

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

QOMPLX LLC,
Patent Owner.

Case IPR2026-00298
Patent 12,143,424

PATENT OWNER'S PRELIMINARY SUR-REPLY

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	Declaration and CV of Dr. Sam Malek
2002	Declaration of Nathan Lowenstein in Support of Notice of Intent
2003	Declaration of Colette Woo in Support of Notice of Intent
2004	Declaration of Dennis J. Courtney in Support of Notice of Intent

All emphases in quotations are added unless otherwise stated.

The Reply largely answers arguments Patent Owner did not make and leaves the Petition's defects uncured. Institution should be denied.

I. The Reply Does Not Fix The Petition's Shifting "Respective First Data" Theories.

Petitioner asserts that a "holistic read" reveals a coherent mapping. Reply, 1. But for the compute nodes, the Petition does not identify the same "respective first data" for limitations [1.2.a] and [1.2.b]. For [1.2.a], it points to generic programming instructions, application data, and buffered stream data; for [1.2.b], it switches to PEs 235. Pet., 17–19, 23; POPR, 6–12. The Reply does not resolve that disconnect. Its new label—"PEs/operator data"—artificially joins disparate elements with a slash; it still does not identify which data is the claimed "respective first data" or explain how it is the same data identified for [1.2.a]. Nor does its citation to Pet., 35 help, because that passage addresses a different limitation, [1.3.c]. Reply, 1. Thus, the Reply only confirms the Petition's lack of a consistent and coherent mapping.

The Reply further introduces a red herring. Patent Owner did not argue that the claimed data must itself be "configured as a graph structure." Reply, 1. The problem is that Petitioner identifies Barsness's operator graph as the "distributed computational graph," but Barsness discloses that graph at its management system—not at its compute nodes. POPR, 8–9. Because Petitioner's mapping would require each compute node to store data representing a portion of the graph, Petitioner instead relies on the PEs stored at the compute nodes. But Barsness's operator graph

describes aspects of the PEs and their connections; the PEs do not themselves depict or “represent” any portion of that graph. *See, e.g.*, POPR, 12–13.

II. Petitioner’s Arguments For Claim 9 Still Fail.

The Reply says the Petition provides a “complete theory” for limitation [9.3]. Reply, 1. It does not. Limitation [9.3] requires *each computer system* in the first plurality to store first data that both describes part of a first transformation pipeline and identifies a second transformation pipeline. Petitioner identified that plurality as including “at least *management system 105* and compute nodes 130₁ and 130₂.” Pet., 62. Patent Owner’s point was that the Petition never identified, for each of those systems, the first data stored there and how that data performs both functions. POPR, 14–18. The Reply addresses only nodes 130₁ and 130₂; it never identifies what data at management system 105 allegedly identifies a second transformation pipeline, or how. Reply, 1–2. The Petition’s claim 1 cross-reference does not fill that gap: the cited claim 1 analysis concerns data representing a portion of a graph, not data identifying a second transformation pipeline. Pet., 62–63; POPR, 15–17. The Petition’s alternative reference to node 130₃ merely changes which compute node is called the second pipeline; it does not supply the missing mapping for management system 105. *See* Pet., 65. The supposedly “complete” theory remains incomplete.

The Reply’s nonlinearity argument answers a point Patent Owner did not

make. Patent Owner did not contend that a transformation pipeline must be “linear.” Rather, Petitioner’s alternative claim 9 theory depends on treating the PE4/PE5/PE6 arrangement on node 130₂ as the claimed “second transformation pipeline.” Under Petitioner’s own construction, those PEs must form “a progression of functions which each perform a transformation on a data stream.” Pet., 9. Patent Owner explained that Barsness shows PE4 and PE5 sending their outputs to PE6, which may join them, but the Petition never explained how that arrangement satisfies its construction. POPR, 18–20. The Reply argues that “the Petition” addressed this in a reference to “split data elements,” Reply, 2–3 (citing Pet., 22)—but the cited passage discusses whether Barsness’s “operator graph” is a “distributed computational graph,” not the application of Petitioner’s construction of “transformation pipeline.” Pet., 22. Thus, the Petition did not explain how PE4, PE5, and PE6 satisfy Petitioner’s construction of a “transformation pipeline.” The Reply’s Ground 2 footnote does not help because Ground 2 provides no separate claim 9 mapping and instead relies on Ground 1. Pet., 77.

