UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC.
Requester

v.

AT&T INTELLECTUAL PROPERTY II, L.P.
Patent Owner and Appellant

Appeal 2015-007847
Reexamination Control 95/002,353
Patent US 7,454,071 B2
Technology Center 3900

Before RICHARD M. LEBOVITZ, JEFFERY B. ROBERTSON, and ANDREW J.DILLON, *Administrative Patent Judges*.

DILLON, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Owner appeals under 35 U.S.C. § 134(b) (2002) from the final decision of the Examiner adverse to the patentability of claims 1, 3, 9, 10, 12, 21, 22, 31, and 32.

We have jurisdiction under 35 U.S.C. § 315 (2002).

We heard oral argument in this Appeal on December 7, 2015, a transcript of which will be entered into the electronic record in due course.

We affirm.

Invention

The '353 patent describes a method of using pattern vectors for image coding and decoding. The method comprises converting a block of image data into a set of transform coefficients, quantizing the transform coefficients such that a number of the coefficients become zero, constructing a single entity or bit vector indicating which coefficients are non-zero, coding the single entity or bit vector as an integer using an adaptive, semi-adaptive or nonadaptive arithmetic coder, coding the values of the coefficients in any fixed order, using an adaptive, semi-adaptive or non-adaptive arithmetic coder, or some other coder, and coding all coefficients except the zero coefficients. Abstract.

Claims

Claims 1, 3, 9, 10, 12, 21, 22, 31, and 32 are subject to reexamination and have been rejected. Claims 1-35 are original patent claims. Claims 4 and 13 have been canceled. Claims 1, 10, 21, and 31 are independent.

Claim 1 is illustrative.

1. A method for identifying non-zero coefficients in a square block of image data, the method comprising:

mapping a square block of transform coefficients into a one-dimensional list of transform coefficients in a fixed order;

generating a single entity that identifies which transform coefficients in the one dimensional list are non-zero; and

coding the single entity.

Prior Art

Meeker	US 5,740,283	Apr. 14, 1998
Krause	US 5,295,203	Mar. 15, 1994

Wenye Yang and Jerry D. Gibson, "Coefficient Rate and Significance Maps in Transform Coding," Conference Record of the Thirty-First Asilomar Conference on Signals, Systems & Computers, Vol. 2, pp. l373-l377, November 2-5,1997 (hereinafter "Yang");

Vivek K. Goyal, "Theoretical Foundations of Transform Coding," IEEE Signal Processing Magazine, pp. 9-21, September 2001 (hereinafter "Goyal");

Henrique S. Malvar, "Lapped Biorthogonal Transforms for Transform Coding with Reduced Blocking and Ringing Artifacts," Presented at the IEEE ICASSP Conference, Munich, April 1997 (hereinafter, "Malvar").

Owner's Contentions

Owner contends that the Examiner erred in entering the following grounds of rejections:

A. The rejection of claims 1, 3, 9, 21, and 22 under 35 U.S.C. § 102(b) as being anticipated by Krause; (App. Br 8-23)

B. The rejection of claims 10, 12, 31, and 32 under 35 U.S.C. § 103(a) as being unpatentable over Krause and Meeker; (App. Br. 23-25).

Representative Claim

Owner relies on the limitations of claim 1 and does not provide substantive arguments for separate patentability for any other claim. Accordingly, we will decide the appeal on the basis of claim 1 alone. *See* 37 C.F.R. § 41.67(c)(1)(vii).

Owner argues independent claim 1 is not anticipated by Krause in view of the failure of Krause to disclose mapping "a square block of transform coefficients into a one-dimensional list of transform coefficients" and generating "a single entity" that identifies which transform coefficients "in the one-dimensional list" are not zero. App. Br. 8.

Initially, Owner argues that the Examiner erred in rejecting claim 1, by utilizing a faulty interpretation of the claimed "block," that is, ignoring the express description of the claimed "block" as a "square" block. Owner cites the Examiner's comments at page 7 of the RAN, wherein the Examiner indicated an intention to interpret the term "block" as including any shape. App. Br. 9.

