

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BRYCER, LLC, and BRYCER MANAGEMENT, INC.,
Petitioners

v.

TEGRIS, INC.,
Patent Owner.

Case No. IPR2023-01196
Patent No. 11,126,966

Before KAREN I. SWEENEY, *Trial Paralegal*

PATENT OWNER'S SUR-REPLY

UPDATED PO EXHIBIT LIST

Ex. #	Description
2001	Declaration of David Williams
2002	David Williams CV
2003	https://www.wsp.wa.gov/wp-content/uploads/2021/09/Application-Level-ITT-Specialized-Certificate-of-Competency-420263.pdf
2004	Lynnwood Case Study
2005	https://www.nfpa.org/News-and-Research/Publications-and-media/Blogs-Landing-Page/NFPA-Today/Blog-Posts/2020/10/30/guide-to-fire-extinguisher-inspection-testing-and-maintenance
2006	U.S. Published App. No. 2008/0114638 to Colliau
2007	U.S. Published App. No. 2003/0171957 to Watrous
2008	U.S. Published App. No. 2005/0108038 to Cober
2009	U.S. Patent No. 6,446,053 to Elliott
2010	U.S. Published App. No. 2006/0235611 to Deaton
2011	Annual Hydrant Inspection Procedures 2001
2012	U.S. Publication No. 2008/0084291 to Champion
2013	Claim 8
2014	Potts v. Martin & Bayley, Inc. Case Opinion
2015	Declaration of Andrew Moren
2016	Declaration of Leroy McNulty
2017	Declaration of Mike A. Miller
2018	Claim chart mapping Challenged Claims to Tegrifire
2019	Claim chart mapping Challenged Claims to Brycer <i>TCE</i>
2020	Declaration of David Williams in Support of Patent Owner Response
2021	Excerpts from MacInnes Deposition Transcript
2022	Merriam-Webster Definition of Notice
2023	Anacortes, WA Fire Department Case Study
2024	Marysville, WA Fire Department Case Study
2025	Richland, WA Fire Department Case Study
2026	Welcome to ACS Firehouse Solutions—Website Aug 23, 2007
2027	Information system - Automation, Data Processing, Decision Support _ Britannica Website, accessed 4/12/2024
2028	www.researchgate.net/figure/Example-of-geographical-information-system-GIS-mapping-in-environmental-studies-Photo_fig1_330567969

Ex. #	Description
2029	GIS electric utility map data layers - Search Images.pdf2
2030	https://www.giscloud.com/blog/gis-for-electric-utilities/ , Accessed April 12, 2024
2031	EX2031 - fire hydrant gis map data layer, fire hydrant gis map data layer - Search (bing.com)
2032	examples of life safety map data layers inside a building - Search (bing.com) , Examples of life safety map data layers inside a building - Search.pdf
2033	Life Safety Plans - 2018 Project Standards (weebly.com) , Life Safety Plans - 2018 Project Standards.pdf
2034	fire hydrant map data layer - Search (bing.com) , Fire hydrant map data layer - Search.pdf
2035	Quantifying the High Cost of Delayed Em...pdf
2036	Fire Hydrant System in Buildings _ Office _ Industries _ Best 2022.pdf
2037	Fire Hydrant Systems - Torvac.pdf
2038	Standpipe Connection for Fire Protection - What You Need to Know.pdf
2039	Relational Database vs Flat File (Differences & Similarities) - DatabaseTown.pdf
2040	City of Tumwater Brycer RFP
2041	12/16/2011 Richland WA email
2042	Benefits of Proactive Compliance Program
2043	10 Ways to Improve Fire and Life Safety Instructions with Software
2044	Cambridge Dictionary, https://dictionary.cambridge.org/us/dictionary/english/send , accessed on September 10, 2024
2045	Cambridge Dictionary, https://dictionary.cambridge.org/us/dictionary/english/notify , accessed on September 10, 2024
2046	Cambridge Dictionary, https://dictionary.cambridge.org/us/dictionary/english/access , accessed on September 10, 2024

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I. INTRODUCTION

Petitioners allege that Patent Owner (“PO”) is attempting to rewrite the claims. On the contrary, Petitioners are rewriting the claims and cited references and attempting to satisfy missing elements with unspecified general knowledge in the art. The claims as written and properly construed are novel over the cited references, which fail to disclose several limitations. Further, no motivation to combine exists, as Petitioners’ primary reference, Key, teaches away from the challenged claims. The uncontroverted record demonstrates that, *inter alia*, Key’s process for managing inspections of pressure vessels is forbidden by applicable regulations for the inspection of fire hydrants and related assets. Petitioners also failed to rebut PO’s substantial evidence of unexpected results, commercial success (corroborated by wide spread adoption by municipalities), and a long-felt unmet need for a web-based fire hydrant management software that effectively tracks inspections of fire hydrants and related equipment (thereby dramatically improving compliance with applicable regulations and public safety, when the ultimate goal is to ensure that these emergency systems are in good working order when needed to respond to a fire). (*See* EX1001, 1:50-59.)

