

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BRYCER, LLC, BRYCER MANAGEMENT, INC.,

Petitioners

v.

TEGRIS, INC.,

Patent Owner.

Case No. IPR2004-01196

Patent No. 11,126,966

DECLARATION OF ANDREW MOREN

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I, Andrew Moren, declare as follows:

I. INTRODUCTION

1) I have been asked to provide my testimony on behalf of patent owner Tegriss, Inc. (“Tegriss”) in connection with *inter partes* review (“IPR”) proceedings in IPR2004-01196 Brycer LLC and Brycer Management, Inc. (“Petitioner”), involving U.S. Patent No. 11,126,966 (the “‘966 Patent”), titled “Systems and Methods for a Web Based Inspection Compliance Registry and Communication Tool” by named inventors Andrew S. Moren and Robert J. Moren. The ‘966 Patent is currently assigned to Tegriss. EX1001.

2) I am one of the named inventors of the ‘966 Patent. I understand Petitioner challenged Claims 8-16 of the ‘966 Patent (the “Challenged Claims”) as allegedly being unpatentable under 35 U.S.C. § 103 in view of certain alleged prior art references. Paper 9 (“Institution Decision”) at 9. Petitioner challenged Claims 8-16 on the following single ground:

- a. Claims 8-16, 35 U.S.C. § 103, based on Key, Ex. 1005 (U.S. Patent Application Publication No. 2002/0029222A1, published Mar. 7, 2002), Chauhan, Ex. 1016 (W.O. International Publication No. 2004/104891A1, published Dec. 2, 2004), Sweeney Ex. 1006 (U.S. Patent Application Publication No. 2005/0021449A1, published Jan. 27, 2005),

and McKinney Ex. 1020 (U.S. Patent Application Publication No. 2004/0230455A1, published Nov. 18, 2004).

3) I also understand the Board instituted review of the Challenged Claims. Paper 9 at 2.

4) I am one of the named inventors of the '966 Patent and have personal knowledge of the technology disclosed and claimed in the '966 Patent. In reaching my opinions, I considered the materials identified in Section III in the context of my own education, training, research, and knowledge, as well as my personal and professional experience.

5) I make this Declaration based on my own personal knowledge and, if called upon to testify, would testify competently to the matters contained herein.

II. BACKGROUND AND QUALIFICATIONS

6) I hold a NICET Level III Certification in Water-Based Systems Layout (National Institute for Certification in Engineering Technologies) and a Washington State Level 3 Certificate of Competency for the design and installation of fire safety systems. I also hold a Bachelor of Theology and Master of Biblical Studies from Covenant Bible Seminary.

7) I have spent my entire 33-year career in the fire prevention industry.

8) My father, Robert Moren started Tegriss in 1981 focused on developing solutions for the fire and life safety industry. I joined the company in

1991 after high school while attending the University of Washington. At Tegriss we designed fire prevention systems for buildings throughout Washington, Oregon, and Alaska. In 1998, we started Fireshield Inc, a fire prevention system contracting company focused on providing design, installation, and inspection, testing, and maintenance (ITM) services, where I currently hold the position of President. I've worked closely with code officials to develop solutions for buildings and properties employing the local, state, and national codes like IBC (International Building Code), NFPA-13 (Standard for Installation of Sprinkler Systems), NFPA-25 (Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Sprinkler Systems), NFPA-14 (Standard for the Installation of Standpipe and Hose Systems), NFPA-291 (Recommended Practice for Water Flow Testing and Marking), NFPA-24 (Standard for the Installation of Private Fire Service), NFPA-20 (Standard for the Installation of Stationary Pumps for Fire Protection), NFPA-72 (National Fire Alarm and Signaling Code), and many others. I am an expert in these codes and have successfully designed and commissioned over 1100 life safety systems using these codes with the approval of fire marshals, property owners, and insurance companies. I have wide first-hand experience discovering fire prevention systems that are broken, working with property owners who have refused to fix their systems until forced to by their fire department, and working with fire marshals who did not have proper resources to enforce ITM codes.

9) I have extensive knowledge of the requirements for compliance with state and local government laws and regulations relating to fire and health safety.

III. MATERIALS CONSIDERED

10) I considered information from various sources in forming my opinions. Besides drawing from my 33 years of experience in the fire prevention industry, I also reviewed the documents and references cited herein. Additionally, I reviewed Tegriss' product offering called TegrissFire™ covered by the '966 Patent that can be found at <https://www.tegrisinc.com/>. I also reviewed multiple case studies that I authored on the lack of ITM compliance in the fire and life safety system and how TegrissFire™ solved long-felt but unresolved needs in the market.

11) I have also reviewed and studied Brycer's competing service offering that it calls TheComplianceEngine at www.thecomplianceengine.com ("TCE").

12) The following Table identifies the Exhibits referenced in this Declaration.

EXHIBIT #	DESCRIPTION
2018	Claim chart mapping Challenged Claims to TegrissFire
2019	Claim chart mapping Challenged Claims to Brycer <i>TCE</i>
2004	Lynnwood Case Study

EXHIBIT #	DESCRIPTION
2025	Richland Case Study
2040	Tumwater RFP
2041	Email from Richland, WA dated 12/16/2012

IV. LEGAL UNDERSTANDING

13) I relied on instructions from Tegriss’ legal counsel as to the applicable legal standards to use in arriving at my opinions in this Declaration. My opinions are informed by my understanding of the relevant law.

14) I understand a person of ordinary skill in the art (“POSA”) is assumed to have knowledge of all prior art references. I understand multiple prior art references or teachings can be combined to show a patent claim would have been obvious. When taking this approach, I understand the proponent of an obviousness challenge must show a person of ordinary skill in the art would have had reason or motivation to combine the references in the way the elements are recited in the claim. This reason or motivation can come from different sources—like the prior art—but it cannot come from the challenged patent’s own disclosure. The challenger of a patent claim cannot use the inventor’s own work against the inventor to argue the invention would have been obvious. I further understand a combination is improper when one of ordinary skill in the art, upon reading a

reference, would be discouraged from following the path set out in the reference. I understand this standard may be met when a reference criticizes, discredits, or otherwise discourages modifying the reference to arrive at the claimed invention.

15) I understand objective evidence of non-obviousness (“secondary considerations” of non-obviousness) should be considered when evaluating whether a claimed invention would have been obvious to one of ordinary skill at the time of invention. These secondary considerations may include, for example: (i) a long-felt but unmet need in the prior art was satisfied by the claimed invention; (ii) commercial success of products covered by the patent; (iii) unexpected results achieved by the invention; (iv) praise of the invention by others skilled in the art; (v) the taking of licenses under the patent by others; (vi) whether others had tried and failed to make the invention; (vii) whether persons of ordinary skill in the art expressed surprise or disbelief regarding the invention; (viii) whether the inventor overcame initial skepticism and proceeded contrary to accepted wisdom; and (ix) deliberate copying of the invention. I understand there must be a nexus between any such secondary consideration of non-obviousness and the claimed invention.

V. LEVEL OF ORDINARY SKILL IN THE ART

16) Tegriss’ counsel has informed me the claims of a patent are judged from the perspective of a hypothetical construct involving a POSA at the time the

claimed invention of the patent was made. I understand the “art” is the field of technology to which the ‘966 Patent is related.

17) I understand Tegriss contends a POSA in the relevant time period for the ‘966 Patent would have had 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. Paper No. 8, at 13. I understand the Patent Trial and Appeal Board (the “Board”) applied Brycer’s description of the qualifications of POSA. Paper 9 at 21-2.

18) Based on my education and experience in the field set forth above, I meet each of the definitions of one of ordinary skill in the art. I am qualified to provide opinions about how one of ordinary skill in the art would have interpreted and understood the ‘966 Patent and the alleged prior art cited in the Petition. I meet this definition because of my extensive experience developing a software platform (TegrissFire™) specifically focused on driving compliance for the fire and life safety ITM industry.

19) In developing this software, I worked with fire marshals, inspection contractors, property owners, and the Washington Survey & Rating Bureau. I work deeply in the IBC and NFPA codes on a daily basis which is essential to understanding the ITM compliance problem. I worked with national organizations such as NFSA (National Fire Sprinkler Association) and AFSA (American Fire

Sprinkler Association) to fully understand every solution available nationwide and their effectiveness, as well as our patented solution and its unique ability to solve the industry's specific compliance problem. My personal experience as an inspection contractor for 26 years and a commercial property owner with fire and life safety equipment for 15 years has helped me understand the unique challenges that these two essential stakeholders face. I have designed and commissioned over 1,100 fire safety systems. I have consulted with dozens of fire marshals and members of their department to explore why the other solutions have not worked. I hired retired fire marshals for consultation and development of the software embodying the patented method. My team has worked with hundreds of fire marshals and their staff to learn their infrastructure for managing ITM compliance including helping departments search physical file cabinets looking for past inspection reports. And since there were no other similar methods in this industry, my team and I have hosted hundreds of training events for fire marshals, inspection contractors, and property owners to teach them how this new method changes the paradigm of compliance in the fire and life safety ITM compliance industry. Additionally, my father, Robert Moren, who I trained under and is a named inventor on the '966 Patent has been a NICET level IV (highest attainable certification) since 1985. His 59 years of experience developing fire and life safety systems started in 1965.

20) In rendering the opinions set forth in this Declaration, I was asked to consider the '966 Patent and prior art through the eyes of a POSA. I have applied the perspective of a POSA in the art in rendering my opinions below.

21) Based on my first-hand experience in this field, it would be beneficial for a POSA in evaluating an ITM compliance system for the benefit of the fire and life safety industry to meet the minimum N.I.C.E.T. requirements for understanding how these emergency systems are designed, how they are maintained, and how periodic inspections are uniquely effectuated by the coordination of at least three specific stakeholders.

22) N.I.C.E.T. is the National Institution for Certification in Engineering Technologies. It is the national standard for measuring the qualifications of individuals capable of working on water-based fire protection systems.

