. These arguments parallel the arguments addressed above which we did not find persuasive.

Additionally, appellants argue that the examiner's statement of the rejection is internally inconsistent. (See reply brief at page 3.) We agree with appellants that the statement of the rejection could be better, but the basic combination of the two teachings and respective embodiments relied upon are clear in our view. With respect to the statement of the prior art that addresses the last element of the claimed invention, appellants argue that the examiner failed to assert what corresponds to this limitation. (See reply brief at page 3.) We disagree with appellants and find that the examiner directed attention to the assembly 26-29 as teaching an external digital peripheral device. Additionally, we note that the portion of Nagasaki addressing the teachings of the mass storage and its I/O teaches and suggests the use of external digital peripheral devices as detailed above. The reply brief repeats arguments that the individual teachings of the references are lacking and there is no motivation for the

combination as discussed above. These arguments are not persuasive, as discussed above. Since we find that appellants have not adequately rebutted the case of obviousness over the combination of Kikuchi and Nagasaki, we will sustain the rejection of independent claim 1 and the claims grouped therewith.

GROUP TWO

With respect to dependent claims 5, 10, 15, 18, 20, 23, and 31, the examiner relied upon the teachings of Kikuchi with respect to the use of optical isolators in Figure 5 as an input medium to isolate the input. From this teaching, the examiner extrapolates that it would have been obvious to one of ordinary skill in the art at the time of the invention to advantageously transmit the optical signal from one place to another place. (See Final rejection (Paper No. 23) pages 4-5 and answer at page 5.) Appellants argue that the examiner provides no evidence to support the rejection. (See brief at page 26.) We agree with appellants and disagree with the examiner's modification of the teachings of Kikuchi wherein the examiner has used an optical isolation teaching to suggest the use of an optical output of the serial digital signal. We find no convincing line of reasoning and no express teaching in either reference to support the examiner's conclusion. Therefore, this argument by the examiner is not persuasive, and we will not sustain the rejection of dependent claims 5, 10, 15, 18, 20, 23, and 31.

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CONCLUSION

To summarize, the decision of the examiner to reject claims 1-3, 6-8, 11-13, 16,19, 21, 24-26, 28, 29, 32-34, and 36-41 under 35 U.S.C. § 103 is affirmed, and the decision of the examiner to reject dependent claims 5, 10, 15, 18, 20, 23, and 31 under 35 U.S.C. § 103 is reversed.

AFFIRMED-IN-PART

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MAHSHID D. SAADAT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	
JOSEPH L. DIXON)	
Administrative Patent Judge)	

jld/vsh

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GREENBLUM & BERNSTEIN
1941 ROLAND CLARKE PLACE
RESTON, VA 20191