

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HILTON DOMESTIC OPERATING COMPANY, INC.

Petitioner,

v.

R2 SOLUTIONS LLC,

Patent Owner

Case IPR2023-00689

U.S. Patent 8,190,610

PATENT OWNER'S PRELIMINARY SUR-REPLY

I. The Art Relied On in the Petition Is Substantially Similar to the Art That Was Before the Office During Prosecution.

Despite arguing in the Petition that the Pike reference “correspond[s]” to the Dean paper (Ex. 1009), Petitioner now argues that the disclosures are not similar. This is wrong. As explained in the Preliminary Response, the references’ disclosures have common authorship and are almost identical. *See* Paper 9 at 61-64. Indeed, the only distinction that Petitioner tries to elucidate is that Pike purportedly discloses applying MapReduce to heterogenous data while Dean does not. *See* Paper 14 at 1-2. But Dean does, in fact, disclose applying MapReduce to heterogeneous data. Dean’s introduction lists several different types of input data, including “crawled documents, web requests logs, etc.” Ex. 1009 at 1. Dean includes an entire section on “Input and Output Types,” discussing how the MapReduce architecture “provides support for reading input data in several different formats.” *Id.* at 6-7. In fact, both references disclose near identical types of input data, including text, logs, documents, and maps (e.g., key/value pairs). *Compare* Ex. 1009 at 1, 6-7 *with* Pike at 2:18-19. And Petitioner is wrong that the ’610 patent says that Dean “does not disclose processing data from heterogenous sources.” *See* Paper 14 at 1. The ’610 patent actually discloses that “conventional MapReduce implementations [(i.e., Dean and Pike)] do not have facility to *efficiently* process data from heterogenous sources.” ’610 patent at 3:15-17 (emphasis added). Nowhere does the ’610 patent say that Dean’s MapReduce cannot receive different data types.

Like Pike, Chowdhuri is substantially similar to art that was already before the Office. Petitioner does not even argue that Chowdhuri is not substantially similar to Cruanes; rather, Petitioner just explains the arguments that the applicant made in response to the examiner's rejections over Cruanes. This is because Cruanes and Chowdhuri disclose substantially the same thing. Like Chowdhuri, Cruanes discusses (at length) performing operations on different data tables (an "emp" table and a "dept" table) to effectuate joinder. This is precisely the disclosure for which the Petition relies on Chowdhuri. *See* Paper 14 at 2 ("Chowdhuri expressly discloses performing operations on data groups having different schema, such as order and customer tables."); *see also, e.g.*, Ex. 2008 at ¶¶ 5, 12, 55, 56, 57, 60. The Burroughs reference similarly involves data having different schema, and the claimed inventions were created because "it can be very difficult to provide for effective partitioning while melding the two distinct schema." *See* Ex. 2007 at 3:28-30. Again, this is a key feature that Petitioner claims Chowdhuri teaches. *See, e.g.*, Paper 2 at 44-50. There is, thus, no relevant disclosure in Chowdhuri that was not already before the Office via Cruanes, Burroughs, or both.

II. The Arguments in the Petition Are Substantially Similar to Those Made to the Office During Prosecution.

At bottom, Petitioner's argument is that neither Pike nor Chowdhuri were explicitly before the Office during prosecution, and thus the arguments made to the Office are not substantially similar to those here. This is incorrect. During

prosecution, the examiner combined a typical MapReduce implementation (U.S. Pat. App. Pub. No. 2007/0038659 (“Datar”)) with a reference that teaches data of different schemas (Burroughs) and alleged that the combination rendered the claims invalid. *See* Ex. 1004 at 149-150; *see also* Datar at ¶ 33 (“This implementation uses the MapReduce programming model and technology...”). This is precisely the argument that Petitioner makes now, but with Pike substituted for Datar and Chowdhuri substituted for Burroughs.

Similarly, the examiner alleged that Cruanes, by itself, rendered the claims invalid because Cruanes teaches joining an “emp” table with a “dept” table on a common key via mapping/reducing operations over a distributed system. *See, e.g.*, Ex. 1004 at 229-39. Petitioner makes an identical argument using Pike, claiming that Pike teaches receiving diverse data into a MapReduce architecture and joining such data over a distributed system. In other words, the examiner alleged that the augmented MapReduce of Cruanes (which specifically focused on joining data in different tables) rendered the claims invalid, and here, Petitioner argues that Pike’s regular MapReduce, even without explicit disclosure of joining data of different schema, renders the claims invalid. These arguments are substantially similar.

The Board should deny institution under § 325(d).

Dated: August 16, 2023

By: /s/Carder W. Brooks
Carder W. Brooks
Registration No. 75,456
NELSON BUMGARDNER
CONROY P.C.
3131 W. 7th St.
Fort Worth, TX 76107
Telephone: (817) 806-3814
Email: carder@nelbum.com

Attorney for Patent Owner

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Patent Owner's Preliminary Response was served on August 16, 2023, to Lead and Back-up Counsel for Petitioner at the service address provided in Petitioner's Updated Mandatory Notices:

Email: ksmith@mcguirewoods.com

dfinkelson@mcguirewoods.com

Dated: August 16, 2023

By: /s/Carder W. Brooks
Carder W. Brooks
Registration No. 75,456
NELSON BUMGARDNER
CONROY P.C.
3131 W. 7th St.
Fort Worth, TX 76107
Telephone: (817) 806-3814
Email: carder@nelbum.com

Attorney for Patent Owner