UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
MICROSOFT CORPORATION,
Petitioner,
V.
BRADIUM TECHNOLOGIES LLC,
Patent Owner.
Case IPR2015-01432
Patent 7,139,794 B2

Paper 27 (Replacement with Corrected Cites for Ex. 1015)

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

June 23, 2016



UPD	ATED	EXHIBIT LIST1	I	
I.	INTRODUCTION			
II.		RELEVANT FIELD OF ART INCLUDES GEOGRAPHIC ORMATION SYSTEMS	1	
III.		SITA WOULD HAVE COMBINED THE PRIOR ART ERENCES IN THE PETITION	2	
	A.	Combining 3D visualization techniques with 2D geographic imagery was well-known in the art of GIS	2	
	В.	A POSITA would have combined Rutledge, Ligtenberg, and Cooper because accessing map tiles according to a 3D viewpoint is an obvious and straightforward application of Cooper	5	
		1. A POSITA would recognize that Cooper's priority algorithm would improve either 2D or 3D visualization of map data	5	
		2. A POSITA would use the prioritization of Cooper to optimize retrieval and display of the multi-resolution map tiles of Rutledge and Ligtenberg	9	
	C.	A POSITA would have applied the Cooper priority queue to Rutledge and Ligtenberg	4	
	D.	A POSITA would have combined Rutledge, Ligtenberg, Cooper and Migdal	5	
IV.	CLAIM 1 IS OBVIOUS OVER RUTLEDGE, LIGTENBERG, AND COOPER			
	A.	The combination of Rutledge, Ligtenberg, and Cooper teaches retrieving the map tiles of Rutledge and Ligtenberg according to the priority-based algorithm of Cooper	9	
	B.	The combination of Rutledge, Ligtenberg, and Cooper teaches the determination of priority based on a predetermined resolution	C	
V.		IM 2 IS OBVIOUS OVER RUTLEDGE, LIGTENBERG, PER. AND MIGDAL22	2.	



Petitioner's Reply to Patent Owner's Response, Paper 27

	A.	The combination teaches retrieving image parcels in a priority order	22
	B.	The combination teaches progressive regional resolution enhancement	22
	C.	The combination of Rutledge, Ligtenberg, Cooper, and Migdal discloses "wherein said step of rendering limits the selective rendering of said image parcels to image parcels having associated resolutions less than a predetermined level."	25
VI.	CON	CLUSION	26



UPDATED EXHIBIT LIST

- Ex. 1001 U.S. Patent No. 7,139,794 B2 to Levanon et al. ("the 794 Patent")
- Ex. 1002 Declaration of Judea d'Arnaud, attaching the article *Maps Alive:* Viewing Geospatial Information on the WWW, Michael Potmesil, Computer Networks and ISDN Systems Vol. 29, issues 8-13, pp. 1327-1342 ("Potmesil") as Exhibit A.
- Ex. 1003 PCT Publication No. WO 1999/041675 by Cecil V. Hornbacker, III ("Hornbacker")
- Ex. 1004 U.S. Pat. No. 5,682,441 to Adrianus Ligtenberg et al. ("Ligtenberg")
- Ex. 1005 U.S. Pat. No. 6,650,998 to Charles Wayne Rutledge et al. ("Rutledge")
- Ex. 1006 U.S. Pat. No. 6,118,456 to David G. Cooper ("Cooper")
- Ex. 1007 U.S. Pat. No. 5,760,783 to Migdal et al. ("Migdal")
- Ex. 1008 Declaration of Prof. William R. Michalson
- Ex. 1009 Six Provisional Applications from which the 794 Patent claims priorities.
- Ex. 1010 EP1070290 to Cecil V. Hornbacker, III from a European national application based on PCT Publication No. WO 1999/041675 (Ex. 1003)
- Ex. 1011 An Integrated Global GIS and Visual Simulation System by P. Lindstrom et al., Tech. Rep. GIT-GVU-97-07, March 1997 ("Lindstrom")
- Ex. 1012 Declaration of Dr. Peter Lindstrom (including Exhibits A, B and C) regarding the publication of the 1997 article entitled "An Integrated Global GIS and Visual Simulation System" which is Ex. 1011 ("Lindstrom")



- Ex. 1013 Declaration of Mr. Charles Randall Carpenter (including Exhibits A, B, C and D) regarding the publication of 1997 article entitled "An Integrated Global GIS and Visual Simulation System" which is Ex. 1011 ("Lindstrom")
- Ex. 1014 Affidavit of Matthew C. Bernstein in Support of Petitioner Microsoft Corporation's Motion for Pro Hac Vice Admission Under 37 C.F.R. §42.10(c)
- Ex. 1015 Declaration of Prof. William R. Michalson in Support of Petitioner's Reply to Patent Owner's Response



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