23) It would be beneficial for a POSA to be well versed and demonstrate experience with several NFPA codes relating to fire hydrants, fire sprinkler, fire alarm, and ITM inspections. For example, a POSA with only a BS in Engineering having 2 years of experience developing a broad asset compliance system would not yet be sufficient per N.I.C.E.T. standards to design or inspect a fire hydrant system, fire sprinkler system, or fire alarm system. The State of Washington, for example, under WAC code 212-80-018 establishes the minimum requirements for fire protection systems. It states at

<https://apps.leg.wa.gov/WAC/default.aspx?cite=212-80-018>, “only a licensed contractor, who has at least one certificate of competency holder on staff certified to license level consistent with the contractor’s license, by the director, can bid, offer to bid, contract, or perform the designing, installation, inspection, testing, maintenance, or repair of a NFPA fire protection sprinkler system or any part of such a system based on the level of the contractor license.”

24) The Washington State Fire Marshal defines the minimum requirements to be a ‘Certificate of Competency Holder’ on their website, <https://www.wsp.wa.gov/fire-sprinklers/>, which states, “[LEVEL 3](#): A level 3 Certificate of Competency Holder is an employee of a Fire Protection Sprinkler System Contractor. The Certificate allows the employee to work on the design of sprinkler systems falling under the purview of N.F.P.A. 13 – D, 13 – R, 13 and/or 24. This level of design requires the Certificate of Competency Holder to have at least a N.I.C.E.T. Level 3 Certification in Water Based Sprinkler System Layout, or equivalency.”

25) It also adds, “A level ITT Certificate of Competency Holder is an employee of a Fire Protection Sprinkler System Contractor. This certification allows the COC inspection and testing work of a wet and dry pipe fire protection sprinkler system under the purview of N.F.P.A. 25. Each and every individual who physically performs such inspection and testing work must be certified by this

office as competent. This specialized level requires the Certificate of Competency Holder to have at least a N.I.C.E.T. Level II Certification in Inspection and Testing of Water Based Systems. Allows an individual to perform only inspection and testing of water based fire protection systems, with the exception of preaction, deluge, or systems with fire pumps.”

26) N.I.C.E.T. defines the minimum requirements to reach a Level 3 certification in water based systems layout on their website which includes passing the Level I, II, III General Plans and Preparation, and III Hydraulics and Water Supply Planning Exams; Obtaining supervisor verification of performance measures for all three levels; demonstrating a minimum of 5 full-time years of water-based fire protection systems layout, involving the complete layout of sprinkler and standpipe systems, including hydraulic calculations, for a variety of applications, and which may include management of water-based system layout projects and/or code compliance; and Personal Recommendations from an industry professional.

27) N.I.C.E.T. provides a list of code references required for their testing and performance based criteria which include NFPA 13 (fire sprinkler), NFPA 291 (fire hydrants), NFPA 14 (standpipe and hose systems), NFPA 20 (fire pumps), NFPA 22 (fire water tanks), NFPA 24 (fire service mains), NFPA 25 (Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems) as well as

references to multiple OSHA publications. Certified individuals have to demonstrate expertise in all of these standards.

28) These are the minimum requirements to be considered a qualified POSA for understanding water-based fire protection systems in Washington State as well as at least 38 more states using N.I.C.E.T. standards.

29) This is because code compliance for emergency systems is not the same as any generic asset. The strict requirements are necessary to ensure that fire and life safety systems, like the fire hydrant and fire sprinkler system will work during an emergency and are not treated like a generic construction asset. Any asset compliance system that serves these types of assets would be considered an emergency system as well. A person would be less apt to develop a system that manages the inspections of fire hydrants without demonstrating some expertise in NFPA 291, or for fire sprinklers without understanding NFPA 13 and NFPA 25. Any system created without this experience would not only be useless to the industry but potentially dangerous since it risks missing required elements such as the assignment of responsibility, the periodic inspection cycles of the different types of systems, and identification of code-defined deficiencies and their repairs. A POSA with only a BS in Engineering and 2 years developing a compliance system for generic assets would not have sufficient skill or understanding of the highly developed codes and infrastructure of water-based fire protection systems as

already defined by national standards to develop an ITM compliance system for the fire and life safety industry.

VI. THE PRIOR ART DOES NOT MEET THE NEEDS OF AN ITM COMPLIANCE PLATFORM FOR FIRE PROTECTION SYSTEM

30) In considering the cited prior art, I tested how the prior art references either separated or combined could have provided a reasonable solution for the fire and life safety industry. I also compared these references with the Tegriss patent to understand any similarities and differences. Key fundamentally fails to provide a system that could legally be used in the fire and life safety industry.

A. ITM compliance in the fire and life safety industry is driven by highly developed fire codes.

31) Fire protection systems are unique assets that have a very specific set of codes that regulate the inspection, testing, and maintenance requirements. NFPA 25 is the “Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems”. This standard is the basis of measuring ITM competency for national certification through N.I.C.E.T. The certification is required by statewide standards. It is imperative that any ITM compliance system that could be used to serve the fire and life safety industry must be consistent with those laws and regulations. That compliance system, for example, could not allow any stakeholder to order an inspection when that responsibility is, by law, assigned to the property

owner. Similarly, you could not allow an insurance company to perform the required inspection and submit the report when that responsibility is, by law, assigned to a certified inspector. Nor could you have an insurance company review and approve an inspection report when that responsibility is assigned, by law, to a fire marshal. NFPA, IBC, and IFC strictly define those roles and assign them unique responsibility. The workflow for compliant systems in the fire and life industry must go through each of those stakeholders.

32) However, the inverse is not true. A compliance system built to serve fire and life safety could be useful to an industry with less regulations. Such a system could provide a regulated infrastructure that another industry might be lacking.

33) These strict regulations are built to distinguish fire and life safety systems, services, and components apart from any other system, service, or component. For example, you cannot treat an irrigation system as a fire sprinkler system. Nor can a landscaping company install a fire sprinkler system. And you can't use lawn sprinklers where fire sprinklers are required.

34) An ITM compliance system that serves the fire and life safety industry must be fundamentally rooted with the strictly regulated codes and specifically include the code-required stakeholders and prompted in the order that their participation is required by law.

35) The cited prior art, Key, is fundamentally rooted in a jurisdictional online manager that manages requisite inspections of boilers, pressure vessels, elevators, and amusement park rides by insurance companies to a local authority. The list of assets is exhaustive and repeated in Key claims 38, 49, 64, and 72. These are not a list of generic assets. They have inherent properties and users which Key describes in its background. Fire protection systems also have a highly sophisticated infrastructure of codes, standards and regulations that dramatically impact the needs of an ITM compliance system that serves it.

36) The cited prior art, Sweeney, is fundamentally rooted in an online storage and bidding tool for construction assets comprising of a roof, a driveway, a parking lot, a building structure, or a building lot. The list of assets is exhaustive and further specified in claim 15 (e.g., “repair of a roof leak, ...”). These assets have inherent properties which are very different than fire protection systems with specific codes, standards, and regulations. For example, as quoted above from WAC 212-80-018, “only a licensed contractor, who has at least one certificate of competency holder on staff certified to license level consistent with the contractor’s license, by the director, can bid, offer to bid, contract, or perform the designing, installation, inspection, testing, maintenance, or repair of a NFPA fire protection sprinkler system or any part of such a system based on the level of the contractor license.” This requires certification verification that Sweeney does not

teach.

37) The cited prior art, Chauhan, is fundamentally rooted in the integration of utility related services such as SCADA, AMR, CIS, GIS, and call centers into a comprehensive database for a user to reference and edit. In essence, it's a database with no reference to driving ITM workflow. It teaches an environment that a user can interact with the data.

38) Chauhan describes a method for public utilities, where it is assumed that the data can be gathered from publicly available sources. Fire protection systems are primarily maintained on private properties where the data is not publicly available. The only 'utility' related fire protection system would be a publicly owned fire hydrant which would be considered 'owned' by the municipality. Most fire hydrants are privately owned and maintained by the property owner, or a private water company. Chauhan does not teach any method for users to drive ITM compliance, it only gathers that data from other sources.

39) Neither Key nor Sweeney nor Chauhan teach about asset inspections that relate to the developed codes of the fire and life safety industry.

40) The Tegriss method is fundamentally rooted in fire and life safety to specifically satisfy the required codes. A truck is not a fire truck, a hose is not a fire hose, a sprinkler is not a fire sprinkler, and similarly a compliance system is not a fire compliance system. The differences in the fundamental origins of these

systems cannot be overstated or ignored.

41) Management of fire protection systems are complex. Properties have multiple co-dependent fire and life safety systems. For example, a fire pump system improves the fire flow in a fire sprinkler system. Activation or tampering of a fire sprinkler system is monitored by a fire alarm system. A fire hydrant provides additional water to a fire sprinkler system through a fire department connection. A fire department connection is used to provide water to a fire standpipe and hose system. Each of these systems have individual code inspection requirements, inspected by uniquely certified individuals, with different periodic inspection cycles.

42) Periodic inspection cycles have multiple timelines required for the same system (e.g., semi-annual, annual, and 5-year). And it is required for multiple systems on the same property (e.g., fire sprinkler, fire alarm, fire hydrant, fire pump). There are multiple inspectors that perform these inspections (e.g., one may provide the inspection for the fire pump and fire sprinkler systems, another may inspect the fire alarm, and another the fire hydrant). All of these variables are tracked within the jurisdiction by a single authority.

43) The ITM compliance system for fire and life safety needs to be able to manage a plurality of system types with a plurality of inspection cycles, for a plurality of properties, and from a plurality of inspectors, within a single

jurisdiction.

B. Ordered Steps

44) In order to drive ITM compliance, the system cannot simply provide a hub where stakeholders can view the status of inspection reports. It must take action at the appropriate times to prompt the correct stakeholder that their input is necessary. The system needs to guard each step of the code-regulated cycle to ensure compliance is met. These are the precise ordered steps that the Tegriss system and method teaches in order to deliver a meaningful solution to the fire and life safety ITM problem.

