The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARK S. KNIGHTON,
DAVID S. AGABRA
AND WILLIAM D. MCKINLEY

Appeal No. 2006-1541
Application No. 09/660,811

ON BRIEF

Before HAIRSTON, KRASS, and MACDONALD, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-30.

The invention relates to the capture and distribution of three-dimensional digital images, best illustrated by reference to representative independent claim 1, reproduced as follows:

1. A system comprising:

a digitizer capable of collecting three-dimensional data about an object;

an orientation fixture to automatically reposition the object from a first orientation to a second orientation to expose a first

aspect and a second aspect of the object relative to the digitizer; and

a controller to coordinate the automatic repositioning with data capture by the digitizer;

wherein the orientation fixture and the digitizer are physically independent units without a predefined relative position.

The examiner relies on the following references:

Murphy et al. (Murphy)	5,799,082	Aug. 25, 1998
Pito	5,831,621	Nov. 3, 1998
Migdal et al. (Migdal)	5,991,437	Nov. 23, 1999
Truc et al. (Truc)	6,421,079	Jul. 16, 2002 (filed Sep. 8, 1998)
Vellacott	WO 96/02106	Jan. 25, 1996

Claims 1-30 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner offers Pito and Migdal with regard to claims 1-4, 8-15, 18, and 19, adding Vellacott with regard to claims 5-7, 16, 17, and 30.

With regard to claims 27-29, the examiner cites Pito and Truc, while the examiner relies on Murphy with regard to claims 20-26.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

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, John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). The examiner must articulate reasons for the examiner's decision. In re Lee, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). In particular, the examiner must show that there is a teaching, motivation, or suggestion of a motivation to combine references relied on as evidence of obviousness. Id. at 1343. The examiner cannot simply reach conclusions based on the examiner's own understanding or experience – or on his or her assessment of what would be basic knowledge or common sense. Rather, the examiner must point to some concrete evidence in the record in support of these findings. In re Zurko, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). Thus the examiner 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 examiner's conclusion. However, a suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole,

rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. In re Kahn, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) citing In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313 (Fed. Cir. 2000). See also In re Thrift, 298 F.3d 1357, 1363, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002). 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, 1040, 228 USPQ 685, 687 (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, 1051, 189 USPQ 143, 146-147 (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 § 41.37(c)(1)(vii) (2004)].

With regard to independent claim 1, the examiner points to Figure 1 of Pito, indicating scanner 10 as the claimed digitizer and turntable 14 as the claimed orientation fixture. The examiner alleges that Pito's determination of the "Next Best View" is effected by a computer control and software so that a controller coordinates automatic repositioning of the object on turntable 14 with data capture by scanner (digitizer) 10.

The examiner interprets Pito's scanner (digitizer)10 and turntable (orientation fixture) 14 as being "physically independent units." With regard to the claimed feature of the digitizer and orientation fixture being "without a predefined relative position," the examiner turns to Migdal (column 7, lines 38-53) for an alleged teaching of a calibration technique for a scanning unit which "does not differ from that of Applicant" (answer-page 5).

The examiner concludes that it would have been obvious to combine the teachings of Pito and Migdal "for the purpose of creating a highly accurate scanning system" (answer-page 5).

Appellants argue that Pito fails to describe the orientation fixture and digitizer as physically independent units without a predefined relative position. Appellants base this argument on the absence of any specific structural elements in Figure 1 of

Pito, contending that such absence prevents this figure from suggesting the scanner 10 and turntable 14 to be physically independent units without a predefined relative position.

We do not agree with appellants that Pito's scanner and turntable cannot be determined to be "physically independent." At the top of page 5 of the instant specification, appellants define "physically independent" to mean "that no mechanical or wired electrical connection must exist between the physically independent units during operation."

