

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,

Petitioner,

v.

STERLING COMPUTERS CORPORATION

Patent Owner.

Case IPR2025-00270

U.S. Patent No. 8,073,911

PATENT OWNER'S SUR-REPLY

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EXHIBIT LIST

Patent Owner's Exhibit No.	Exhibit Description
2001	Declaration of Britta Loftus, Feb. 7, 2025
2002	Declaration of Latifur Khan, June 24, 2025
2003	Curriculum vitae of Latifur Khan
2004	Ramez Elmasri & Shamkant B. Navathe, FUNDAMENTALS OF DATABASE SYSTEMS, 195-201 (Chapter 7) & 941-949 (Appendix D) (3d ed. 2000)
2005	Declaration of Latifur Khan, December 16, 2025
2006	Oehlberg, T. (July 1998), <i>Informal PC-based Databases</i> , PM NETWORK, 12(8), 35-38.
2007	U.S. Patent No. 5,452,450 ("Delory")
2008	U.S. Patent Application No. 09/881,353 ("Mohit")
2009	U.S. Patent No. 7,542,979 ("Gupta")
2010	U.S. Patent Application No. 10/789,461 ("461 Application")
2011	Ramez Elmasri & Shamkant B. Navathe, FUNDAMENTALS OF DATABASE SYSTEMS, 195-241 (Chapter 7) (3d ed. 2000)

For numerous reasons, Petitioner has not met its burden to show that any claim of the '911 Patent is obvious.

First, as the Board already preliminarily found, Petitioner has not shown that its combination would apply “*different rules*”¹ to “*different... submessages*,” as required by three independent claims, because all of the evidence that Petitioner points to for this limitation involves applying a rule **to the same message**. Petitioner's Reply does not acknowledge the Board's findings on this limitation, let alone point to evidence to overcome them. Therefore, Petitioner has not met its burden to show obviousness of Claims 1-12 or 27-29.

Second, Petitioner's combination does not render obvious **any** claim because **every** claim requires applying rules to *submessages*, but Petitioner's combination would apply rules to entire threads, not to *submessages*. This is because Petitioner's combination adopts Rohall's “techniques” (unchanged), and Rohall's “techniques” operate on the entire-thread level. Petitioner presents no evidence that a PHOSITA would be motivated to operate on (e.g., apply rules to) Rohall's individual message items, and Rohall teaches away from operating on individual message items. Therefore, Petitioner has not met its burden to show that any claim is obvious.

Finally, Petitioner's proposed combination does not render obvious the “*relational references*” limitation required by every claim. As properly construed,

¹ Italics denote claim language.

the claim language “*relational references*” refers to “*references*” in a **relational** model, but Petitioner’s combination uses a **hierarchical** model. Although the Board preliminarily found that “*relational references*” did **not** require the use of a *relational* model, Petitioner’s Response supplemented the record with voluminous evidence showing that a skilled artisan would understand “*relational references*” to refer to “*references*” in a *relational* model. Critically, Petitioner’s Reply does not address that evidence; **all of that evidence is un rebutted**. Because Petitioner’s combination uses a hierarchical model instead of a *relational* model, Petitioner’s combination does not render obvious the “*relational references*” required by every claim.

I. Petitioner’s Rohall-Schiavone Combination Does Not Render Obvious Any Claim.

1. The Rohall-Schiavone Combination Does Not Teach, Disclose, or Suggest Applying “different rules” to “different ... submessages.”

Three of the four independent claims require that “*different rules*” apply “*to different ... sent submessages.*” EX1001, Claims 1, 10, 27.² Petitioner asserts that “the Board has already found ... that the claimed rule-application requirement is met.” Reply,22. **That is false**. The Board preliminarily found that Petitioner **had not**

² Petitioner and its expert lump this limitation together with “*selectively applying rules*” from Claim 13 (Reply,9-14; EX1003,121), but PO and the Board addressed it separately. Decision,27-26 & Resp.,37-40.

met its burden to show that its combination teaches this rule-application limitation. Decision,27 (“[W]e are uncertain as to how those disclosures describe ‘different rules’ that are applied to ‘different . . . submessages.’”); *id.* (finding PO had raised “a valid question” about whether “the combination of Rohall and Schiavone teaches this limitation.”); *id.*,26. This was because the examples that Petitioner relied upon all related to “**the same message**”³ being treated differently based on its recipients.” *Id.*,26-27 (citing Pet.,44–45 (citing EX1006,¶¶29,33)). Thus, the disclosures do not describe “*different rules*” applied to “**different...submessages.” *Id.***

The Board’s preliminary findings were correct. Nothing in the Reply changes the analysis. Indeed, Petitioner’s Reply does not even acknowledge, let alone address, the Board’s findings. *See generally* Reply,9-14.⁴ Instead, Petitioner rehashes the same arguments that the Board already rejected. *Compare* Pet.,44–45 (citing EX1006,¶¶7,16,29,33)) *with* Reply,11-12 (citing same). For example, Petitioner cites Paragraphs 29 and 33 of Schiavone, but those are the precise disclosures that the Board already found disclose only applying a rule to **the same message**, not to “**different...submessages.” Decision,26 (citing EX1006,¶¶29,33)).**

³ Unless otherwise noted, **bold/underlined** emphasis has been added.