45) Claim 8 has been incorrectly broken into sections by the petitioner in order to have the PTAB consider them separately and without regard to their ordered organization. This rather long claim is meant to be read in its entirety to preserve those regulated and ordered steps required for successful compliance in the fire and life safety industry and distinguish it from prior art.

46) The regulations require multiple steps in a certain order by these three stakeholders: The fire marshal is responsible for enforcing the inspection standard on the owner. The owner is responsible for hiring a certified inspector. The certified inspector is required to submit the report. The fire marshal is required to review and approve or reject the report. The fire marshal is required to determine if any deficiencies require repair and then notify the property owner. And the

property owner is responsible to hire a certified individual to do the repairs.

C. Notification Of Due Inspection To Property Owner

47) The prior art Key teaches in [0077] “The work assignment unit automatically schedules inspection for objects with upcoming due dates.”

48) In the fire and life safety industry the responsibility for scheduling inspections cannot be automated by the work assignment unit since code assigns the responsible party to the property owner.

49) NFPA 25 (2020) 4.1.1 that states, “**Responsibility for Inspection, Testing, Maintenance, and Impairment.** The property owner or designated representative shall be responsible for properly maintaining a water-based fire protection system.”

50) The National Fire Sprinkler Association (NFSA) adds in their 2020/03/10 article ([NFPA 25 and the Building Owner - National Fire Sprinkler Association \(nfsa.org\)](https://www.nfsa.org/2020/03/10/article/NFPA-25-and-the-Building-Owner-National-Fire-Sprinkler-Association-nfsa.org)) “Section 4.1.1 is quite possibly the most important rule in the entire standard. This clearly designates the owner as the entity responsible for ensuring that all inspection, testing and maintenance (ITM) tasks pertaining to the type of fire protection system installed in their building are to be completed. This includes all ITM tasks at their specified intervals such as daily, weekly, monthly, quarterly, etc. In many cases, the building owner only completes that which is being enforced by the Authority Having Jurisdiction (AHJ), which is usually only

an annual inspection.”

51) Appropriately therefore, Tegriss teaches and claims in part in claim 8 that , “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;”

52) The owner is a critical stakeholder in the process and, as historically understood, shown in our case studies, and summarized in the above NFSA article, requires enforcement to participate.

53) Key fails to teach a method of notifying an owner of a due inspection. Where it fails to solve, teach or even suggest this critical step, the Tegriss method was developed to specifically address it.

54) Instead, Key directs notifications of due inspections to the inspector. In [0021] it teaches, ‘The system can automatically determine objects with upcoming inspections due dates and provide this information to the **inspection entity**.’ Again, this would be contrary to code requirements in the fire and life safety industry and misplace the assignment of responsibility. Inspection

companies already expend massive resources trying to convince property owners to obey the ITM laws, without success. However, when the fire marshal uses the Tegrís method to automatically notify the property owner then compliance is proven to dramatically improve, as shown in the case studies.

55) Key may provide notification to an owner when a boiler repair is required as an after-effect of an inspection, but not at the critical path step before an inspection is due. Conversely, Tegrís requires the method to go through the property owner as required by law by providing notification to the owner of the due inspection with specific instructions on the efforts required by the owner to achieve compliance. This has proven to be one of the single most important steps in the method as compliance has measurably improved as shown in the case studies and by nationwide adoption.

56) By notifying the owner of their responsibilities and efforts needed they (1) learn that they are the responsible party, (2) understand that the fire marshal is tracking them, and (3) have instructions on what effort they must contribute. And, again, as stated accurately in the above NFSA article, “In many cases, the building owner only completes that which is being enforced by the Authority Having Jurisdiction (AHJ)”.

57) Neither Key, Sweeney, nor Chauhan teach anything about notification of due inspections to the asset owner. Sweeney teaches a bidding tool between an

owner and a contractor. Chauhan teaches a comprehensive database of utilities for a single user to reference and update.

D. Strict Assignment of Roles To At Least Three Users

58) The Tegriss method was designed to enable compliance with the fire and life safety codes and regulations that define the responsibility of at least three stakeholders; the owner of an asset, an approval authority, and an inspector.

Tegriss' Claim 8, in part, states, "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;

59) Key teaches a method configured to run its jurisdictional online manager to at least **two** classes of user; an approval authority and an inspector. Key's method teaches that it is not dependent on the role of the owner. The inspection cycle can be completed without their participation or knowledge. Key only teaches the role of the owner as an optional participant who may be notified to pay for repairs or services. Key even teaches that an owner could be substituted as an inspector, which is strictly forbidden in the fire and life safety industry. And in either case, still only teaches a method for 'at-least-two' users.

60) Sweeney teaches a method to organize bids between an asset owner and construction companies. This also, is a method for two users as opposed to the

‘at-least-three’ users taught and claimed in Tegriss’ patent claim 8.

61) Chauhan teaches a comprehensive database from several sources being accessed by ‘at-least-one’ user. This is more akin to a database than any type of multi-user method for driving compliance.

62) Key teaches a method for optionally including owners in a repair bidding process. Sweeney teaches a more sophisticated repair bidding process than Key. Chauhan would, at best, describe a potential destination for data to be shared with. Neither Key, nor Sweeney, nor Chauhan teach a method of ‘at-least-three’ users. The combination of the features of Key, Sweeney, and Chauhan do not create a workflow that requires more than ‘at-least-two’ users. Tegriss’ patent teaches a method that minimally requires ‘at-least-three’ users’ participation to complete the ITM cycle.

63) In the fire protection industry, an insurance company can neither legally enforce compliance nor demand new standards on a property owner but instead adjust rates appropriately or terminate coverage. Any ITM compliance system that enables an insurance company to act as the role of an authority or allows them to mandate inspection functions would circumvent the role of the fire marshal and would fail for the fire and life safety industry.

64) Key teaches in [0017] that “Consequently, all insurance company have a common interface and programs to support their mandated inspection

functions.” A person of ordinary skill in the art would recognize that this functionality would be inconsistent with codes and workflow in the fire and life safety ITM industry.

VII. TEGRIS OFFERINGS EMBODY THE CLAIMED INVENTIONS OF THE ‘966 PATENT

65) I understand Brycer challenges the validity of the ‘966 Patent. The Challenged Claims 8-16 of ‘966 Patent are directed to fire hydrant management systems.

66) Challenged Claims 8-16 of the ‘966 Patent require 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:”

- a. 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;
- b. 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;
- c. analyzing the records of assets from the database to identify

notification events;

- d. 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;
- 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, and wherein the approval authority, upon accessing the web-based registry, may update and review the status of the assets assigned;
- f. 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 at each of the steps of the inspection;

- g. receiving from the inspector, inspection information in specific response to the web-based template;
- h. storing in a database in association with the asset, the inspection information, wherein the inspection information is accessible to the users, and updating the database in association with the asset based upon the inspection information;

transmitting to the approval authority, a standard format compliance report including noting compliance, wherein the compliance report includes, noting deficiencies in the asset and storing the noted deficiencies in association with the asset. Ex. 2013

67) Exhibit 2018 is a table that shows Tegrifire™ incorporates each of the elements of Challenged Claim 8. I prepared Exhibit 2018 based on my knowledge of the '966 Patent and my knowledge of Tegrifire™.

68) Tegrifire™ is a computer-implemented method for using an asset management software and web-based registry to track inspection of an owned asset, *e.g.*, fire hydrant, sprinkler system, *etc.* Ex. 2018, p. 1.

69) Tegrifire™ grants remote access to a web-based registry system, which is configured to run a fire hydrant (owned asset) management software, to at least three classes of users, namely, the owner of an asset, an approval authority, and an inspector. Ex. 2018, p. 1-2.

70) Tegrifire™ retrieves, through computer-based asset management software, real time records of assets from a database, the database being accessible and augmentable by users. Ex. 2018, p. 3.

71) Tegrifire™ analyzes the records of assets from the database to identify notification events. Ex. 2018, p. 3-4.

72) Tegrifire™ notifies asset owners 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. Ex. 2018, p. 3-5.

73) Based upon the analysis, Tegrifire™ sends 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. Ex. 2018, p. 4-5.

74) Tegrifire™, 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 and each of the steps of the inspection. Ex. 2018, p. 4-5.

75) Tegrifire™ provides for the inspector to submit inspection information in response to the web-based template. Ex. 2018, p. 9-14.

76) Tegrifire™ stores in a database in association with the asset, the inspection information, wherein the inspection information is accessible to the users, and updates the database in association with the asset based upon the inspection information. Ex. 2018, p. 16-17.

77) Tegrifire™ transmits to the approval authority a standard format compliance report including noting compliance, wherein the compliance report includes noting deficiencies in the asset and storing the noted deficiencies in association with the asset. Ex. 2018, p. 18-23.

VIII. BRYCER'S PRODUCT OFFERING EMBODIES THE CHALLENGED CLAIMS.

78) Exhibit 2019 is a table that shows Brycer's TheComplianceEngine (TCE) incorporates each of the elements of Challenged Claim 8.

79) Brycer's TCE is a computer-implemented method for using an asset management software and web-based registry to track inspection of an owned asset, *e.g.*, fire hydrant, sprinkler system, *etc.* Ex. 2019, p. 1-2.

80) TCE grants remote access to a web-based registry system, which is

configured to run a fire hydrant (owned asset) management software, to at least three classes of users, namely, the owner of an asset, an approval authority, and an inspector. Ex. 2019, p. 3-10.

81) TCE retrieves, through computer-based asset management software, real time records of assets from a database, the database being accessible and augmentable by users. Ex. 2019, p. 10-11.

82) TCE analyzes the records of assets from the database to identify notification events. Ex. 2019, p. 12-16.

83) TCE notifies asset owners 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. Ex. 2019, p. 17-19.

