

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 PRELIMINARY RESPONSE

EXHIBIT LIST

Exh. No.	Description
2001	Declaration of David Williams
2002	David Williams Curriculum Vitae
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 Campion

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I. INTRODUCTION

Patent Owner Tegriss, Inc. (“Tegriss”) submits its Preliminary Response to the Petition for *Inter Partes* Review (the “Petition” or “Pet.”) filed by Petitioners Brycer, LLC and Brycer Management, Inc., (“Petitioners”). Petitioners challenge Claims 8-16 (“the Challenged Claims”) of U.S. Patent Number 11,126,966 (“the ‘966 Patent”), titled “Systems and Methods for a Web Based Inspection Compliance Registry and Communication Tool,” issued on September 21, 2021. Petitioners argue a single ground that the Challenged Claims are unpatentable under 35 U.S.C. §103(a) (“Ground 1”), based on multiple references, none of which disclose, alone or in combination, the limitations of the Challenged Claims. Petitioners fail to show a reasonable likelihood that they would prevail on Ground 1. Tegriss respectfully requests the Board deny institution.

II. SUMMARY OF THE ARGUMENT

The Petition should be denied for several reasons. The Challenged Claims were the subject of extensive prosecution, including six Office Actions over thirteen years. Petitioners rely on prior art and arguments that are substantially the same as, and in some instances identical to, those addressed during prosecution. Petitioners fail to demonstrate that the Patent Examiner erred in any material manner in allowing the Challenged Claims. The Board may exercise its discretion pursuant to 35 U.S.C. § 325(d) and deny institution on this basis alone.

Petitioners also fail to identify with particularity the grounds on which the challenge to each claim is based. The Challenged Claims are method claims, with claim 8 as the sole independent claim. It recites nine (9) steps, each with detailed limitations. Petitioners cobble together four references – Key, Chauhan, Sweeney, and McKinney – to argue that claim 8 is allegedly obvious. The weakness of that argument is underscored in part by Petitioners’ additional reliance on eight other references to fill elements in the claims not taught by Key, Chauhan, Sweeney, and McKinney.¹

Petitioners also argue that Key alone or in combination with Chauhan discloses steps [8a] and [8b]² of Claim 8 but fail to refer to Chauhan thereafter regarding these steps, much less explain why and how a POSA would combine

¹ For the Ground 1 obviousness challenge to claim 8, Petitioners also rely upon the following eight (8) additional references: EX1007 Campion (Pet., pp. 25, 27, 56, 66); EX1017 Ratnaker (Pet., p. 34); EX1018 Silvers (Pet., p. 34); EX1019 Jackson (Pet., p. 34); EX1024 Buildingreports.com (Pet., pp. 38, 45); EX1021 Lloyd (Pet., pp. 26, 27); EX1025 Woodings (Pet., p. 46); and EX1032 Apostolides (Pet., p. 38).

² Petitioners refer to the nine steps of claim 8 as [8a] through [8i], a nomenclature that Tegris follows for consistency and clarity.

Key and Chauhan. *See* Pet., pp. 29-38. Petitioners fail to show that the 12 references disclose several limitations recited in claim 8.

Petitioners fail to demonstrate a reasonable likelihood of success on Ground 1, as they rely on conclusory statements instead of well-reasoned and evidenced arguments. First, the Petition lacks any claim construction analysis to support the argument that the detailed steps of the Challenged Claims are taught in the cited prior art. Indeed, as shown below, when claim 8 is properly construed, it is apparent that numerous limitations recited therein are not disclosed in the prior art. Second, the Petition uses snippets from several references and at times relies solely on the alleged knowledge of a POSA, to assert functionality that is allegedly similar to individual steps of claim 8. However, the Petition fails to show that any prior art, alone or in combination, teaches the claimed method steps as a whole, with all of the limitations therein.

Petitioners' reliance on a declaration by Richard MacInnes cannot and does not overcome the elements missing in the prior art. Mr. MacInnes parrots many of the conclusory statements in the Petition without additional analysis or support. He fails to explain the motivation that a POSA would have had to combine Key, McKinney, Sweeney, Chauhan, and the eight additional references to arrive at the invention recited in the combined steps of claim 8. None of those references relate

to the inspection, testing and monitoring of fire hydrants or even any other kind of emergency or life-safety equipment, which is a unique category of assets for management, with certain challenges addressed by the '966 Patent. *See* EX2001, Declaration of David Williams, ¶¶ 74-78. Rather, the references relate to different technologies. Like Petitioner, Mr. MacInnes broadly defines the pertinent field of technology (so as to encompass those disparate references), picks and chooses between them for disclosures similar to the individual steps of claim 8, but fails to explain the motivation to combine them to result in the combined steps of claim 8.

Further, Mr. MacInnes has no experience with systems for managing the inspection and maintenance of fire hydrants or any other emergency or life-safety equipment of any kind, no knowledge of the requirements for their inspection and maintenance, and no experience with fire hydrant management software or any other similar life-safety assets. *See* EX1004. In short, he lacks the knowledge and experience of a POSA, and his opinions regarding the knowledge of a POSA in 2007 should be given little weight, if any. *See Kyocera Senco Indus. Tools, Inc. v. ITC*, 22 F.4th 1369, 1376-1377 (Fed. Cir. 2022) (“To offer expert testimony from the perspective of a skilled artisan in a patent case—like for claim construction, validity, or infringement—a witness must at least have ordinary skill in the art. Without that skill, the witness' opinions are neither relevant nor reliable.”)

III. RELATED LITIGATION AND PATENT PROSECUTION

On October 19, 2022, Tegriss sued Brycer, LLC, et al., in *Tegriss, Inc. v. Brycer, LLC*, Case No. 1:22-cv-05741, in the Northern District of Illinois. On September 7, 2023, Tegriss voluntarily dismissed that complaint. On that same date, Tegriss refiled a slightly different complaint against Brycer, LLC in *Tegriss, Inc. v. Brycer, LLC*, Case No. 1:23-cv-07744, in the Northern District of Illinois, alleging infringement of the ‘966 Patent, a matter that is currently pending. There are also two pending U.S. continuation patent applications, application serial No. 17/405,909 and application serial No. 17/942,876, that each claim priority to the ‘966 Patent.

IV. THE ‘966 PATENT

The ‘966 Patent describes and claims improvements to fire hydrant management software used in conjunction with a web-based registry. In the Background of the Invention, the inventors describe shortcomings in existing fire hydrant management software, including the lack of a global registry for fire hydrants and other owned assets. EX1001, 1:59-2:39. They explain that existing systems were also limited, because they were typically used as a way for inspecting authorities to track fire hydrant usage. *Id.* at 2:59-60. The previous software approaches focused on collecting limited data on each fire hydrant and keeping the information local to either the fire department or the owner, but not

both. *Id.* at 2:60-63. The Summary of the Invention describes the improved methods to track the inspection and compliance of owned assets reciting various steps with reference to the asset owner, asset inspector, and approving authority therein. *Id.* at 3:8-24.

For example, Figure 3 depicts various components, including a hydrant 360 as the asset to be inspected, a wireless Hydrant Scout device 340, and Hydrant Works Mobility Server 310. Fig. 4 shows various aspects of the database developed for use in connection with this system and related methods, for which many of the fields are related to hydrants. Figs. 7-9, 11, and 13-23 show user interfaces that refer to the Hydrant Scout system and include fields for reviewing or entering data regarding hydrants. *See* EX1001. While Petitioners argue that the ‘966 Patent does not describe the invention of any new software (*see* Pet., p. 1), the specification and figures of the patent demonstrate otherwise.

Petitioners also argue that the ‘966 Patent is not entitled to claim priority to EX1009. For purposes of this Preliminary Response, Tegriss uses Petitioner’s proposed effective priority date for the ‘966 Patent. *See* Pet., pp. 6-9. Tegriss reserves the right to prove an earlier priority date if institution is granted.

V. PROSECUTION OF THE CHALLENGED CLAIMS

The prosecution of the ‘966 Patent extended for over thirteen years, with several Office Actions issued during the prosecution of the Challenged Claims.