II. PETITIONERS MISCONSTRUE THE CHALLENGED CLAIMS.

A. The notices sent to the asset owner and approval authority must relate to the inspection of the same asset.

Petitioners incorrectly argue (1) that the claims do not require sending “separate notices ...of an upcoming inspection,” and (2) the approval authority’s notice in [8e] “could be that the assets were *already* inspected.” (Reply, pp. 3-4, emphasis in original.) These arguments are belied by the plain claim language. Claim 8 in relevant part recites: [8c] “analyzing the *records of assets*...to identify notification events”, [8d] “based on *the* analysis, notifying an owner of *an asset* of a notification event...wherein the notice includes a standard format description of the type of inspection...wherein the notification event comprises a designatable interval in advance of an impending deadline for the inspection”, [8e] “based upon *the* analysis, sending a standard form notice to the approval authority of the status of *the assets* assigned to the approval authority...” and [8i] “transmitting to the approval authority, a...compliance report...noting deficiencies in association with *the asset*.” (EX1001, 15:31-16:14, emphasis added.) Based on this plain claim language: (1) both notices (owner and approval authority) necessarily derive from the same analysis that identifies the notification events; (2) the asset owner is notified, *inter alia*, of a designatable interval (notification event) in advance of the deadline for the inspection of a certain *asset*; (3) the approval authority is sent a

notice of the status of *the assets* assigned to the approval authority; and (4) that notice may refer to other assets assigned to the approval authority but must at least relate to the owned asset with an upcoming inspection, in part, because also transmitted to the approval authority is a compliance report that notes deficiencies in *the asset*, which in patent claim parlance refers back to the *an asset* of the owner.¹ By logical extension, if the approval authority is receiving a compliance report that notes deficiencies with the owner's asset, then that owner's asset must have been *assigned to the approval authority* and must be included in the approval authority's notice of "the status of the assets assigned to the approval authority." Further, since the status of the owner's asset is that there is an inspection deadline approaching ("notifying an owner of an asset of a notification event...wherein the notice includes a...description of the type of inspection...wherein the notification event comprises a designatable interval in advance of an impending deadline for the inspection"), then the "status of *the assets* assigned to the approval authority" must also relate to the upcoming inspection of the owner's *asset*. Therefore, contrary to Petitioners'

¹ "...the introduction of a new element is accomplished through the use of an indefinite article... See, e.g., Robert C. Faber, *Faber on Mechanics of Patent Claim Drafting*, App. D-1 (6th ed. 2008) ('the definitive article THE is used to refer to an ELEMENT which has been established earlier in a claim.') (citation omitted). Thus, the use of the definite article...supports our conclusion that 'the smoke cooled' is the smoke from the previous step." *Tuna Processors, Inc. v. Haw. Int'l Seafood, Inc.*, 327 F. App'x 204, 210 (Fed. Cir. 2009)

Reply, claim 8 requires notices to the asset owner and approval authority – [8d] a notice to the asset owner of an upcoming inspection deadline for an asset, and [8e] a notice to the approval authority related to the status of assets, including the upcoming inspection deadline for the asset in the [8d] notice to the asset owner.

Likewise, the approval authority’s notice in [8e] related to the owner’s asset cannot be “that the assets were *already* inspected,” as alleged by Petitioners. The claim requires that the owner’s notice and the approval authority’s notice are based on the same [8c] analysis, *which identifies an upcoming inspection of that asset*. No notice is required for the approval authority or asset owner for an asset that has already been inspected with no upcoming inspection deadline. Petitioners’ construction also defies common sense, as the approval authority needs to know what inspection deadlines are upcoming for assets so that it can follow-up with the asset owner if an inspection report is not timely received. (*See* EX1001, 4:21-31.) [8g]-[8i] recite receiving an inspection report from an inspector, storing it in association with the asset, and transmitting it to the approval authority, none of which would be required for a previously inspected asset that did not have an upcoming inspection deadline. Hence, both notices (owner’s and approval authority’s) relate to an upcoming inspection deadline for an asset, which is also

consistent with the preamble reciting a method to “track a requisite inspection of an owned asset”. (EX1001, 15:17-18.)