84) Based upon the analysis, TCE sends 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. Ex. 2019, p. 17-19.

85) TCE, 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 each of the steps of the inspection. Ex. 2019, p. 19-24.

86) TCE provides for the inspector to submit inspection information in response to the web-based template. Ex. 2019, p. 24.

87) TCE stores in a database in association with the asset, the inspection information, wherein the inspection information is accessible to the users, and updates the database in association with the asset based upon the inspection information. Ex. 2019, p. 25-29.

88) TCE transmits to the approval authority a standard format compliance report including noting compliance, wherein the compliance report includes noting deficiencies in the asset and storing the noted deficiencies in association with the asset. Ex. 2019, p. 30.

IX. OBEJECTIVE INDICIA OF NONOBVIOUSNESS

A. Tegriss Has Had Extraordinary Commercial Success

89) Since Tegriss first offered its fire hydrant management system to the

market, it has enjoyed commercial success despite the original reluctance and skepticism of stakeholders, *e.g.*, owners, authorities having jurisdiction (“AHJ”), and inspectors to adopt such a system. Tegriss’ commercial success attracted the attention of the National Fire Sprinkler Association (“NFSA”) who hailed Tegriss’ patented method as the perfect solution to the nationwide ITM compliance problem that was causing properties to be unsafe, inspectors from working, and fire departments unable to enforce compliance. Despite Tegriss’ patent pending status and express notices to others, its commercial success and publicity prompted competitors like Brycer to enter the market. Now, at least five companies compete with Tegriss by offering similar methods. The industry has developed a new term for these companies that are called, “3rd Party ITM Compliance Providers”.

90) Municipalities began releasing Requests for Proposals (“RFPs”) for Tegriss’ patented solution from competing providers. EXHIBIT 2040. Prior to the ‘966 Patent, this type of service was never requested. Nationwide adoption of Tegriss’ patented methods grew quickly as municipalities learned how their neighboring cities were solving their ITM problems. In about 10 years, adoption has grown across all 50 states, including over 1,000 local jurisdictions. The commercial success of Tegriss’ patented compliance method in the fire and life safety industry is unprecedented.

91) Stakeholders such as the property owner, inspection contractor, and

fire departments use, propagate, and advocate for Tegriss' patented method because it has provided safer buildings, lower insurance premiums, more inspection work, cost savings, and metric-proven effectiveness for fire departments. EX. 2040. This commercial success has been documented in several case studies in municipalities that, although originally skeptical and reluctant to adopt, discovered meaningful improvements in compliance with fire safety laws, regulations, and codes. I discuss some of those case studies in turn.

B. Brycer Has Had Extraordinary Success

92) Brycer started in 2011 and acquired new customers for its now infringing system that it calls The Compliance Engine.
(<https://thecomplianceengine.com> last visited 12/28/2040)

93) Several of Brycer's customers told me that Brycer's program "looked exactly like Tegriss' and does the exact same thing."

94) Brycer modeled its system after Tegriss' technology and mimicked Tegriss' marketing materials, including those protected by copyright registrations. Brycer had access to Tegriss' marketing materials and copied the substantive look, feel, content, and expression thereof.

95) My team has attended many of the same industry presentations as Brycer. We told Brycer and other attendees that Tegriss had a pending patent

application for its novel methods. Brycer told me it did not think Tegriss could patent the system, but the issuance of the '966 Patent proved Brycer wrong.

96) In April 2012, I told NFSA that Brycer was copying the Tegriss method and platform as disclosed and claimed in the '966 Patent.

97) In April 2012, Tegriss' legal counsel notified Brycer that Tegriss would assert its patent rights and copyrights when issued or registered. Brycer ignored these notices and continued to develop and expand deployment of its infringing systems. According to Brycer, they now service more than 900 jurisdictions.

98) In 2015, Brycer partnered with Western States Fire Marshal Association to win an exclusive marketing partnership to provide recommendation for Brycer's system in Washington, Oregon, California, Alaska, Nevada, Arizona, Montana, Idaho, Utah, Hawaii, and W. Pacific Islands.

99) In 2015, Brian Schultz of Brycer proposed to acquire Tegriss. Tegriss and Brycer entered a non-disclosure agreement and discussed Tegriss' assets, including the then pending patent application and registered copyright. Tegriss proposed a partnership, but Brycer rejected the proposal. Brycer subsequently began servicing new customers, including Seattle and Bellevue in Washington, Tegriss' home state.

100) In October 2020, Brycer's president Matthew B Rice provided his proposal for TCE's services to the City of Tumwater, WA in response to their

RFP. EX. 2040. He describes 500% growth year over year: “The City of Tumwater will benefit from BRYCER’s 10+ years of experience delivering results to our 20,000+ users spanning 38 states covering 1,000,000+ buildings across the country. BRYCER is headquartered in Warrenville, IL. Our team of professionals are focused on delivering The Compliance Engine, a Software as a Service (SaaS) solution to cities such as Los Angeles, Austin, Seattle, Wichita, Hartford, Raleigh, Kansas City, Greensboro, San Jose, Boise, Chicago etc., Led by Co-founders Matt Rice and Bryan Schultz we are experiencing a growth rate of 500% year over year. Our success in delivering compliance and operational efficiencies has earned us partnerships with the Western Fire Chiefs Association, International Kitchen Exhaust Cleaning Association (IKECA), and the Arizona Fire Alarm Association.”

101) By Mr. Rice’s measurements in 2020 of his own company the results are extraordinarily successful. EX. 2040, p. 5. To grow within 10 years’ time (note: Brycer was incorporated Feb, 2011 according to the IL Secretary of State’s office) into 38 states within major cities and encompass 20,000+ users covering over a million buildings in the U.S. is the result of a commercially successful system and method.

102) Mr. Rice details that they are experiencing a 500% growth rate year over year. Ex. 2040. Over a ten-year span that represents a total 19531% growth. Brycer won the proposal with the City of Lynnwood, WA.

103) Based on Mr. Rice's own measurements, and assuming "modest" growth of 150%, I estimate that in 2025 Brycer processes a minimum of 4.5 million reports per year using the methods disclosed and claimed in the '966 Patent.

104) Brycer lists its partnering municipalities on its website. As of September 2020, they listed 662 partnering municipalities. From web searches, the total added population of those 662 municipalities (states withstanding) is just over 54 million people. Tegriss was able to do the same exercise on our own data to find that the average number of annually processed reports per person in the population was 4.4%. Using that approximate indicator, it would be reasonable to assume that Brycer was processing 2.4M reports in September of 2020, and closer to 4.5M reports currently.

105) Based on these estimates of reports per population, I estimate the national market for inspection reports for fire and life safety equipment to be 15 million reports per year for the current fire and life systems only. This number is expected to grow significantly as providers expand their services to include more fire and life safety systems. The Tegriss platform disclosed and claimed in the '966 Patent has become a source of revenue for cities, a protection of work for inspectors, and an insurance metric for basing insurance rates for property owners.

106) Brycer's current revenue is about \$15 per report, and I estimate its annual revenue from its practicing the methods disclosed and claimed in the '966 Patent are at least \$75 million. Ex. 2040, p, 25. I estimate Brycer's revenue from Thecomplianceengine over the last 6 years to be at least \$200 million.

107) One of the novel features Tegriss created was a way for authorities having jurisdiction ("AHJs") to add their own fee to each report, thereby creating a revenue stream for the AHJs. Brycer copied this feature, and many of its AHJs add an 'AHJ Fee' ranging from about \$5 to \$60 per report, with some municipalities such as Chicago charging as high as \$300 per report. *Id.*

108) I estimate cities like Chicago generate over \$1 million of revenue per year using Tegriss' patented and copyrighted methods disclosed and claimed in the '966 Patent.

109) Tegriss' patented method disclosed and claimed in the '966 Patent solves several industry problems by tracking each asset and prompting collaboration from each stakeholder when needed. AHJs using Tegriss' patented method were automatically sending timely notifications to inform and remind property owners what was needed; property owners were compelled to get inspections done; and inspection contractors were getting hired to perform their inspection services. Their reports were inputted into the system, giving everyone a permanent record of compliance. The automated process restarts when the periodic

inspection was next due. This is the System and Methods for a Web-Based Inspection Compliance Registry and Communication Tool as claimed in claim 8.

C. A Case Study of Lynnwood, WA Fire Department Improving Compliance by using the Tegrism standard.

110) I contributed to and studied Tegrism Case Study dated January 3, 2012 discussing the first year experience by the city of Lynnwood, WA fire department using Tegrism service offering now covered by the '966 Patent. EX. 2004.

111) In September 2010, Lynnwood started the Tegrism program to improve the compliance of inspection, testing, and maintenance ("ITM") of the fire and life safety systems in its jurisdiction. Prior to Tegrism, Lynnwood had no specific oversight of the industry's ITM activity other than site visits the fire department was able to perform. One year later, Lynnwood's compliance rate more than doubled to 68.96%, and the number of deficient systems decreased to less than 3%. *Id.*

112) Lynnwood was the first city in the region (and in the country) to adopt a third party ITM compliance program and thus had a larger learning curve for property owners and inspection service companies. Lynnwood proved the success of Tegrism fire prevention program covered by Challenged Claims 8-16 of the '966 Patent.

113) Before the '966 Patent, many property owners were not complying

with laws requiring annual fire safety inspections. Owners waited for enforcement actions that were rarely pursued.

114) The industry had done an excellent job of building the fire prevention ITM structure with codes and laws to ensure public safety. Without enforcement, these laws were ineffective and resulted in lost work for inspectors, fire marshals with little oversight of their jurisdiction, public safety at greater risk, and lowered expectations for the industry.

115) The industry has benefitted greatly from a third party ITM compliance management process as disclosed and claimed in the '966 Patent.

116) Tegriss built its ITM program around compliance. It helps the AHJ understand who is not in compliance and provides the platform necessary to enforce compliance.

