

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Bismuth et al.
U.S. Patent No.: 12,271,636 Attorney Docket No. 54788-0026IP1
Issue Date: April 8, 2025
Appl. Serial No.: 18/502,275
Filing Date: November 6, 2023
Title: ANALYTICS, ALGORITHM ARCHITECTURE, AND DATA
PROCESSING SYSTEM AND METHOD

VOLUNTARY SEARCH DISCLOSURE
DECLARATION OF KENNETH DARBY

I, Kenneth Darby, declare as follows:

1. I am an attorney at Fish & Richardson PC, counsel of record for Advanced Micro Devices, Inc. (Petitioner). I am a member of the State Bar of Texas in good standing and admitted to practice before the U.S. Patent and Trademark Office.

2. I submit this Declaration voluntarily on behalf of Petitioner in response to Director's November 17, 2025 Memorandum titled "Voluntary Search Disclosure Declarations as a Favorable Factor in Institution Decisions" (the Memorandum).

3. This Declaration provides a description of where relevant prior art was located and the general methods used to find that art. This Declaration does not disclose counsel's legal analyses, mental impressions, or internal strategy; nothing herein should be construed as a waiver of attorney-client privilege or work-product protection. Consistent with the Memorandum, this Declaration is offered to assist the Office in understanding the search pathways employed.

4. Petitioner engaged multiple specialized third-party prior-art search firms to locate prior art that was not identified by the examiner during the examination of U.S. Patent No. 12,271,636.

5. I have investigated and been informed by the search firms that the search methodologies employed by the search firms used multiple, complementary

pathways, including keyword and Boolean text string searching, forward-and-backward citation searching, Cooperative Patent Classification (CPC) and International Patent Classification (IPC) classification traversals, assignee-targeted search passes, agentic AI context-aware semantic retrieval.

6. The search spanned both patent and non-patent literature, including Orbit Intelligence (Questel), PatSnap, Google Patents, Google Scholar, SpringerLink, IEEE Xplore Digital Library, the ACM Digital Library, ScienceDirect, and arXiv.org.

7. The classification-based search employing IPC/CPC relied primarily on G06F classes (e.g., G06F3/0659, G06F9/38, G06F9/3828, G06F9/3867, G06F13/4022, G06F15/7867, G06F30/34). Classification scoping was used both as a starting lens and as a cross-check or filter for other results.

8. To complement classification and semantic passes, the searches included targeted queries for major assignees in the space to surface additional families and disclosures that concept-only searches might miss.

9. The searches further employed one or more AI tools designed to look beyond literal keyword matches and capture contextual similarity. For example, the searches used Questel Orbit Sophia AI Search Tool. This tool provides an AI-powered semantic search agent with cutting-edge features, such as generating prior

art search reports, pre-filtering search results, generating optimized Boolean search strings based on natural language queries, and synthesizing patent documents with enhanced data retrieval and comprehension capabilities.

10. This searching was reviewed by attorneys and further supplemented by attorneys who performed additional searching of one or more of the same search resources discussed above, including supplemental searching for non-patent literature via the Google search engine, and supplemental searching for patent literature via Google Patents and PatSnap, including text string searching, semantic searching, and similarity score searching.

11. This Declaration is a good-faith general description of publicly accessible methods and sources used to locate prior art. It is not exhaustive, does not concede materiality or any legal issue, and should not be read to describe counsel's privilege-protected analysis. To avoid waiver of protected work product and proprietary search know-how, this public filing does not disclose the complete, exact strings executed.

12. I declare that all statements made in this Declaration of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both (under Section 1001 of Title 18 of the United States Code).

Executed this 4th day of May, 2026.

/Kenneth Wayne Darby Jr./

Kenneth W. Darby

Attorney for Petitioner