Challenged Claim 8, which was claim 21 during prosecution, was added with a Response to Office Action submitted on November 21, 2011. EX1002, pp. 133-141. The Office Action rejections of claim 21 (issued claim 8) based on obviousness are summarized below:

Date	EX1002 pg. ref.	§103 Rejections for Claim 21 (issued Claim 8)
3/29/13	192-199	Watrous (US 2003/0171957 A1) in view of Colliau (US 2008/0114638 A1)
5/9/2014	232-240	www.buildingreports.com any linkage Sept. 4, 2004, in view of US Pg Pub Frost Interactive process for real estate transactions in further view of applicant submitted prior art "America's Tunnel Highway"
3/9/18	321-343	Campion (2008/0084291) in view of Colliau (2008/0114638)
11/26/18	373-399	Campion (2008/0084291) in view of Colliau (2008/0114638)
10/31/19	438-480	Campion (2008/0084291) in view of Colliau (2008/0114638) in further view of Deaton (2006/0235611)

Claim 21 was also rejected under Section 101 as allegedly directed to an abstract idea. That rejection was overcome when claim 21 was amended to

expressly recite that the claimed method is performed by a web-based registry and “fire hydrant management software”. *See* EX1002, pp. 604-616. Therein, applicant explained that claim 21, as amended, specifically relates to a practical application, that is, a remotely accessible fire hydrant management system. *Id.* at p. 614. The Patent Examiner concluded that narrowing claim 21 in that manner was sufficient to overcome the Section 101 rejection. *Id.* at 628-629.

In his stated Reasons for Allowance over the cited prior art, the Patent Examiner explained:

Regarding the prior art, the claimed invention is directed to using a *fire hydrant management software system* accessible via a web registry to track a requisite inspection of an owned asset.

* * *

The closest prior art of record *Campion* (US 7,649,450) teaches in col. 1:18-25 providing an authenticated test report and other authenticated test related and monitoring metrics for life safety equipment, such as fire alarm control panel for facilitating on-site walkabout testing, inspection, installation, servicing, and control of fire alarm systems. *Silva* (US 7,831,628) teaches (abstract) users to transmit plans, request inspections and retrieve inspection results and retrieve inspection results along with any issued certifications via a network. Inspectors also retrieve and schedule inspection requests via the network. *Cober* (US 2005/0108038) teaches (abstract) an online

fire plan system that includes a data entry, storage, and retrieval module, and a fire plan wizard for guiding a user. Elliott (US 6,446,053) teaches col. 2:25-39 a computer implemented method and system enables a user to develop a construction proposal including a detailed graphical model and a detailed cost estimate model. Colliau (US 2008/0114638) teaches (abstract) a system for automatically scheduling an appointment for performing a task. Deaton (US 2006/0235611) teaches (§ 0002, 0009) systems and methods for recording and reporting data collected from a remote location. A portable computing device for storing the inspection data and a bidirectional communications interface for transmitting the inspection data to the client and receiving the inspection plan from the client. **It is hereby asserted by the Examiner and upon further deliberation over all the evidence at hand, that the claims are allowable. The Examiner performed an updated search and was unable to find any other non-patent literature which would teach or suggest, other otherwise render obvious, even in combination with the Champion, Silva, Cober, Elliott, Colliau, and Deaton references, the aforementioned claim limitations.**

EX1002, pp. 629-632, emphasis added.

VI. CONSTRUCTION OF CLAIM 8

In an *inter partes* review proceeding, a patent claim shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance

with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100 (2018); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). Claim language should be read in light of the specification, as it would be interpreted by a POSA. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

The Challenged Claims consist of independent claim 8 and dependent claims 9 through 16. Tegriss addresses defects in Petitioners' Ground 1 arguments regarding claim 8, which support denying institution. While Tegriss does not address Petitioners' arguments regarding the other Challenged Claims, the defects in Petitioners' arguments regarding Claim 8 apply equally to the dependent claims 9 through 16.³

Claim 8 recites in the preamble using a "fire hydrant management software" and "web-based registry" to track the inspection of an owned asset, and states in

³ In this Preliminary Response, Tegriss addresses some but not all of Petitioners' invalidity arguments for the Challenged Claims. It reserves the right to address the remainder of Petitioners' arguments and supplement or amend its response to its arguments herein, if institution is granted.

the body thereof that the web-based registry is configured to run a fire hydrant management software. EX1001, 15:16-26. It then recites steps taken by or in connection with the fire hydrant management software as shown below:

8. A computer-implemented method for using **a fire hydrant management software** and a web-based registry to track requisite inspection of an owned asset comprising:

[8a] granting remote access to a web-based registry system, wherein the web-based registry is configured **to run a fire hydrant management software**, to at least three classes of user, wherein the three classes of user comprise:

- (1) an owner of an asset
- (2) an approval authority
- (3) an inspector

[8b] **retrieving, by a computer-based fire hydrant management software system, real time records of assets from a database**, the database being **accessible and augmentable** by a classes of user;

[8c] **analyzing the records of assets from the database to identify notification events;**

[8d] **based on the analysis, notifying an owner of an asset of a notification event**, wherein the notice includes standard format description of the type of inspection, and a cost associated with the type of inspection, and wherein the notification event comprises a designatable interval in advance

of an impending deadline for the inspection, and wherein the owner of the asset, upon remotely accessing the fire hydrant management software compliance registry, may update and review the status of the assets;

[8e] based upon the analysis, sending a standard format notice to the approval authority of the status of the assets assigned to the approval authority, and wherein the approval authority, upon accessing the web-based registry, may update and review the status of the assets assigned;

[8f] upon logging on to a password controlled website configured to provide access to the fire hydrant management software, 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, **a web-based template configured to describe the asset an[d] each of the steps of the inspection;**

EX1001, 15:14-56, emphasis added.

The ‘966 Patent specification describes the above steps in conjunction with Fig. 5. EX1001, 8:15-38. The addition of the fire hydrant management software to the steps of claim 8 was one of the reasons why the examiner allowed claim 21, which issued as claim 8, as discussed above. Hence, the proper construction of “fire hydrant management software” based on the intrinsic evidence and the ‘966 Patent disclosure should be:

Software that allows the user to input fire hydrant information, schedule maintenance and create reminders for service.

See EX2001, ¶¶ 51-54; EX1001, 1:63-66.

Petitioners fail to construe “fire hydrant management software,” they fail to discuss whether it is taught in the record prior art, and they likewise fail to show that any of the record prior art teaches fire hydrant management software, as recited in the steps of claim 8 highlighted above.

VII. PERSON OF ORDINARY SKILL IN THE ART

Petitioners’ description of the qualifications of a POSA is too general, as it fails to consider the express scope of the Challenged Claims, which are limited to a method for “using a fire hydrant management software and web-based registry.” Petitioners’ description likewise fails to consider the prosecution history, which shows that the claims were allowed after they were limited to the field of technology relating to fire hydrant management software, as discussed above. A POSA should at minimum have knowledge of and experience in the inspection and maintenance of fire hydrants or at least similar emergency or life safety assets and software available for use in connection therewith in 2007. EX2001, ¶¶ 39-42. As referenced above, Mr. MacInnes does not have the minimum knowledge and

experience of a POSA and did not confer with anyone who does to provide a sufficient foundation for his opinions.

VIII. THE BOARD SHOULD DENY INSTITUTION.

A. Legal Standards

The standard for instituting an IPR provides: “The Director **may not** authorize an *inter partes* review to be instituted unless the Director determines that the information presented in the petition ... shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). When deciding whether to institute, the Board views the information presented in the Petition in a light most favorable to the Petitioner. 37 C.F.R. § 42.108(c). Nevertheless, the Board **may not** institute an IPR unless the information presented in the Petition, read in the light most favorable to the Petitioner, shows at least a reasonable likelihood that Petitioner would prevail.

Under 35 U.S.C. § 103, Petitioners must prove that the claimed subject matter would have been obvious to a person of ordinary skill in the art at the time of the invention. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The Board must determine the scope and content of the prior art, differences between the prior art and the claims, and the level of ordinary skill in the art, as well as consider any objective indicia of non-obviousness. *Graham v. Deere*, 383 U.S. 1,

17 (1966). Proper analysis under § 103 requires proof that if all elements of a claimed invention are taught or suggested by the prior art, the prior art would have also suggested to one skilled in the art that they should make the claimed invention as a whole and that they would have a reasonable expectation of success in so making. *Intri-Plex Techs., Inc. v. Saint-Gobain Performance Plastics Rencol Ltd.*, IPR2014-00309, Paper 83 at 19 (PTAB Mar. 23, 2014); *Endo Pharm., Inc. v. Actavis LLC*, 922 F.3d 1365, 1373 (Fed. Cir. 2019) (“An obviousness determination requires finding that a POSA would have been motivated to combine or modify the teachings in the prior art and would have had a reasonable expectation of success in doing so.”).