⁴ Petitioner argues that “the Board expressly rejected Patent Owner’s improper attempt to import unclaimed requirements.” Reply,21 (citing Decision,23). But the portion of the Decision Petitioner quotes was addressing Claim 13, **not** the language in Claims 1, 10, and 27 that PO is addressing here.

Petitioner's Reply also cites Paragraphs 36 and 42. Reply,12. But Paragraph 36 suffers from the same problem: it relates to **the same message**. EX1006,[0036] (“**a** given electronic mail **message**”; “**the** mail **message**”). And, Paragraph 42 states only that Schiavone's rules could also apply to non-emails (e.g., AOL instant messages), which do not involve “*submessages*” at all. In sum, the Reply contains no evidence showing “*different rules*” applied to “*different...submessages*.”

Petitioner also contends that PO's expert “conceded that Schiavone would apply ‘*different rules of the compliance policy*’ to each subsequent message (i.e., ‘*submessage*’) in an email chain.” Reply,13. But that is not true. The cited cross-examination **did not discuss any disclosure from Schiavone**. Instead, the cross-examination involved an incomplete, counsel-created **hypothetical**⁵ in which a user hypothetically replies to Schiavone's COPPA email example. Reply,13 (hypothetical about what “**would**” happen “**if** a message was replied to”). PO's expert testified that **Schiavone does not discuss this**. EX1022,68:24-25 (“In case of Schiavone, they don't talk about what would happen in this case, what rule would be applied.”). And Schiavone does not. *See* EX1006. In any event, even the hypothetical (which is not evidence) does not supply the missing limitation. This is because, in the hypothetical, **the same rule (i.e., COPPA) applies** to both the initial

⁵ Because the hypothetical was made up during the deposition, PO's expert, of course, did not address it on direct, so the cross-examination falls outside the scope of direct. Fed.R.Evid.611.

message **and** the hypothetical reply. EX1022,69:1-4 (COPPA “rule would be applied” to the reply as well). Indeed, the hypothetical **does not even discuss some other, “different rule”** applying to either message. Therefore, among its many other deficiencies, Petitioner’s hypothetical (and cited cross-examination testimony) fails to disclose applying “*different rules*” to “*different ... submessages.*” As PO’s expert testified clearly: the ‘911 Patent limitation of applying “*different rules*” to “*different ... submessages*” is “significantly different from Schiavone.” EX2022,58:19-24.

A final reason that Petitioner’s evidence fails to render obvious this limitation is because, as discussed below, Petitioner’s combination uses the “techniques” taught by each individual reference, and Rohall’s “technique” involves “hand[ling] or process[ing] [a thread] **as a single entity,**” **not** at the *submessage* level. EX1005,[0013]; *infra*,6-9.

2. The Rohall-Schiavone Combination Does Not Teach, Disclose, or Suggest Applying Rules to Submessages.

Every claim of the ‘911 Patent requires applying rules **to submessages**. For example, every claim requires “*rule elements describing whether the rule is applicable **to a sent submessage**.*” In addition, Claims 13-26 require “*selectively **applying rules** ... **to the sent submessages**.*” And, as discussed above, all of the remaining claims require “*different **rules***” apply to “*different ... **submessages**.*”

It is undisputed that **Schiavone** does not disclose applying rules **to submessages** because Schiavone does not discuss *submessages*.⁶ EX2005,¶71. And, it is undisputed that **Rohall** does not disclose applying **rules** to *submessages*, because Rohall does not discuss applying rules at all. EX2005,¶62. Nevertheless, Petitioner contends that, in its proposed combination, Schiavone's rules would apply to *submessages*. But that is simply not true. Based upon Petitioner's own statements about how its combination would function, if Schiavone's rules were applied to Rohall, the rules would apply to Rohall's **entire threads**.

Petitioner states "the combined system **uses the ... techniques already described in each reference**," and that "each system **would perform the same in the combined system**." Pet,12&EX1003,¶126; *accord id.*¶127 (combination involves each reference "performing the same function it has been known to perform"). The "techniques described" in Rohall, however, **do not** operate on Rohall's individual message items. Instead, Rohall constructs and stores an "**entire message thread**" (or "complete thread tree") "**as a single entity**." *Id.*[0009] &[0010]. Then, Rohall handles/processes each "thread" "**as a single entity**."