In Pito, no such mechanical or wired connection is shown to exist between the scanner 10 and the turntable 14. Moreover, no such mechanical or wired connection is described in Pito. The artisan would most likely interpret the disclosure of Pito to describe a turntable 14 which rotates an object 12 which is scanned by scanner 10 as the scanner moves in a circular motion around the turntable. Accordingly, within the definition provided by appellants, we find that the turntable 14 and scanner 10 of Pito are "physically independent."

However, we do not find that these elements are "without a predefined relative position" because Pito describes their relative position at column 5, lines 42-47, in equating the relative movement to placing the scanner "at some point on a

circle whose center coincides with that of the turntable 14…" While the radius of that circle may be varied, the fact that the scanner is positioned at some fixed distance from the turntable and keeps that fixed distance as it moves around the turntable means that the relative positions of the scanner and turntable are, indeed, in a predefined relative position.

While the examiner relies on Migdal for this limitation, specifically column 7, lines 38-53, of Migdal, we agree with appellants that this portion of Migdal discusses the use of an object 10 to assist in calibration of the system and there would appear to be no reason, other than hindsight, to use this calibration teaching to somehow modify the relative positions of the scanner and turntable in Pito so that they are "without a predefined relative position," as claimed.

We note that "without a predefined relative position" in claim 1 does not indicate at what time there is no predefined relative position. By this we mean that one might argue that even in Pito, before the elements are assembled, the scanner 10 and turntable 14 are in no predefined relative position. However, we interpret the claim language to be part of a "system" as set forth in the claim preamble. Under this interpretation, it would be unreasonable, in our view, to identify the pre-set-up

elements 10 and 14 of Pito as having no predefined relative position because at this time, there is no “system.” Once the elements are all constructed into the “system” depicted in Figure 1 of Pito, the relationship between scanner 10 and turntable 14 is predefined by a constant distance between scanner 10 and the center of turntable 14 as the scanner moves around the turntable in a circular arc.

Accordingly, we will not sustain the rejection of claim 1, or of claims 2-12 dependent thereon, under 35 U.S.C. § 103.

We will, however, enter a new ground of rejection against claims 1-12 under 35 U.S.C. § 112, first paragraph, in accordance with our authority under 37 CFR § 41.50(b).

Claims 1-12 are rejected under 35 U.S.C. § 112, first paragraph, based on an inadequate written description of the now claimed term “without a predefined relative position.” Nowhere in the original disclosure, as filed, did appellants ever describe the relative positions of the digitizer and orientation fixture as being “without a predefined relative position,” as now claimed and relied on for patentability.

The original instant specification did describe the desirability of the digitizer and the orientation fixture as being able to “find” each other (specification-page 5) and a

general manner for carrying out this function (specification-page 6). But we find nothing in the original description which indicates that the orientation fixture and the digitizer have no predefined relative position nor do we find any definition of "without a predefined relative position" in the original disclosure.

It appears to us that claim 1 would have been in better form, and clearer, if it omitted "without a predefined relative position" and placed in its stead something about the digitizer and orientation fixture being able to "find" each other, if that is what appellants intended by referring to "without a predefined relative position."

With regard to independent claim 13, this claim mentions nothing about the relative positions of the digitizer and the orientation fixture or that they are "physically independent." The claim does, however, recite that the orientation fixture automatically repositions the object from a first orientation to a second orientation to expose first and second aspects of the object relative to the digitizer.

This much is described by Pito in that the turntable does automatically rotate the object 12 so that it presents different aspects to the scanner (digitizer) 10.

The claim also requires that the digitizer and the orientation fixture “are integrally coupled as a single unit.” The examiner relies on Migdal, column 4, lines 34-36, for the desirability of portable scanning systems, and concludes that it would have been obvious to combine the teachings of Pito and Migdal “for the purpose of creating a highly accurate scanning system” (answer-page 5). We believe the examiner meant to point to column 4, lines 29-31, of Migdal for the “portable” teachings.

We will not sustain the rejection of independent claim 13, or of its dependent claims 14-19, under § 103.