More specifically, “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR* 550 U.S. at 418. To determine whether there was a reason to combine known elements in the manner claimed, it is often necessary to “look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art.” *Id.* Moreover, in an obviousness analysis, conclusory assertions from a third party about general knowledge in the art cannot, without supporting evidence of record, supply a

limitation that is not evidently and indisputably within the common knowledge of those skilled in the art. *K/S Himpp v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1365 (Fed. Cir. 2014). In addition, in an obviousness analysis, “common sense” – whether to supply a motivation to combine or a missing limitation- cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art references specified”. *Arendi S.A.R.L. v. Apple, Inc.* 832 F.3d 1355 (Fed. Cir. 2016). Petitioners were required – but failed – to clearly explain why the invention would have been obvious with some articulated reasoning and rational underpinning to support the legal conclusion of obviousness. Petitioners’ conclusory statements of obviousness do not suffice and thus fail to carry their burden of showing at least a reasonable likelihood that Petitioners’ Ground 1 would prevail.

**IX. PETITIONERS FAIL TO ESTABLISH A REASONABLE
LIKELIHOOD OF PREVAILING ON GROUND 1.**

**A. Petitioners Fail to Show that the Alleged Prior Art, Even If
Combined, Discloses the Fire Hydrant Management Software
Recited in Claim 8 and the Steps Performed Thereby.**

The claim 8 preamble recites a method for using “fire hydrant management software” and a “web-based registry” to perform the recited steps of that claim. Step [8a] recites that the web-based registry is configured to run a fire hydrant management software, then, steps [8b] through [8e] recite the fire hydrant

management software retrieving real time records of assets from a database, analyzing the records, and based on that analysis sending notices to the asset owner and approval authority. The Petition is devoid of any construction of the “fire hydrant management software” alone or as the software is recited in claim 8 performing certain functions in the recited steps. The Petition lacks analysis, much less evidence, that any of the cited prior art, alone or in combination, discloses fire hydrant management software performing in connection with such steps at all, much less in the specific manner claimed. *See* EX2001, ¶¶ 139-149.

Regarding the claim 8 preamble, Mr. MacInnes (Petitioners’ declarant) admits that Key does not disclose a “fire hydrant” or “fire hydrant management software” but then attests that it would have been obvious to apply Key’s teaching to fire hydrants (EX1003, ¶143), without addressing the “fire hydrant management software” at all. Mr. MacInnes makes the same admissions and assertions when opining regarding steps [8a] and [8b], which also recite the fire hydrant management software. *See* EX1003, ¶¶ 150 and 159. Notably, Mr. MacInnes nowhere opines that the fire hydrant management software, alone, or performing certain aspects of the steps of claim 8, is disclosed in any prior art reference.

As support for his opinion that it would have been obvious to apply Key to fire hydrants, Mr. MacInnes refers to Section XI.A.2 of his declaration. *See*

EX1003, ¶¶ 143, 150, and 159. However, that section lacks any discussion regarding how the prior art allegedly discloses “fire hydrant management software” or such software performing aspects of steps [8b] through [8e] discussed above. *See* EX1003, ¶¶122-139. Rather, Mr. MacInnes notes that Key discloses a system applicable to “pressure vessels, boilers, elevators, amusement park rides and other required jurisdictional inspections of objects,” and baldly opines that a POSA would have been motivated to apply Key’s system to fire hydrants. EX1003, ¶¶124-126. That conclusion lacks evidentiary support and fails to address the recited fire hydrant management software as recited in the claim 8 steps. In the remainder of that section, Mr. MacInnes describes other prior art references, like Chauhan, that generically mention fire hydrants in one specific embodiment but conspicuously fail to address whether any of them disclose the fire hydrant management software recited as performing certain aspects of the steps in Claim 8. *See* EX1003, ¶¶127-138; EX2001, ¶¶ 139-149.

B. Petitioners Fail to Show that the Alleged Prior Art, Even If Combined, Discloses Other Claim 8 Limitations.

1. Key Alone or in Combination with Chauhan Does Not Teach the Limitations of Step 8[a].

Petitioners argue that Key alone or in combination with Chauhan discloses step [8a]. Pet. at 29. Step [8a] recites:

granting remote access to a **web-based registry system**,

wherein the web-based registry is configured to run a fire hydrant management software, to at least three classes of user,
wherein the three classes of user comprise:
(1) an owner of an asset[,]
(2) an approval authority[,]
(3) an inspector”

EX1001,15:19-26, emphasis added. Petitioners fail to show or even assert that Key discloses a web registry and fire hydrant management software accessible to the recited classes of users. While Petitioners assert that it would have been obvious that the recited “asset” could be a fire hydrant, they fail to provide any evidence to support the assertion and also completely ignore the fire hydrant management software limitation. *See* Pet. at 29-33.

Petitioners’ asserted combination of Key with Chauhan is similarly unavailing. First, Chauhan only refers to fire hydrants in passing when discussing a Security Manager embodiment, which allows an administrator to set user permissions for fields within a database, and as an example, states that a contractor hired to inspect fire hydrants could be assigned a “username that only allows him to edit the inspection fields on the HYDRANT theme.” EX1016, ¶0207. Chauhan never expounds upon or otherwise describes what “HYDRANT theme” means. In any event, Chauhan does not disclose the use of a web registry and fire hydrant management software as recited in claim 8. *See* EX2001, ¶¶ 146-149.

Second, Chauhan discloses a system for a utility to improve its outage management systems. *See* EX1016, ¶¶0001-0002. Petitioners fail to explain why or how a POSA would combine Key, which describes a multi-jurisdictional system for managing the inspection of boilers and pressure vessels, with Chauhan, which describes a system for a utility to improve its outage management, to satisfy the above referenced limitations in Step [8a], which relates to a different technical field than both of those references. *See* Pet., pp. 29-33. While Mr. MacInnes notes that Chauhan states that the same technology “has been tailored to the specific needs of public agencies, such as fire and police departments” (*see* EX1003, ¶130), Chauhan nowhere explains the needs of the fire department or how the utility outage management system was in fact modified to meet the needs of a fire department, especially where a fire department does not need a power outage management system, as described in Chauhan. *See* EX2001, ¶ 148.

2. Key Alone or in Combination with Chauhan Does Not Teach the Limitations of Step [8b].

Petitioners assert that Key alone or in combination with Chauhan discloses step [8b]. Pet., p. 34. Step [8b] recites:

“retrieving, by a computer-based fire hydrant management software system, real time records of assets from a database, the database being accessible and augmentable by a classes of user”

EX1001,15:27-30, emphasis added.

First, Petitioners again fail to demonstrate that Key alone or in combination with Chauhan discloses the recited “computer-based fire hydrant management software system” retrieving real time records of assets from a database. *See* EX2001, ¶¶ 150-152. As discussed above, neither Key nor Chauhan disclose a method of using fire hydrant management software as recited in claim 8. Petitioners ignore it, again failing to discuss it at all. *See* Pet., pp. 34-38. Rather, Petitioners cite to Key Figures 3 and 4, noting that the database is coupled to application servers 330 which run application software. *Id.* at 34-35. However, Key Figure 3 also shows client computers 305, which are described as only retrieving and displaying “jurisdiction online management” (JOM) web pages accessed via the internet. EX1005, [0065]. On the contrary, the ‘966 Patent Fig. 2 teaches the use of a server 230 in communication with a client device 210 via a network 220. It explains that the client device need not be served by the server but may download computer executable instructions or otherwise install them locally via CD-ROM or other storage media. EX1001, 6:58-7:5. Hence, Key teaches away from the recited computer-based fire hydrant management software system, recited in claim 8 and described in the ‘966 specification. EX2001, ¶ 152.

Second, neither Petitioners nor MacInnes explain how Chauhan discloses the step [8b] limitations or how or why a POSA would combine that reference with Key to teach step [8b] and the limitations therein. *See* Pet. at pp. 34-38, EX1003, ¶¶ 158-164. Chauhan does not teach a computer-based fire hydrant management software system, as it describes a utility power outage management system, with the servers and other devices communicating via an intranet, as shown in Figure 1 thereof (*see* EX1016, Fig. 1, 0039-0040), as opposed to “retrieving, by a computer-based fire hydrant management software system, real time records of assets from a database, the database being accessible and augmentable by a classes of user” as recited in step 8[b].