⁶ Petitioner complains that, because PO considered whether Schiavone discloses this limitation, PO erroneously "attack[ed] [the] references individually." Reply,8-9. But it was proper for PO to consider whether Schiavone discloses this. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966) (obviousness ascertains "differences between the prior art and the claims"). Moreover, PO also addressed **the combination**. Resp.,31-40; *e.g.*, *id.*,31 (discussing "add[ing] Schiavone's rules to Rohall"); *id.*,34 (discussing "the combination").

EX1005,[0013]. Rohall states that “operation[s] on the data structure” apply to “**all** ancestor documents in the conversation thread.” *Id.* Therefore, Petitioner’s **own description** of its “combined system” is a system in which operations (e.g., applying Schiavone’s rules) on the data structure (i.e., the thread) apply **to the entire thread** (i.e., to all ancestor documents in the thread). Indeed, Rohall’s invention is titled “Method and Apparatus for **Handling Conversation Threads ... as a Single Entity.**” EX1005.

In the Reply, Petitioner stresses that Schiavone can apply rules to “a mail message” based upon, e.g., its recipients. Reply,11-12 (citing EX1006,[0007]& [0016]). But there is no teaching in Schiavone that this should be done **at the submessage level**. Instead, as Petitioner acknowledges, Schiavone **is silent** on whether to process at the *submessage* level versus the entire-thread level. Reply,10-11 (Schiavone is “agnostic” to the “unit of message”). But **Rohall is not**: Rohall’s techniques handle messages **at the entire-thread level**, handling threads “as a single entity.” Therefore, in the combination, Schiavone’s rules would apply to Rohall’s **entire threads**. Petitioner’s arguments to the contrary ignore Rohall’s techniques.

Petitioner also argues that the Board already found that Schiavone’s COPPA example “shows rule-application to each sent instance.” Reply,19 (citing Decision,22-24). But Petitioner’s own brief acknowledges that Schiavone is “agnostic” to the “unit of measure,” and the obviousness question is not what

Schiavone alone does: the question is what **the combination** does. Petitioner's combination uses Rohall's "techniques" and, therefore, handles operations on messages at the **entire-thread level**.

Another reason that Petitioner's combination would **not** involve applying rules to *submessages* is because Rohall criticizes "act[ing] on each message individually." EX1005,[0008]. This is because, as Rohall explains, "act[ing] on each message individually" is a "time consuming" process that results in "message items" becoming "disconnected," which in turn results in "increase[d] confusion." *Id.* For example, "messages can be deleted (if received) or not saved (if sent)," resulting in conversation threads having "holes." *Id.*; *see also id.* (criticizing algorithms that "fail to generate complete conversation trees"). When these "holes" exist, messages "do not make any sense," "similar to joining an oral conversation that is already in progress." *Id.* Thus, although Petitioner is correct that Rohall **describes** "granular units" (Reply,9-10), Rohall teaches away from "act[ing] on" those units "individually."⁷ A skilled artisan would know that, if Schiavone's rules were applied to Rohall's individual "message items," instead of to the entire thread, then the

⁷ The Board touched upon this "teaching away" argument and suggested that Rohall only "criticizes the difficulty in **sending** entire message threads." Decision,24. Respectfully, Rohall does not discuss the problem of incomplete threads **only** in the context of "**sending**." For example, Rohall also criticizes **receiving** and **reading** "disconnected" items. *Id.* ("messages ... do not make any sense [to the recipient/reader] without the entire conversation thread"). These discussions in Rohall teach away from applying rules to *submessages*.

message items could become disconnected. EX2029, ¶147. As a result, a skilled artisan would **not** apply Schiavone's rules to Rohall's individual message items.

In contrast to PO's evidence, Petitioner has presented **no evidence** showing why its combination would apply Schiavone's rules to Rohall's individual message items (as opposed to Rohall's entire threads). Schiavone is silent on this issue. Reply, 10-11 (Schiavone is "agnostic" to the "unit of message"). But Rohall **does** weigh in on this issue, teaching processing/handling threads "as a single entity" and teaching away from techniques that result in "holes" or "disconnected items." Petitioner cites no evidence – from Schiavone, Rohall, or elsewhere – in support of applying Schiavone's rules to Rohall's individual message items.

In sum, in Petitioner's combination Schiavone's rules would apply to Rohall's **entire threads**, not to *submessages*. Because every claim applies rules to *submessages*, Petitioner's combination does not render obvious any claim.