117) The benefits of Tegriss' patented system as claimed in the '966 Patent for the property owners are significant. It heightens public safety in their business and reduces costs of compliance. The cost of an inspection is more competitive with an influx of new inspectors working in the jurisdiction. Businesses realize savings by sharing their compliance status with their fire insurance provider. With ongoing notifications of the ITM process, fire marshals have better and quicker visibility of the inspection contractors that the property owners are hiring and whether they meet the minimum certification standards. In this way, an important

level of consumer protection resulted.

118) Tegriss' platform provides significant and indisputable value to all of the stakeholders involved, *e.g.*, owners, authorities have jurisdiction ("AHJs"), and inspectors, while greatly increasing rates of compliance.

119) One significant difference between Tegriss' patented system and prior systems is that it not only collects data, the fire hydrant management software tracks and automates ongoing compliance to meet code required inspections, testing, and maintenance of fire and life safety systems. The data analysis performed by Tegriss' method covered by the '966 Patent automatically prompts input from at least 3 specific stakeholders in the fire and life safety industry (property owners, inspection contractors, and fire departments) for tracking and growing cyclical compliance is unique and non-obvious.

120) Tegriss' patented system builds a complete database of every system in a given jurisdiction, tracks compliance, automates enforcement for non-compliance, accept reports online, streamlines the review process, and builds a property journal with collaborative input from all the stakeholders.

121) Once implemented, fire marshals developed codes to require the inspection service providers in the area to submit these reports online via www.tegrisfire.com.

122) When these codes were in place, the Lynnwood fire marshal notified

inspection service providers that online submittal was required through the online portal. Lynnwood then began working with Tegriss through the first phase of the program establishing the first embodiment of the TegrissFire™ system.

123) Tegriss worked with Lynnwood to collect all the property and system information available through the city's databases, file cabinets, and department inspectors. This collective database represented a record of every system the department was aware of in the jurisdiction. However, much of that data was understandably outdated and incomplete. The patented Tegriss system enabled all stakeholders to grow and purify the information over time through a free and secure online portal www.tegrissfire.com.

124) Tegriss' patented system automated due dates and triggered notification letters sent to property owners that required collaborative input from them or their inspection service providers. The automated system invited them to correct the information or to otherwise fill out the online report and submit.

125) The inspection report was available to the department through the Tegriss online dashboard which allowed systems with deficiencies to be prioritized. Deficient systems initiated a notification letter that the Tegriss system automatically generates and sends to the property owner informing them of their responsibility to fix it. The Tegriss system tracks the deficiency until repairs were confirmed.

126) At each 'touch point' with a stakeholder, Tegriss enabled or required

collaborative information to help build a better database and develop a complete record of information and events for that property. By automating collaboration with the property ‘experts’ the data continues to be self-corrected and self-generating. The jurisdictional records continue to grow with new properties and systems that were previously unknown.

127) Tegriss and Lynnwood worked with hundreds of property owners and service providers to train them on the new, automated Tegriss process.

128) The performance of the Tegriss system was based on several statistics gathered at the start of the program and again one year later. *Id.* Some of these statistics are tracked daily on the fire marshal’s online dashboard. *Id.* These metrics measured improvements in the following categories: fire and life safety, database quality, market improvement, stakeholder communication, and required departmental resources. The one-year improvements are summarized in the following Table.

CURRENT DATA FOR LYNNWOOD, WA FIRE DEPARTMENT	Initial Data (Sept 2010)	Current Data (Sept 2011)	% Change	Notes
<u>FIRE AND LIFE SAFETY</u>				
% Compliance	32.8%	69.0%	110.6%	Compliance has more than doubled
% Systems with a Deficiency	12.5%	2.58%	384.5%	Deficiencies were drastically decreased
<u>DATABASE QUALITY</u>				
# of known properties with at least 1 system	609	867	42.4%	An additional 42.4% properties were discovered to have systems
# of known systems	1465	1741	18.8%	An additional 18.8% systems were discovered
<u>MARKET IMPROVEMENT</u>				
# of licensed contractors in jurisdiction	40	99	147.5%	There are over twice as many contractors working in Lynnwood
Approx number of systems being inspected	480	1201	250%	Inspection work has improved 2.5 X
Approx number of impaired systems	183	45	306.9%	Over 130 impaired systems have been identified and repaired
<u>COMMUNICATION</u>				
% accuracy of a CURRENT contact list	25%	100%		The department now maintains an accurate contact list
% of ITM service providers communicated with during a year	10%	100%		The department communicates with nearly every contractor at least once/yr

% of property owners communicated with during a year (email, letter, phone, visit)	10%	100%		The department communicates with every fire system property owner at least once per year
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EX. 2004, p.9.

129) Prior to Tegriss, Lynnwood could not effectively track the rate at which property owners were getting required inspections from certified service companies. Only 32.75% of the known systems had been inspected within the last required period. EX. 2004, p. 10. One year later the compliance rate is tracked up-to-the-minute at 68.96%. *Id.* That compliance number also included new properties and systems the department did not previously have on record. Many of the ‘non-compliant’ properties were in the system but were waiting for stakeholder input until finalized. The foregoing data was based on data from 2011.

130) Before Tegriss, the fire marshal had estimated that 12.5% of their known systems listed at least one deficiency that needed repairs. *Id.* Since using Tegriss, the department received at least 1,223 reports with 120 of them (9.8%) listing at least one deficiency. *Id.* Ninety-two of those generated a ‘deficiency’ notification letter to the property owner from the fire marshal through Tegriss. *Id.* The department now has full visibility to the status of every deficient system on its online dashboard until completed.

131) By improving compliance from 32.75% to 68.96% and reducing the

number of impaired systems from 12.5% to 2.58%, the Lynnwood community can be assured that the places they work and visit are protected with working systems.

Id. The fire department and the elected officials of Lynnwood can stand behind real numbers that show how they have improved public safety over the last year.

132) The majority of property owners were not getting inspections done until they felt enforcement. Only 32.75% of the property owners were getting inspections without departmental enforcement. *Id.* In the first year of implementing the Tegriss system, about 50% of the owners complied after 1 reminder letter from the fire marshal. *Id.* About half of the rest complied after an Overdue Notification letter. *Id.* And again, about 50% of the rest complied after sending a Final Notice letter. *Id.* The necessity for subsequent letters was attributed to the fact Lynnwood was the first AHJ in the region to use the new Tegriss method. After the first year, Lynnwood experienced a decrease in the need for subsequent notifications.

133) By improving the quantity of records from 609 properties and 1,465 systems to 867 properties and 1,741 systems, Lynnwood became better aware of every property and system in its jurisdiction. This improved emergency preparedness and acquainted Lynnwood with every untested or broken system. Through the secure online Tegriss account, Lynnwood had immediate (and mobile) access to previous inspection reports, deficiencies, contact information, historic data, and journal information.

134) Before employing the Tegriss system, Lynnwood maintained property records in a self-developed Access database and a manual file cabinet system. Records and reports were kept in a unique folder in the file cabinet until the Access database would bring an annual reminder to their attention. This would prompt the department to assign a site visit to the property. Site visits generally included verification of a current inspection tag. Notes for the property were handwritten and placed back into the folder. Deficiencies or follow-ups required scheduling a reminder. Because the Access database was not kept current, the fire marshal could only estimate the number of properties with systems in their jurisdiction. The Access database required manual input using limited fire departmental resources and was inaccessible to other stakeholders for providing their own input. As such, the Access system method continuously failed to drive compliance.

135) Because of the collaborative nature of Tegriss' system, it is not just the quantity of records being tracked but also the quality. Each stakeholder has unique details about the property and provides public information to share with the department (and private information for their own records). This creates a Property Journal which maintains a complete record of every event that occurred for that property, every notification letter sent to the owner, all notes, and previous inspection reports. Information is securely captured and institutionalized into the permanent record so that new stakeholders (such as a new service company or even

a new property owner) have a complete log of the public information.

136) Every report submitted to Lynnwood is typed and on the same form. The data is automatically pre-screened for unlikely or incomplete information. Each report includes a statement by the inspector that the information is true and accurate. This declaration and the transparency of the report existing online (and always visible) encourages better data entry than when reports are destined to be stored away (and out of sight) in a file cabinet. In the first year Lynnwood collected 1,223 standard, legible inspection reports. *Id.* at 12.

137) Lynnwood's data continued to improve without the required data entry from the fire department. The program continuously monitors the data for upcoming due dates and uses those events to automate communication with the appropriate stakeholders. This drives the data collection process and ensures data growth.

138) Each stakeholder has unique knowledge about the properties and systems they maintain. By enabling an online tool to collect that information, Lynnwood created a complete record of their jurisdiction and also takes the time to input their institutional knowledge to complete the records for each property. This information that was previously kept in the file cabinet is now accessible to the city anywhere through a secure online portal in 'the cloud'.

139) The information collected by each stakeholder is tied to their account

identity. This is saved in the permanent record for each property that is available for the appropriate parties to see online. This transparency encourages users to provide quality data with a heightened focus on accuracy. This discourages uncertified and substandard work that is commonly hidden in file cabinets. By keeping the information online and visible the data quality has improved.

140) The ITM service industry is heavily reliant on property owners complying with the laws that require inspections. As compliance improves there are more work opportunities in both inspections and repairs. When this compliance improves in a focused jurisdiction the service providers are able to better prepare their business to accommodate the market growth. While the city of Lynnwood has improved their compliance from 32.75% to 68.96%, the market is experiencing significant growth. An additional 721 systems were inspected due to the program so far. *Id.* at 14. And over 130 repair jobs have been enforced. *Id.*

141) As the demand for inspections has been established, the supply of service providers has grown from 40 to 99. *Id.* at 15. This increase in the supply of inspectors gives the property owners a broader selection to choose from. Property owners can now find a quality service company for a competitive price.