B. Claim 8 requires simultaneous notices sent to the asset owner and inspection authority regarding an upcoming asset inspection.

Petitioners argue that claim 8 does not require simultaneously sending separate notices to the approval authority and asset owner of an upcoming inspection. (Reply, p. 3.) [8c], [8d] and [8e], discussed above, expressly provide for the analysis of retrieved records of assets to identify notification events, and based on that analysis, notifying both the asset owner of an upcoming inspection deadline, and the approval authority of the status of the assets assigned to it. (EX1001, 15:27-47; EX2013.) While the notice to the approval authority may relate to additional *assets*, the plain language of claim 8 requires that it is at least related the asset referenced in the [8d].

Petitioners argue that the specification does not require simultaneous notices or separate notices to different users containing different information. (Reply, p. 4.) The latter point is contrary to the plain language of claim 8, as the [8d] notice to the asset *owner* includes a standard format description of the required inspection and a designatable interval in advance of an impending inspection deadline - neither of which is included in the [8e] *approval authority* notice, which recites “a standard format notice ... of the status of the assets within a jurisdiction.” In the ‘966

specification, Fig. 5 step 510 represents the [8d] and [8e] notices. (EX1001, 8:15-18.) At 510, the inspection authority and asset owner are notified that an inspection is needed. (EX1001, 8:15-17, 29-31.) In short, the specification supports the construction that separate notices are sent, as part of the same step, to the asset owner and inspection authority regarding an upcoming inspection deadline.

Petitioners misstate the record arguing that its expert MacInnes was not asked about simultaneous notices. (Reply, p. 4.) Referring to [8d] and [8e], Mr. MacInnes agreed that a POSA would understand that those notices are “essentially sent at the same time”. (EX2021, pp. 62-62.)

C. Sending/notifying and Key’s adding to a task list are not the same.

Petitioners also incorrectly argue that sending a notice (an active action) and Key’s adding to a task list (a passive action) are the same – they are not. (Reply, p. 5.) The plain language of claim 8 differentiates between merely adding information to a database and sending a notice. For example, [8d] recites the ordered steps “notifying an owner of an asset of a notification event” as an alert to “remotely access the fire hydrant management software compliance registry.” (EX1001, 15:32-43; EX2015, ¶¶44-46; *see also Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1398 (Fed. Cir. 2014) (“a claim ‘requires an ordering of steps when the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written, or the specification

directly or implicitly requires’ an order of steps.”) (citation omitted).) Likewise, [8e] recites “sending a...notice to the approval authority of the status of the assets assigned...” to alert the approval authority to “access the web-based registry...” (EX1001, 15:43-48.) The logic and grammar of these elements indicate an ordered difference between notifying/sending and accessing. In addition, Key’s adding a task to a task list is the same as sending/notifying, as Petitioners argue, it would make the recited notifications superfluous, as the owner or approval authority would have to regularly access the fire hydrant management software to determine the status of the assets.

The challenged claims recite collaborative software that dramatically improved compliance by proactively notifying the asset owner of upcoming inspection deadlines, without expending the limited resources of the approval authority in doing so. (*See* PO Response, pp. 1-2, 20-21; EX2020, ¶¶95-104; EX2015, ¶¶65-67.)

Further, [8h] recites “storing in a database...the inspection information, wherein the inspection information is accessible to the users...” (EX1001, 16:4-18.) Notably, this language does not recite notifying the users of the inspection information. This is another example of the claim language differentiating between accessing and notifying. Moreover, when the claim language uses

“notifying” or “sending a notice,” it always specifies a user, whereas when the user accesses something, it is always the registry, database or software - not the notice. Finally, according to the claim language, information to be accessed is “stored” not “sent.”

Petitioners cite no language in the claims or specification to support their incorrect assertion that Key’s adding to a task list is the same as sending a notice. Petitioners incorrectly argue that the phrase in the specification of the ‘966 Patent: “the property owner will receive notice (via email, physical mail, *or other*) that the fire sprinkler system is due for an annual inspection” includes the asset owner merely accessing the web registry as notice. (Reply, p. 5 citing EX1001, 4:24-36.) However, even that portion of the specification differentiates between proactively sending a notice, as opposed to assess/using the web registry, e.g., the fire marshal uses the web registry to communicate with the owner regarding enforcement, and the owner uses the web registry to find qualified inspectors and request bids. (EX1001; 4:31-36.)