III. Petitioner’s “Third Computer System” Argument Misses The Point.

The Reply attacks a strawman when it insists that Petitioner mapped Barsness’s management system to the claimed “third computer system.” Reply, 3. Patent Owner did not dispute that mapping. POPR, 21–23. The issue is whether, consistent with that mapping, Petitioner shows that Barsness’s management system

executes software instructions that cause its mapped fourth system to execute software instructions applying Petitioner’s mapped first or second transformation pipelines as required by the claims. Petitioner did not do this. *Id.*, 26–29.

Petitioner points to disclosures showing that Barsness’s management system plays a role in “provisioning” and “spawning” new compute nodes, Pet., 44–49, Reply, 3–4, and argues that the management system must therefore also necessarily execute software instructions that cause newly created compute nodes to apply Petitioner’s mapped transformation pipelines. *See generally* POPR, 21–29. As Patent Owner explained, however, other components—particularly Barsness’s monitoring system—are involved in and at times direct those processes, undermining Petitioner’s attribution of the claimed functionality to the management system. *Id.*, 23–26.

More fundamentally, the Reply still does not identify the required causal step. It asserts that the management system “‘set[s] up,’ ‘configure[s],’ ‘monitor[s],’ and ‘instruct[s]’” PEs and therefore causes execution of pipelines. Reply, 3–4. But provisioning or configuring a node does not, without more, show management-system instructions causing a node to execute PE instructions applying Petitioner’s alleged PE1/PE2/PE3 or PE4/PE5/PE6 pipelines. Petitioner implicitly assumes that provisioning/configuring instructions are the claimed causing instructions. *See* POPR, 26–29. The Reply does not fill the Petition’s shortfall.

IV. The Petition Does Not Explain How Chakradhar’s “Route-Map” Benefits Arise In Its Proposed Combinations.

Petitioner says Patent Owner improperly demanded “bodily incorporation” of Chakradhar’s controller. Reply, 4–5. Not so. Patent Owner did not insist that the controller be copied wholesale; it argued that the Petition must identify what in the proposed combination performs the controller functions on which its asserted benefits depend. The Petition invokes on-the-fly, atomic route-map updates to support fast reconfiguration, scalability, and fault tolerance. *See* Pet., 69–73. Yet its proposed combination adds route-maps to Barsness without explaining what in the combined system creates, updates, injects, or activates route-maps. *See* POPR, 31–40. In Chakradhar, those functions are performed by the controller. Ex. 2001 [Malek-Decl.] ¶¶ 63–75; POPR, 34–40. Although the Petition also calls route-maps a “natural and efficient” data structure for Barsness’s routing, even a route-map used only for routing must be created and populated. Pet., 71. The Reply’s reference to Barsness’s management system, Reply, 5, does not fill that gap, because it never explains how that system would perform those functions. Nor do the similarity of the systems, any alleged absence of incompatibilities between the systems, or Patent Owner’s explanation of how Chakradhar itself works supply the missing mechanism in Petitioner’s combination. Without that mechanism, Petitioner has not shown that the asserted benefits would arise in its combination or that a POSITA would reasonably expect the combination to work.

Respectfully submitted,

Dated: July 13, 2026

By: /Kenneth J. Weatherwax/

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the following documents were served
by electronic service, by agreement between the parties, on the date below:

PATENT OWNER'S PRELIMINARY SUR-REPLY

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