

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNITED STATES DEPARTMENT OF HOMELAND SECURITY,
Petitioner,

v.

LARRY GOLDEN,
Patent Owner.

Case IPR2014-00714
Patent RE43,990 E

Before LORA M. GREEN, JON B. TORNQUIST, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

CHERRY, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

The United States Department of Homeland Security (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 11, 74, and 81 of U.S. Patent No. RE43,990 E (Ex. 1001, “the ’990 patent”). Paper 1 (“Pet.”). Larry Golden (“Patent Owner”) timely filed a Patent Owner Preliminary Response. Paper 10 (“Prelim. Resp.”). In a Decision to Institute (Paper 16, “Dec. to Inst.”) issued October 8, 2014, we instituted an *inter partes* review of claims 11, 74, and 81 of the ’990 patent.

On January 13, 2015, Patent Owner filed a Patent Owner Response (Paper 24 (“PO Resp.”)), a Non-Contingent Motion to Amend (Paper 25 (“Non-Cont. Mot. to Amend”)), and a Motion to Amend (Paper 26 (“Mot. to Amend”)).¹ Petitioner filed a Reply to Patent Owner’s Response (Paper 31, “Pet. Reply”) and an Opposition to the Motion to Amend (Paper 32, “Opp.”). Patent Owner filed a Reply to Petitioner’s Opposition. Paper 33 (“PO Reply”). No oral hearing was held.

With its Petition, Petitioner provided a declaration from Dr. Sriram Vishwanath, dated April 29, 2014. Ex. 1005 (“Vishwanath Decl.”).

¹ As explained in our February 4, 2015 order, Patent Owner confirmed in a conference call with the Board that the Motion to Amend is non-contingent. Paper 29, 2 (“We reminded Mr. Golden that, as set forth in our order of January 13, 2015 (Paper 23), with a noncontingent motion to amend, he bears the burden of demonstrating that the claims are patentable, and that he is abandoning the claims on which trial was instituted. Mr. Golden confirmed again that the motion to amend was a non-contingent motion to amend.”). As we further explained in that order, we are treating Paper 25 and Paper 26 collectively as the Motion to Amend. *Id.*

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, and addresses issues raised during trial.

In the Motion to Amend, Patent Owner requests cancellation of claims 11, 74, and 81, and substitution of those claims with proposed claims 154–156. Non-Cont. Mot. to Amend 1.² For the reasons discussed below, Patent Owner’s Motion to Amend is *granted* with respect to the cancellation of claims 11, 74, and 81, and *denied* with respect to the proposed substitution of claims 154–156.

A. Related Proceedings

Patent Owner and Petitioner note that the ’990 patent is asserted in a proceeding pending before the U.S. Court of Federal Claims, *Golden v. United States*, Case No. 13-307 C. Paper 5, 2; Pet. 1. Patent Owner also identifies a related pending patent application: U.S. Application No. 14/021,693 (“the ’693 application”). Non-Cont. Mot. to Amend 1.

B. The ’990 Patent (Ex. 1001)

The ’990 patent is a reissue of U.S. Patent No. 7,636,033 (“the ’033 patent”). Ex. 1001, at [64]. The ’033 patent issued from U.S. Application No. 12/155,573 (“the ’573 application”), which was filed on June 6, 2008. *Id.* The ’573 application, in turn, was a continuation-in-part of U.S. Application No. 11/397,118 (“the ’118 application”) that was filed on April 5, 2006. *Id.* at [63].

² Paper 24 has no page numbers. We treat the first page after the caption page as page 1 and number the pages consecutively from there.

The '990 patent relates generally to a multi-sensor detection and lock disabling system for detecting agents, such as, chemical, biological, and radiological agents in, for example, cargo containers, shipping containers, and tractor trailers. *Id.* at col. 3, ll. 16–26, 37–41. Specifically, one embodiment of the system of the '990 patent includes detector cases for holding interchangeable detectors. Ex. 1001, Abstract. The detectors sample for chemical, biological, and radiological compounds. *Id.* Each detector case is disposed in, or upon, a monitored product, such as a shipping container or tractor trailer. *Id.* If a specific nuclear, chemical, or other agent is detected, alarm indicators on the detector case light up, and the detector case transmits information to a monitoring computer. *Id.* The detector case may lock or unlock the monitored product by communicating with a lock disabler in the container or may perform other actions based on instructions received directly from the monitoring site. *Id.*

Figure 16 of the '990 patent is reproduced below:

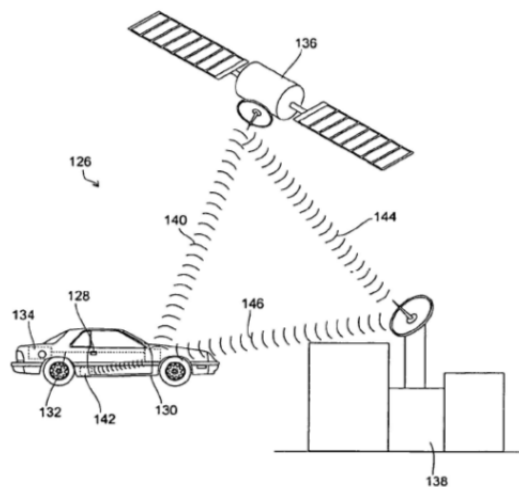


Fig. 16

Figure 16 is representation of an embodiment of the multi-sensor detection system of the '990 patent.

