UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ORCA SECURITY LTD,
Petitioner,

v.

WIZ, INC.,
Patent Owner.

IPR2025-01083
Patent 11,722,554

PATENT OWNER WIZ, INC.'S PRELIMINARY RESPONSE

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I. INTRODUCTION

Patent Owner Wiz, Inc. requests denial of *inter partes* review of the involved U.S. Patent No. 11,722,554 ("Keren'554"). Petitioner Orca Security Ltd. has failed to demonstrate a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable. 35 U.S.C. §324(a).

The petition alleges that the independent claims of Keren'554 are obvious based on the teachings of Shivamoggi (EX1004) alone, but its analysis falls short of establishing obviousness. In numerous instances, the petition invokes the POSITA's understanding to allege that Shivamoggi teaches certain elements of the claims, but the petition provides inconsistent and insufficient reasoning to support its assertions. For instance, the petition argues that a POSITA would have understood Shivamoggi as teaching *collecting network object data*,[1] but the petition's assertions are unsupported and at odds with both Shivamoggi and Keren'554. These deficiencies are further highlighted by the petition's reliance on the same type of data described in Shivamoggi as also teaching the separately claimed *determining relationships between the identified network objects*. Other

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[1] For convenience, Wiz adopts Orca's convention of denoting claim language with italics. Pet., 10 n.2.

instances of unsupported and unreasoned reliance on the POSITA's alleged understanding of Shivamoggi include the petition's conclusory assertions that Shivamoggi teaches *generated insights* that include *a list of abnormal connections between the identified network objects* and *tagging network objects in the network graph for which the insight is generated*.

Accordingly, for the reasons detailed below, the Board should deny institution of the petition.

II. CLAIM CONSTRUCTION

In an IPR, claims are given their ordinary and customary meaning in light of the specification. 37 CFR §42.100(b). No constructions are necessary to deny institution because denial is warranted for numerous reasons that do not depend on claim construction, as further detailed below.

III. ANALYSIS

A. Ground 1: The Petition Fails to Establish that Claims 1, 4, 7-12, 15, and 18-21 Are Obvious based on Shivamoggi (EX1004)

Ground 1 of the petition challenges claims 1, 4, 7-12, 15, and 18-21 as obvious based on Shivamoggi. Pet., 6. The petition fails to meet its burden in showing that Shivamoggi renders these claims obvious because the petition fails to show that the proposed combination teaches each and every limitation of independent claim 1, including limitations 1[a], 1[d], and 1[e],[2] and their corresponding limitations in independent claims 11 and 12. The petition also fails to provide a sufficient obviousness rationale explaining the differences between Shivamoggi and the claimed invention and why a POSITA would have been motivated to modify Shivamoggi to arrive at the claimed invention.

1. The petition fails to show that Shivamoggi teaches each and every limitation of independent claim 1

a. The petition fails to show that Shivamoggi teaches limitation 1[a]

Limitation 1[a] requires *collecting network object data on a plurality of network objects deployed in the cloud computing environment.* The petition asserts that Shivamoggi teaches the claimed collection of network object data through the collection of "network data." Pet., 15. The petition fails to show that Shivamoggi's network data is *network object data* as recited in the claims. The petition's assertions are inconsistent with Keren'554, Shivamoggi, and the petition's own treatment of Shivamoggi's network data through its mapping of the same data to different limitations of the claim. Moreover, the petition's attempts to map Shivamoggi's network data to the claimed *network object data* are conclusory and

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[2] Petitioner's labeling for the claim limitations is used in this preliminary response.

lack corroborating evidence.

The petition asserts that "Shivamoggi teaches that collected 'network data may include metadata about internal connections that were made among nodes of the network during a time interval,' including among virtual machine 214*d* nodes" (which the petition maps to the claimed *network objects*). Pet., 17 (emphasis omitted). The petition particularly relies on "exemplary types of metadata" described by Shivamoggi, "including 'the source and destination nodes of the connection, the communication protocol of the connection, the connection time and/or time length of the connection, the user that initiated the connection, the amount of data that was uploaded or downloaded over the connection, among other information.'" Pet., 17 (citing EX1004, 5:59-60) (emphasis omitted). According to the petition, "[a] POSITA would have understood that each of these examples of metadata is data describing one or more network objects and, therefore, is 'network object data' within the meaning of the '554 Patent." *Id.* As explained below, the petition's assertion that Shivamoggi's network data, including its exemplary types of metadata, constitutes *network object data* "within the meaning of the '554 Patent" is unsupported because it is contrary to Keren'554 and Shivamoggi.

