

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES RUSSELL BERGEN, CURT R. CARLSON,
RAKESH KUMAR and SAWHNEY S. HARPREET

Appeal No. 2003-1967
Application No. 08/970,889

ON BRIEF

Before THOMAS, FLEMING, and BLANKENSHIP, ***Administrative Patent Judges***.

FLEMING, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-11, 13, 14 and 17-26, all the claims pending in the instant application. Claims 12, 15 and 16 have been canceled.

Invention

The invention relates to a method and apparatus for efficiently storing and accessing video information. See page 1 of Appellants' specification. Figure 7 is a graphical representation of the relative memory requirements of two scene

Appeal No. 2003-1967
Application No. 08/970,889

storage methods. Specifically, structure and memory contents of a two-dimensional mosaic representation of a scene. A video program 710 includes a plurality of scenes denoted as S_1 through S_n . The scene comprises a plurality of video frames denoted as F_1 through F_m , where F_1 is the most recent frame. The video content of frames F_1 and F_m are shown as respective pictures 730 and 740. Note that both pictures include a boat 732, 742 floating in a body of water 738, 748 beneath at least a portion of a cloud cover 736, 746. Picture 730 also contains a dock 739, while picture 740 contains the sun 744 but not the dock 739. Frames F_2 through F_{m-1} are the intervening frames of scene 720. Frame sequence 750 represents a two-dimensional mosaic of the scene. The two-dimensional mosaic comprises a background image related to all the frames in a particular scene, and a plurality of foreground images related to respective foreground portions of each frame of the scene. Thus, background frame 760 is shown as a panoramic picture comprising all the background information in the scene including a dock 769, a body of water 768, a cloud 766 and the sun 764. Frames F_1 and F_m show only the respective foreground portions comprising the boat 732, 742. See page 20 of Appellants' specification.

Independent claim 1 present in the application is representative of Appellants' claimed invention and is reproduced as follows:

1. A method for comprehensively representing video information in a manner facilitating indexing of the video information, comprising the step of:

segmenting a video stream into a plurality of scenes, each of said scenes comprising at least one video frame;

dividing, using intra-scene motion analysis, at least one of said plurality of scenes into at least one scene foreground layer and a scene background layer;

representing each scene background layer as a mosaic, said background layer mosaic defining a key frame of a respective scene; and

representing each of said at least one video frames forming said scene as a difference between initial video frame imagery and a respective portion of said key frame.

References

Zhang et al. (Zhang)	5,635,982	Jun. 3, 1997
Adelson	5,706,417	Jan. 6, 1998 (filed May 24, 1995)
Barber et al. (Barber)	5,751,286	May 12, 1998 (filed Jan. 24, 1997)
Yeo et al. (Yeo)	5,821,945	Oct. 13, 1998 (filed May 15, 1997)

Jaillon et al. (Jaillon) ("Image Mosaicing Applied to Three-Dimensional Surfaces": 1051-4651/94 - 1994 IEEE).

Shibata et al. (Shibata) ("Content-Based structuring of video information": 0-8186-7436-9/9, 1996 IEEE).

Appeal No. 2003-1967
Application No. 08/970,889

Rejections at Issue

Claims 1-3, 11 and 21-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo and Shibata.

Claims 4-8 and 24-26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Jaillon.

Claims 9 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Barber.

Claims 13 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Zhang.

Claims 17-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Barber in view of Yeo and Shibata.

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of Appellants and Examiner, for the reasons stated *infra*, we reverse the Examiner's rejection of claims 1-11, 13, 14 and 21-26 under 35 U.S.C. § 103 and we affirm the Examiner's rejection of claims 17-20 under 35 U.S.C. § 103.

Appeal No. 2003-1967
Application No. 08/970,889

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). *See also In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. *See also Piasecki*, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." *In re Lee*,

Appeal No. 2003-1967
Application No. 08/970,889

277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). With these principles in mind, we commence review of the pertinent evidence and arguments of Appellants and Examiner.

Claims 1-3, 11 and 21-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo and Shibata. We note that claims 1 and 21 are independent claims. Claim 1 is a method for comprehensively representing video information in a manner facilitating indexing of the video information and claim 21 is a computer-readable medium having stored thereon a plurality of instructions, the plurality of instructions including instructions which, when executed by a processor, cause the processor to perform substantially the same steps recited in claim 1.

Appellants argue that Adelson, Yeo and Shibata, either singly or in combination, fail to disclose or suggest the steps of dividing, using intra-scene motion analysis, at least one of said plurality of scenes into at least one scene foreground layer and a scene background layer, representing each scene background layer as a mosaic, said background layer mosaic defining a key frame of a respective scene; and representing each of said at least one video frame forming said scene as a difference between initial video frame imagery and a respective portion of said key

Appeal No. 2003-1967
Application No. 08/970,889

frame as recited in Appellants' claims 1 and 21. In particular, Appellants argue that the references fail to teach combining or mosaicing layers from a plurality of image frames within a scene to form a combined or mosaiced background layer. See pages 16-22 of the brief.

Upon our review of Adelson, Yeo and Shibata, we fail to find that the Examiner has made a *prima facie* case showing that the above limitations are taught by these references. Adelson teaches a technique which operates on the principle that a still or moving image can be broken down into a plurality of layers. For instance, an image of a baseball player chasing a flyball might comprise three layers; 1) a stationary background (i.e., the field, 2) the baseball player, and 3) the baseball. See column 4, lines 16-26. However, we fail to find that Adelson teaches or suggests representing each scene background layer as a mosaic where the background layer mosaic defines a key frame of a representative scene. Thus, Adelson does not teach combining or mosaicing layers from a plurality of image frames within a scene to form a combined or mosaiced background layer.

