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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PAUL ROBERTS CONLON

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Appeal 2014-009261
Application 12/636,311
Technology Center 2600

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Before ERIC S. FRAHM, LARRY J. HUME, and
NORMAN H. BEAMER, *Administrative Patent Judges.*

FRAHM, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) of a Final Rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b). We note that in several related appeals having the same inventor (Paul Roberts Conlon) and assignee (Xerox Corporation), the Patent Trial and Appeal Board reversed the Examiner's obviousness rejections over the same prior art combination applied in the instant case of Warmus et al. (US 2001/0051964 A1; published Dec. 13, 2001) and Hemingway (US 6,166,741; issued Dec. 26, 2000). In each of these related appeals, the Board determined, among other things, Warmus failed to disclose the recited

features of "determining an order of transformation operations performed *upon the rasterized data*." Application No. 12/636,274, Appeal No. 2014-001979 (decision mailed Mar. 16, 2016), p. 12; Application No. 12/636,287, Appeal No. 2014-002558 (decision mailed Mar. 16, 2016), p. 9; Application No. 12/636,331, Appeal No. 2014-002553 (decision mailed Mar. 16, 2016), p. 10; and Application No. 12/636,348, Appeal No. 2014-001984 (decision mailed Mar. 16, 2016), p. 8–9.

For similar reasons as provided by the Board in the related appeals discussed *supra*, and for additional reasons that follow, we also reverse the obviousness rejection of claims 1–20 over the combination of Warmus and Hemingway in the instant case before us.

Exemplary claims 1 and 13, with emphases added to the key limitations, are reproduced below:

> 1. A method of rendering rasterized data, comprising:
>
> receiving non-rasterized page description language data and a source transformation matrix representing source transformation operations, the source transformation operations being a source rotation transformation operation, a source scaling transformation operation, and a source translation transformation operation;
>
> rasterizing, using a processor, the non-rasterized page description language data;
>
> *determining an order of transformation operations to be performed upon the rasterized data*;
>
> generating, from the source transformation matrix, a rotation transformation matrix and a scaling transformation matrix based upon a rotation scaling order of the determined order of transformation operations;

generating a translation transformation matrix from the generated rotation and scaling transformation matrices;

creating a target transformation matrix by matrix multiplying the generated rotation transformation matrix, the generated scaling transformation matrix, and the generated translation transformation operation in a matrix order corresponding to the determined order of transformation operations to be performed upon the rasterized data;

decomposing the target transformation matrix into a rotation transformation operation matrix, a first scaling transformation operation matrix, and a translation transformation operation matrix;

decomposing the first scaling transformation operation matrix into a shear transformation operation matrix and a second scaling transformation operation matrix;

generating a discrete rotation transformation operation value from the rotation transformation operation matrix;

generating a discrete scaling transformation operation value from the second scaling transformation operation matrix;

generating a discrete translation transformation operation value from the translation transformation operation matrix;

generating a discrete shear transformation operation value from the shear transformation operation matrix;

performing transformation operations upon the rasterized data based upon the generated discrete transformation operation values; and

rendering the transformed rasterized data.

13. A system for rendering rasterized data, comprising: a rasterizing circuit to rasterize non-rasterized page description language data, the non-rasterized page description language data having a source transformation matrix representing source transformation operations, the source transformation operations being a source rotation transformation operation, a source

scaling transformation operation, and a source translation transformation operation;

a processor to determine an order of transformation operations to be performed upon the rasterized data; and

a processor generating, from the source transformation matrix, a rotation transformation matrix and a scaling transformation matrix based upon a rotation scaling order of the determined order of transformation operations;

said processor generating a translation transformation matrix from the generated rotation and scaling transformation matrices;

said processor creating a target transformation matrix by matrix multiplying the generated rotation transformation matrix, the generated scaling transformation matrix, and the generated transformation operation *in a matrix order corresponding to the determined order of transformation operations to be performed upon the rasterized data*;

said processor decomposing the target transformation matrix into a rotation transformation operation matrix, a first scaling transformation operation matrix, and a translation transformation operation matrix;

said processor decomposing the first scaling transformation operation matrix into a shear transformation operation matrix and a second scaling transformation operation matrix;

said processor generating a discrete rotation transformation operation value from the rotation transformation operation matrix;

said processor generating a discrete scaling transformation operation value from the second scaling transformation operation matrix;

> said processor generating a discrete translation transformation operation value from the translation transformation operation matrix;
>
> said processor generating a discrete shear transformation operation value from the shear transformation operation matrix;
>
> a plurality of post-rasterization transformation circuits, operatively connected to said rasterizing circuit and said transformation matrix decomposing circuit, to perform transformation operations upon the rasterized data.

We have reviewed Appellant's arguments in the Appeal Brief (App. Br. 10–11) and the Reply Brief (Reply Br. 2–11) that the Examiner's rejection (*see* Final Act. 11–20) of claims 1–20 under 35 U.S.C. § 103(a) as being unpatentable over Warmus and Hemingway is in error, and the Examiner's response to Appellant's arguments in the Appeal Brief (Ans. 3–25).

We concur with Appellant's assertions (*see* App. Br. 12–33; Reply Br. 2–6) that Warmus and, as a result, the combination of Warmus and Hemingway, fails to disclose determining an order of transformation operations that are performed "upon rasterized data" as claimed (*see* independent claims 1, 5, 9, 13, and 17). Specifically, we find the Examiner's reliance (*see* Final Act. 12–13 and 17; Ans. 8 and 10) on Warmus' paragraphs 16, 17, 383, 389, and 405 for this feature recited in claims 1, 5, 9, 13, and 17 to be in error. Specifically, although we may agree with the Examiner that there is inherently an order of some sort present in the operations of Warmus, Warmus is silent as to "determining" such an order. In addition, just because the performance of transformation operations may be disclosed in Warmus as being "order dependent" (¶ 16), this does not mean that it would be obvious to change the order with

impermissible hindsight to be that recited in each of Appellant's independent claims, such that transformation operations are performed on data that has already been rasterized. Notably, Warmus' Figure 19 shows a print system 79 including a raster image processor (RIP) 82 and raster memory 452 for rasterizing data for printing at demand printer 84, where the data being input (merged files 450) *has already undergone transformation operations* (*see* ¶¶ 231–251, especially ¶¶ 233 and 244).

Based on the foregoing, we find that the Examiner has not properly established factual determinations and articulated reasoning with a rational underpinning to support the legal conclusion of obviousness for independent claims 1, 5, 9, 13, and 17, resulting in a failure to establish a prima facie of obviousness. Warmus, and thus the combination of Warmus and Hemingway, whether taken singly or in combination, fails to disclose determining an order of transformation operations that are performed "upon rasterized data" as claimed (*see* independent claims 1, 5, 9, 13, and 17).

Accordingly, we do not sustain the Examiner's rejection of independent claims 1, 5, 9, 13, and 17, as well as claims 2–4, 6–8, 10–12, 14–16, and 18–20 depending respectively therefrom.

## CONCLUSION

The Examiner erred in rejecting claims 1–20 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Warmus and Hemingway.

## DECISION

We reverse the Examiner's rejection of claims 1–20.

REVERSED