3. The Rohall-Schiavone Combination Does Not Teach, Disclose, or Suggest "*relational references*."

Every independent claim requires "*relational references pointing to a plurality of submessages*." EX1001, Claims. As discussed below, the proper construction of "*relational references*" is "*references*" in a *relational* model. Petitioner's proposed combination does not teach, disclose, or suggest this limitation. Petitioner relies upon Rohall for this limitation, but Rohall uses a hierarchical model, **not** a *relational* model. EX2005, ¶¶54-62 & 102-127. Petitioner

does not dispute this. *See generally* Reply. Therefore, if PO's proposed construction of "*relational references*" is adopted, Petitioner's Rohall-Schiavone combination fails to render obvious any claim.

a) "Relational References" Are "References" in a Relational Model.

A skilled artisan would understand that, in the '911 Patent, the claimed "*relational references*" are "*references*" in a *relational* model. EX2005,¶¶103-124.

(1) Voluminous Response Evidence Supports Patent Owner's Construction (and Is Unrebutted).

The Board preliminarily found that "*relational references*" is **not** limited to "*references*" in a *relational* model. Decision,11-12. That decision was based upon a finding that PO had not yet pointed to "any specific correspondence between a relational model and relational references." Decision,12. In Response, PO provided voluminous additional evidence showing why a skilled artisan would understand that "*relational references*" refer to "*references*" in a *relational* model, including:

- A 1998 article that contrasts the hierarchical and relational models and specifically **describes "references" used in the relational model as "relational references."** EX2006,3; *see also* EX2005,¶117 (this publication "confirm[s] that, when skilled artisans use the term 'relational references,' they are referring to references in a relational model").
- **Three** contemporaneous patents that use a relational model and **use the term "relational reference"** to refer to the "references" in those relational models. EX2005,¶118 (these patents "confirm that a skilled artisan would understand '*relational references*' in the context of the '911 Patent to refer to using references in a relational model"). These include:

- A patent from 1993 using both “a relational database” and a “**relational reference** database” to refer to use of the relational model. EX2007,1.
- A patent application filed in 2001 using “relational database techniques” and stating that “there is a need for address ‘identifiers’ that allow **relational reference** to ... objects” EX2008,[0015],[0017].
- A patent whose application was filed in 2004 that discusses storing data “in relational database tables” and discusses “establish[ing] the **relational reference** between the current entity and other entities being processed by the spreadsheet loader.” EX2009, 1:20-33, 8:48-51, 10:31-37.
- Other contemporaneous evidence showing that, when skilled artisans use a *relational* model, they use the word “*relational*” to modify other nouns used in that *relational* model, in the same way that the ‘911 Patent claim language uses the word “*relational*” to modify the word “*references*.” This includes:
 - The textbook chapter on the relational model, which uses the word “*relational*” to modify nouns, including “relational algebra,” “relational databases,” “relational representation,” “relational constraints,” “relational operations,” “relational concepts,” “relational systems,” “relational mapping,” and “relational languages.” EX2011,vii,xix,195,196,202,226; EX2005,¶116.
 - The ‘461 Application (EX3002), which uses a relational model and uses the word “relational” to modify nouns, including a “relational data store,” a “relational messaging system,” “relational database,” and “relational records.” *Id.*,[0017],[0018],[0021],[0044]; EX2005,¶111.

This additional evidence demonstrates the “specific correspondence between” the *relational* model and *relational references* that the Board preliminarily found lacking (Decision,12). **Petitioner’s Reply does not even acknowledge this evidence**, let alone rebut it.

PO also addressed the Board’s criticism that, for the textbook chapter on the *relational* model, PO had not adequately explained where the cited portions discuss

“‘relational **references**’ specifically.” Decision,13. To address this, the Response pointed to a passage in the textbook chapter on the *relational* model discussing “**referencing relations**” and “**referenced relations**” in connection with the *relational* model, EX2005,¶114 (EX2004/EX2011,206-207), as well as numerous other disclosures tying together the words “relation” and “*references*” in the context of the *relational* model. EX2004/EX2011, 206, 207, 219, Figure 7.7. “These passages confirm that a skilled artisan, when reading the term ‘*relational references*’ in connection with a patent that discusses use of a ‘relational model,’ would understand the term ‘*relational*’ to mean using a relational model.” EX2005,¶115. This evidence, too, is unrebutted. *See Reply.*

In sum, although Petitioner contends that “[n]othing in Patent Owner’s Response request the Board to depart from its previous findings,” the Response added voluminous evidence showing why the Board should depart from its previous findings with respect to the construction of “*relational references*.” Petitioner does not address **any** of this evidence. The unrebutted evidence shows that, to a skilled artisan, the ‘911 Patent’s “*relational references*” are “*references*” in a *relational* model.