Migdal’s disclosure of producing “portable scanning systems” (column 4, lines 31-32) is a very broad suggestion with no indication as to what such a portable scanning system might or might not include. There is no suggestion in the disclosure of either Migdal or Pito of making a portable scanning system by integrating the digitizer and orientation fixture (e.g., elements 10 and 14 in Pito), as required by independent claim 13.

Accordingly, we will not sustain the rejection of independent claim 13, or of its dependent claims 14-19, under § 103.

With regard to independent claims 20 and 23, the examiner relied solely on Murphy, explaining that column 15, lines 6-31,

of Murphy discloses freezing or locking image data, and further preventing transmission to another person or facility (remotely), except those who are authorized, and implementing the proper request for downloading the information.

The examiner contends that information being transmitted back and forth “is itself a teaching of a distributive network” (answer-page 10). The examiner also contends that while Murphy may not explicitly describe unlocking and image-capturing, “the frame lock mechanism, which prevents image data from being downloaded, serves the same purpose,” (answer-page 10), taking “Official Notice” of this fact.

The examiner concludes that it would have been obvious “to employ the locking mechanism of Murphy, for the purpose of maintaining an uncompromised network” (answer-page 10).

Appellants argue that, with regard to claim 20, Murphy fails to teach or suggest at least the elements of “receiving a request over a distributed network to authorize operation of a lockable image capture system at a node remote from the image capture system” and “sending an authorization data to the image capture system across a distributed network such that the image capture system is unlocked and enabled to capture an image” (principal brief-page 26).

In particular, appellants contend that Murphy teaches that digital frames, after having been captured, may be “frozen” in a storage module. Therefore, argue appellants, Murphy does not prevent the use of the digital camera to capture images, but only prevents download after capture. Claim 20, on the other hand, argue appellants, requires that authentication data is provided to unlock and enable the capture of an image.

We agree with appellants. Claim 20 clearly requires that it is the “image capture system,” e.g., the digital camera in Murphy, which is locked and can only be unlocked and enabled by the proper authorization data. While Murphy describes the use of a digital camera, or “image capture system,” nowhere in the disclosure of Murphy is it suggested that the operation of this digital camera is locked. Rather, it is processing of an image, after capture by the camera, which is inaccessible without the proper authorization. As taught by the portion of Murphy cited by the examiner (column 15, lines 6-31), the recorded digital frame can be viewed but it cannot be edited, altered or deleted because the frame is “frozen” in the frame recording and storage module 39. The digital frame including authentication information is never transmitted to another person or facility except for downloading by an authorized downloader. This portion

of the reference also describes a frame lock mechanism for preventing downloading of the digital frame information except by authorized downloaders. While it may have been obvious to also disable the camera (the “image capture system”) in Murphy, the examiner has offered no evidence of this, and Murphy suggests only locking the downloading and editing of an image.

We are unpersuaded by the examiner’s allegation that Murphy’s frame lock mechanism for preventing image data from being downloaded, altered, or edited, “serves the same purpose” (answer-page 19). Other than the examiner’s own opinion, no evidence has been evinced that a mechanism for preventing image data from being downloaded or edited serves the same purpose as locking an image capture system to all but authorized users. In fact, it appears to us that while locking an image capture system, e.g., a digital camera, may, in fact, also lock access to its images, the reverse is not necessarily true. That is, one may block access to a download of an image or the editing of an image in a digital camera without also preventing the use of the camera for capturing images. Instant claim 20 requires locking the image capture system to prevent the capture of images. Murphy describes the prevention of downloading and editing of images already captured. We cannot understand how the examiner equates these two disparate functions.

Accordingly, we will not sustain the rejection of claim 20, or of claims 21 and 22 dependent thereon, under 35 U.S.C. § 103.

We find otherwise with regard to independent claim 23. In this claim, image data is captured and the image capture device is coupled to a distributed network. Access to the image data by a local user is prevented until authorization is received from a remote node on the distributed network and, when received, access is allowed.

