

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,

Petitioner,

v.

HEADWATER RESEARCH LLC,

Patent Owner

IPR2026-00271

Patent No. 9,491,564

**PATENT OWNER'S AUTHORIZED SUR-REPLY
TO PETITIONER'S PRELIMINARY REPLY BRIEF (PAPER NO. 10)**

The POPR provided no construction of the claim term “bus.” Instead, the extrinsic definition of “bus” shows that typical (“default”) buses lacked the security mechanisms claimed by the ’564 patent. POPR, 12–13. The “bus” *recited in the ’564 patent*, by contrast, “allow[s] access to the bus *only* for software components identified by the access authorization information.” Ex. 1001, 167:11–19 (limitation [1B]) (emphasis added); POPR, 6 (explaining that components not identified by the access authorization information “cannot access the bus”).

As the POPR made clear, it is Google’s *prior art*, not the ’564 patent, that fails to disclose limiting which software components receive messages over a bus: “[N]o security mechanism is disclosed *by TS-23.140 or Rakic* to prevent [unauthorized] applications B and C from also receiving the message intended for [authorized] application A.” POPR, 12 (emphases added). This is clear from the references themselves. For instance, TS-23.140 does not disclose any bus for transmitting data. Ex. 1004, 54 (noting that “how an MMS User Agent... would interface with” applications is “outside the scope” of TS-23.140).

Regarding Rakic, the Reply’s contention that “Rakic’s validation process” would ensure that “only the intended destination application receives the message” (Reply, 1) is incorrect. As explained in the POPR, Rakic’s signature-validation process only controls *whether* a message is sent and contains no mechanism for constraining which components can access the message. POPR, 11–12; Ex. 2006,

¶40 (“[N]either TS-23.140 nor Rakic discloses any mechanism that would prevent B and C from also reading the message intended for A.”).

Google’s Reply attempts to cure this deficiency by advancing new attorney argument that hardware and software buses operate in fundamentally different ways, such that, unlike hardware buses which transmit to all connected components, software buses would have transmitted messages only to a single component. *See* Reply, 2–3. This distinction, however, is contradicted by the Petition’s reliance on Rakic’s “communication path” as disclosing how “application[s]” would “communicate with one another.” Pet. 15 (quoting Ex. 1007, [0058]–[0059]); *see also* Ex. 1003, ¶72 (same). But Rakic’s bus, which the Petition alleges would be used for *software* transmissions, is clearly implemented as a *hardware* bus. Ex. 1007, [0058] & FIG. 3 (showing “communication path 310” being used to transmit data between hardware components such as “processor,” “memory,” and “network interface”). Because Google previously relied on Rakic’s *hardware* bus as disclosing a pathway for communication between *software* components, Google’s unsupported attorney argument that software buses are fundamentally different from hardware buses must be rejected.

Finally, Patent Owner does not dispute that a bus *only* routing a message to the identified component (i.e., so that no other software component would have access to the message) would satisfy the claim requirement. *See* Reply, 3. The

problem is that the Petition fails to establish the obviousness of such a solution, because nothing in Rakic or TS-23.140 provides such a teaching. Google's allegation that its combination of Rakic and TS-23.140 would include this feature which both references individually lack is an improper attempt to supply a missing limitation through attorney argument and expert testimony, contrary to 37 C.F.R. § 42.104(b)(4). *See* POPR, 19. And as further noted in the POPR, even if the *result* were obvious, the Petition articulated no allegedly obvious *mechanism* for how its proposed combination would actually *achieve* that result. POPR, 18 n.1.

Google's failure to identify such a mechanism is not trivial, because Google's own evidence shows the claims are not satisfied without such a mechanism. For instance, Google's "Yami" reference recognizes that prior-art software buses did not restrict access to the data transmitted over them. Ex. 1039, [0002] (describing a "vulnerability when data is... passed among or between various processes," wherein "[u]nauthorized users may be able to compromise a system and intercept data that is passed between processes"). Yami itself utilizes a "symmetric key" for "encrypting" data transmitted between processes to prevent unauthorized users from accessing the transmissions. *Id.*, [0007]. But Yami is not part of Google's MMS-Rakic combination, Google has not alleged the obviousness of Yami's solution in that combination, and Google identifies no mechanism in that combination that would restrict which software components may access the bus.

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Respectfully submitted,

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

The undersigned hereby certifies that the above document was served on July 24, 2026, by filing this document through the Patent Trial and Appeal Case Tracking System (P-TACTS) as well as delivering a copy via electronic mail upon the following attorneys of record for Petitioner:

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