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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DONALD FISK

Appeal 2015-005360
Application 13/355,862
Technology Center 2600

Before NORMAN H. BEAMER, JAMES W. DEJMEK, and SCOTT B. HOWARD, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–19 and 21, which constitute all of the claims pending in this application. Claims 20 and 22 have been cancelled. App. Br. 21, 22. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellant identifies Imagination Technologies, Limited as the real party in interest. App. Br. 2.

THE INVENTION

The disclosed and claimed invention is directed to a method and apparatus for tile based depth buffer compression. Abstract.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method for compressing depth buffer data in a 3-dimensional computer graphics system, comprising:
>
> dividing the depth buffer data into a plurality of rectangular tiles corresponding to rectangular areas of an associated image;
>
> for each tile to be compressed, identifying a plurality of starting point locations in the tile;
>
> for each starting point location of the plurality of starting point locations,
>
> determining a difference in depth between a depth value at the starting point location and respective depth values at each of at least two further locations, and
>
> predicting a depth value at a plurality of other locations in the tile from the thus determined difference values, and where a predicted value substantially matches an actual depth value for that location, assigning that location to a plane associated with the respective starting point location;
>
> identifying locations within a tile that are not assigned to any plane associated with the plurality of starting point locations;
>
> for each tile, storing, for each plane, starting point location and depth value data at the starting point location, difference value data, and plane assignment data for each tile, the plane assignment data indicating which locations in the tile are assigned to that plane, and data indicating which locations in the tile are not assigned to any of the planes and depth values for those locations.

REFERENCES

The prior art relied upon by the Examiner as evidence in rejecting the claims on appeal is:

Van Dyke et al.	US 6,961,057 B1	Nov. 1, 2005
Liao	US 2006/0103658 A1	May 18, 2006

REJECTIONS

Claims 1–10 and 21 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Final Act. 2–3.

Claims 1–19 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Dyke in view of Liao. Final Act. 4–11.

ANALYSIS[2]

We have reviewed the Examiner's rejection in light of Appellant's arguments that the Examiner erred. In reaching this decision, we have considered all evidence presented and all arguments made by Appellant. We are not persuaded by Appellant's arguments regarding the rejections based on 35 U.S.C. § 103(a). However, we are persuaded by Appellant's argument that the Examiner erred in rejection the claims as being directed to non-statutory subject matter.

[2] Rather than reiterate the entirety of the arguments of Appellant and the positions of the Examiner, we refer to the Appeal Brief (filed Dec. 12, 2014); the Reply Brief (filed April 22, 2015); the Final Office Action (mailed Aug. 13, 2014); and the Examiner's Answer (mailed Feb. 23, 2015) for the respective details.

Claims 1–10 and 21 (35 U.S.C. § 101)

The Examiner concludes the invention claimed in claims 1–10 and 21 is directed to non-patentable subject matter because it is not directed to a machine/particular apparatus or does not "transform the underlying subject matter." Final Act. 3; Adv. Act. 2; Ans. 15–16. The Examiner further concludes that the claims are directed to an abstract idea because the claims "rely on using mathematics [and] the claim[s are] directed to a mathematical relationship from implementation to a technical problem." Ans. 16–18. The Examiner further concludes the claims do "not amount to significantly more than the abstract idea itself [and] requires the additional limitations of a computer with a processing (CPU), memory or other devices to perform their functions of dividing, identifying, determining, predicting that enables the compressing depth buffer data." Ans. 17.

Appellant argues the Examiner erred in applying the machine or transformation test. App. Br. 6; Reply Br. 1–3. More specifically, Appellant argues that although the machine or transformation test may be one tool for assisting in determining if the claims are directed to patentable subject matter, it is not the exclusive test. *Id.* Appellant argues that, instead, the correct test is the two-part framework under *Alice*[3] and *Mayo*[4]. *Id.* Appellant further argues that the invention "is not directed to an abstract idea merely because it includes or contains references to a mathematical or geometrical relationships." Reply Br. 3–4.

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[3] *Alice Corp. Pty. Ltd. v. CLS Bank Int'l.*, 134 S. Ct. 2347 (2014).
[4] *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012).

The Supreme Court has set forth a two-part test to determine whether or not a claim is directed to patentable subject matter:

> First, given the nature of the invention in this case, we determine whether the claims at issue are directed to a patent-ineligible abstract idea. *Alice Corp. v. CLS Bank Int'l*, — U.S. —, 134 S.Ct. 2347, 2355, 189 L.Ed.2d 296 (2014). If so, we then consider the elements of each claim—both individually and as an ordered combination—to determine whether the additional elements transform the nature of the claim into a patent-eligible application of that abstract idea. *Id.* This second step is the search for an "inventive concept," or some element or combination of elements sufficient to ensure that the claim in practice amounts to "significantly more" than a patent on an ineligible concept. *Id.*

DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245, 1255 (Fed. Cir. 2014).