(2) Petitioner Relies upon Unsupported Attorney Argument in Support of Its Proposed Construction.

In contrast to PO's evidence, Petitioner **never** submitted **any** expert testimony to show how a skilled artisan would understand the term "*relational references*." See generally Reply, 2-7. Although Petitioner's expert concludes that Rohall's "pointers" are "*relational references*" (EX1003, ¶148), he does not explain **why**, and he never addresses PO's evidence to the contrary. It is only Petitioner's **attorneys** who argue how "a POSITA would understand" the term. Reply, 7. But "[a]ttorney argument is not evidence' and cannot rebut other admitted evidence." *Elbit Systems of America, LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed.Cir.2018) (internal quotation omitted); *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974).

In any event, each of Petitioner's attorney arguments fails.

First, Petitioner's attorneys argue that "*relational references*" means "pointers" because the '461 Application equates "references" and "pointers." As an initial matter, PO submitted **unrebutted** evidence explaining why it would be **improper** to construe any part of "*relational references*" to mean "pointers," including because a skilled artisan would understand that a "pointer" is **narrower** than a "*reference*" (i.e., the word used in the claim). EX2005, ¶¶119-124. In fact, traditional-programming-language physical "pointers" would **preclude** the use of a *relational* model (i.e., the sole embodiment in the specification). *Id.*, ¶122. Such a construction is "rarely, if ever, correct." *Vitronics Corp. v. Conceptronic, Inc.* 90

F.3d 1576, 1583 (Fed.Cir.1996). Moreover, even if “*references*” were construed to mean “pointers,”⁸ the word “*relational*” **also** “**must be considered meaningful.**” *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1562 (Fed.Cir.1991). The un rebutted evidence is that the claim term “*relational*” signifies to a PHOSITA that the *references* are those in a *relational* model. EX2005,¶¶111&116 (quoting EX2011,vii,xix,195,196,202,226 & EX3002,[0017],[0018],[0021],[0044]).

Second, Petitioner’s attorneys argue that the claims’ use of the verb “to point” would be “meaningless” in a *relational* model. Reply,3. Petitioner seems to be suggesting that “*pointing*” means that the claims **do not** use a *relational* model. But any construction that **precludes** a *relational* model is improper.⁹ *Vitronics.*, 90 F.3d at 1583. In any event, there also is no support for the attorney argument that “*pointing*” would be “meaningless” in a *relational* model. Reply,3. The verb “to point” **is used with the relational model.** EX2005,¶119 (quoting EX2004/EX2011, at 207)). For example, the textbook chapter on the *relational* model states that “the

⁸ If the Board adopts a construction of “*relational references*” that includes “pointer,” PO respectfully submits that the construction should make clear that “pointers” can be logical (i.e., that “pointers” does not preclude logical references – e.g., like the logical keys/identifiers in a *relational* model). EX2004,948 (“a pointer” can be “a logical one containing a key”).

⁹ Petitioner seems to be seeking this unsupported construction to aid its non-infringement position: if it can secure a construction of “*relational references*” that requires (physical/traditional) pointers and thereby **precludes** use of the *relational* model, then its accused product (which uses the *relational* model) would not infringe (because it does not use physical pointers).

arrowhead may **point** to the primary key of the referenced relation.” *Id.* Once again, Petitioner’s Reply does not even address, let alone rebut, this evidence.

Third, Petitioner’s attorneys argue that the *relational* model described in the ‘911 Patent and the ‘461 Application has “no definition.” Reply,3-4. But “[a] skilled artisan would understand the meaning of ‘a relational model’ in the ‘911 Patent.” EX2005,¶104; EX2004,7&17. Indeed, **the parties agree** that skilled artisans were aware of the *relational* model at the time of the invention. Reply,5-6. Thus, the *relational* model requires no “definition.” *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369, 1376 (Fed.Cir.2017) (“A patent need not explicitly include information that is already well known in the art.”).

Fourth, Petitioner’s attorneys argue that the ‘911 Patent does not “tie ‘*relational references*’ to ‘relational model.’” Reply,3. But the ‘911 Patent claim language does precisely that: it uses the word “*relational*” to modify the word “*references*.” EX1001,Claims. When a reference discussing the *relational* model uses the word “*relational*” to modify a noun (as in the claims), a skilled artisan would understand that a *relational* model is being used. EX2005,¶¶111&116. This evidence is unrebutted.

