

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES STEARNS

Appeal No. 2001-2573
Application No. 09/070,486

ON BRIEF

Before JERRY SMITH, BARRY and LEVY, Administrative Patent Judges.
JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-20, which constitute all the claims in the application.

The disclosed invention pertains to a method for converting digitized image pixel values from an input dynamic range to an output dynamic range

Appeal No. 2001-2573
Application No. 09/070,486

Representative claim 1 is reproduced as follows:

1. A method for converting digitized image pixel values from a first range to a second range, the method comprising the steps of:

- (a) determining a lower limit value of a relevant portion of the first range based upon non-log transformed pixel values;
- (b) generating an intensity histogram representative of pixel populations having specified intensities, and transforming the histogram to generate a log-transformed histogram;
- (c) identifying a threshold value for an upper limit of log-transformed values from the log-transformed histogram;
- (d) identifying a population of pixels having log-transformed values having a desired relationship to the threshold value;
- (e) determining an upper limit value of the relevant portion of the first range based upon the identified population; and
- (f) converting the non-log transformed pixel values to converted values over the second range based upon the lower and upper limit values.

The examiner relies on the following references:

Hara et al. (Hara)	4,950,894	Aug. 21, 1990
Shimura	5,060,081	Oct. 22, 1991
Kobayashi et al. (Kobayashi)	5,757,022	May 26, 1998
		(filed Oct. 17, 1996)

Claims 1-20 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Kobayashi in view of Shimura with respect to claims 1-6, 8-10 and 14-19, and the examiner adds Hara with respect to claims 7, 11-13 and 20.

Appeal No. 2001-2573
Application No. 09/070,486

Rather than repeat the arguments of appellant or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-20. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v.

Appeal No. 2001-2573
Application No. 09/070,486

John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048,

Appeal No. 2001-2573
Application No. 09/070,486

1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR § 1.192(a)].

We consider first the rejection of claims 1-6, 8-10 and 14-19 based on the teachings of Kobayashi and Shimura. With respect to independent claims 1, 9 and 14, the examiner essentially finds that Kobayashi teaches the claimed invention except that Kobayashi does not teach a log-transformed histogram or the determination of an upper limit value based on the log-transformed histogram. The examiner cites Shimura as teaching a system similar to the system of Kobayashi except that Shimura teaches using log-transformed histograms. The examiner finds that it would have been obvious to the artisan to include the Shimura method in the Kobayashi process in order to produce images of better quality [answer, pages 3-7].

Appellant argues that the examiner has failed to establish a prima facie case of obviousness because the examiner has not pointed to anything within the applied prior art to show the desirability of making the combination proposed by the examiner. Specifically, appellant argues that Kobayashi does not suggest the use of log-transformed histograms, while Shimura teaches conversions based only on log-transformed histograms. Appellant

Appeal No. 2001-2573
Application No. 09/070,486

argues that since the claimed invention recites the combined use of log-transformed histograms and non-log-transformed histograms, and since the applied prior art teaches using only log-transformed histograms or only non-log-transformed histograms, there is no suggestion to combine the two techniques in the precise manner recited in appellant's claims [brief, pages 4-14].

The examiner responds that the motivation to combine the references comes from Shimura's teaching that using log-transformed values provides higher quality output signals. The examiner also responds that appellant cannot attack the references individually when the rejection is based on a combination of the references [answer, pages 8-12].

We will not sustain the examiner's rejection of independent claims 1, 9 and 14 for essentially the reasons argued by appellant in the brief. Although Kobayashi and Shimura are each similar to the claimed invention in the result they intend to achieve, each reference achieves the result in a different manner, and there is no suggestion within these references to combine them in the manner required to meet the claimed invention. The claimed invention requires that the lower limit value be calculated using the non-log-transformed values while the upper limit value is calculated using the log-transformed values. As noted above, Kobayashi calculates both limits using non-log-transformed values while

Appeal No. 2001-2573
Application No. 09/070,486

Shimura calculates both limits using log-transformed values. The examiner has not identified anything in either reference which would have led the artisan to use non-log-transformed values for only the lower limit value while using log-transformed values for only the upper limit value. The teachings of Shimura would have led the artisan to modify Kobayashi by performing all calculations on log-transformed values, rather than just the upper limit calculations. The examiner has never addressed the thrust of appellant's position that there is no teaching or suggestion for combining non-log-transformed data processing with log-transformed data processing. The claims on appeal all require that log-transformed data be combined with non-log-transformed data in a specific manner which is not taught by the applied references and which is not properly addressed by the examiner.

Since we have not sustained the examiner's rejection of independent claims 1, 9 and 14, we also do not sustain the rejection of dependent claims 2-6, 8, 10 and 15-19. Although claims 7, 11-13 and 20 were rejected using the additional teachings of Hara, Hara does not overcome the deficiencies of the main combination of references discussed above. Therefore, we also do not sustain the rejection of any of claims 7, 11-13 and 20.

Appeal No. 2001-2573
Application No. 09/070,486

In summary, we have not sustained either of the examiner's rejections of claims 1-20. Therefore, the decision of the examiner rejecting claims 1-20 is reversed.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LANCE LEONARD BARRY)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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STUART S. LEVY)	
Administrative Patent Judge)	

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Appeal No. 2001-2573
Application No. 09/070,486

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