We agree with the examiner that Murphy does disclose and/or make obvious this claimed subject matter since an image is captured (abstract-line 1) and access to the image data by a user is prevented until authorization is received (column 15, lines 6 et seq.). When authorization is received, access is allowed (column 15, lines 6 et seq.).

Appellants do not dispute this much but do argue that Murphy does not teach allowance of access to the image data “upon receipt of the authorization from a remote node on the distributed network” because Murphy does not teach or suggest that either the download or the reception of a key occurs “over a network connection” (principal brief-page 29).

As the examiner has explained (answer-page 20), since Murphy indicates at column 15, lines 6-31, that image data is locked, preventing transmission “to another person or facility, except

for downloading by an authorized downloader," this means that there is some remote transmission and since Murphy clearly implies that the information may be transmitted back and forth, a distributive network is suggested.

While not explicitly set forth by Murphy, recitations of downloads and transmissions would have certainly suggested to the artisan that the operations described in Murphy would have been obvious to effect via a distributed network.

Accordingly, we will sustain the rejection of claims 23-26 under 35 U.S.C. § 103.

With regard to independent claim 27, the examiner applies Pito similar to its application with regard to the other independent claims, noting, however, that Pito does not explicitly describe rescanning points of interest at higher resolution. The examiner relies on Truc, column 1, lines 33-41, for rescanning selected images at higher resolution and that this would be desirable. Specifically pointing to column 15, lines 51-67, of Truc, the examiner indicates that Truc teaches specifically a scanner that rescans selected images (points of interest) at a higher resolution. The examiner then concludes that it would have been obvious to combine Pito and Truc "for the purpose of creating a scanning system, which is capable of producing quality high-resolution images" (answer-page 9).

Appellants counter by arguing that Truc is nonanalogous art and may not be combined with Pito. More particularly, appellants argue that Truc is directed to a film scanner for scanning a film strip while Pito teaches a range scanner for building a surface image of a three dimensional object, the scanning of a film strip being "not remotely analogous to the scanning of three-dimensional physical objects" (principal brief-page 26).

The test for analogous art outside an inventor's field of endeavor is whether the art pertains to the particular problem confronting the inventor. In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992); In re Greene (Fed. Cir. 1994).

It appears to us that both Pito and Truc are directed to the art of scanning albeit Pito pertains to a range scanner for building a surface image while Truc is concerned with a film scanner. Further, the particular problem confronting the inventor, viz., how to get a higher resolution image, is directly addressed by Truc, e.g., column 15, lines 51-67, in a teaching of rescanning at a higher resolution those areas of interest.

Accordingly, since we find that Truc is analogous art, pertaining to the particular problem confronting the inventor, viz. obtaining higher resolution images, we are unpersuaded by appellants' sole argument with regard to the rejection of claims

27-29.

Therefore, we will sustain the rejection of claims 27-29 under 35 U.S.C. § 103.

With regard to independent claim 30, appellants make the same arguments made with regard to claim 1 (principal brief-pages 22-24). However, whereas we did not sustain the rejection of claim 1 because of the limitation of "without a predefined relative position," we will sustain the rejection of claim 30 because this limitation is not present. With regard to the digitizer and orientation fixture being "physically independent units," as we explained supra, in our view, the scanner (digitizer) and turntable (orientation fixture) of Pito are physically independent units as there is no indication that there is any mechanical or electrically wired connection between them.

Accordingly, we will sustain the rejection of claim 30 under 35 U.S.C. § 103.

CONCLUSION

We have sustained the rejection of claims 23-30 under 35 U.S.C. § 103 but we have not sustained the rejection of claims 1-22 under 35 U.S.C. § 103. Further, we have entered a new ground of rejection under 35 U.S.C. § 112, first paragraph, against claims 1-12.

Accordingly, the examiner's decision is affirmed-in-part.

This decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .
>
> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a). See 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART – 37 CFR 41.50(b)

KENNETH W. HAIRSTON Administrative Patent Judge	)	
ERROL A. KRASS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ALLEN R. MACDONALD Administrative Patent Judge	)	

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