First, the petition's contention is at odds with the challenged Keren'554 patent because the types of metadata relied upon by the petition are consistent with what Keren'554 describes as data relating to network object ***relationships***, rather than network object data. As the petition acknowledges, Keren'554 "teaches 'network object data is data describing one or more network objects.'" Pet., 16 (quoting EX1001, 8:10-12). However, in addition to network object data, Keren'554 also describes other types of data, including data relating to "[n]etwork object relationships," which "are descriptions of the various connections between the network objects." EX1001, 9:3-6. Keren'554 provides examples of "aspects of the connections between objects," including "connected objects, relevant ports of connected objects, connection bandwidths, connection durations, connection protocols, connection names or IDs, connection statuses, and the like." *Id.*, 9:6-11. These examples are similar to the metadata examples relied upon in the petition. *Compare id.*, 9:6-11 (listing connected objects, connection durations, connection protocols) *with* Pet., 17 (listing the source and destination nodes of the connection, the communication protocol of the connection, the connection time and/or time length of the connection).

Thus, to the extent Shivamoggi discloses collection of any type of data, its data is consistent with a different category of data described by Keren'554—namely, network object **relationships**. Indeed, further highlighting that the petition's reliance on Shivamoggi's examples are data descriptive of network object relationships and not network objects is the petition's reliance on the ***same*** examples of Shivamoggi as mapping to the *determined relationships between the* *identified network objects* of limitation 1[c]. *See* Pet., 23 (relying on connection between "a source node to a new destination node"), 23 (asserting "Shivamoggi teaches the "connection protocol of the connection' along with 'a user that initiated the connection, the time length of the connection, the amount of data uploaded or downloaded using the connection, etc.") (emphasis omitted), 32-34 (relying on Shivamoggi's collection of network data as satisfying the claimed *determining the relationships* using observational and active logging methods recited in dependent claim 7); *cf. id.*, 17 (asserting as the claimed network object data "the source and destination nodes of the connection, the communication protocol of the connection, the connection time and/or time length of the connection, the user that initiated the connection, the amount of data that was uploaded or downloaded over the connection").

In fact, Shivamoggi itself confirms that its network data are descriptions of the ***connections*** between nodes, rather than descriptions of the nodes. For example, much like the network object relationships of Keren'554, Shivamoggi expressly describes its network data as "metadata ***about internal connections*** that were made among nodes." EX1004, 3:13-15 (emphasis added); *see also* Pet., 17 (citing same). Shivamoggi also states that "the network data 320 ***indicates connections*** that were made among nodes" and includes "***connection attributes***." EX1004, 11:49-65 (emphasis added). Thus, the petition's assertion that Shivamoggi's network data “is ‘network object data’ within the meaning of the ’554 Patent” (Pet., 17) is unfounded because it is inconsistent with not only how Keren’554 describes different types of data, but also how Shivamoggi expressly characterizes its own data.

Finally, in addition to its inaccurate characterizations of Shivamoggi and Keren’554, the petition implicitly concedes the shortcoming of the reference by attempting to gap-fill Shivamoggi through conclusory assertions and reimagining its disclosures through improper hindsight. For instance, the petition argues “a POSITA would have understood an identification of the source and destination nodes of a connection to include or suggest the network object addresses and the remaining examples of metadata to be information such as would be obtained from a firewall event log.” Pet., 17. However, Shivamoggi says nothing about identifying network object addresses or firewall event logs. *Cf.* EX1004, FIG. 3 (no identification of network object addresses as part of network data). The petition also concludes that “[a] POSITA would have found it obvious to collect network object addresses because use of an object’s network address is the most ubiquitous means for identifying objects in a networked environment.” Pet., 17. The petition’s only support for this assertion is its expert, who fails to provide any corroborating evidence or reasoned analysis and simply parrots the petition. EX1003, ¶75. Thus, the petition’s conclusory assertions fall far short of a proper obviousness analysis sufficient to meet Petitioner's burden, especially in view of Shivamoggi's express disclosure that its data is descriptive of connections, as opposed to network objects.

Accordingly, the petition fails to establish that Shivamoggi teaches limitation 1[a].

b. The petition fails to show that Shivamoggi teaches limitation 1[d]

Limitation 1[d] recites *analyzing the network graph and the determined relationships to generate insights, wherein the generated insights include at least a list of abnormal connections between the identified network objects*. Petitioner argues that Shivamoggi teaches this limitation, but the petition fails to show that Shivamoggi teaches generating insights that include *a list of abnormal connections between the identified network objects*.

