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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* AMIR SAID and TON KALKER

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Appeal 2015-007145  
Application 13/018,241  
Technology Center 2400

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Before BRUCE R. WINSOR, LINZY T. McCARTNEY, and  
NATHAN A. ENGELS, *Administrative Patent Judges*.

*PER CURIAM*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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<sup>1</sup> According to Appellants, the real party in interest is Hewlett-Packard Development Company, LP. App. Br. 1.

STATEMENT OF THE CASE

*The Invention*

Appellants' invention relates to “[a]n embedded light field display architecture to process and display three-dimensional light field data in a light field display.” Abstract; *see* Spec. ¶ 9. Claim 7 is independent and illustrative of the subject matter on appeal:

7. A light field display for displaying a light field, the light field display comprising:

a display screen having a plurality of tiles;

a plurality of hierarchical modules to process a portion of compressed light field data for a subset of the plurality of tiles; and

a plurality of tile modules embedded in at least one of the plurality of tiles to receive both uncompressed and compressed light field data from the plurality of hierarchical modules for local processing and display at the display screen.

App. Br. (Claims App'x) ii.

*Rejections on Appeal*

Claims 1, 2, 5–7, 9–15, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Vetro et al. (US 2008/0043095 A1; published Feb. 21, 2008) (“Vetro”) and Ohba et al. (US 2010/0040297 A1; published Feb. 18, 2010) (“Ohba”). *See* Final Act. 4–9.

Claims 3, 4, 8, 16, 17, and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Vetro, Ohba, and Kroll et al. (US 2010/0149311 A1; published June 17, 2010) (“Kroll”). *See* Final Act. 9–12.

## ISSUE

The issue presented by Appellants' contentions is as follows: Does the Examiner err in finding that Ohba's teaching of an image processing device, including a format identifying unit that receives header information indicating the compression format of the image data, would have taught or suggested "a plurality of tile modules . . . to receive . . . uncompressed . . . light field data," as recited in claim 7?

## ANALYSIS

The Examiner finds Ohba teaches claim 7's "a plurality of tile modules . . . to receive . . . uncompressed . . . light field data" by disclosing an image processing device including a format identifying unit that receives header information indicating the compression format of the image data. *See* Ans. 12 (citing Ohba Fig. 7, ¶¶ 48, 54); Final Act. 6 (citing Ohba Figs. 3, 6; ¶ 32). The Examiner explains that this header information "will not be compressed in the process of transmission of image data and auxiliary information," and "[c]onsequently, the functionality of the image processing device 10 receives . . . uncompressed . . . data." Ans. 12. The Examiner further notes that Appellants' "specification defines 'uncompressed data' in paragraph 0020 only" and that "uncompressed data may be raw data and generally the data which is not compressed during encoding." *Id.* (citing Spec. ¶ 20).

Appellants contend Ohba does not teach or suggest "receiv[ing] . . . uncompressed . . . light field data" because Ohba's "image processing device 10 receives just compressed image data (and not uncompressed image data) to decode for display." Reply Br. 4; *see id.* at 3–5; App. Br. 6. Further,

Appellants argue that “[e]ven if the Examiner were correct in asserting that the header information is not compressed, . . . it would be improper for the header information of Ohba to be equated with . . . ‘uncompressed . . . light field data.’” Reply Br. 5 (final ellipsis in original).

We agree with Appellants. Appellants’ written description discloses that “[l]ight field data . . . represents the amount of light traveling in every direction through every point in space,” Spec. ¶ 9, and “may . . . include both compressed light field data as well as uncompressed light field data, e.g., view depth, projexel data, and so on,” *id.* ¶ 20. Accordingly, we conclude the broadest reasonable interpretation of claim 7’s “uncompressed . . . light field data” encompasses data other than compressed data that represents the amount of light traveling in every direction through every point in space, e.g., view depth or projexel data. However, we conclude a claim construction that encompasses data other than data that represents the amount of light traveling in a direction through a point in space is unreasonably broad.

Applying this interpretation, we find the Examiner errs in relying on header information to teach or suggest claim 7’s “uncompressed . . . light data” limitation. *See* Ans. 12; Final Act. 6; Ohba Fig. 7, ¶¶ 32, 48, 54. We agree with the Examiner that Ohba’s header information indicates the compression format of a tile image. *See* Ans. 12; Ohba ¶¶ 48, 51, 54. We also agree with the Examiner that this header information is not compressed in the process of transmitting image data and auxiliary information. *See* Ans. 12; *compare* Ohba ¶¶ 48, 51, 54, *with* Ohba ¶ 32. However, Ohba’s header information, even though uncompressed, is not encompassed within the broadest reasonable interpretation of “light field data.” *See* Ohba Fig. 7,

¶¶ 32, 48, 54. For example, Ohba's header information, which identifies the compression format of the image data, is neither view depth or projoxel data. *See Spec.* ¶¶ 9, 20; Ohba Fig. 7, ¶¶ 32, 48, 54. Furthermore, Ohba's header information does not represent the amount of light traveling in every direction through every point in space, in accordance with Appellants' written description of "light field data." *See id.* Accordingly, Ohba's image processing device 10, including a format identifying unit that receives header information indicating the compression format of the image data, does not teach or suggest "a plurality of tile modules . . . to receive . . . uncompressed . . . light field data," as recited in claim 7. *See Ohba Fig. 7, ¶¶ 32, 48, 54; App. Br. 6; Reply Br. 3–6.* Further, the Examiner does not show that Vetro cures this deficiency of Ohba. *See Final Act. 6; Ans. 11–13.* Nor does the Examiner provide an adequate rationale to fill the gaps in the cited prior art.

In view of the foregoing, we conclude the Examiner errs in the rejection of claim 7. Accordingly, we do not sustain the rejection of independent claim 7. For the same reason, we do not sustain the rejection of independent claims 1 and 19, as well as dependent claims 2, 5, 6, 9–15, and 18, each of which include the same deficiency discussed above for the rejection of claim 7. *See App. Br. (Claims App'x) i–iv; Ans. 13–15; Final Act. 3–9.* Nor do we sustain the rejections of claims 3, 4, 8, 16, 17, and 20, which include the same limitation discussed above for claim 7, the deficiencies of which are not cured by Vetro or Kroll. *See App. Br. (Claims App'x) i–iv; Ans. 16; Final Act. 9–12.*

#### DECISION

The decision of the Examiner to reject claims 1–20 is reversed.

Appeal 2015-007145  
Application 13/018,241

REVERSED