Moreover, step [8b] explicitly recites “**retrieving, by a computer-based fire hydrant management software system, real time records of assets from a database, the database being accessible and augmentable by a classes of user**”. In contrast, Key teaches a closed centralized architecture for insurance companies to manage maintenance compliance of boilers and related assets and thus teaches closed-centric proprietary system that allows for standardization and exclusive control and data input by insurers. EX2001, ¶¶ 93-104. Thus, Key specifically teaches away from the limitations set forth in step [8b]. There is no motivation set

forth in the Petition to modify the closed systems of Key in view of teachings of Chuahan to result in the limitations set forth in step [8b].

Finally, Petitioners argue that the ‘966 Patent fails to provide any detail regarding the above referenced limitations, and on that basis, Petitioners allege Tegris cannot argue that there is anything inventive to this claimed step. Pet., p. 34. As demonstrated above, the ‘966 Patent discloses improvements to fire hydrant management software and claim 8[b] recites that the software “retrieves, by a computer-based fire hydrant management software system, real time records of assets from a database, the database being accessible and augmentable by a classes of user.” Hence, the limitations are supported, and the claimed invention is presumed to describe a patentable invention. Petitioners have the burden of proving the contrary – a burden they fail to carry.

3. Key Does Not Teach the Limitation of Step [8c].

Petitioners assert Key discloses, or it would have been obvious to include as part of Key, step [8c]. See Pet., pp. 38-41. Step [8c] recites:

“analyzing the records of assets from the database to identify
notification events;”

EX1001,15:27-30, emphasis added.

Step [8c] depends upon the “fire hydrant management software” recited in earlier limitations, as it retrieves the records of assets analyzed in this step. As discussed above, Key does not disclose or teach in any way “fire hydrant management software.” While relevant for most of the limitations of Claim 8, it is of particular relevance here, as the analysis of the records of the assets depends greatly upon the attributes of the assets involved and how they are used or potentially used, *e.g.* their use cases. In this instance, the purpose and use cases of managing fire hydrants, and any similar emergency or life safety assets for that matter, are very different than other assets, even if those other assets have some sort of non-primary “dangerous” use cases. EX2001, ¶¶ 153-159.

Further, the data attributes underlying records of fire hydrants and other similar life safety and emergency assets are very different than “general” assets. “General” assets focus on relatively basic information like when put in service, operating parameters, key sensor outputs and how they relate to various ranges or thresholds, service record, repair record, expected life, and of course inspection record. Fire/life safety/ emergency asset attributes are very specific to the type of asset, and often the associated analysis requires focus on these details to a degree that a “general” asset would not. EX2001, ¶¶ 155-158.

For example, in the ‘966 Patent, the data about fire hydrants includes the following:

Hydrant Details [Save]

Inspection
Condition Report
Test
Service Record
Recommended Maintenance

Hydrant Number: 344
Address: 2200 - Mauri North Shore
GPS: Lat: 45.334380, Long: -122.540233
Line 1: 2200 - Mauri North Shore
Line 2:
City, State, Zip: Oregon City, OR, ST045
Make: , Model: , Barrel Color: Blue
Install Date: , Barrel Type: , Top Color: Blue
Distance from CL: , Side Of Road: , Nozzle Color: Blue
Wrench Type: , Nozzle Coeff: , Base Size: , Gate Valve:
Base Connection: , Base Elevation:
Special Markings:
Notes:
No Image Loaded
Nozzles
Nozzle Height Size Fitting
No records to display

Fig. 11

EX1001, Fig. 11. This information is critical in an emergency when the fire hydrant has to be opened and used to put out a fire. But unlike general assets, there is no “normal, ongoing” operation about which a hydrant’s performance can be analyzed or operational status be confirmed. Instead, the testing of fire/life safety/emergency assets (e.g., fire hydrants) often must be performed when using the asset during fire emergencies. See EX2001, ¶¶ 156-159.

Thus, Petitioners’ attempt at portraying Key’s “analysis” as equivalent to the ‘966 Patent analysis is flawed and technically unsupported.

4. Key Alone or in Combination with Sweeney Does Not Teach the Limitations of Step 8[d].

Petitioners assert that Key alone or in combination with Sweeney discloses step [8d]. Pet. at 42. Step [8d] recites:

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, and a cost associated with the type of inspection, and **wherein the notification event comprises a designatable interval in advance of an impending deadline for the inspection**, and wherein the owner of the asset, upon remotely accessing the fire hydrant management software compliance registry, may update and review the status of the assets;

EX1001,15:33-42, emphasis added. Section [8d] when properly construed requires that this step be based on analysis of records retrieved by the “fire hydrant management software,” also discussed above. Petitioners fail to address the proper construction of this step and fail to show that any of the prior art of record discloses the limitations of this this step. EX2001, ¶¶ 160-169.

Likewise, Petitioners fail to demonstrate that the record prior art discloses “the notification event comprises a designatable interval in advance of an impending deadline.” Key teaches away from a “designatable interval,” as it describes that the JOM automatically sets inspection dates, without describing a notification event with a designatable interval. *See* EX1005, Fig. 5 item 535, 0084,

Fig. 6 item 662, 0099; EX2001, ¶¶ 164-165. MacInnes glosses over that gap in Key by conflating its inspection date with the recited notification event with a designatable interval, arguing that a POSA would set the interval at 60-90 days before the deadline. EX1003, ¶167. MacInnes misses the point, as portions of Key relied upon by him describe setting the inspection deadline itself, as opposed to a “notification event” for an inspection deadline, and the recited limitation allows the notification interval to be changed, *i.e.*, it is designatable, as opposed to the predetermined inspection deadline described in Key. EX2001, ¶ 165.

Tacitly acknowledging this gap in Key, Petitioners cite to yet another reference (EX1032 Apostolides) arguing that it discloses setting and notifying predetermined services intervals. *See* Pet., p. 45 citing EX1032, [0121]. However, Petitioners fail to provide any support for the motivation to combine Key with Apostolides. Moreover, the referenced portion of Apostolides describes setting the service interval, *i.e.*, the next inspection date, like Key, as opposed to a notification event with a designatable interval in advance of the inspection date, as recited in step 8[d]. EX2001, ¶ 166.

Moreover, as discussed above regarding step [8b], Key teaches a closed centralized architecture used by insurance companies to manage maintenance compliance of boilers and related assets and thus teaches closed-centric proprietary

system that allows for standardization and exclusive control by insurers. EX2001 ¶ 93-104. Thus, Key teaches away from the limitations set forth in step [8d].

In fact, the Petition admits Key does not teach or suggest the limitations in step [8d] relating to owners but baldly asserts “it was well-known and obvious”. Pet. at 50. “[C]ommon sense’-whether to supply a motivation to combine or a missing limitation – cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art references specified”. *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016). “Common sense can only be used to supply a missing limitation that is unusually simple and the technology particularly straightforward”. *Id.* 1362; *See also, DSS. Tech. Mgmt. Inc. v. Apple, Inc.* 885 F.3d 1367 (Fed. Cir. 2018). The Petition has provided no evidence to support their assertion. Such evidence is required, because in IPR, challenges to patents must be based on patents and printed publications, not merely unsupported testimony. 35 U.S.C. § 311 (A petitioner in an inter partes review may request to cancel ... claims of a patent only ... on the basis of prior art consisting of patents or printed publications).

In addition, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified,

then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959); *see also*, *Depuy v. Medtronic Sofamar Danek*, 567 F.3d 1314 (Fed. Cir. 2009). Open and closed systems are opposites. Hence, transforming a closed system (Key) to an open one (the ‘966 Patent) indisputably changes the principle of operation. That Key is a closed system is apparent on its face, and extensively explained by D. Williams. *See* EX2001, ¶¶ 93-104. That ‘966 patent is an open system is not merely described in the specification, but thoroughly permeates the claims themselves. For example, step [8d] recites **notifying an owner** of an asset of a notification event and wherein **the owner** of the asset, upon remotely accessing the fire hydrant management software compliance registry, **may update** and review the status of the assets, step [8e] (discussed below) recites “**the approval authority**, upon accessing the web-based registry, **may update** and review the status of the assets assigned” and step [8a] (discussed above) recites “granting **access...to at least three classes of user**” and “the database being **accessible and augmentable**” by users. Thus Claim 8 is describing an open system in contrast to Key. Key would need to be modified, and its principle of operation changed. Therefore, it does not make ‘966 Patent obvious. *Ratti*, *Id.* [cite].