Further, according to the Cambridge Dictionary, the definition of “send” is “to cause something to go from one place to another,” (<https://dictionary.cambridge.org/us/dictionary/english/send>), the definition of “notify” is “to tell someone officially about something,”

(<https://dictionary.cambridge.org/us/dictionary/english/notify>), and the definition of “access” is “the right or opportunity to use or look at something” (<https://dictionary.cambridge.org/us/dictionary/english/access>). (See EX2044; EX2045; EX2046.) Thus, the plain meaning of these words is different, and as Petitioners agree, PO “does not suggest any intent to deviate from the plain meaning” of these words. (See Reply, p. 5.)

D. Petitioners’ argument regarding [8c] “notification events” ignores the intrinsic record and the claim language.

Petitioners argue, in response to PO’s proposed construction that such notification events refer to upcoming inspection deadlines, that [8c] does not expressly limit “notification events” to a particular event or require details about such event. (Reply, pp. 5-6.) They also argue that PO’s proposed construction imports limitations from [8d], without identifying any such limitation. *Id.* However, Petitioners fail to address the preamble of claim 8, which recites a method for using fire hydrant management software “to track requisite inspection of an owned asset,” other intrinsically related aspects of claim 8, and the specification. (Compare PO Response, pp. 29-30 with Reply, pp. 5-6.) While Petitioners note the plural notification events in [8c] and singular notification event in [8d], it ignores the plural “status of assets” in [8e]. (See Reply, fn. 2.) The intrinsic record supports PO’s proposed construction.

Petitioners also argue that the “notification events” should be limited to fire hydrants, asserting that claim 8 is expressly limited to such a device, and not “fire hydrant or related life safety device or system,” as urged by PO. (Reply, p. 6.) As discussed in PO’s Response and compelled by common sense, fire hydrants do not exist in a vacuum, but rather, they are interconnected with other devices/systems (e.g., fire sprinklers, fire alarms, smoke detectors, etc.), as part of a network used to detect and suppress fires. The specification refers to tracking required inspection deadlines for related systems, like fire sprinklers. (EX1001, 4:21-24.) Claim 8 and the “fire hydrant management software” recited therein are not expressly limited to fire hydrants as argued by Petitioners.

E. PO’s “fire hydrant management software” construction is consistent with the record.

Petitioners argue that PO’s construction of “fire hydrant management software” bears no relationship to the management of required inspections for fire hydrants and related life safety assets. (Reply, p. 7.) The record is uncontroverted that the regulatory scheme for the inspection of fire hydrants and related assets are distinct from other types of assets. (EX2020, ¶¶54-55; 151-179; EX2015, ¶¶30-64.) Petitioners’ references (Key, Chauhan, Sweeney, and MacKinney) are directed to non-emergency systems, whereas the assets recited in the challenged claims are specifically for use during an emergency. The regulatory requirements, necessary

stakeholders, and timely involvement are unique for such devices/systems, as compared to non-emergency type assets. (EX2015, ¶¶21, 29.) Indeed, the inspection/maintenance method described in Key is strictly forbidden by regulations applicable to the inspection/maintenance of fire hydrants and related assets. (EX2015, ¶¶47-59.) Any asset management system for tracking the inspection/maintenance of fire hydrants and related assets must comply with applicable codes and regulations. (See EX2015, ¶¶31-34.) The approval authority of claim 8 would demand it.

Petitioners misstate that Williams (PO's technical expert) testified that claim 8 is limited to fire hydrants. (Reply, p. 7.) He testified:

7 BY MR. COLSHER:
8 Q. Okay. And based on your
9 interpretation of the specification and
10 claims prosecution history, the scope of
11 claim 8 is to fire hydrants specifically;
12 right?
13 A. It includes fire hydrants.
14 It also, in my view, includes fire
15 hydrant-related assets and systems.

(EX1040, p. 90; *see also* pp. 87-89.)

III. THE LEVEL OF SKILL IN THE ART MUST INCLUDE KNOWLEDGE OF THE INSPECTION OF FIRE HYDRANTS AND RELATED ASSETS AND APPLICABLE REGULATIONS.