The petition does not allege that Shivamoggi discloses generating insights that include *a list of abnormal connections*, instead turning to the POSITA's alleged understanding of Shivamoggi's description of "suspected attack paths." Specifically, the petition asserts that "Shivamoggi teaches 'candidate graphs 154 are further analyzed to determine suspected attack paths 184 in the graphs.'" Pet., 24 (citing EX1004, 8:15-17) (emphasis omitted). According to the petition, "a POSITA would have understood 'suspected attack paths' to be *generated insights* that *include a list of abnormal connections* within the meaning of the '554 Patent because the '554 Patent expressly teaches that *insights* may specify a path." *Id.*, 25 (citing EX1001, 10:31-49). The petition's assertion that a POSITA would have understood Shivamoggi's "suspected attack paths" to constitute *a list of abnormal connections* is unfounded and unsupported by Keren'554 and Shivamoggi.

First, the petition's reliance on Keren'554 as "teach[ing] that *insights* may specify a path" does not support a conclusion that Shivamoggi's "suspected attack paths" would have been understood to be a list of abnormal connections. While the portion of Keren'554 relied upon by the petition provides an example of an "insight specifying a path" along particular network objects, it does not characterize that insight as a list of connections nor does it state that any identification of a path, whatever its form, is a "list" of connections. *See* EX1001, 10:31-49. The petition does not make any attempt to explain why Keren'554's description that insights may specify a path means that Shivamoggi's "suspected attack paths" map to the claimed ***list** of abnormal connections*. Pet., 25. The petition's expert similarly fails to bridge this logical gap by making the same conclusory assertion as the petition. EX1003, ¶98.

Second, Shivamoggi also does not describe its suspected attacks as including a list of abnormal connections. The petition cites to Shivamoggi's disclosure in which a path evaluator "determine[s] a specified number of highest-ranking paths as the suspected attack paths 184," which "are reported to the network administrator via the output interface 190." EX1004, 8:60-63, 9:1-3; Pet., 25 (citing same). But aside from stating that suspected attack paths are "reported," Shivamoggi does not indicate what form that report takes (*e.g.*, as a list or some other format). Indeed, any attack paths shown in Shivamoggi are illustrated in a graphical format. *See*, *e.g.*, EX1004, FIGS. 1 (illustrating time-ordered connection path(s) 170 in graphical form), 5 (same for time-ordered connection path 510), 7A (same for suspected lateral movement shown in GUI 700). This is in contrast to Keren'554, which distinguishes lists from graphs. *See, e.g.*, EX1001, 8:61-9:2 (describing features, such as "a visual 'node and link' graph" and "a list of network objects"), 12:34-38 (stating "network graph schema 300 … may be constructed in other formats including … a table, chart, or other, non-visual, data organization formats, a list of objects"), FIGS. 3A (illustrating an example network graph schema in the form of a node-and-link graph), 3B (illustrating a network graph object list). Thus, the petition's blanket assertion that Shivamoggi's suspected attack paths include *a list of abnormal connections* is unsupported and insufficient to meet Petitioner's burden.

The petition purports to identify other examples of "insights" allegedly described in Shivamoggi. For example, the petition asserts that Shivamoggi describes insights via Shivamoggi's "graph information section 720" illustrated in FIG. 7A, which allegedly "includes natural-language representations of the network graph, such as 'communication protocols used, the time frame of the connection behaviors shown, the total number of connections represented by the graph, the amount of data transferred within the graph, etc.'" Pet., 26-27. The petition also alleges that a POSITA would have understood that "similar information" would be provided by "a user selecting the 'Review Attack Path Info' button" shown in FIG. 7A. *Id.*; *see also id.*, 27-28 (arguing "[a] POSITA would have understood the *insights* provided in Fig. 7A, such as 'Total Connections' to match the *insights* of the '554 Patent, which describes them as including 'graph connection counts"). However, the petition does not allege that any of these other examples satisfy the claimed *list of abnormal connections*. *See* Pet., 26-28; EX1003, ¶¶100-02 (similarly failing to allege that information shown in FIG. 7A satisfies the claimed *list of abnormal connections*); *see also* Pet., 37-38 (relying on the same information shown in FIG. 7A as allegedly teaching a generated insight *generated utilizing natural language representation* as recited in dependent claim 10). Nor does the petition propose modifying Shivamoggi to include a list of abnormal connections as claimed, let alone provide a reasoned basis for doing so. *See generally*, Pet., 24-28.

