Paper 15

Date Entered: December 23, 2015.

## UNITED STATES PATENT AND TRADEMARK OFFICE

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## BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MICROSOFT CORPORATION, Petitioner,

v.

BRADIUM TECHNOLOGIES LLC, Patent Owner.

Case IPR2015-01432 Patent 7,139,794 B2

Before BRYAN F. MOORE, BRIAN J. McNAMARA, and MINN CHUNG, *Administrative Patent Judges*.

McNAMARA, Administrative Patent Judge.

DECISION Institution of *Inter Partes* Review 37 C.F.R. § 42.108



### BACKGROUND

Microsoft Corporation ("Petitioner") filed a Petition, Paper 2 ("Pet."), to institute an *inter partes* review of claims 1 and 2 (the "challenged claims") of U.S. Patent No. 7,139,794 B2 ("the '794 Patent"). 35 U.S.C. § 311. Bradium Technologies LLC ("Patent Owner") timely filed a Preliminary Response, Paper 12 ("Prelim. Resp."), contending that the Petition should be denied as to all challenged claims. We have jurisdiction under 37 C.F.R. § 42.4(a) and 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition "shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

Having considered that arguments and the associated evidence presented in the Petition and the Preliminary Response, for the reasons described below, we institute an *inter partes* review of all the challenged claims based on the grounds identified with specificity in the analysis that follows.

### REAL PARTIES IN INTEREST

Petitioner states that Microsoft Corporation constitutes all the real parties in interest in this proceeding. Pet. 2.

### PENDING LITIGATION

The Petition states that the '794 Patent and two related patents, U.S. Patent Nos. 7,908,343 B2 and 8,924,506 B2, which are also the subject of petitions for *inter partes* review, have been asserted against Petitioner in

<sup>&</sup>lt;sup>1</sup> U.S. Patent No. 7,908,343 B2 is the subject of IPR2015-01434. U.S. Patent No. 8,924,506 B2 is the subject of IPR2015-01435.



Bradium Techs. LLC v. Microsoft Corp., 1:15-cv-00031-RGA in the District of Delaware.

## THE '794 PATENT (EXHIBIT 1001)

The '794 Patent concerns reducing latency in transmitting full resolution images over the Internet on an "as needed" basis, particularly for "complex images" such as "geographic, topographic, and other highly detailed maps." Ex. 1001, col. 1, 11. 32–47. According to the '794 Patent, conventional approaches, such as progressive resolution build-up of the image in the current field of view, presume that client systems have an excess of computing performance and memory storage that is not available in smaller devices, such as embedded clients, or in limited bandwidth circumstances. *Id.* at col. 1, 11. 48–58, col. 3, 11. 4–29. The '794 Patent describes an image distribution system having a network image server and a client system, in which a client can input a navigational command to adjust a 3D viewing frustum for the image displayed on the client system. *Id.* at col. 5, 11. 23–53. The '794 Patent describes achieving dynamic visualization of image data provided through a communications channel by a client system including a parcel request system and a parcel rendering system. *Id.* at col. 3, 11. 42–47. Figure 2 of the '794 Patent shown below illustrates the preparation of an image parcel and overlay data set that are to be stored by and served from a network server system in accordance with a preferred embodiment. *Id.* at col. 4, 11. 54–56.



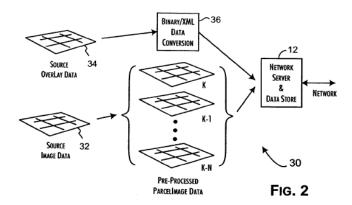


Figure 2 shows image parcel and overlay data stored on a server.

As shown in Figure 2, high resolution image data is pre-processed by the image server into a series K<sub>1-N</sub> derivative images of progressively lower image resolution. *Id.* at col. 5, 1. 54–col. 6, 1. 6. The source image is also subdivided into a regular array of 64 by 64 pixel resolution image parcels, or image tiles, and each image parcel may be compressed to fit into a single TCP/IP packet for faster transmission. *Id.* at col. 6, 11. 6–22, col. 7, 11. 30–49.

Figure 3 of the '749 Patent shown below is a block diagram of the operation of the parcel request and parcel processing subsystem.

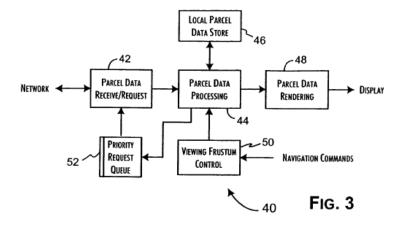


Figure 3 is a block diagram of a client system image presentation system.



When the viewing point is changed in response to a navigation command, the control block determines the ordered priority of image parcels to be requested from the server to support progressive rendering of the image. *Id.* at col. 7, 11. 19–22. Image parcel requests are placed in a queue and issued by the parcel request subsystem based on priority. *Id.* at col. 7, 11. 22–24, col. 8, 11. 24–36. The priority is determined based on a number of factors, including: whether the image parcel is outside the viewing frustum, id. at col. 9, 11. 26–29; the resolution of the client display (to avoid downloading and processing image parcels that cannot provide any perceptible improvement in the displayed image), id. at col. 8, 1. 54–col. 9, 1. 4; the relative contribution of the parcel to total display quality of the image (e.g., assigning higher priority to parcels near the focal point of the viewer), id. at col. 10, 11. 20–38; and completeness of the image (e.g., assigning high priority to lower resolution parcels to assure a complete image of at least low resolution will be available for fast rendering), id. at col. 10, 11. 11–19.

The '794 Patent states that its disclosed technology can achieve faster image transfer by (1) dividing the source image into parcels/tiles (*id.* at col. 6, ll. 1–16), (2) processing the parcels/tiles into a series of progressively lower resolution parcels/tiles (*id.*), and (3) requesting and transmitting the parcels/tiles needed for a particular viewpoint in a priority order, generally lower-resolution tiles first. *Id.* at col. 3, l. 38–col. 4, l. 42.

After the image parcels are requested and received, an algorithm is applied to select image parcels for rendering and display and overlay data, e.g., street names and landmarks, may be added. *Id.* at col. 8, 11. 37–51.



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