Petitioners argue that PO failed to explain how its proposed level of skill in the art impacts obviousness. (Reply, p. 7.) PO asserts that a POSA should at minimum have knowledge of the inspection and maintenance of fire hydrants and related assets, applicable regulations, and software available for use in connection therewith in 2007. (PO Response, p. 35.) As discussed herein, fire hydrants and related life safety assets are subject to unique codes and regulations that govern their inspection and maintenance, which is important to the obviousness analysis, in part, because the process described in Key EX1005 for pressure vessels is strictly prohibited for fire hydrants and related life safety assets. A POSA, as defined by PO, would not consider Key analogous art. MacInnes acknowledged that he had no experience inspecting fire hydrants, he has no knowledge of the applicable regulations, and he did not investigate how fire marshals managed that process.² (EX2021, pp. 25, 37, 49.) Hence, when he considered Key, MacInnes did not know that the inspection process described therein *could not be used for*

² While Petitioners argue that Williams lacks the knowledge of a POSA (Reply, p. 2), he developed location-based asset management systems, investigated software for managing fire hydrants and related assets during the relevant period, and interviewed and/or considered the declaration of Moren and others to learn about relevant codes, regulations, and practices during that period. (EX2020, ¶¶19-27.)

hydrants without violating applicable regulations. An approval authority would not accept such unregulated processes.

The level of skill in the art is also important to understand that “fire hydrant” in the claim limitation “fire hydrant management software” is functional, not merely descriptive. In the Institution Decision, the Board stated:

“In our view, at this stage, there is insufficient evidence to attribute a functional characteristic to the phrase “fire hydrant” in the “fire hydrant management software” limitation.” (Paper 9, p. 20.)

Williams explained that asset management systems are not interchangeable, and that fire hydrants and related life safety assets would require different data and related structures. (EX2020, ¶¶118-150.) Moren explained that regulatory requirements for fire hydrants and related life safety assets are necessary to ensure that they will work in an emergency; thus, they are treated differently than other assets. (EX2015, ¶29.) He explained in detail why such fire protection assets are unique in that regard, and why the inspection processes described in Petitioners’ references would not meet those requirements. (*Id.* at ¶¶31-43.) Hence, a POSA with the knowledge ascribed by PO would recognize that “fire hydrant” is a functional limitation of the “fire hydrant management software” that cannot simply be read out of the claim.

IV. PETITIONERS FAILED TO MEET THEIR BURDEN TO PROVE THAT THE CHALLENGED CLAIMS ARE UNPATENTABLE.

Petitioners argue, based on their incorrect constructions discussed above, that the challenged claims are obvious over their references and that PO's analysis is improper because it focuses "on individual references, rather than the entire record including the state of the art."³ (Reply, p. 8.) Petitioners' argument ignores 37 CFR § 42.104(b)(4), which requires "[t]he petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon." PO is, in fact, pointing out that Petitioners failed to do just that. Despite Petitioners' unsubstantiated statements about what they think was or was not invented (*see e.g.*, Reply, pp. 9-10), multiple elements of claim 8 *are not present* in

³ Petitioners' reliance on *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) is misplaced, as that case involved a crowded art with multiple patents describing various means for bulkhead stowage. The Court found that the examiner should have considered them when determining motivation to combine. None of Petitioners' primary or secondary references (Key, McKinney, Sweeney, and Chauhan) describe a method for tracking the inspection of hydrants and related assets. Petitioners' primary reference Key is directed to pressure vessels, it fails to disclose several claim elements, and it teaches away from the claimed invention. The secondary references do not fill the gaps in Key, even if *arguendo* a motivation to combine existed (it did not). Likewise, Petitioners' background references regarding knowledge in the art *do not* teach a web-based fire hydrant management software for tracking requisite inspections as recited in claim 8. In short, this proceeding does not involve a crowded art with background references teaching elements of the claimed invention, as in *Randall Mfg.*

the references relied on by Petitioners, alone or combined. Petitioners' bald, conclusory statements are legally insufficient to meet their burden.

A. None of Petitioners' references disclose [8d] "notifying an owner of an asset of a notification event...wherein the notice includes a standard format description of the type of inspection...wherein the notification event comprises a designatable interval in advance of an impending deadline for the inspection."

Petitioners failed to address each of the limitations of [8d], but instead argued generally: (i) Key describes sending notices in various forms, (ii) it would have been obvious to send notices to system users at various times, and (iii) Key teaches notifying an owner in advance of a repeat inspection. (*See* Reply, pp. 10-11.) Starting with the last argument first, Petitioners rely on Key EX1005 [0077], which merely states that the asset owner is notified of a rejected inspection report (*i.e.*, a report of an inspection that already occurred), and not that the asset owner is sent a notice of an upcoming inspection deadline, where that notice meets each of the [8d] limitations.