Accordingly, the petition fails to establish that Shivamoggi teaches limitation 1[d].

c. The petition fails to show that Shivamoggi teaches limitation 1[e]

Limitation 1[e] recites *tagging network objects in the network graph for* *which the insight is generated*. The petition argues that Shivamoggi teaches tagging network objects for which the insight is generated through its description of GUI 700 shown in FIG. 7A. *See* Pet., 28-30. The petition fails to establish that Shivamoggi teaches each of the elements of limitation 1[e] because the petition fails to show that Shivamoggi teaches tagging network objects with generated insights.

In arguing that Shivamoggi teaches limitation 1[e], the petition relies on "the information shown in section 730 (e.g., 'Total Connections', 'Protocols Used', etc.) of the exemplary GUI of Fig. 7A" and asserts that a POSITA would have understood the information as "tagging network objects in the network graph as used in the '554 Patent." *Id.*, 28-29 (emphasis omitted). However, the information shown in section 730 relates to information for a selected ***link***, not a node (which the petition maps to the claimed network objects). *See* EX1004, 15:45-47 ("In this example, a particular path link 712 is selected, and information about that link is provided in section 730."), FIG. 7A (illustrating "Selected Link Information 730" for "selected link 712"). And the petition's citation to Keren'554 does not support that the information illustrates the tagging of network objects. *See* EX1001, 11:16-19 (stating "[t]agging of network objects at S250 may include … association of one or more data labels, tags, or other, like, features, with graph entries ***for one or more network objects***" (emphasis added)); Pet., 29 (citing same). Moreover, to the extent Shivamoggi generally states that a user can "select elements within the displayed connection graph 710 (e.g., individual nodes, path links, or entire connection paths)" to view information (EX1004, 15:42-45; Pet., 28), the petition fails to explain how and why a POSITA would have understood that the information that would be displayed when a user selects a node would include the generated insights as identified for limitation 1[d].

Accordingly, the petition fails to establish that Shivamoggi teaches limitation 1[e].

2. The petition fails to provide a sufficient obviousness analysis

The petition's Ground 1 asserts Shivamoggi based on a single-reference obviousness theory. Pet., 6. The petition does not allege that Shivamoggi anticipates the challenged claims—nor could it, based on the numerous instances the petition must turn to the POSITA's understanding to allege that Shivamoggi teaches the claimed limitations. *See, e.g.*, *id.*, 14-15, 17, 24, 25, 29. However, despite alleging obviousness, the petition fails to set forth a complete *Graham* analysis. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The petition does not identify the differences between the prior art and the claims or explain why a POSITA would have been motivated to modify Shivamoggi to arrive at the claimed invention. This lack of analysis is insufficient to satisfy Petitioner's burden in establishing the obviousness of the challenged claims.

3. The petition fails to show that Shivamoggi renders obvious independent claims 11-12

The petition incorporates by reference its claim 1 analysis for independent claims 11 and 12, including the limitations discussed above. *See* Pet., 39-43. Accordingly, for the same reasons discussed above with respect to independent claim 1, the petition also fails to establish that Shivamoggi renders obvious independent claims 11 and 12.

4. The petition fails to show that Shivamoggi renders obvious dependent claims 4, 7-10, 15, and 18-21

The petition also fails to show that dependent claims 4, 7-10, 15, and 18-21 are rendered obvious over Shivamoggi for at least the reasons discussed above with respect to independent claims 1 and 12.

B. Ground 2: The Petition Fails to Establish that Claims 2, 3, 13, and 14 Are Obvious based on Shivamoggi and Zhong

Ground 2 of the petition applies Zhong as allegedly teaching certain limitations recited in dependent claims 2, 3, 13, and 14. *See* Pet., 44-52. Because these claims depend from independent claims 1 and 12, the petition fails to establish that the combination of Shivamoggi and Zhong renders obvious the challenged claims.

C. Ground 3: The Petition Fails to Establish that Claims 5 and 16 are Obvious based on Shivamoggi and Woolward

Ground 3 of the petition applies Woolward as allegedly teaching certain limitations recited in dependent claims 5 and 16. *See* Pet., 52-57. Because these claims depend from independent claims 1 and 12, the petition fails to establish that the combination of Shivamoggi and Woolward renders obvious the challenged claims.

IV. CONCLUSION

Petitioner has failed to make a facial case of unpatentability for any challenged claim, so institution is unwarranted and should be denied.

Respectfully submitted,

Date: September 26, 2025

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CERTIFICATION UNDER 37 C.F.R. §42.24(d)

I certify the word count for this reply is 3098 words, excluding any table of contents, table of authorities, mandatory notices, certificate of service or word count, and appendix of exhibits or claim listing.

Date: September 26, 2025

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<u>**CERTIFICATE OF SERVICE**</u>

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