Fifth, Petitioner’s attorneys argue that PO “points to nothing in the [‘]911 Patent to suggest that the claimed ‘*relational references*’ are implemented in association with such tables [for managing the relational database].” Reply,4. To the

contrary, PO's expert pointed to evidence showing why a skilled artisan would understand the '911 Patent's tables use a *relational* model, including for example, the use of Unique IDs, which are a form of primary keys in a relational database.¹⁰ EX2005,¶30 (citing EX1001,5:55-60); *id.*¶120 (same); *id.*¶30 (explaining that "[t]he relational model effectively supports both **one-to-many** and **many-to-many** relationships," as reflected in the '911 Patent's disclosures (citing EX1001,1:67-2:2,1:42-45)); *see also id.*¶¶131-132,134,137. This evidence is unrebutted.

Sixth, Petitioner's attorneys argue that, because the '461 Application "sends and stores pointers referencing the locations of the submessages," that shows that "the claimed '*relational references*' are **not** limited to the relational model." Reply,4 (citing EX2010,[0041],[0046]). Again, Petitioner is suggesting that "pointers" **cannot exist** in a *relational* model and that, therefore, "*relational references*" must **not** refer to a *relational* model. But this argument ignores **so much**. As an initial matter, the argument ignores that the '461 Application **uses the relational model** and, therefore, its "pointers" are in a *relational* model. Moreover, Petitioner ignores that "pointers" can refer not only to physical pointers, but also to logical ones (e.g., the unique keys/identifiers in a relational model). EX2004,948 ("a pointer" can be

¹⁰ Petitioner argues that the testimony that a *relational* model "links tables through those keys or identifiers" (EX2005,¶34) is "unsupported" (Reply,5) but PO's expert cited to the '911 Patent's use of "unique IDs," which are "identifiers" used to "link tables" in a relational model. EX2005,¶¶30,120.

“a physical one containing an address, or a logical one containing a key”). Because the ‘461 Application uses a *relational* model, a skilled artisan would know that its “pointers” are logical references. EX2005,¶52. This evidence is unrebutted.

Seventh, Petitioner’s attorneys argue that “Patent Owner’s expert also stated that a message container and its submessages, as taught by the [‘]911 Patent, can be implemented using either a hierarchical or a relational model.” Reply,5-6 (citing EX1022,6:14–23). Not true. PO’s expert was **not** testifying about **the ‘911 Patent**: he was testifying about Paragraph 24 of his declaration, which cites to **a textbook** discussing different ways of associating a message container and its sub-messages. EX2005,¶24 (citing EX2004). The unrebutted evidence is that a skilled artisan would understand “*relational references*” in the ‘911 Patent to refer to “*references*” in a *relational* model. EX2006,¶¶103-124. This is not a case where an inventor “chose not to include it in the claim language,” as Petitioner contends (Reply,6): the inventors did include the word “*relational*” in the claim language.

Eighth, Petitioner’s attorneys argue that PO’s proposed construction “improperly imports limitations from the specification,” suggesting that PO should **not** consult the specification to determine what “*relational*” means. Reply,6. But the specification is “the single best guide to the meaning of a disputed term,” *Vitronics*, 90 F.3d at 1582, and neither of Petitioner’s cases is on point. In *Arlington*, the claim term was “flexing,” but a party sought a construction that “flexing” “must be limited

to cantilever flexing.” *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 345 F.3d 1318, 1327 (Fed.Cir.2003). The word “cantilever” did not appear in the claims. In contrast, here, the claim term is not simply “*reference*,” but a particular type of “*reference*”: a “*relational*” *reference*. Thus, there is no need to “import” the *relational* model: **the claim language itself** tells a skilled artisan that the *relational* model is used. The other case that Petitioner cites, *Abbott Labs*, supports **PO’s** construction. In that case, the claim term being construed was “crystalline.” The court found it proper to limit the claim term to a particular type of “crystalline,” in part because “the exclusive focus” of the specification was on that crystal, even though other types of crystals were known in the art. *Abbott Lab’ys v. Sandoz, Inc.*, 566 F.3d 1282, 1289-91 (Fed. Cir. 2009). Similarly, here, the only model for linking submessages discussed in the specification is the *relational* model. *Vitronics*, 90 F.3d at 1582. Although the hierarchical model was known (Reply,5-6), the specification **never discusses that model**. Instead, the specification exclusively discusses the *relational* model and incorporates by reference the ‘461 Application (that also uses a *relational* model), and then the claims use the word “*relational*.” In this context, a skilled artisan would understand that a “*relational*” *reference* is a *reference* that uses a *relational* model. EX2005,¶¶103-124.