Key explains that an inspection is scheduled, at step 525 of its inspection routine shown in Fig. 5, by placing a task in a task list for the jurisdictional authority or insurance company, depending on which entity is responsible for conducting inspections, *i.e.*, the asset owner is not notified of an upcoming inspection deadline, much less sent a notice that comports with the requirements of [8d]. (EX1005, Fig. 5, [0083], [0048]). As shown in Key Fig. 5, if an inspection

report is rejected at step 585, the routine returns to step 535 discussed above.

Similarly, Key's review routine shown in Figure 6 addresses rejected inspections at step 665, which is followed by notification of the rejected inspection, again without notifying the asset owner of any upcoming inspection deadline in a manner that satisfies [8d]. (EX1005, [0100]-[0101].)

While Key mentions in the abstract that communications may be made in many forms, as argued by Petitioners, it only describes one mechanism for scheduling inspections, *i.e.*, placing a task in a task list for the jurisdictional authority or insurance company. As discussed, that passive event is not the same as proactively notifying or sending a notice. Moreover, there is no citation to Key in the Petition (Doc. 1) or in the Reply (Doc. 26), of a notice being sent to the owner in advance of an upcoming inspection deadline as recited in [8d].

[8d] also recites a notification event that comprises a "designatable interval in advance of an impending deadline for the inspection." (EX1001, 16:36-37.) Petitioners' only mention of this designatable interval is that Key, without any citation thereto, discloses that notices are provided about required inspections based on notification events "including a designated interval in advance of the deadline..." (*See* Pet., p. 42 citing MacInnes, EX1003, ¶167.) MacInnes characterizes Key's inspection routine stating "the JOM determines if any object

requires inspection in the near future.” (EX1003, ¶167.) He then extrapolates this language to assert: “For example, in Key’s system, the JOM would analyze the database to determine objects that ‘require inspection in the near future’ (which a POSA would have understood to logically be a designated, such as 60 or 90 days from the inspection deadline).” (EX1003 at 167.) Notably, MacInnes does not declare -- and Key does not disclose -- that the asset owner is sent a notice of an upcoming inspection deadline, based on a notification event that comprises a designated interval, as recited in [8d]. (See EX1005, [0084].)

Petitioners’ hind-sight assertion that it would have been obvious to send notices to system users with relevant information at various times contradicts the teachings of Key, which does not teach notifying asset owners of an upcoming inspection deadline, nor does it teach any notice having required [8d] limitations. Instead, Key teaches that the asset owners need not be provided those details because only the jurisdictional authority or insurance company – neither an asset owner -- is responsible for inspections. (EX1005, [0048].) Petitioners attempt to “boot strap” support for their argument with a self-serving declaration, drafted by counsel then adopted *without revision* by MacInnes. (See Pet., p. 45 citing EX1003, ¶181; EX2021, pp. 39-42, MacInnes testified that counsel prepared his

opinions regarding the cited references, which he adopted without revision.)

Surely Petitioners did not meet their burden by fabricating their own “evidence.”

Nothing in the references disclose [8d] (1) an owner notification; (2) a notification event comprising a “designatable interval in advance of an impending deadline for the inspection,” or (3) a “standard format description of the type of inspection, and a cost associated with the type of inspection” recited therein.

B. None of the references disclose 8[e] “based upon the analysis, sending a standard format notice to the approval authority of the status of the assets assigned to the approval authority...”

Petitioners’ construction of the [8e] approval authority notice, *i.e.* not requiring notice of an upcoming inspection or the sending of a notice at all, is incorrect, as discussed above. Likewise, their assertion that the references disclose 8[e] is also incorrect. Petitioners cite Key EX1005, [0043]-[0047], [0067], [0070]-[0071], [0087], [0091], [0177]-[0182] as support for their arguments. None of those paragraphs, alone or combined, disclose an [8e] standard format notice being sent to an approval authority. (*Id.* at [0046], Fig. 2, Fig. 6, [0177] – [0182].) In the referenced portions of Key, the information available to the approval authority relates to already inspected objects.

Petitioners’ statement that “It is also worth noting that a ‘standard’ format notice can have no meaning aside from what already existed in the prior art” (Reply, p. 14) is nonsensical and belied by the disclosure of the ‘966 Patent:

“Currently there is not a standard format for collecting fire hydrant information. If there were a way to share a local database globally, the information would not likely integrate well using current software and inspection methods... Allowing an accessible format to independent contractors would allow cheaper maintenance costs and saves the department and taxpayer's money.” (EX1001; 2:34-37; 3:1-4.) Accordingly, by “standard format,” the patent is referring to a format that would be common across jurisdictions and users, as opposed to a pre-existing industry standard as implied by Petitioners. Further, the abstract of Key discloses that different formats are used in different jurisdictions. Petitioners do not allege that the cited references provide such a standard format notice, and thus do not specify in the Petition or Reply where this element of the claim is found in the cited references.