Furthermore, we fail to find that Yeo teaches this limitation as well. Yeo is concerned with automating the browsing process for browsing of video material. See Yeo, column

Appeal No. 2003-1967
Application No. 08/970,889

1, lines 11-13. Also, we fail to find that Shibata teaches this limitation. Shibata is concerned with a component-based scene description model for computerizing linguistic descriptions written by the director and a method for extracting a content-based hierarchical structure for video sequences based on this model. See Shibata, page 330. However, Neither Yeo nor Shibata teach combining or mosaicing layers from a plurality of image frames within a scene to form a combined or mosaiced background layer as recited in Appellants' claims.

Claims 4-8 and 24-26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Jaillon. Claims 9 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Barber. Claims 13 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Zhang. Claims 25 and 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Adelson in view of Yeo, Shibata and Jaillon. We note that these claims are dependent claims on either independent claim 1 or independent claim 21. Furthermore, we note that the Examiner has relied on the combination of Adelson, Yeo and Shibata for teaching the above limitations.

Appeal No. 2003-1967
Application No. 08/970,889

Therefore, we will not sustain the Examiner's rejection of these claims for the same reasons as above.

Claims 17-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Barber in view of Yeo and Shibata.

At the outset, we note that Appellants state on page 6 of the brief that claims be considered separately patentable. However, in the brief and reply brief, we note that Appellants argued claims 17-20 as a group. No other claims are argued. 37 CFR § 1.192(c)(7) (July 1, 2001) **as amended at** 62 Fed. Reg. 53196 (October 10, 1997), which was controlling at the time of Appellants filing the brief, states:

For each ground of rejection which [A]ppellants contest and which applies to a group of two or more claims, the Board shall select a single claims from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, Appellants explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

We will consider Appellants' claims 17-19 as standing or falling together and we will treat claim 17 as a representative claim of that group. **See also *In re McDaniel***, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) ("If the brief fails to meet

Appeal No. 2003-1967
Application No. 08/970,889

either requirement [of 37 CFR § 1.192(c)(7)], the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim.") **See also, In re Watts**, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004).

Appellants' sole argument is set forth on page 31 of the brief. There, Appellants argue that claims 17-20 are patentable for the reasons discussed with respect to claim 1. See page 31 of Appellants' brief.

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Claims will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not to be read into the claims. **In re Etter**, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985).

We note that claim 17 is directed to an entirely different invention than claim 1. In particular, Appellants' claim 17

Appeal No. 2003-1967
Application No. 08/970,889

recites a method comprising the steps of providing a database associated with the stored video program, said database comprising attribute information associated with at least a representative portion of said plurality of video frames forming each scene; formulating a query utilizing attribute information associated with a desired video frame; searching said database to identify video frames substantially satisfying said query; and retrieving, from said mass storage unit, one or more of said identified video frames. We note that Appellants have not argued that the Examiner has erred in finding that Barber, Yeo and Shibata teach these method steps as recited in Appellants' claim 17. However, Appellants have argued that Barber, Yeo and Shibata do not teach a plurality of video frames including a key frame comprising a mosaic of an intra-scene background layer. However, the question before us is whether method claim 17 is limited by this limitation recited in the preamble or is this limitation simply a suggested intended use for the method steps.

To determine if language in the preamble is limited, a review of the patent application in its entirety should be made to determine whether the inventor intended such resolve to represent an additional structure limitation or merely introductory language. ***Corning Glass Works v. Sumitomo Elec.***

Appeal No. 2003-1967
Application No. 08/970,889

U.S.A., Inc., 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989). Whether a preamble stating an intended purpose constitutes a limitation to the claim depends on whether the language is essential to particularly pointing out the invention. *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678-79, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988).

We note that the method steps recited may be used on any video program stored in a mass storage unit. The method steps do not require that the data stored in the mass storage unit comprises of a mosaic of intra-scene background layers. Therefore, we find that the language found in the preamble is not essential to particularly pointing out the invention as claimed and constitutes introductory language of intended use. Therefore, we will sustain the Examiner's rejection.

37 CFR § 1.192(a) states:

Appellant must, within two months from the date of the notice of appeal under § 1.191 or within the time allowed for reply to the action from which the appeal was taken, if such time is later, file a brief in triplicate. The brief must be accompanied by the fee set forth in § 1.17(c) and must set forth the authorities and arguments on which appellant will rely to maintain the appeal. Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences, unless good cause is shown.

Appeal No. 2003-1967
Application No. 08/970,889

Thus, 37 CFR § 1.192 provides that only the arguments made by Appellants in the brief will be considered and that failure to make an argument constitutes a waiver on that particular point. Support for this rule has been demonstrated by our reviewing court in *In re Berger*, 279 F.3d 975, 984, 61 USPQ2d 1523, 1528-29 (Fed. Cir. 2002), wherein the Federal Circuit Court stated that because the Appellants did not contest the merits of the rejections in his brief to the Federal Circuit Court, the issue is waived.

In view of the foregoing, we have not sustained the Examiner's rejection of claims 1-11, 13, 14 and 21-26 under 35 U.S.C. § 103. However, we have sustained the Examiner's rejection of claims 17-20 under 35 U.S.C. § 103.

Appeal No. 2003-1967
Application No. 08/970,889

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

AFFIRMED-IN-PART

JAMES D. THOMAS)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
HOWARD B. BLANKENSHIP)	
Administrative Patent Judge)	

MRF/lbg

Appeal No. 2003-1967
Application No. 08/970,889

MOSER, PATTERSON & SHERIDAN, LLP
SARNOFF CORPORATION
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702