142) The fire marshal reported that prior to this program he would occasionally find unlicensed ‘fly by night’ or ‘trunk slammer’ contractors who would work in the city without a city business license, state license, or individual

technicians license. Unqualified inspectors are unlikely to submit qualified reports to a fire marshal. The transparency of the online report discourages unlicensed and substandard contractors to work in Lynnwood. This has leveled the playing field for legitimate contractors and provided a new level of consumer protection for property owners.

143) The number of known contractors working in Lynnwood has grown to 99 in the last year. The department tracks that number daily on their online dashboard. Each service provider is required to have a city business license. At \$166 per license, that represents an enforceable \$16,434 of license revenue per year. Tegriss also enables the city to collect an optional overdue, review, or service fee for any report. The AHJ establishes the amount in their preferences and funds are deposited directly into their own account. Lynnwood currently has no additional fees.

144) The transparency of the online report filters out contractors who are uncertified or provide substandard work. These contractors were previously able to operate in the city without being noticed. They knew that their ‘inspection report’ would be filed in an onsite file cabinet for years until an authority hunted it down. By eliminating these service providers there is more work for certified inspectors.

145) By enforcing these inspections, the city of Lynnwood stimulated the ITM service industry with an estimated \$100,000 of new revenue every year. *Id.*

As compliance continues to improve toward 100% then the city will be protecting an estimated \$165,000 of inspection work per year for the ITM service industry.

Id.

146) Communication is critical in fire prevention. Before Tegriss, Lynnwood relied on the folders in their file cabinet to hold any current contact information. *Id.* at 16. Because of the lack of resources to maintain those records, the natural inefficiencies of file cabinets, and the continuous flux of new owners and property managers the quantity and quality of those records were poor. The fire marshal estimated that the file cabinet generally had 50% of some contact information when they looked for it. Of that he estimated another 50% of the contact information was accurate when you used it. In other words, about 25% of the department's contact list was accurate.

147) By providing the community with an online collaborative platform and using due dates as a trigger to encourage participation the department was able to leverage the contact information collected on inspection reports by the service companies. *Id.* at 17.

148) Similarly, contact information for property owners are being populated and updated. As email addresses are becoming increasingly common, this allows the department to communicate with the community instantly and inexpensively. While it is not required for property owners to sign up, 413 have set

up their own free account which also improves the current information and gives the department another direct channel for communication. Lynnwood's database continues to collect current email addresses from every property owner in the jurisdiction. In a city-wide emergency the ability to communicate with every property owner quickly may prove to be vital.

149) Prior to Tegriss, the fire marshal reported that the department did not regularly communicate with the ITM stakeholders. The department received ITM questions from about 10% of the service companies each year but generated little to none. During site visits they would communicate directly with the property owner about 10% of the time.

150) With Tegriss, Lynnwood initiated communication (email, mail, phone calls, site visits) over 2,000 times to 867 property/system owner and 99 service providers in the city. *Id.* at 17. Property owners received reminder and notification letters and service companies receive a reminder email when customers are due. This ensures that the Lynnwood fire department has multiple touches with the stakeholders in the community every year. Thus far Lynnwood has sent 1790 letters alone via Tegriss to property owners informing them of their inspection and repair responsibilities. *Id.*

151) With Tegriss, Lynnwood now has a structure for effective and efficient communication, a current contact list of all parties, a conduit for sending and

receiving information, a focused theme of ITM, and an automated tool that triggers stakeholder input at regular intervals.

152) Lynnwood now has records for every letter they have sent to a property owner detailing the owner's responsibility to inspect, test, and maintain their system. This communication encourages the fire preventative activities that keep a disaster from occurring. It also provides the department with the legal substantiation it will need if one does occur.

153) Lynnwood experienced very tight budget constraints over the last year. By putting this program in place, however, they were able to increase the level of compliance in the city. As one of the pioneers of this program, the department had the unique challenge of testing many of the new features within Tegriss as well as helping support the community. This resulted in the department using more resources than what would normally be required but even with this extra work the overall departmental resources dedicated to ITM did not change.

154) One of the biggest challenges that Lynnwood and Tegriss encountered was from service companies that did not believe the program would improve compliance. The initial perception from these companies was that it was simply another online reporting program. Online reporting programs only enable a service company to submit reports online. They only have the ability to track the reports that have been submitted. The pre-existing systems only tracked who was

complying, but they lacked the capability to track property owners who were not complying with local code requirements. As such, preexisting systems were incapable of improving and increasing compliance. Tegriss' patented method of tracking non-compliance and automating enforcement letters is unique. It not only tracks every truant system in the jurisdiction but also does something about it.

D. A Case Study of Richland, WA Fire Department Improving Compliance by using the Tegriss™ standard.

155) The Richland Fire Department adopted the TEGRIS Fire™ program in January 2011. EX. 2025, at 3. It chose the program because of its demonstrated history of improving ITM compliance for fire sprinkler systems. *Id.* It achieved outstanding success after its first year as measured in the following Table *Id.* at 9.:

STATISTICS FOR RICHLAND, WA FIRE DEPARTMENT	Initial Data (2011)	Current Data (2012)	% Change	Notes
<u>FIRE AND LIFE SAFETY</u>				
% Compliance	20.0%	76.0%	280%	Nearly 8 out 10 businesses are compliant by their due date. Almost 10 out of 10 are compliant within 90 days. The best measured compliance in the country.
% Systems with a Deficiency	25.0%	7.10%	-181.7%	Deficient systems are being identified and repaired.
<u>DATABASE QUALITY</u>				
# of known properties with at least 1 system	501	469	-6.4%	The department discovered 30+ properties in their database that was actually outside their jurisdiction.
# of known systems	854	1083	26.8%	Over 200 unknown systems were discovered
<u>MARKET IMPROVEMENT</u>				
# of licensed contractors in jurisdiction	15	45	200%	There are 3 times as many licensed contractors working in Richland
Approx number of systems being inspected	171	823	457.7%	Inspection work has improved almost 5X
Approx number of impaired systems	214	77	-177.3%	Contractors have repaired over 135 systems in the first year.
<u>COMMUNICATION</u>				
% accuracy of a CURRENT contact list	20%	100%		The department maintains a contact list that has been confirmed or updated within the last year.
% of ITM service providers communicated with during a year	10%	100%		The department communicates with every known contractor at least once/yr
% of property owners communicated w/ each yr (email,letter,phone, visit)	5%	100%		The department communicates with every system owner at least once/yr
<u>DEPARTMENTAL RESOURCES</u>				
FTE hours dedicated to ITM administration	780	322.4	-58.7%	58.7% less time is being spent on ITM administration
\$\$ dedicated to ITM administration	\$32,325	\$ 14,625	-54.8%	A reduction of cost of 54.8% with zero cost to the city

156) Property owners are required to have their fire protection systems such as fire sprinkler, fire alarm, and kitchen hood suppression systems tested by a certified inspection service provider every year (or sooner). In Richland WA, the fire department is the authority responsible for enforcing these laws. The tools and resources available to the Richland fire marshal was only allowing the dedicated fire prevention staff to achieve 20% compliance *Id.* at 9; meaning 1 in 5 property owners were getting their inspections done on time, or at all. In January 2011, the Richland WA Fire Department partnered with Tegriss Inc to improve the level of compliance for inspecting, testing, and maintenance (ITM) of these systems in the community. Tegriss provides a no-cost compliance tracking program that automatically drives notifications to property owners who have overdue or impaired systems and builds the city records by collaborating with all the relevant stakeholders during the process.

157) The Richland Fire Marshal enforced the Tegriss Standard and helped the community achieve an ‘on-time’ compliance rate for inspections of 76% in the first year alone. *Id.* These are reports that were received before their actual due date. However, the fire marshal also studied how many reports he received within 90 days of their due date and found that he had achieved 97% compliance. The fire marshal took it one step further and sent a Notice of Civil Violation to the few properties that went beyond 90 days and gave them a brief time to rectify their

truant inspection or face civil penalties. In ONE year, the city adopted a reproducible self-sustaining model that ensures 100% compliance while reducing their overall ITM workload.

158) National, State, and Local codes all require that property owners maintain their systems because of the enormous benefit that is gained with improved public safety, reduced liability, and increased inspection work. Preventing fires is well documented to be less expensive than fighting them. And more immediately, the entire inspection service industry relies on a fire department's ability to enforce. Without enforcement, these businesses are struggling. The Richland fire prevention staff leverages Tegriss to take on the important task of communicating with every business in the community and every inspector in the industry. They represent one of the only (if not the only) connection the city has to its local businesses. Richland was able to measure these benefits and more as detailed below.

159) By employing an ITM enforcement system in Richland the fire department has revitalized the city's infrastructure of fire protection systems. They now have visibility to the presence and status of every system in their jurisdiction. They have knowledge of every impaired system and written directives to the owners for fixing them. Public Safety has not only improved because the systems are working but also because the fire department has a better understanding of the

conditions in each building. In an emergency this knowledge is vital.

160) Before Tegriss, Richland did not have a method for measuring ITM compliance for property owners. Tegriss and the fire department staff worked together to develop a full list of fire prevention systems collected from file cabinets, existing databases, and staff knowledge. It was discovered that only 20% of the known systems had been inspected within the last cycle. *Id.* Today, using Tegriss, Richland compliance rate is measured at 76% and rising. The fire marshal noted that 97% of the properties are reporting with 90 days. The increase in compliance also includes over 200 newly discovered systems that were previously unknown.

161) Also unknown by the department was the number of systems that were impaired or had some kind of deficiency. One common deficiency that is usually identified during an inspection is the amount of grease buildup in a kitchen hood. Expectedly, this is a common reason for fires. Inspections help keep small treatable issues from growing into major problems. They help identify a broad range of issues such as a box on a top shelf blocking a sprinkler head to an offline fire panel that is not communicating with a monitoring station. Nearly every system if left untested and ‘unexercised’ will eventually develop deficiencies. A simple inspection can prevent and cure most of the issues that develop. The rest require repairs, replacement, or upgrades. The fire marshal estimated 25% of the

fire protection systems had at least some small deficiency. *Id.* With 76% of the properties currently reporting the city is aware of only 77 specific systems still waiting for repair. *Id.* The property owners for each of these systems have been notified by letter to get their systems fixed and update the online status when complete. The fire department uses Tegriss to track each repair until completion.

