

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

BRADIUM TECHNOLOGIES LLC,
Patent Owner.

Case IPR2016-01897
Patent 9,253,239 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

Bromium Exhibit 2032

BACKGROUND

Microsoft Corporation (“Petitioner”) filed a petition, Paper 2 (“Pet.”), to institute an *inter partes* review of claims 1–25 (the “challenged claims”) of U.S. Patent No. 9,253,239 B2 (“the ’239 Patent”). 35 U.S.C. § 311. Bradium Technologies LLC (“Patent Owner”) timely filed a Preliminary Response, Paper 9 (“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 the arguments and the associated evidence presented in the Petition and the Preliminary Response, for the reasons described below, we institute *inter partes* review of claims 1–19 and 21–25.

REAL PARTIES IN INTEREST

The Petitioner identifies itself as the only real party-in-interest. Pet. 1.

PENDING LITIGATION

The Petition states that the ’239 Patent and three other patents in the same family, U.S. Patent Nos. 7,139,794 B2 (’794 patent), 7,908,343 B2 (’343 patent), and 8,924,506 B2 (’506 patent), are being asserted against Petitioner in an on-going patent infringement lawsuit brought by Patent Owner in *Bradium Techs. v. Microsoft*, 1:15-cv-00031-RGA, filed January 9, 2015. Pet. 1–2. Petitioner states that Patent Owner asserted the ’239 Patent for the first time in the aforementioned litigation by filing an

amended complaint on March 11, 2016, and served the Petitioner with the amended complaint on March 14, 2016. *Id.* at 2. Petitioner also identifies the following petitions for *inter partes* review of the related patents:

- '794 patent: IPR2015-01432, instituted Dec. 23, 2015, final written decision finding claims 1 and 2 not unpatentable entered on Dec. 21, 2016, Notice of Appeal filed Feb. 21, 2017;¹

- '343 patent:

IPR2015-01434, institution denied Dec. 23, 2015

IPR2016-00448, instituted July 25, 2016

- '506 patent:

IPR2015-01435, institution denied Dec. 23, 2015

IPR2016-00449, instituted July 27, 2016.

Id.

THE '239 PATENT (EXHIBIT 1001)

In the '239 Patent, large scale images are retrieved over network communication channels for display on client devices by selecting an update image parcel relative to an operator controlled image viewpoint to display on the client device. Ex. 1001, Abstract; 3:47–51. A request for an update image parcel is associated with a request queue for subsequent issuance over a communication channel. *Id.* at 3:51–54. The update image parcel is received in one or more data packets on the communications channel and is displayed as a discrete portion of the predetermined image. *Id.* at 3:54–60. The update image parcel optimally has a fixed pixel array size and may be

¹ The Petition was filed on September 30, 2016. We have included subsequent history information not available when the Petition was filed.

constrained to a resolution equal to or less than the display device resolution.
Id.

The system described in the '239 Patent has a network image server and a client system where a user can input navigational commands to adjust a 3D viewing frustum for the image displayed on the client system. Ex. 1001, 5:26–55. Retrieval of large-scale or high-resolution images is achieved by selecting, requesting, and receiving update image parcels relative to an operator or user controlled image viewpoint. *Id.* at 3:48–51. When the viewing frustum is changed by user navigation commands, a control block in the client device determines the priority of the image parcels to be requested from the server “to support the progressive rendering of the displayed image,” and the image parcel requests are placed in a request queue to be issued in priority order. *Id.* at 7:45–62.

On the server side, high-resolution source image data is pre-processed by the image server to create a series of derivative images of progressively lower resolution. *Id.* at 6:3–8. Figure 2 of the '239 patent is reproduced below.

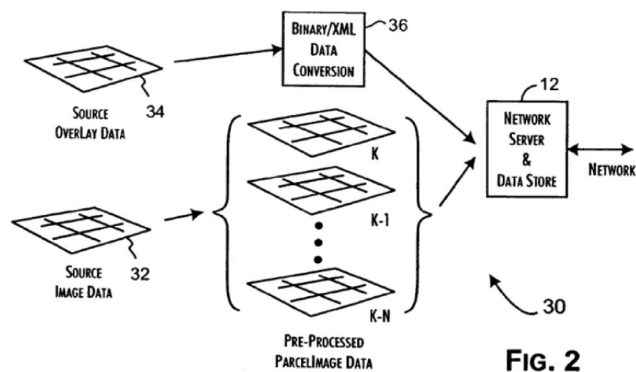


Figure 2 of the '239 Patent

Figure 2 of the '239 Patent depicts preparation of pre-processed image parcels at the network image server. *See id.* at 4:57–60; 6:10. As illustrated in Figure 2, source image data 32 is pre-processed to obtain a series K_{1-N} of derivative images of progressively lower image resolution. *Id.* at 6:6–8. Initially, the source image data—i.e., the series image K_0 —is subdivided into a regular array of image parcels of a fixed byte size, e.g., 8K bytes. *Id.* at 6:8–13. In an embodiment, the resolution of a particular image in the series is related to the predecessor image by a factor of four while, at the same time, the array subdivision is also related by a factor of four, such that each image parcel of the series images has the same fixed byte size, e.g., 8K bytes. *Id.* at 6:14–18. In another embodiment, the image parcels are compressed by a fixed ratio—for example, the 8K byte parcels are compressed by a 4-to-1 compression ratio such that each image parcel has a fixed 2K byte size. *Id.* at 6:19–24. The image parcels are stored in a file of defined configuration, such that any parcel can be located by specification of a $K_{D,X,Y}$ value, representing the image set resolution index D and the corresponding image array coordinate. *Id.* at 6:24–28. The TCP/IP protocol is used to deliver image parcels, e.g., 2K-byte compressed image parcels, to the clients. *Id.* at 8:10–11, 17–19. For preferred embodiments, where network bandwidth is limited, entire image parcels preferably are delivered in corresponding data packets. *Id.* at 8:11–14. This allows each image parcel to fit into a single network data packet, which improves data delivery and avoids the transmission latency and processing overhead of managing image parcel data broken up over multiple network data packets. *Id.* at 8:14–17.

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