Sweeney also describes a closed stand-alone system for construction owners, as discussed above. There is no motivation set forth in the Petition to modify the closed systems of Key in view of closed stand-alone system of Sweeney to result in the limitations set forth in step [8d].

5. Key Does Not Teach the Limitations of Step 8[e].

Petitioners assert that Key discloses, or it would have been obvious to include as part of Key, step [8e]. EX1003, ¶¶ 191-208; Pet., p. 49. Step [8e] provides:

based upon the analysis, sending a standard format notice to the approval authority of the status of the assets assigned to the approval authority, and wherein the approval authority, upon accessing the web-based registry, may update and review the status of the assets assigned;

EX1001, 15:43-48, emphasis added. This step must be construed in view of the specification and claim 8 read as a whole. As discussed above, step [8b] recites the fire hydrant management software system retrieving records of assets, step [8c] recites analyzing such records to identify notifications events, and then based on that analysis, in step [8d] notifying an asset owner of the notification event, and in step [8e], also based on the analysis, notifying the approval authority. Hence, step [8e] when properly construed requires that this step is “based upon the analysis” performed on asset records retrieved by the “fire hydrant management software,” as discussed above. Petitioners fail to address the proper

construction of this step and fail to show that any prior art discloses fire hydrant management software performing step [8e]. *See* EX2001, ¶¶ 170-175.

Petitioners argue that Key discloses a notification system 414 that is operative to send notifications to users, which include jurisdictional reviewers. Pet., p. 49-50; EX1003, ¶ 195. Petitioners assert that Key discloses a JOM that schedules the inspection to be reviewed by the jurisdiction and places a task in the jurisdiction task listing. Pet., p. 51 citing EX1003, [0177]-[182]. That portion of Key describes Fig. 15, which depicts a review interface routine. That review interface routine is a more detailed description of review function 880 shown in Fig. 8, which depicts the user interface routine. Key explains that review function 880 is initiated if a user has requested the review unit. EX1005, [0115], [0123]. Regarding Fig. 15, Key similarly provides that review routine 880 is accessed upon a user requesting review functions from Fig. 8. *Id.* at [0177]. Hence, while Key does state that reviews to be performed are listed in the “task listing for that jurisdiction,” such tasks are not triggered by fire hydrant management software retrieving asset records for analysis, but rather, by a user request as described in Key. *See* EX2001, ¶ 173.

Moreover, Key provides no description of the information associated with a task placed in the “task listing” discussed above. *See* EX1005, [0177]. Hence,

Key does not teach or suggest sending a standard format notice to the approval authority *based on the analysis of the records of assets*, as recited in claim 8.

EX2001, ¶ 174.

Petitioners tacitly acknowledge the deficiencies of Key noting that McKinney discloses a regulatory authority 40 that can obtain status reports regarding timely repairs. Pet., p. 51. However, McKinney teaches a monitoring system for wastewater treatment systems, where controllers installed on such devices generate alarms to monitor compliance and maintain such equipment. EX1020, [0013]-[0015]. Hence, to the extent a regulatory authority disclosed by McKinney can obtain status reports of such activities, it is not based on fire hydrant management software retrieving and analyzing records as recited in step [8e]. Thus, Key alone or in combination with McKinney does not teach or suggest the limitations of step [8e].

Moreover, as discussed above regarding steps [8b] and [8d], Key teaches a closed centralized architecture for insurance companies to manage maintenance compliance of boilers and related assets and thus teaches closed-centric proprietary system that allows for standardization and exclusive control by insurers. EX2001 ¶¶ 93-1004. Thus, Key teaches away from the limitations set forth in step [8e].

There is no motivation set forth in the Petition to modify the closed systems of Key to result in the limitations set forth in step [8e].

6. Key Alone or in Combination with McKinney and/or Sweeney Does Not Teach the Limitations of Step 8[f].

Petitioners assert that “Key alone or in combination with McKinney and/or Sweeney discloses, or it would have been obvious to include as part of Key, step [8f] EX1003 ¶¶209-222.” Pet., p. 53. Step [8f] provides:

upon logging on to a password controlled website configured to provide access to the fire hydrant management software, 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, a web-based template configured to describe the asset an[d] each of the steps of the inspection

EX1001, 15:49-56, emphasis added. This limitation recites that the asset owner, when selecting an inspector, is provided a list of available inspectors from which to choose. The ‘966 Patent describes making recommendations to asset owners regarding inspecting a fire hydrant or other assets by providing a list of inspectors, type of inspection, and costs associated therewith. EX1001, 8:26-29. It also explains that the asset owner may select from the available list of inspectors, which include licensed and bonded inspectors. *Id.* at 8:42-53.

Petitioners argue that Key discloses the referenced limitation, as it discloses that inspections must be performed by an inspector commissioned to perform inspections in a particular jurisdiction. Pet., p. 57 citing EX1005, [0048], [0051]. That aspect of Key does not disclose the referenced limitation in step [8f], which requires providing a list of available inspectors to the asset owner, from which the asset owner can select to arrange an inspection. EX2001, ¶¶ 176-180.

Petitioners acknowledge that void in Key arguing that the referenced limitations would have been obvious by combining Key with McKinney and/or Sweeney. Pet., pp. 58-59. Regarding the former, Petitioners refer to McKinney providing for online contracts and scheduling. *Id.* at 59 citing EX1020, [0063]-[0064], [0080]. However, McKinney does not disclose providing a list of inspectors from which an asset owner may select, as recited in step [8f].

Regarding Sweeney, Petitioners argue that it discloses an online bid function where asset owners can select a contractor from online bids. Pet., p. 50 citing EX1006, [0043]-[0044], Fig. 1. As referenced above, step [8f] refers to providing the asset owner a list of inspectors from which the asset owner may select to perform an inspection. Sweeney discusses inspections and inspection reports for construction assets, but nowhere teaches that asset owners are provided a list of inspectors, as recited in the limitation at issue. *See* EX1006, [0007]-

[0011], [0013], Figs. 1 and 2. The ‘966 Patent also discloses an online bidding process (EX1001, 8:45-49) and separate functionality referenced above for providing a list of inspectors. Hence, Sweeney teaches away from the referenced limitation, as it discloses a bidding process, inspections, and related reports but does not disclose providing owners a list of inspectors from which to select. *See* EX2001, ¶¶ 180-183.

Thus, Key, alone or in combination with McKinney and/or Sweeney, does not teach or suggest the limitations defined by Section [8f].

C. Petitioners Fail to Provide a Reasonable Basis to Modify Key in view of Chauhan, Sweeney, and McKinney to teach the Invention Recited in Claim 8.

A proper obviousness analysis requires proof that if all elements of a claimed invention are taught or suggested by the prior art, the prior art would have also suggested to one skilled in the art that they should make the claimed invention and that they would have a reasonable expectation of success in so making. *Intri-Plex Techs., Inc. v. Saint-Gobain Performance Plastics Rencol Ltd.*, IPR2014-00309, Paper 83 at 19 (PTAB Mar. 23, 2014). Further, “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Moreover, in an obviousness analysis, conclusory assertions from a third party about general knowledge in the art cannot, without

supporting evidence of record, supply a limitation that is not evidently and indisputably within the common knowledge of those skilled in the art. *K/S Himpp v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1365 (Fed. Cir. 2014). Further, when an obviousness challenge asserts a combination of identified prior art, the motivation-to-combine portion of the inquiry is “whether ‘a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve *the claimed invention.*’” *Axonics v. Medtronic, Inc.*, 2023 U.A. App. LEXIS 17231, *15 (Fed. Cir. July 10, 2023).

1. Petitioners Fail To Show That It Would Have Been Obvious for a POSA to Make the Combined Steps of Claim 8.

None of Petitioners’ prior art addresses the technology at issue in the ‘966 Patent and recited in the Challenged Claims. The Challenged Claims are expressly limited to a method that employs fire hydrant management software and a web-based registry system to address the problems disclosed in the ‘966 Patent. While the term “asset” recited in claim 8 is not limited to fire hydrants, the plain language of the Challenged Claims and steps recited therein are directed toward addressing problems relating to software capable of managing assets such as fire hydrants. Limiting claim 8 to include the “fire hydrant management software” was part of the stated reasons for allowance of that claim, in that, it was directed to a particular technology, as discussed above.