162) The fire department has maximized the effectiveness of the fire protection systems that protect buildings throughout their jurisdiction. By improving compliance from 20% to 76% and reducing the number of deficient systems from 25% to 7.1% the community can be assured that the places they work and visit are protected with working systems. The fire department and the elected officials of Richland can stand behind real numbers that show how they have improved public safety over the last year without increasing the budget.

163) By enforcing inspections, the fire department is increasing the attention that inspectors and property owners are putting on each property. While these inspections are focused on the fire protection systems the property owner's awareness of other potential hazards has naturally increased as well. Awareness of these hazards makes a substantial difference in life safety. But occasionally the fire marshal finds that the real 'hazard' is the stakeholders themselves. By default, the program helped Richland identify which property owners and inspection contractors initially ignored the standard and put off their responsibilities as long

as possible. These unique stakeholders are the reason that compliance has not met 100% yet. The department now knows which stakeholders tend to either procrastinate or challenge the authorities resolve to maintain the minimum standard. Richland now knows exactly who is saying, “I’ll do it when the fire marshal makes me”. With Tegriss that person is identified immediately and automatically notified. Continued resistance is tracked at the top of the fire marshal’s dashboard and becomes the priority task for the day. The city of Richland is fully aware of every overdue and impaired system as well as problematic stakeholders. Knowledge of these hazards strengthens the department’s ability to protect the community.

164) The Richland Fire Department maintains the most updated record of fire protection systems in the country. *Id.* at 11. Contact, Property, and System information is automatically updated with the submittal of every inspection report. Prior to Tegriss, the information was collected when the fire department was able to visit the property, take notes, and update their files back at the department. As such, they were the only source for maintaining records. The property owners and inspection contractors who had the best and most current information about the property were not able to add to or update the old records.

165) Working with Tegriss, Richland was able to initially identify 501 unique fire protected properties through records stored in various locations such as

the file cabinets, existing databases, and departmental knowledge. This became the initial set used to track and notify with the new standard. After a year, the number of protected properties actually decreased to 469. This is because the fire department found that several of the initial city records were outdated and inaccurate. Some of the properties were discovered to be just outside their jurisdiction and therefore reassigned to the neighboring AHJ. Other properties were found to have no fire protection system installed as previously thought. At the same time, new properties and systems were still being discovered and added to the database by property owners and inspectors as they performed their inspections. So far, 1083 systems have been verified. This is 229 more than the 854 they had in their records before. Similar to other cities partnering with Tegriss, the number of known systems in the jurisdiction grew over 20%. In other words, departments have consistently shown to be unaware of 1 out of every 5 systems in their jurisdiction.

166) Richland's database not only improved in quantity but quality as well. Having all the stakeholders collaborating around the online records keeps the contact, property, and system information current. A current contact list (as discussed in the Communication section below) is a new powerful tool that the city has never had before.

167) One of the key benefits to Richland using Tegriss is their online Property Journal. Each property in the Richland database now has a historic journal of events that track the access, notification letters, changes in information, inspection reports, deficiencies, and notes. Notes can either be public or private depending on the contributing party's preference. Depending on the information, each stakeholder is able to view and add more information. This collaboration gives the fire department a very complete view of each property with public notes from the other stakeholders.

168) To date there has been over 1107 additional journal entries on different properties in Richland that help grow the department's knowledge of their jurisdiction.

169) Another benefit of the online submittal process is that reports have been standardized. Every report submitted to Richland is typical and on the same form. The data is pre-screened for unlikely or incomplete information. Each report includes a statement by the inspector that the information is true and accurate.

170) As demonstrated in other case studies, Richland's data will continue to improve without the required data entry from the fire department. The program continuously monitors the data for upcoming due dates and uses those events to automate communication with the appropriate stakeholders. This drives the data collection process and ensures data growth. Before the '966 Patent, I know of no

other system that automated the compliance process like the methods claimed in the '966 Patent.

171) Each stakeholder has unique knowledge about the properties and systems they maintain. By enabling an online tool to collect that information, Richland is creating a complete record of their jurisdiction and also takes the time to input their institutional knowledge to complete the records for each property. This information that was previously kept in the file cabinet is now accessible to the city anywhere through a secure online portal in 'the cloud'.

172) The information collected by each stakeholder is tied to their account identity. This is saved in the permanent record for each property that is available for the appropriate parties to see online. This transparency encourages users to provide quality data with a heightened focus on accuracy. This discourages uncertified and substandard work that is commonly hidden in file cabinets. By keeping the information online and visible the data quality has improved.

173) Unlike almost any other law, the regulations that require that fire protection systems be regularly inspected, tested, and maintained have a drastic impact on an industry full of professionals who dedicate their careers to the inspection service. Local inspectors in Richland WA have to be licensed and certified. The State of Washington requires that any inspector for a fire sprinkler system must achieve a NICET I&T level II, demonstrate 4000 hours of experience,

and maintain a state certification level including annual fees. These inspectors make a deep professional investment to be able to work in the industry. All systems must be inspected annually, and no other person is allowed to inspect them.

174) The industry is weakened when these laws are not enforced, and businesses are allowed to skip their inspections or when uncertified inspectors can perform the inspections without any oversight. Without oversight, businesses with good ITM practices (such as hotel and restaurant chains) do so at a competitive disadvantage. Their competitors trade life safety for lower prices. Inspection companies with certified inspectors and good standards also do it at a competitive disadvantage. Their substandard competitors cut corners and provide cheaper services because no one is watching.

175) By implementing Tegriss, Richland provides a consistent level of consumer protection essential to the businesses in their jurisdiction as well as the local inspectors. They have immediate oversight on every submitted report, the quality of the inspection, and the certification numbers of the inspectors who perform them. All businesses are enforced equally so no competitive disadvantage exists, and life safety cannot be neglected to save on costs.

176) With Tegriss, unqualified inspectors are unlikely to submit unqualified reports to a fire marshal. The transparency of the online report discourages

unlicensed and substandard contractors to work in Richland. This has leveled the playing field for legitimate contractors.

177) As the city of Richland has improved their compliance from 20% to 76% the local market is experiencing significant growth. An additional 879 systems were inspected due to the program so far. And over 135 repair jobs have been enforced. Using a conservative average of \$150 per inspection and \$300 per repair the market increase was over \$172,350 in the first year.

178) Perhaps the most significant market improvement in Richland is that the new work is completely self-sustained by the local inspection service providers. The entire system is completely funded by the inspection companies who choose to work in Richland. Each time an inspector submits an inspection report through the Tegriss platform a \$15 fee is collected to ensure enforcement continues throughout the city. This maintains 100% enforcement without any dependence on the economy or the fire department's budget. Without Tegriss the inspectors were fighting over a \$28,000 ITM market. With Tegriss they have guaranteed themselves a self-sustained \$211,000 annual ITM market in Richland alone.

179) As the demand for inspections has been established, the supply of service providers has grown from 15 to 45. This increase in the supply of inspectors gives the property owners a broader selection to choose from. Property

owners can now find a quality service company for a competitive price. And they can be assured that the report that they pay for will have oversight from the fire marshal.

180) Communication is critical in fire prevention. Like many fire departments in the country right now, it is a tool that has been neglected due to limited resources. But utilizing the Tegriss platform, Richland improved their ability to communicate with local business owners, inspectors, and even with themselves.

181) Every fire protection system owner in the city receives a friendly reminder before their system is due. Subsequent notification letters are sent if the system becomes overdue. Similarly, when a system deficiency is found the owner is notified again. These letters help the property owner and the service providers understand the fire department's intentions of applying the standard.

182) Prior to partnering with Tegriss, Richland kept their records in file cabinets and their RMS database. Updates were manual and only occurred as time and resources allowed. The inefficiency of the system did not allow them to maintain a current and reliable contact list. The fire marshal estimated that only 1 in every 5 contacts was still accurate. That system discouraged communication between the city and the community. The fire marshal reported that the department only communicated with 1 out of every 10 local businesses per year and even less

inspection service provider.

183) After one year using Tegriss, the fire marshal now reports that his department communicates with 100% of the system owners and inspection service providers every year. In fact, they now communicate several times per year with their local inspectors which have led to a better understanding of each other's need and overall improved relations. That collaboration has strengthened the Richland community.

184) Similarly, contact information for property owners are being populated and updated. As email addresses are becoming increasingly common, this allows the department to communicate with the community instantly and inexpensively. While it is not required for property owners to sign up, 82 have set up their own free account which also improves the current information and gives the department another direct channel for communication. Richland's database continues to collect current email addresses from every property owner in the jurisdiction. In a city-wide emergency the ability to communicate with every property owner quickly may prove to be vital.

185) Richland has initiated communication (email, mail, phone calls, site visits) to 469 property/system owner and 45 service providers in the city. Property owners have been receiving reminder and notification letters and service companies receive a reminder email when customers are due. This ensures that the

Richland fire department has multiple touches with the stakeholders in the community every year. Richland sent 779 letters alone via Tegriss to property owners informing them of their inspection and repair responsibilities in the first year.

186) Using Tegriss' methods covered by the '966 Patent, Richland has employed a system that keeps contact information current. This opens the channels for them when they need to provide education and enforcement to the community. The fire department is connected to the stakeholders at the push of a button. Getting a message out is as easy as sending an email. Also, the fire marshal is able to update and customize instructions and notes on every blank Richland inspection report which helps communicate new requirements to the service providers instantly.

187) Richland has records for every letter they have sent to a property owner detailing the owner's responsibility to inspect, test, and maintain their system. This communication encourages the fire preventative activities that keep a disaster from occurring. It also provides the department with the substantiation they will need if one does occur.

