

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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte TATSUYA AOYAMA  
and WATARU ITO

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Appeal No. 2000-2066  
Application No. 08/829,471

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HEARD: April 25, 2002

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Before RUGGIERO, LALL, and BARRY, Administrative Patent Judges.  
RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 2-6, 8, 9, and 24. Claims 1 and 18 were canceled earlier in the prosecution, and claims 10-17 have been indicated by the Examiner to contain allowable subject matter subject to being rewritten in independent form to include all the limitations of the base and intervening claims. In response to Appellants' Brief on Appeal, the Examiner withdrew several rejections and indicated that claims 2-7 and 19-30 are allowed. Accordingly, only the rejection of claims 8 and 9 is before us on appeal.

The claimed invention relates to a method of interpolating an image signal from original image signal components representing a plurality of sampling points arrayed at predetermined intervals in a lattice-like form. A determination is made whether an interpolation point belongs to an image edge portion in which a sharp contrast edge is present or belongs to a flat portion in which a sharp edge is not present. Based on this determination, a particular interpolation operation process is selected. In the case where the interpolation point is determined to belong to the flat portion, an interpolation process is selected with which the sharpness of the flat portion is rendered variable.

Claim 8 is illustrative of the invention and reads as follows:

8. An interpolating operation method for an image signal, wherein an interpolated image signal component corresponding to an interpolation point is calculated from original image signal components of an original image signal representing an original image, which represent a plurality of sampling points arrayed at predetermined intervals and in a lattice-like form, the method comprising the steps of:

- i) making a judgment as to whether the interpolation point belongs to an image edge portion, at which a change in the original image signal is sharp, or belongs to a flat portion, at which the change in the original image signal is unsharp, and
- ii) changing interpolating operation processes, one of which is to be employed for the interpolation point, over to each other in accordance with the results of the judgement; and

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wherein the interpolating operation process, which is employed in cases where, as result of said judgement, it has been judged that the interpolation point belongs to a flat portion, is an interpolating operation process, with which the sharpness of the flat portion is rendered variable.

The Examiner relies on the following prior art:

Perlmutter	4,876,509	Oct. 24, 1989
Sekine et al. (Sekine)	5,754,710	May 19, 1998
		(filed Mar. 18, 1996)

Claim 8 stands finally rejected under 35 U.S.C. § 102(e) as being anticipated by Sekine. Claim 9 stands finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Sekine in view of Perlmutter.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs<sup>1</sup> and Answer for the respective details.

#### OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner and the evidence of anticipation and obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set

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<sup>1</sup> The Appeal Brief was filed November 5, 1999 (Paper No. 13). In response to the Examiner's Answer dated January 18, 1999 (Paper No. 15), a Reply Brief was filed March 13, 2000 (Paper No. 16), which was acknowledged and entered by the Examiner in the communication dated March 30, 2000 (Paper No. 18).

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forth in the Briefs 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 disclosure of the Sekine reference fully meets the claim recitations as set forth in claim 8. We are further of the view that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in the appealed claim 9. Accordingly, we affirm.

We consider first the Examiner's 35 U.S.C. § 102(e) rejection of claim 8 as being anticipated by Sekine. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

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With respect to independent claim 8, the Examiner indicates (Answer, page 4) how the various limitations are read on the disclosure of Sekine. In particular, in addressing the variable sharpness feature of claim 8, the Examiner points to the description of the selection of the first and second interpolation techniques at column 2, lines 28-35 and 54-64 of Sekine. In our view, the Examiner's analysis is sufficiently reasonable that we find that the Examiner has at least satisfied the burden of presenting a prima facie case of anticipation. The burden is, therefore, upon Appellants to come forward with evidence and/or arguments which persuasively rebut the Examiner's prima facie case. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Brief have not been considered [see 37 CFR § 1.192(a)].

Appellants' arguments in response focus on their contention (Brief, pages 8 and 9; Reply Brief, pages 1-3) that the interpolation selection technique described by Sekine does not provide for the ability "...to vary the sharpness of the same image." (Brief, page 8). In Appellants' view, the disclosed automatic selection of interpolation methods in Sekine cannot provide for a variation in image sharpness as claimed.

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After reviewing the disclosure of Sekine in light of the arguments of record, we are in agreement with the Examiner's position as stated in the Answer. As alluded to by the Examiner (Answer, page 6), Appellants' arguments are not commensurate with the scope of claim 8. As the Examiner noted, there is nothing in the claim language which requires a variation in image sharpness to be performed manually or automatically. Further, we find no language in the claim which requires a variation in sharpness of the same image as argued by Appellants. We agree with the Examiner (id. at 6) that "[a]s long as the different interpolations applied to different portions result in different degrees of sharpness, the sharpness 'varies' and the requirements of the claim language have been met." In other words, when Sekine selects a particular interpolation method based on a determination that an interpolation point falls in a flat portion of an image, the result of the application of the selected interpolation technique is an image whose sharpness is varied with respect to an image edge portion.

We do not totally disagree with Appellants' contention that the interpolation selection technique described by Sekine differs from that disclosed by Appellants. It is apparent to us, however, that any distinctions that might be associated with such differences are not set forth in appealed claim 8. In our view,

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Appellants' arguments improperly attempt to narrow the scope of the claim by implicitly adding disclosed limitations which have no basis in the claim. See In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Accordingly, since all of the claimed limitations are present in the disclosure of Sekine, the Examiner's 35 U.S.C. § 102(e) rejection of claim 8 is sustained.

Turning to the Examiner's 35 U.S.C. § 103(a) rejection of dependent claim 9 based on the combination of Sekine and Perlmutter, we sustain this rejection as well. In addressing the limitations of claim 9, which set forth a spline interpolation process for varying the sharpness of the image flat portion, the Examiner points to the disclosure of such a technique in Perlmutter. We find no arguments from Appellants that convince us of any error in the Examiner's assertion (Answer, page 5) of the obviousness to the skilled artisan of selecting a spline interpolation process on determination of an interpolation point falling in a flat portion of an image. As pointed out by the Examiner, the claimed sharpness variability requirement is provided by Sekine. The spline interpolation teachings of Perlmutter are applied in combination with Sekine to provide a basis for the obviousness rejection. One cannot show nonobviousness by attacking

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references individually where the rejections are based on combinations of references. In re Keller, 642 F. 2d 413, 425, 208 USPQ 871, 881 (CCPA 1981); In re Merck & Co., Inc., 800 F. 2d 1091, 1096, 231 USPQ 375, 380 (Fed. Cir. 1986).

In conclusion, we have sustained the Examiner's 35 U.S.C. § 102(e) rejection of claim 8 as well as the 35 U.S.C. § 103(a) rejection of claim 9. Therefore, the decision of the Examiner to reject claims 8 and 9 is affirmed.

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

AFFIRMED

JOSEPH F. RUGGIERO	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
PARSHOTAM S. LALL	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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	)	
LANCE LEONARD BARRY	)	
Administrative Patent Judge	)	

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# **Letty**

JUDGE RUGGIERO

APPEAL NO. 2000-2066

APPLICATION NO. 08/829,471

APJ RUGGIERO

APJ BARRY

APJ LALL

DECISION: **AFFIRMED**

**PREPARED:** Jul 21, 2003

**OB/HD**

**PALM**

**ACTS 2**

**DISK (FOIA)**

**REPORT**

**BOOK**