None of Petitioners' prior art is directed to this field of technology or the problems discussed in the '966 Patent, and none describe the use of fire hydrant management software, in general or otherwise, as part of the solution for any such problems. Key describes problems that insurance companies have when monitoring boilers and pressure vessels for compliance with local regulations in different jurisdictions and proposes a JOM for managing their inspections. EX1005, [0002], [0009]-[0010], [0015]; *see also* EX2001, ¶¶ 93-104. McKinney relates to the technical field of online monitoring of wastewater treatment systems. EX1020, [0003] *see also* EX2001, ¶¶ 125-131. Sweeney relates to the technical field of monitoring construction assets and a related online bidding process. EX1020, [0002]; *see also* EX2001, ¶¶ 118-124. Chauhan describes improving the outage management system of a utility. EX1025, [0002], [0039] *see also* EX2001, ¶¶ 105-117. Petitioners combine these references and others in their Ground 1 obviousness argument for claim 8 alone. Petitioners fail to demonstrate that a POSA would have been motivated to combine these references from disparate technologies – none of which relate to the management of fire hydrants and other fire suppression systems – to create the combined steps of claim 8, as discussed above or that a POSA would have a reasonable expectation of success in doing so to result in the claimed invention without rendering the

prior art unsatisfactory for its intended purpose or changing the principle of operation of the cited references. EX2001, ¶¶ 184-186. “A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR*, 550 U.S., at 421 (citing *Graham*, 383 U.S. at 36). “The invention must be viewed not after the blueprint has been drawn by the inventor, but as it would have been perceived in the state of the art that existed at the time the invention was made.” *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996).

To obscure the differences between those references, Petitioners argue that they are in the technical field of asset management, monitoring, and compliance (Pet., p. 22), notwithstanding that the ‘966 Patent and Challenged Claims are directed at a much narrower technical field. Petitioners then pick and choose between them to allege functionality similar to each step of claim 8, while failing to demonstrate that a POSA would have been motivated to make the combined steps of claim 8, if presented with those references, where they are from different technical fields than the ‘966 Patent, and the references themselves are from different technical fields from each other. *Id.* at pp. 22-28.

While Petitioners rely on the declaration of Mr. MacInnes, he likewise fails to demonstrate that a POSA would have been motivated to combine Petitioners’

references to create the specific combined steps of claim 8. He followed the same deficient path as Petitioners, first describing the relevant field of technology very broadly so that it includes the varied prior art (EX1003, ¶109), then picking and choosing between them to allege functionality similar to the individual steps of claim 8 (*id.* at ¶¶110-121), and baldly concluding that it would have been obvious for a POSA to use those references to create the specific combined steps recited in claim 8 (EX1003, ¶¶140-141). He then attempts to support that conclusion by again picking and choosing between the references for functionality similar to the individual steps of claim 8. (*Id.* at ¶¶142-235.) The issue is not whether Petitioners can cobble together enough references to identify or suggest features similar to each of the steps of claim 8, but rather, whether all of the limitations set forth in each of the claim 8 steps, as combined, would have been obvious to a POSA reviewing those references and that a POSA would have a reasonable expectation of success when combining them to result in the claimed invention without rendering the prior art unsatisfactory for its intended purpose or changing the principle of operation of the cited references. Nowhere does MacInnes provide a sufficient basis to show that a POSA would have been motivated to combine or have a reasonable expectation of success when combining Petitioners' disparate references to result in the combined steps of claim 8, including their individual

limitations, many of which are still missing as discussed above. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 (August 24, 2022) (precedential opinion designated: February 10, 2023) (AIA, denying institution – holding declaration is entitled to little weight when it contains an exact restatement of the petition’s unsupported, conclusory assertions without any additional supporting evidence or reasoning.)

2. Key Does Not Address the Problems Solved by the Invention Recited in Claim 8 and Describes a Different Solution.

Key is the primary reference used in Ground 1 against claim 8. Key describes the complexity of insurance companies managing the compliance of boiler and pressure vessel inspections and reporting to local regulatory agencies. EX1005 ¶¶0003-0011. It teaches away from the use of software or electronic interfaces by individual regulatory agencies and proposes to solve the problem with a centralized web enabled process for the transfer of data between jurisdictions and other entities. *Id.* at 0012-1017.

The Challenged Claims relate to software capable of managing the substantially different needs and problems relating to fire hydrants. *See* EX2001, ¶¶ 91-104. As discussed above, claim 8 recites a method that employs a web-based registry and fire hydrant management software, which performs certain

steps thereof. The '966 Patent explains the problems to be solved for fire hydrant inspection, maintenance, and monitoring:

In order to ensure that a fire hydrant is working and is capable to dispense water to fight fires the hydrant is preferably inspected annually. The hydrant is usually inspected by **a range of individuals including but not limited to a citizen, an owner, a water purveyor, a firefighter, and/or a fire marshal**. Usually, an inspector will record information about the hydrants location and operability. The completed inspection may be recorded in local neighborhood records (privately owned hydrant), a firehouse or in a computer system stored locally in an inspectors office. Most of these inspections are not available globally and generally are not available at the time of a fire. If a hydrant is not inspected a fire crew could waste valuable time trying to find water for their hoses from a malfunctioning hydrant. A hydrant also could be leaking water or be otherwise unsafe, which may not be discovered without an inspection. In most areas very few hydrants are inspected because of the large number of hydrants, the lack of a working inspection enforcement and tracking system and because there is not currently a way to use the inspection information at the time of a fire near the hydrant.

EX1001, Col. 1:39-58. (bold added)

Computer software has been used in the past as a way for inspecting authorities to track fire hydrant usage. These previous software approaches focus on collecting limited data on each fire hydrant and keeping the information local to the fire department or owner only. A

typical fire hydrant management software program allows the user to input hydrant information, schedule maintenance, and create reminders for service. The local fire department can evaluate inputted data to determine water flow information and general location. These programs do not record data such as water quality, GPS location, or condition. Also they do not record requests for maintenance or improvements. None of previous approaches communicate with each other or communicate with a global registry. In fact, none of them communicate with other users who use the same program and therefore there is not a system that currently combines all of the gathered data for use by all fire departments. Commonly, because of high software costs and the lack of organization, departments do not use a formal hydrant management software program and instead rely on pencil, paper, calendars, and file cabinets.

EX1001, Col. 1:59-Col. 2:12. (bold added)

The global registry is intended to assist the government, private owners, insurance bureaus, businesses, and the general public in providing information regarding hydrant condition, location, and water quality. **The most important purpose is to prepare the fire department for the hydrant and water conditions prior to arriving at a fire incident. This preparation will improve the approach of extinguishing a fire by showing the best hydrant for the fire department to connect to and also give visual reference of that hydrant prior to arriving at the site. This improvement will allow a fire department to put more water on a fire**

quicker and save lives and property. Non-working or low performing hydrants will be identified prior to arriving at the site and avoided. **Another major purpose of the registry is to assist maintenance crews in locating and preparing work on hydrants in need of service.** Equally important, these needed and/or finished repairs are communicated back to the fire marshal and fire department. This vital communication will inform the fire fighters of hydrant conditions. The state fire marshals are able to review the performance of local fire marshals and maintenance crews. The improved method of record keeping hydrant information will improve a city's ISO (insurance) rating which will save money in fire insurance premiums for local businesses and homes. The web based compliance registry is optionally advantageous to improve the process of inspections and in many cases introduce a new ability to enforce inspections. **The authorities will be able to easily monitor, require, enforce, review, approve, and summarize all the inspections under their control.** This new method will provide an easier way for them to charge for their review time and a way to confirm inspection companies are licensed to work in their city. This will help the cities recuperate lost expenses previously overlooked or ignored.

EX1001, Col. 10:10-42. (bold added)

Claim 8 recites a method that solves the above problems by employing a web-based registry and fire hydrant management software for open and full access and use by the approval authority, asset owner, and inspector – all three. The solution recited in claim 8 is directed to solving the localized problem of ensuring that fire hydrants are inspected and operational so that they are available for use by

a fire department when needed to suppress a fire. Not only are the problems solved in the '966 Patent different than Key, but the solution is different as well, given that Key describes a closed, centralized solution for exclusive use by insurance companies across multi-jurisdictions for a standardized internal processing and management of the inspection of boilers and pressure vessels. EX2001, ¶¶ 93-104.

3. No motivation to combine Chauhan with Key.

Chauhan relates to “an automated management system for managing data, outage repair, load switching, job workflow and crew dispatching, crew workflow, installation, maintenance and restoration of utility services by integrating geographic information systems (GIS) data with many other data sources so as to gather, transform, manipulate, analyze, and produce desired information for continuously supplying utility and relevant services.” EX1016, Abstract, *see also* Field of the Invention, ¶0001; *see also* Ex2001, ¶¶ 105-117.