**C. Petitioners’ references fail to disclose the [8f] limitations
“providing to an inspector the owner selects, the selection based
upon a list of qualified inspectors that are available to inspect the
asset based upon attributes including proximity to the asset”.**

Petitioners argue that Key satisfies these limitations by disclosing that inspectors are qualified by jurisdiction, and they generally refer to the Petition for other arguments. (Reply, p. 15.) [8f] provides that the asset owner selects the inspector (EX1001, 15:51-52), which Key teaches away from, instead disclosing that the jurisdictional authority or insurance company is responsible for selecting

the inspector. (*See* EX1005, [0044], [0083.]) Petitioners also failed to show where Key discloses providing a mechanism for the asset owner to use the JOM to find an inspector. In their Petition, Petitioners argued that Key combined with McKinney or Sweeney allegedly teaches the [8f] limitations. PO addressed in its Response the failure of McKinney and Sweeney to disclose the [8f] limitations and the lack of motivation to combine those references with Key, especially where they teach away from the claimed invention. (*See* PO Response, pp. 44-46, 58-59.)

D. Petitioners failed to contradict evidence demonstrating a lack of motivation to combine Key with other references.

Petitioners argue that PO's arguments are largely premised on the assertion that "life safety" assets are not interchangeable with "non-life safety" assets. (Reply, p. 17.) Petitioners also argue that claim 8 is limited to "fire hydrants," even though it applies to fire hydrants and related assets for detecting or fighting fires, as discussed above. (*Supra*, pp. 10-11; *see also* Reply, p. 6.) The record is uncontroverted that the regulations for managing the inspection/maintenance of fire hydrants and related assets are distinct from other non-life safety assets, such as Key's pressure vessels. (*Supra*, pp. 11-13.) A POSA would understand that Key's method of managing the maintenance/inspections of such vessels is forbidden by regulations applicable to fire hydrants and related assets. (*Id.*) Notwithstanding that claim 8 is directed to a method for tracking "requisite

inspections,” Petitioners failed to discuss the distinct regulatory requirements for the inspection/maintenance of fire hydrants and related assets, or that Key’s process would violate such regulations if applied to fire hydrants and related assets.

Key’s teachings away are not limited to its Background section, as argued by Petitioners. (Reply, pp. 18-19.) Its inspection routine in Fig. 5 teaches away from: (1) sending an [8d] notice to the asset owner of an upcoming inspection and the other limitations therein; (2) an [8e] notice to the approval authority of the status of assets; and (3) [8f] where the asset owner selects the inspector and may use the fire hydrant management software to assist in doing so. (EX1005, Fig. 5, [0083], [0084].)

Petitioners, recognizing Key’s shortcomings and adverse teachings, argue that Key never discourages investigation into the claimed invention, citing *DyStar Textilfarben GmbH v C. H. Patrick Co.*, 464 F.3d 1356, 1363 (Fed. Cir. 2006). (Reply p. 19.) That case merely stands for the proposition that *the absence of a disclosure* in a reference is not evidence of teaching away. In contrast, Key’s disclosure *expressly* teaches away from several aspects of the claimed invention, and its inspection/management scheme for pressure boilers could not be applied to fire hydrants and related assets without violating applicable regulations.

V. PO DEMONSTRATED UNEXPECTED RESULTS AND LONG FELT NEED OF THE CLAIMED INVENTION.

Petitioners argue that PO failed to prove nexus, in part, asserting that PO's fire hydrant management software, Tegris Fire™, is allegedly not co-extensive with the challenged claims because it manages the inspection/maintenance of assets in addition to fire hydrants. (Reply, p. 24.) That argument is based, not on any evidence of record, but only on Petitioners' erroneous interpretation of claim 8, which is not limited to fire hydrants alone, as discussed above. (*Supra*, pp. 10-11.)

In addition, Petitioners argue that PO's and Petitioners' software do not practice the challenged claims. (Reply, p. 24.) That argument is belied by the declaration of Andrew Moren, one of the named inventors, who demonstrated that each element of claim 8 is met by the parties' respective software. (*See* EX2015, ¶¶67-88; EX2018; EX2019.) To distinguish the parties' systems from claim 8, Petitioners adopted an incorrect construction to argue that they are outside of that claim. (Reply, pp. 20-23.) Their analysis stands in stark contrast to the general descriptions of the same claim elements, when arguing that they are disclosed in Petitioners' references. Moreover, PO demonstrated that those systems are covered by at least claim 8 with an un rebutted Moren declaration and supporting exhibits. (*See* EX2015, ¶¶ 65-88; EX2018; EX2019.)