Ninth, Petitioner’s attorneys argue that “*relational*” simply means items that are “*related*.” Reply,7. But that proposed construction ignores the specification’s use

of the *relational* model and its incorporation by reference of the '461 Application, which also uses the *relational* model. It also ignores all of the Response evidence showing how a PHOSITA would understand "*relational references*" in the '911 Patent. Moreover, the word "*relational*" is used in the '911 Patent only (1) to refer to "*relational references*" and (2) to refer to the *relational* model. EX1001. In addition, the '911 Patent uses the term "*relational reference*" interchangeably with "relationally-referenced." EX1001,5:23-25. This adverb describing referencing items "relationally" reinforces linking items in **a particular manner**; here, using a *relational* model. EX1001,5:23-25. It does not make sense to use "relationally" to refer to linking "related" items.

In sum, PO has submitted voluminous evidence – including expert testimony, citations to the '911 Patent and the '461 Application, and contemporaneous publications (a textbook, patents, publications) – supporting its construction. In contrast, Petitioner's arguments (1) are unsupported by any expert testimony, (2) are conclusory attorney argument, and (3) are rebutted by PO's evidence. For all of these reasons, the Board should construe "*relational references*" to mean "*references*" in a *relational* model.

b) The Rohall-Schiavone Combination Does Not Teach, Disclose, or Suggest “relational references.”

When “*relational references*” is construed to require “*references*” in a *relational* model, Petitioner's combination does not render obvious this limitation. Resp.40-45.

Petitioner relies upon Rohall for this disclosure. Pet.,23-34. Rohall, however, does not use a **relational** model. EX2005,¶¶58-60,84,125-138. Rohall uses a **hierarchical** model. *Id.* **Petitioner does not dispute this.** Nor could it, given Rohall's repeated disclosures that a hierarchical model is being used. E.g.,EX1005,Abstract,[0013],[0056]-[0057],[0061],[0063],[0076],[0125],[0129].

Nevertheless, Petitioner argues that Rohall discloses “*relational references*” even under PO's construction. Reply,16. Petitioner has not submitted **any** expert testimony to support this argument. *Id.* Instead, Petitioner's attorneys argue that Rohall satisfies the limitation because Rohall uses (1) a “unique identifier” and (2) “pointers.” *Id.* But the use of a unique ID **alone** does not mean that a *relational* model is being used; there are other characteristics that separate the two models. EX2005,¶¶24-28. For example, in a *relational* model, the linkage between items is **logical**. EX2005,¶¶27,35,47,52,122. But the linkage in Rohall is **physical**. *Id.*,¶¶28,60,135. Similarly, Rohall's “pointers” are not “*references*” in a *relational* model. Rohall's “pointers” are **physical** pointers, EX2005,¶¶28,60,135, which are **different than** the logical references used in a *relational* model. *Id.*,¶¶28,32,35,46,

52,119,120,122; EX2004,948 (“a pointer” can be **either** “a physical one containing an address, **or** a logical one containing a key”). Rohall’s physical pointers reiterate that Rohall uses a hierarchical model, **not** a *relational* model.

Because Rohall does **not** use a *relational* model, Rohall does not disclose “*references*” in a *relational* model.

4. A Skilled Artisan Would Not Be Motivated to Combine Rohall and Schiavone to Solve Any Problem in the ‘911 Patent.

One reason a PHOSITA would not make Petitioner’s proposed combination is because the ‘911 Patent seeks to **reduce** storage needs, but Rohall’s shadow documents **increase** storage needs. EX1001,1:44-45; Resp.,45-47. Petitioner’s attorneys argue, without any support from an expert, that Rohall would **not** “exacerbate the 911 Patent’s identified storage concerns.” Reply,19-20. But the only citation they point to is Rohall’s statement that storage of shadow documents can be consolidated into a single tree document. Reply,19-20. But regardless of whether Rohall’s shadow documents are stored as individual documents or in a single document, they need to be stored, resulting in the system having **more** data to store. EX1005,[0013]. The fact that Rohall makes an effort to **reduce** the amount of **additional** storage needed does not change the fact that a skilled artisan would be discouraged from adding **any** additional storage needs. EX2005,¶95.

The Response also explained that another reason a PHOSITA looking to solve the problems addressed in the ‘911 Patent would not look to Rohall is because Rohall

deals with the opposite problem (constructing, rather than deconstructing, threads). In response, Petitioner's attorneys note that PO's expert does not dispute that Rohall discloses "parts of a thread." Reply,17 (citing EX200[6],¶83). But the fact that Rohall discloses only disjointed "**parts** of a thread" – e.g., a reply that does **not** include the message it is replying to – is precisely why a skilled artisan would not look to Rohall: it did not face – and, therefore, cannot help fix – the problem the '911 Patent is grappling with (i.e., submessages being replicated).