Chauhan teaches that an electric utility may improve its operations by implementing an Outage Management System (OMS) with interfaces with SCADA, automatic meter reading systems (AMR), utility call centers, Customer Information Systems (CIS), and AM/FM/GIS systems to reduce the average outage restoration. EX1016, ¶0002. It further explains:

The Crew Management of the first version was basic. It **allowed the user to enter a crew name, type, contact information, and be**

assigned to an Outage and that was about it. In the second version, a user can build a crew to include the following: Crew Members, Equipment, Material, Work order Assignments, Outage Assignments, Crew Current Physical Locations, and Skill Sets. As such, Work and Service Orders can be assigned and scheduled to be worked, skill sets of Crews and individual Crew members, as well as the Equipment and Material associated with a specific Crew can be tracked.

EX1016, [0206], (bold added)

Chauhan further describes the tool for managing crews working on outages, as follows:

The second version includes new **features not available in the first version**, such as Sketch and sketch manager, Multiple work order types, MasterSQL, Security Manager, Custom Edit and Custom Report interfaces, AVL Interfaces, Transfer database for 3rd party data, and a new feature of the Prediction/Trace engine, i.e., ability to process Calls by District. The new Security Manager allows user administrators to allow/deny access to functionality within the application, to set permissions for who can view/edit certain database tables, or to set permissions for who can view/edit particular fields within a database table. These security setting can be set per user, or users can be assigned to groups with preset security sets. **The system architecture allows managers or administrators to temporarily assign permissions to work crews. For example, a contractor hired to do fire hydrant inspections could be given a laptop with**

UtilityCenter loaded on it and assigned a username that only allows him to edit and view the inspection fields on the HYDRANT theme.

EX1016, [0207], (bold added). While Chauhan refers to hydrant inspections and a “HYDRANT theme” in passing, neither are discussed in any detail nor are the problems with fire hydrants discussed or otherwise addressed in Chauhan. Thus, Chauhan does not teach or suggest compliance according to Key or claim 8, but instead teaches online tools for assigning work crews to address power outages. *See* EX2001, ¶¶ 105-117.

Chauhan does not even relate to the subject matter of Key, *i.e.*, managing “required inspections mandated by a plurality of different jurisdictions performed by non-governmental entities” (EX1005, [0018]) or the “required inspections mandated by a plurality of different jurisdictions performed by non-governmental entities.” (*Id.* at [0015]), much less the subject matter defined by claim 8. There is no evidence in the Petition providing motivation for a POSA to modify the disclosure of Key in view of Chauhan to result in the combined steps recited in claim 8. Moreover, POSA would not look to the disclosure of Chauhan to modify the disclosure of Key since these are non-analogous references for the reasons set forth above. EX2001, ¶¶ 108-117; *see Manual of Patent Examining Procedure*, § 2141.01(A) (“A reference is analogous art to the claimed invention if: (1) the

reference is from the same field of endeavor as the claimed invention (even if it addresses a different problem); or (2) the reference is reasonably pertinent to the problem faced by the inventor (even if it is not in the same field of endeavor as the claimed invention)”.) citing *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

4. *No Motivation to Combine Sweeney with Key.*

Sweeney relates to the online management of construction assets. EX1006, Abstract, [0007]. Sweeney describes online monitoring of the condition of a construction asset, such as a building, a roof, a parking lot, or the like. *Id.* at [0002]. It also describes an Internet based design and bid procurement process that is linked to the condition management system to enable online bidding on a construction project. *Id.* Thus, Sweeney is focused on managing construction assets, including inspection reports and repairs, while Key is related methods for owners/insurers of assets to comply with required inspections of boilers and pressure vessels in different jurisdictions, as discussed above. Sweeney does not relate to the multi-jurisdictional compliance method of Key or the fire hydrant software management and web-based registry method set forth in claim 8. Accordingly, a POSA would not have been motivated to modify Key in view of Sweeney to result in the combined steps of claim 8. Moreover, a POSA would not look to teachings of Sweeney to modify the teachings of Key to result in the

claimed invention since these are non-analogous references. *See* EX2001, ¶¶ 118-124.

5. No Motivation to Combine McKinney with Key.

As discussed above, Mc Kinney relates to monitoring wastewater treatment systems. It provides:

Therefore, **environmental regulations/certifications relating to regular maintenance and inspection, as well as prompt repairs of wastewater treatment systems**, are necessary and desirable to protect the environment. In some cases, non-governmental companies, such as NSF®, have been created to provide certification of equipment for compliance with NSF® requirements that relate to regulations, rules, and/or standards for such systems. Certification requirements may relate to maintenance, inspection, and repairs, as well as technical requirements for system outputs/operation such as suspended solids, pH, temperature, dissolved oxygen, color, oily film, foam, noise, BOD, odor, reliability, and the like.

EX. 1020, [0007] (bold added). It further explains:

Wastewater systems for homeowners are generally positioned away from the house. Installation may require running cables and wires such as telephone lines, power lines, and the like. Additional telephone lines may incur additional costs if necessary for sending/receiving data.

Id. at [0010]. McKinney then describes methods for installing a plurality of

environmental equipment systems without running a specialized data transmission line by using node-to-node communication links. *Id.* at [0018]-[0022]. Thus, McKinney relates to monitoring for wastewater treatment systems, while Key relates to insurers required inspections of boilers and pressure vessels in different jurisdictions. Petitioners fail to show that a POSA would look to teachings of McKinney to modify the teachings of Key to result in the steps of claim 8. Moreover, POSITA would not look to the disclosure of McKinney to modify the disclosure of Key since these are non-analogous references. EX2001, ¶¶ 125-132.

X. INSTITUTION ON GROUND 1 SHOULD ALSO BE DENIED AS IT IS BASED ON ARGUMENTS AND REFERENCES PREVIOUSLY CONSIDERED DURING PROSECUTION.

Under 35 U.S.C. § 325(d), when determining whether to institute *inter partes* review, the PTAB “may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” In *Becton, Dickinson and Co. v B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017), the Board exercised its discretion under § 325(d) to deny institution of certain obviousness grounds after weighing the following non-exclusive list of factors: (1) the similarities and material differences between the asserted art and the prior art involved during examination; (2) the cumulative nature of the asserted art and the prior art evaluated during examination; (3) the extent to which the asserted art was

evaluated during examination, including whether the prior art was the basis for rejection; (4) the extent of the overlap between the arguments made by the Patent Owner to distinguish the prior art during examination and the manner in which Petitioner relies on the prior art; (5) whether Petitioner has sufficiently pointed out how the Examiner erred in its evaluation of the asserted prior art; and (6) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Petitioners' Ground 1 obviousness challenge is based Key in view of secondary references Chauhan, Sweeney, and McKinney, while still relying on eight additional references to fill gaps therein. Two of these additional references relied upon in the Petition, *Campion* (EX1007) and *Buildingreports.com* (EX1024) were cited as primary references in rejections of claim 8 (originally claim 21) during the prosecution of the '966 Patent. *See* EX1002, pp. 234-238, 389-39, 467-469. Petitioners cite the patent issued to *Campion*, which published as U.S. Publication No. 2008/0084291 on April 10, 2008. EX1007, cover page, *see also* EX2012. That published application is listed in the References Cited in the '966 Patent. EX1001, p. 2. Its disclosure is the same as the *Campion* patent cited by Petitioners; hence hereinafter, the published application is referred to as *Campion*.