188) Richland like most other cities in the country has extremely tight budget constraints. Unfortunately for most fire departments this means that the fire prevention services suffer. But unlike other cities in the country, Richland adopted

a solution to provide the highest level of public safety and an economic stimulus for the local ITM service industry.

189) Before the program, the Richland fire prevention staff had 3.5 people dedicating anywhere between 5-15% of their time to ITM activities such as site visits, reviewing and processing reports, following up on known deficiencies, etc. *Id.* at 9. Using Tegriss, the entire department streamlined their ITM activities by using the Tegriss dashboard that monitors for new reports, deficiencies, overdue properties, and inaccurate data. The streamlined administration work as well as the automated notification letters gave the department back valuable time and resources to accomplish other tasks.

190) These statistics show that Richland's fire prevention staff is essential to the city's health and public relations. They used their resources effectively to create jobs in Richland, lower inspection costs, keep constant communication with the businesses, and improve public safety. Protecting their budget or improving it will lead to even more success for the Richland community. As cities around the nation struggle to hold their fire prevention services intact, this example in Richland, WA needs to be used to demonstrate the importance of our fire marshals, fire inspectors, and administrators.

E. A long-felt but unmet need in the prior art was satisfied by the claimed invention.

191) Before I started developing the inventions now claimed in the '966

Patent, I was discouraged to add inspection services for my fire system contracting company, Fireshield Inc. Contracting companies that design and install fire protection systems commonly provide ITM services. I learned property owners were not motivated by the laws that required them to get their inspections done. Property owners repeatedly told me that they'd only do their inspection when the fire marshal forced them to. In that way, they could skip years of inspections. We were frequently told the same thing when we actually would inspect a system and find it was broken. The fundamental problem for ITM compliance was enforcement. I began interviewing fire marshals to understand the specific challenges for enforcing the laws that required periodic inspections. Consistently, the answer was a lack of resources to manually manage the process. Even with the help of software to sort the information in meaningful ways, the programs still required manual input and manual enforcement. The use of Access databases, Excel spreadsheets, and most commonly physical file cabinets demanded significant time, money, and labor to achieve results. However, those results failed to meet the compliance that national, state, and local laws required. It was not feasible to achieve 100% compliance at any given time, let alone to maintain it year after year. Before Tegriss' methods covered by the '966 Patent, no prior art (or combination of prior art) disclosed any system in the fire and life safety industry. When I personally presented Tegriss' patented system to the NFSA, including the

President, Vice President, and Director of ITM Solutions, I learned that Tegriss's patented system was exactly what the industry needed. Soon after meeting with the NFSA, two competitors incorporated out of Chicago, IL which was evidence that there was a long felt need for this patented method.

F. Commercial success of products covered by the patent.

192) As demonstrated by two of the case studies detailed above, the Tegriss system embodied the claims in the '966 Patent and provided a dramatically successful commercial product. That led to competitors like Brycer, IROL, LIV, and Buildingreports.com providing substantially the same methods who also experienced dramatic success. Dramatic is an appropriate term considering: (1) the fire prevention industry has existed for over 200 years. The fire sprinkler and fire hydrant are both over 150 years old and still the main components in any fire protection system. The fire and life safety industry is famously skeptical and slow to adopt new methods; and (2) In fewer than 10 years, over 1000 municipalities across all 50 states have adopted methods described and claimed in the '966 Patent for successfully achieving ITM compliance. The commercial success of products using this method are unprecedented.

G. Unexpected results achieved by the invention.

193) The expected results from the methods claimed in the '966 Patent include continuously improving compliance, driving inspection work for

inspection contractors, lowering prices for property owners, and providing safer metrics for municipalities and insurance providers.

194) I have observed several unexpected results from practicing the methods claimed in the '966 Patent that the invented method has produced. Municipalities are able to better coordinate safety programs with neighboring jurisdictions. The standardized method gives cities the ability to form partnerships and manage areas beyond city boundaries into regional authorities encompassing several cities, saving costs from duplicate management and overhead expenses. New programs are being built on top of the patented systems. In one example, the South King County Regional Authority used an API to connect the ITM compliance data in their city to their ESO system so that their fire department has real-time building system information as they're responding to an emergency. Other industries are able to develop APIs to broaden their services as well. Companies that provide mobile inspection report software use APIs to connect their data directly to an ITM compliance platform.

H. Praise of the invention by others skilled in the art.

195) There is no shortage of praise from fire marshals who continue to recommend and adopt the program at a dramatic rate, as well as inspection contractors who are experiencing significant increases in the amount of work they perform in each city.

196) In an email message received from the Richland Fire Marshal, Kurt Hubele on December 16, 2011 he said,

“We, RFD Prevention, have been discussing how we can measure our efforts in gaining compliance and what are successful outputs and outcomes. One particular output we are considering is the percentage of compliant properties that are less than 90 days overdue. When we figure in the time spans between the property owner arranging for a contractor, the contractor scheduling the appointment, conducting the testing and the date they finally enter the records, most of our properties are overdue for a time. By accepting that most properties will be overdue for a time and allowing for some leeway, we find that we are very effective using Tegriss. Figuring the above output, we are at 97% general compliancy today! That is a huge improvement from where we were before we started using Tegriss.

Just so you know, at 90 days overdue we sent a correction letter and follow that letter with a Notice of Civil Violation letter. We have been 100% successful with the few stragglers that reach this stage of the process.”

EX. 2041. This sentiment has been repeated with every jurisdiction we’ve partnered with.

I. The taking of licenses under the patent by others.

197) There were 5 known third party ITM Compliance Providers in the industry. (Tegris, IROL, Building Reports.com, LIV, and Brycer) BuildingReports.com recently acquired IROL and is in the process of licensing the '966 Patent from Tegris. This license will be finalized on or about April 17, 2025. Because I signed this declaration before that date, I cannot state that the license is finalized.

J. Whether others had tried and failed to make the invention.

198) BuildingReports.com attempted to build an ITM compliance system but did not have the success they were expecting. As a result, BuildingReports.com ended up acquiring IROL who has a growing customer base. When I presented Tegris' patented method to some municipalities, I was told they intended to build and manage it themselves. In each case, the municipalities lacked resources to develop and maintain the system inside their own jurisdiction. As a third-party provider, Tegris can offset the large costs of developing and managing a sophisticated system across several jurisdictions. This is not a feasible option for, at least, small or medium sized cities. Even for large sized cities, the program requires participation from inspection contractors who work throughout the region and within multiple cities. Without assistance from Tegris, home-grown programs

required significant resources to enforce compliance. The city of Seattle attempted such a system before abandoning their efforts and adopting the Brycer system which uses Tegriss' patented system.

K. Whether persons of ordinary skill in the art expressed surprise or disbelief regarding the invention.

199) Between 2007 and 2011, adoption of the Tegriss method and system was met with serious and severe skepticism and opposition, including even death threats. The fire prevention industry is slow to change. Tegriss' methods as claimed in the '966 Patent were initially perceived as an attempt to acquire inspection contractor's private customer information. Tegriss' methods as claimed in the '966 Patent threatened to make visible the activities and deficiencies that were previously hidden in the shadows of file cabinets.

200) Property owners expressed to me their displeasure about having the true status of their systems brought to light.

201) Inspection Contractors expressed to me they were very defensive of the relationships they have with their customers. Some inspectors proffered legal refusals to use a standardized inspection form.

202) Union representatives for fire departments expressed to me their concerns about the impact to the labor of fire prevention staff.

203) City councils, mayors, and fire chiefs argued to me about whether

they should allow Tegriss, as a third party ITM compliance provider, help them provide compliance services.

204) With so much resistance, the common wisdom was that the industry could not overcome its deeply rooted processes and that the time and expense for us to proceed was prohibitive and put Tegriss at a serious disadvantage after adoption started to grow.

205) Tegriss' methods covered by the Challenged Claims requires at least three distinct stakeholders to participate. Without the participation of any one of these, Tegriss' methods do not work as intended. Therefore, I expended tremendous effort to change the culture of three different groups, in multiple jurisdictions, until adoption reached a tipping point. Accepted wisdom was that task would not be achievable in an affordable amount of time. Tegriss' methods covered by the '966 Patent was and remains the only solution that ever worked for ITM compliance management.

L. Copying by others.

206) After I disclosed Tegriss' inventions as disclosed and claimed in the '966 Patent to the NFSA, we discussed ways to partner together to provide the Tegriss' patented methods to jurisdictions around the nation. When negotiations did not end successfully, NFSA told me it intended to partner with a competitor. A

year later, two competitors incorporated.

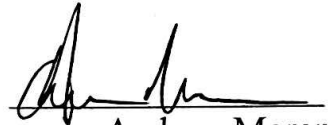
207) In March 2040, NFSA invited Tegriss to a NFSA forum to discuss ways of gaining program adoption. I told NFSA that Tegriss had a pending patent application (i.e., the application that matured into the '966 Patent) and that it was not appropriate for NFSA to work with competitors who were copying the inventions disclosed and claimed in the '966 Patent.

208) NFSA shared my letter with Brycer who threatened to take legal action. In response, Tegriss warned Brycer to avoid the potential of patent infringement. Since that time, Brycer has had great success gaining adoption of its methods covered by the Challenged Claims with major cities. The most difficult objection that Tegriss experiences when dealing with prospective customers is why they would use a third party ITM compliance provider different than a major city in their region. There are very few objections on whether the method will work.

In signing this Declaration, I recognize this Declaration will be filed as evidence in an *inter partes* review before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I understand I may be subject to cross-examination in the case and cross-examination will take place within the United States. If cross-examination is required, I will appear for cross-examination within the United States during the time allotted.

I hereby declare all statements made herein of my own knowledge are true and all opinions expressed herein are my own; and further these statements were made with the knowledge willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

Dated: 4/16/24


Andrew Moren