In response, the Examiner notes that the cited rejection set forth at page 7 of the RAN was asserted against original claim 1, which merely recited "blocks." The Examiner then notes that the amended claim is rejected in view of the disclosure within Krause that the encoding process could be applied to 8x8 square blocks of image data. Ans. 4.

Consequently, we find the Examiner did not apply a faulty interpretation of the term "block," as asserted by Owner.

Next, Owner asserts the Examiner's anticipation rejection includes an "*acknowledged* erroneous factual finding," citing the Examiner's prior acknowledgment that the irregular shaped regions 40, 42, 44, and 47 of Krause do not correspond to the claimed square block of transform coefficients. App. Br. 9-12.

The Examiner responds by acknowledging that the "preferred" embodiment of Krause does indeed disclose utilizing subregions of a square block of transform coefficients, but notes that Krause also describes the processing of an entire block of transform coefficients at Column 7, line 58 through Column 8, line 3, which the Examiner interprets as a 'non-preferred" embodiment. Ans. 5.

Owner argues that the claimed invention is addressed to the processing of an entire block of transform coefficients and that invention is not disclosed by Krause. Owner characterizes Krause's description of the cumbersome nature of processing an entire block of transform coefficients as a description of the state of the art and a reason why it is desirable to reduce the size of the region that is vector coded. Reb. Br. 5-6.

We find the cited portion of Krause at Column 7, line 58 through Column 8, line 3, to be an express acknowledgement that the calculation of all possible combinations of coefficients which are non-zero within an entire block, while "not easy," was contemplated in the prior art. We further find that Krause teaches generating a "single entity" (vector 60) "that identifies which transform coefficients in the one-dimensional list are non-zero" within a particular region, and that teaching was appropriately appreciated by the Examiner to include the calculation of all possible combinations of coefficients which are non-zero within an entire block. (Krause, col. 8, ll. 39-64.)

It is well settled that "[T]he use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

Consequently we are not persuaded by Owner's arguments that assert the cited portion of Krause is not an "embodiment" and should not be considered. We find no erroneous factual finding by the Examiner.

Owner also argues that the "totality of Krause's disclosure" fails to support the non-preferred embodiment cited by the Examiner, noting that claims 1 and 2 of Krause are directed to the broad concept and illustrated embodiment respectively. App. Br. 17-20.

The Examiner finds that the encoding of an entire 8x8 block of image data is not preferred because it is "computationally complex." Further, the

Examiner finds there is nothing within Krause that suggests that Krause's technique must only be applied to sub-regions within an 8x8 block. Ans. 7-8.

We concur with the Examiner for the reasons we set forth above. As evidence thereof we note claim 1 of Krause sets forth expressly the creation of a vector identifying locations of a group of coefficients from a block, not a merely a region of that block. Further, claim 2 expressly sets forth dividing the block up into a plurality of regions. Under the well-established doctrine of claim differentiation, we conclude that claim 1 of Krause does not require division of the block into a plurality of regions.

"[T]he presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim." *Liebel-Flarsheim Co. v. Medrad, Inc*., 358 F.3d 898, 910 (Fed.Cir.2004).

Owner argues the non-anticipation of claims 3, 9, 12, and 22 based upon the arguments set forth above. App. Br. 22-23.

For the reasons we set forth above we find the Examiner's position with regard to the anticipation of these claims by Krause to be persuasive.

With regard to the Examiner's rejection of claims 10, 12, 31, and 32 under 35 U.S.C. § 103(a) as being unpatentable over Krause and Meeker, Owner argues that these claims are directed toward computer readable medium, noting that the Examiner merely cited Meeker to demonstrate that it was notoriously well-known at the time of the invention to utilize software as a preferred means of implementing video codecs. With regard to patentability, Owner reiterates the arguments set forth above regarding

alleged errors by the Examiner regarding claim construction and factual findings.

For the reasons we set forth above with regard to claim 1, we find no error in the Examiner's position with regard to the rejection of claims 10, 12, 31, and 32.

DECISION

The Examiner's decision adverse to the patentability of claims 1, 3, 9, 10, 12, 21, 22, 31, and 32 is affirmed.

Requests for extensions of time in this proceeding are governed by 37 C.F.R. §§ 1.956 and 41.79(e).

AFFIRMED

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