Petitioners also dispute that PO's case studies show that the use of Tegriss FireTM dramatically improved compliance with regulations, arguing that any such improvement was due to fire marshals mandating its use. (Reply, p. 25.) The fire marshals' responsibility for enforcing regulations regarding the inspection/maintenance of fire hydrants and related assets were the same before and after implementing PO's Tegriss FireTM. The innovations recited in the challenged claims, as implemented in Tegriss FireTM, provide an efficient, collaborative tool that empowers fire marshals to perform their duties using fewer resources with remarkably better results enforcing the same fire code regulations. (See EX2020; ¶¶ 105-117; EX2015, ¶¶ 110-190; EX2004, EX2022, EX2023 EX2024.)

Petitioners failed to address other unexpected results obtained within one year of a jurisdiction implementing Tegriss FireTM, which are:

Compliance Attribute	Anacortes, WA Fire Dept.	Lynnwood, WA Fire Department	Marysville, WA Fire Department	Richland, WA Fire Dept.
Overall Compliance	30% → 64%	32.75% → 69%	20% → 80.2%	20% → 76%
Systems w/ a Deficiency	27.5% → 39%	12.5% → 2.58%	50% → 13.78%	25% → 7.1%
Database Quality • # of known properties w/ at least 1 system; • # of known systems	178 → 172 ³⁰ 321 → 367 ³¹	609 → 867 ³² 1465 → 1741	209 → 298 458 → 595	501 → 469 ³³ 854 → 1083
# of Licensed contractors in Jurisdiction	15 → 97	40 → 99	25 → 133	15 → 45
# of Systems being Inspected	150 → 366	480 → 1201	92 → 477	171 → 823
# of impaired systems	49 → 66 ³⁴	183 → 45 ³⁵	229 → 82	214 → 77
ITM Revenue in market	N/A	N/A	\$27.5K → 115.7K	N/A
% accuracy of CURRENT contact list	95% → 100%	25% → 100%	10% → 100%	20% → 100%
% of ITM service providers communicated with during a year	30% → 100%	10% → 100%	30% → 100%	10% → 100%
% of Property Owners communicated with during a year	80% → 100%	10% → 100%	25% → 100%	5% → 100%
Departmental Efficiency • FTE Hours dedicated to	780 hrs → 130 hrs	Not Available	1352 hrs → 520 hrs	780 hrs → 322.4 hrs

(EX2020, ¶¶98-104.)

Regarding long felt need, Petitioners argue that the claims are not directed to compliance generally, but rather, a specific fire hydrant management system.

(Reply, p. 26.) The collaborative fire hydrant management software recited therein is the catalyst for the extraordinary improvement in compliance. (See EX2020, ¶¶105-117; EX2015, ¶¶109-127, 146-147, 156, 166-167, 183.) Petitioners' argument is also belied by the plain language of claim 8, which recites a method

for using fire hydrant management software and a web-based registry to track the requisite inspection of an owned asset. (EX1001, 15:16-18.) While the '966 Patent in the Background of the Invention describes prior methods used to track the inspection of fire hydrants and related assets, it likewise explained their deficiencies, including the absence of features recited in the challenged claims. (EX1001, 1:39-3:4.) Moreover, as shown in the above table, the prior methods were ineffective at achieving the desired result of tracking the inspection of fire hydrants and related assets, an essential part of a fire marshal enforcing compliance with applicable codes and regulations.

VI. CONCLUSION

For the foregoing reasons, Tegriss respectfully requests that the Board find the claims of the '966 Patent patentable, as Petitioners failed to meet their burden under 37 CFR § 42.104(b)(4) and failed to prove obviousness. The cited references, alone or in combination, do not disclose the limitations of claim 8, as properly construed. Petitioners also failed to prove a motivation to combine their disparate references to achieve the steps of claim 8 or a reasonable expectation of success in doing so.

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CERTIFICATE OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned PATENT OWNER SUR-REPLY specified in 37 C.F.R. §42.24 has 5348 words in compliance with the 5600 word limit set forth in 37 C.F.R. §42.24(c)(4). This word count was prepared using Microsoft Word.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing PATENT OWNER SUR-REPLY was served on the above referenced date via email on the following attorneys for the Petitioners:

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