Petitioner also argues that PO "mischaracterizes the art," but Petitioner does not explain why. Reply,18. There is no "mischaracterization": the '911 Patent addresses the problem of replicating submessages, which it solves by storing each *submessage* only once (EX1001,1:40-45; *id.*,Cl.27), and Rohall does **not** address that problem because, in Rohall, message items are **not** replicated. EX1005,[0008] (prior art algorithms "fail to generate complete conversation trees"). Thus, the '911 Patent addresses a problem that simply does not even exist in Rohall.

Petitioner asserts that Rohall and the '911 Patent address "the same...issues" (Reply,18), but the evidence does not support that conclusion. In particular, Petitioner incorrectly asserts that **both** references:

- address "los[ing] important items" (Reply,18).
 - But the '911 Patent does not address that issue; the '911 Patent explains that the problem is actually that items exist **too many** times. EX1001,1:40-55.

- address being “overwhelmed by the volume” of email (Reply,18).
 - Rohall does state that people are frustrated by the volume of email, but nothing in Rohall addresses that problem; Rohall **increases** storage needs. *Supra*,21.
- “encounter difficulty managing message threads” (Reply,18).
 - But Rohall does not encounter that issue, because there are no “threads” in Rohall: Rohall’s problem is the **absence** of threads.
- “encounter difficulty ... when replies and forwards cause messages to become disconnected” (Reply,18).
 - But the ‘911 Patent does **not** encounter that problem; in the ‘911 Patent, replies and forwards cause earlier messages in the thread to be replicated, such that messages in a thread are **always connected**.
- directed to “threads” and have the same “messaging structure” (Reply,18).
 - To the contrary, the “messaging structures” are completely different: Rohall lacks threads, so it constructs them; the ‘911 Patent has too many replicating parts of threads, so it deconstructs them.

In sum, each alleged similarity is present in only **one** of the references.

Petitioner also stresses the Board’s preliminary finding that Schiavone’s compliance and governance features provide the motivation to combine the references. Reply,17. Even if the teachings in Schiavone could provide motivation to add rules to Rohall, Petitioner articulates **no reason** why a skilled artisan would apply the rules to Rohall’s individual message items (as opposed to entire threads). Petitioner’s articulated combination would not. *Supra*,6-9.

For all of these reasons, it is apparent that the only reason for Petitioner’s combination is hindsight reasoning, using the claims of the ‘911 Patent as a roadmap.

This is prohibited. In response, Petitioner argues that its “combination is grounded in the teachings of the references themselves,” but that is not true. For example, Petitioner argues that its combination would apply Schiavone’s rules to Rohall’s individual message items, but that is **not** what “the references themselves” teach. *Supra*,6-9. The fact that Petitioner argues for a combination that is contrary to the references’ teachings demonstrates that Petitioner is using the claims as a roadmap.

B. The Board Should Reject Ground 2.

Claims 9 and 27 are not obvious based on the Rohall-Schiavone-Gomes combination. EX2005,¶¶156-176.

Claim 9 requires “*search rules describing which population structure entities can view which sent submessages when searching.*” EX1001,C1.9. The Rohall-Schiavone-Gomes combination does not render obvious this claim because, in the combination, “*search rules*” would **not** be applied to “*submessages.*” Resp.,57-60. Petitioner contends that this argument “is based on Gomes alone.” Reply,22-23. To the contrary, this argument considers the combination. In addition to the fact that none of the individual references disclose applying search rules to *submessages*, the combination also does **not**. This is because Rohall teaches that each “thread” should be “handled or processed as a single entity,” and Petitioner’s combination uses this “technique.” *Supra*,6-9. Therefore, if Gomes’ rules were applied to Rohall, the rules would be applied to entire threads, not to *submessages*.

Claim 27 requires that “*each of the sent submessages is stored exactly once*” and that “*the first sent submessage is not duplicated.*” EX1001,C1.27. This solves the storage problem created by the replication of *submessages*. EX1001,1:40-55; EX2005,¶167. PO submitted evidence showing that de-duplication in Gomes does not apply to *submessages* but instead applies to entire threads. EX2005,¶¶171-176. Petitioner does not address this argument. Instead, Petitioner asserts that PO addresses Gomes alone, not the combination. But the combination also would not de-dupe Rohall's individual message items. This is because the combination uses Rohall's techniques, which state that threads should be handled “as a single entity.” *Supra*,6-9. Therefore, neither Gomes nor the Rohall-Schiavone-Gomes combination would de-dupe Rohall's individual message items: they would de-dupe entire threads “as a single entity.”

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. 42.6(e), I certify that on this 28th day of April 2026, a true and correct copy of the foregoing **Patent Owner's Sur-Reply** was served by electronic mail on Petitioner's lead and backup counsel at the following addresses:

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