We are persuaded by Appellant's arguments that the Examiner erred in rejecting the claims under 35 U.S.C. § 101. Here, the Examiner makes conclusory statements regarding the claim covering an abstract idea and not containing an inventive concept. Ans. 17. Such a conclusory determination is not sufficient to make a prima facie case.

Accordingly, we are constrained on this record to reverse the Examiner's rejection of claims 1–10 and 21 as directed to non-statutory subject matter.

Claims 1–19 (35 U.S.C. § 103)

Appellant argues the Examiner erred in finding the cited references teach various limitations in claim 1, including the "for each starting point . . . determining . . . and predicting," "identifying locations within a tile," and "for each tile" limitations recited in claim 1. App. Br. 10–14. In particular,

Appellant provides a detailed analysis as to why Liao does not teach or suggest the disputed limitations. *Id.*; Reply Br. 4–5.

We are not persuaded of error based on Appellant's argument because it does not address the reasoning relied on by the Examiner (Ans. 18–23) and, thus, does not adequately address the rejection on appeal. Specifically, although the Examiner relies on Liao for the disputed limitations in the Final Action, the Examiner makes alternate findings regarding Van Dyke in the Answer.

To the extent Appellant addresses Van Dyke, Appellant does so in a summary fashion:

> Van Dyke also does not disclose or suggest this subject matter. While Van Dyke discloses determining a gradient in the X direction based on differences between the Z values of the first major pixel and the anchor pixel (and corresponding in the Y direction), Van Dyke does not disclose for each of a plurality of locations, determining differences in depth at at [sic] least two further locations.

App. Br. 12; *see also* Reply Br. 4 ("Appellant has shown that the ground of rejection is improper because it is based on . . . the failure of any possible combination of Liao with Van Dyke to result in the claimed subject matter." (citing App. Br. 12–13)). Merely summarizing the claim language and making a naked assertion that the prior art does not teach the limitation is insufficient to raise an argument that that Examiner erred. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (Rule 41.37 requires "more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art."); *see also* 37 C.F.R. § 41.37(c)(1)(iv) ("A statement which merely points out what a claim recites will not be considered an

argument for separate patentability of the claim."). Because Appellant has not identified any specific errors in the Examiner's findings based on Van Dyke, "the Board will not, as a general matter, unilaterally review those uncontested aspects of the rejection." *Frye*, 94 USPQ2d at 1075.

Accordingly, we sustain the Examiner's rejection of claim 1 as unpatentable over Van Dyke in view of Liao, along with the rejections of claims 2–19, which are not argued separately.

Claim 21

First, Appellant argues that "[n]either Van Dyke nor Liao discloses storing plane assignment data that indicates what locations in a tile are assigned to any of the planes." App. Br. 14. Particularly, Appellant argues:

> Van Dyke discloses either to compress all of the pixels in a tile using the one plane, or to store depths for all pixels in uncompressed form [and] Liao's disclosure of "planes" relates to deciding what locations in a frame buffer to use to store color sample data, as explained above.

Id. Second, Appellant argues the Examiner erred in finding Van Dyke (col. 2, ll. 44–47) teaches the "extrapolating" step recited in claim 21.

We are not persuaded by Appellant's arguments that the Examiner erred. As for the first argument, nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). The test for obviousness is not whether the claimed invention is expressly suggested in any one or all of the references, but whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the *combined teachings* of those references. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Appellant's first

argument focuses on the references individually and does not address the Examiner's finding that Van Dyke teaches "planes," as recited in claim 21. *See* Final Act. 10; Ans. 23–24. To the extent Appellant discusses the teachings of Van Dyke regarding tiles, Appellant does not cite to any evidence in support of its argument. "Attorney's argument in a brief cannot take the place of evidence." *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974).

As for the second argument, although Appellant argues Van Dyke column 2 does not teach the extrapolating limitation (App. Br. 15), Appellant does not address the Examiner's additional findings in the Answer (*see* Ans. 24 (citing Van Dyke 14:52–15:28, 15:55–16:5)). Because Appellant has not identified any errors in the Examiner's findings in the Answer, we "will not, as a general matter, unilaterally review those uncontested aspects of the rejection." *Frye*, 94 USPQ2d 1072 at 1075.

Accordingly, we sustain the Examiner's rejection of claim 21 as unpatentable over Van Dyke in view of Liao.

DECISION

For the above reasons, we affirm the Examiner's decisions rejecting claims 1–19 and 21 as being unpatentable over Van Dyke in view of Liao.

For the above reasons, we reverse the Examiner's decisions rejecting claims 1–10 and 21 under 35 U.S.C. § 101 as being directed to non-patentable subject matter.

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

AFFIRMED