A. Petitioners' Arguments Based on Key Are Cumulative of Campion.

Key is cumulative of Campion. *See* EX2001, ¶¶ 132-138; 187-196. During prosecution, the examiner explained that Campion discloses:

a computer-implemented method for using a web registry to track a requisite inspection of an owned asset (¶ 0057, 0065-0066)

comprising:

retrieving records of assets from a database to generate an inspection list including each asset due and each asset within a designatable interval of being due for inspection (¶ 0043, 0048, 0057: discloses a workstation with internet access that can be used to access complete inspections and view progress reports on inspection status, where inspections are in progress. The workstation is used to schedule inspections due over the course of coming time for periods as required to set dates for required inspection and receive reminders of inspections due.);

generating a notice notifying an owner of the asset of an impending deadline for the inspection such notice (¶ 0043: discloses providing notification to a building owner of inspections required during a particular time frame via calendar or schedule management tool. The data can include inventories of equipment or the like.);

receiving at a server through an internet portal, information that one of the qualified inspectors supplies, the information garnered by performing the required inspection (¶ 0043: discloses multiple

testers can perform inspections by accessing data server. The test data generated from the test can be stored such that test data can be provided into standard forms required by jurisdictions for reporting information such as inspection status, test results, and the like.);

compiling a report based upon the information the inspector supplies in accord with a template configured to the asset (§ 0029, 0043, 0047, 0064-0065: discloses the web server transmits responses to questions to data server where authentication report is automatically generated in standard form as suggested and recommended by applicable codes and standards.);

transmitting the report completed inspection to an approving authority (§ 0029, 0043, 0047, 0064-0065: discloses the results of the inspection or test can be compiled and the results are authenticated for generation and/or publication of reports in a format that would be accepted by a local fire inspection jurisdiction.);

augmenting at the database, the records relative to the asset to reflect the information the inspector supplies when the inspection is approved by the approving authority (§ 0065-0066: discloses upon completion of inspection, test, or the like, where all questions of the system under test as required by the code are asked, the information is stored. Inspection data is stored and saved on the authentication server for record keeping compliance, archiving, and for viewing at a later date.);

EX1002, pp. 579-580, (bold added). In the Reasons for Allowance, the Patent Examiner noted that *Campion* was the “closest prior art”. EX1002, pp. 631-632.

To assert that claim 8 is obvious, Petitioners rely on features in *Key* that were disclosed in *Campion*. *See* EX2001, ¶¶ 132-138. For step [8a], Petitioners argue that *Key* discloses a JOM that provides a web-enabled process for managing inspections of boilers and pressure vessels. Pet., pp. 29-30. As shown above, the Patent Examiner found that *Campion* discloses “a computer-implemented method for using a web registry to track a requisite inspection of an owned asset (¶ 0057, 0065-0066)”. *See also*, EX1007, Figs. 3, 4, 5, and 6.

For step [8b], Petitioners cite to *Key*’s disclosure of “a central staging database” (Pet., p. 32), which corresponds to the *Campion* database referenced by the Patent Examiner, as shown above. *See also*, EX1007, Figs. 5, data server 520, 8:62-9:13.

For step [8c], Petitioners note *Key*’s disclosure of general application software to process transactions (Pet., p. 38), which the Patent Examiner noted was disclosed in *Campion* via a “workstation with internet access that can be used to access complete inspections and view progress reports on inspection status, where inspections are in progress”.

For steps [8d] and [8e], Petitioners refer to Key's disclosure providing updates and notifications (Pet., pp. 42 and 49), which corresponds to the Campion notification feature, highlighted above, for providing notices to asset owners and regulatory authorities.

For step [8f], Petitioners cite Key's disclosure of the JOM which restricts access to users and may provide inspection templates to inspectors. Pet. pp. 53-55. Similarly, as noted by the Patent Examiner above, Campion "compiling a report based upon the information the inspector supplies in accord with a template configured to the asset (§ 0029, 0043, 0047, 0064-0065...)"

For step [8g], Petitioners cite to Key's JOM receiving information from inspectors (Pet., p. 61), which corresponds to the examiner cited Campion disclosure of "receiving at a server through an internet portal, information that one of the qualified inspectors supplies, the information garnered by performing the required inspection." *See also*, EX1007, Figs. 11A to 11D, 17:23-49.

Finally, for step [8i], Petitioners cite to the database disclosed in Key and that the JOM sends inspection results to the controlling jurisdiction (Pet., p. 64), which corresponds to the Patent Examiner's reliance on Campion for the disclosure of a similar data base and reporting inspection results to the pertinent authorities,

as highlighted above. In short, Petitioners' reliance on Key is cumulative of
Campion.

**B. Petitioners Secondary References Are Also Cumulative of Prior Art
Considered During Prosecution.**

Petitioners argue that Key combined with Sweeney renders obvious steps
[8d] and [8f]. Pet., pp. 42, 53. For step [8d] regarding the notice provided to an
asset owner, Petitioners rely on Sweeney for the disclosure of computer-generated
reports on assets. *Id.* at p. 47. While such reports are not notices to the asset owner
as recited in claim 8, the Patent Examiner cited Campion for “notifying an owner
of the asset of an impending deadline for the inspection such notice (¶ 0043:
discloses providing notification to a building owner of inspections required during
a particular time frame via calendar or schedule management tool,” as shown
above.

For step [8f], Petitioners rely on Sweeney for the disclosure of an online bid
process for construction contracts asserting that it discloses the “list of inspectors”
limitation within that step. Pet., p. 60. During prosecution, the Patent Examiner
reasoned that Colliau [0123] discloses “an inspector selection indication is
received from the user for selecting at least one of the available inspectors” and
[0014] discloses a list of inspectors available to inspect is generated according to
specifications provided by a user including an inspection schedule window and

predetermined locations or the like. EX1002, p. 390. Hence, Colliau is cumulative of Sweeney for the features relied upon by Petitioners.

Petitioners argue that McKinney discloses the limitation of step [8f], where the owner selects the inspector from a list of inspectors. Pet., 58-59. Petitioners refer to McKinney's disclosure of online contracts whereby a homeowner may contract with service providers of choice. *Id.* at 59. However, that disclosure is cumulative of Colliau for the same reasons noted above.

Finally, Petitioners argue Key combined with Chauhan teaches steps [8a] and [8b] of claim 8 but failed to explain how in that section of the Petition. Pet. pp., 29 and 34. Petitioners elsewhere rely on Chauhan for its oblique reference to inspecting fire hydrants. *Id.* at p. 15. The prior art of record during prosecution, included the "Annual Hydrant Inspection Procedures 2001," (EX2003) and the '966 Patent in the Background of the Invention discusses known software used in connection with the inspection of fire hydrants used by fire departments or asset owners. *See* EX1001, p. 2 List of References, 1:59-2:5. Hence, Chauhan does not teach anything regarding the inspection of fire hydrants that was not considered by the Patent Examiner.

Applying the factors set forth in *Becton* factors set forth above, (1) Campion is both identical to asserted art repeatedly referenced in Ground 1 and also

substantially the same as the disclosure relied upon as the asserted primary reference Key; (2) Petitioners' secondary references are cumulative of the art evaluated during examination, as shown above; (3) Campion was repeatedly cited as the primary reference during the patent prosecution and cited in Reasons for Allowance as the "closed prior art"; (4) Petitioners rely on prior art in the same manner as considered during prosecution, as shown above, and the Patent Owner will be repeating the same or substantially the same arguments to distinguish over that prior art, as during examination; (5) Petitioners fail to point out how the Examiner erred in its evaluation of the asserted prior art; and (6) Petitioners fail to provide additional evidence and facts to warrant reconsideration of the prior art or arguments. In short, the factors (1)-(6) each weigh against institution.

The institution of *inter partes* review is discretionary. *Becton, Dickinson and Company v B. Braun Melsungen AG.*, CASE IPR2017-01586 citing *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (PTAB 2017) (the PTO is permitted, but never compelled, to institute an IPR proceeding). In particular, § 325(d) states that "[i]n determining whether to institute . . . the Director may take into account whether . . . the same or substantially the same prior art or arguments previously were presented to the Office." *Id.* Ground 1 may be denied by the Board under §325(d) on this basis alone.

XI. CONCLUSION

For the foregoing reasons, Tegriss respectfully urges that the Board deny institution, as Petitioners fail to show a reasonable likelihood of prevailing on Ground 1, as the cited references do not disclose all of the limitations of claim 8, as properly construed, and Petitioners fail to show that a POSA would be motivated to combine their disparate references to make the combined steps of claim 8 or that there would have been a reasonable expectation of success in doing so. In addition, Petitioners urge the Board to exercise its discretion pursuant to Section 325(d) and decline institution, as Petitioners rely on arguments and references that are cumulative of arguments and references considered by the Patent Examiner during prosecution, and Petitioners fail to show that the Patent Examiner erred in allowing the Challenged Claims.

Date: October 27, 2023

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CERTIFICATE OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned PATENT OWNER'S PRELIMINARY RESPONSE specified in 37 C.F.R. §42.24 has 12777 words in compliance with the 14,000 word limit set forth in 37 C.F.R. §42.24. 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 Mandatory Notice Information Under 37 CFR § 42.8 was served on the above referenced date via email on the following attorneys for the Petitioners:

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