Figure 16 shows an embodiment of the multi-sensor detection and lock system that incorporates satellite 136 for signal receipt and transmission from vehicle 130, in which the detector system is placed, to a monitoring site with monitoring equipment 138. Ex. 1001, col. 11, ll. 1–22.

C. Proposed Substitute Claims

In the Motion to Amend, Patent Owner proposes to add substitute claims 154–156. Proposed substituted claims 154–156 are reproduced below, with bracketed, italicized subject matter indicative of subject matter deleted from challenged claims 11, 74, and 81 and underlined subject matter indicative of subject matter added to challenged claims 11, 74, and 81:

154. (Substitute to claim 11) A communication device of at least one of [*a cell phone, a smart phone, a desktop, a handheld, a PDA, a laptop, or a computer terminal at a monitoring site*] the products grouped together by common features in the product groupings category of design similarity (e.g., computer terminal, personal computer (PC)) for monitoring products, interconnected to a product for communication therebetween, comprising:

at least one of a central processing unit (CPU) for executing and carrying out the instructions of a computer program, a network processor which is specifically targeted at the networking application domain, or a front end processor for communication between a host computer and other devices;

a transmitter for transmitting signals and messages to at least one of plurality product groups based on the categories of a multi-sensor detection device, a maritime cargo container, [*a cell phone detection device,*] a locking device, a device for stalling and stopping a vehicle, or a building monitoring device;

a receiver for receiving signals, data or messages from at least one of plurality product groups based on the categories of a multi-sensor

detection device, a maritime cargo container, *[a cell phone detection device,]* a locking device, a device for stalling and stopping a vehicle, or a building monitoring device;

at least one satellite connection, *[Bluetooth connection, WiFi connection,]* internet connection, radio frequency (RF) connection, *[cellular connection, broadband connection,]* long and short range radio frequency (RF) connection, or GPS connection;

the communication device is at least a fixed, portable or mobile communication device interconnected to a fixed, portable or mobile product, capable of wired or wireless communication therebetween; and

whereupon the communication device, is interconnected to a product equipped to receive signals from or send signals to lock or unlock doors, stall, stop, or slowdown vehicles, activate or deactivate security systems, or activate or deactivate multi-sensor detection systems *[, or to activate or deactivate cell phone detection systems];*

[wherein, the communication device receives a signal via any of one or more products listed in any of the plurality of product grouping categories;]

wherein at least one satellite connection, *[Bluetooth connection, WiFi connection,]* internet connection, radio frequency (RF) connection, *[cellular connection, broadband connection,]* long and short range radio frequency (RF) connection is capable of signal communication with the transmitter and the receiver of the communication device and transceivers of the products.

* * *

155. (substitute to claim 74) A built-in *[embedded]* multi sensor detection system for monitoring products with a plurality of sensors detecting at least one chemical, biological, radiological, nuclear, explosive, human, contraband agent;

comprising at least one built-in *[embedded]* sensor for detecting at least one of the following: motion, perimeter, temperature, tampering, breach, and theft;

comprising a built-in *[embedded]* sensor array or fixed detection device into the product that detects an agent that includes at least one

of a chemical agent, a biological agent, a nuclear agent, an explosive agent, a human agent, contraband, or a radiological agent; and

wherein, when an alarm occurs, the built-in *[embedded]* multi sensor detection system communicates the alarm by way of at least one of, product-to-product, product-to-satellite, *[product-to-cellular]*, product-to-long or short range radio frequency, product-to-radio frequency (RF), product-to-internet, *[product-to-broadband, product-to-smartphone or cell phone,]* product-to-monitoring site *[or central controlling station, product-to-WiFi or WiMax]*, product-to-authorized persons, *[product-to-handheld,]* or product-to-laptop or desktop.

* * *

156. A multi-sensor detection system for monitoring products and for detecting at least one explosive, nuclear, contraband, chemical, biological, human, or radiological agents and compounds, comprising:

a plurality of sensors for detecting at least one chemical, biological, radiological, explosive, nuclear, human or contraband agents and compounds and capable of being disposed within a multisensor detection device

monitoring equipment *[located at a determinate site, comprising at least one of plurality product groups based on the categories of a computer, laptop, notebook, PC, handheld, reader, cell phone, PDA or smart phone]* of at least one of the products grouped together by common features in the product groupings category of design similarity (e.g., computer terminal, personal computer (PC)) for the receipt and transmission of signals therebetween;

[at least one cell phone tower interconnected to the monitoring equipment for sending signals thereto and receiving signals therefrom;]

at least one satellite capable of transmitting signals to the monitoring equipment *[and receiving signals from the monitoring equipment];*

[at least one satellite or at least one cell phone tower capable of two-way signal communication between the multi sensor detection device and the monitoring equipment;]

at least one *[modem]* transceiver for short *[and/or]* and long range radio frequency communication with the monitoring equipment; and at least one internet connection capable of communication between the multi sensor detection device and the monitoring equipment;

whereupon a signal sent *[from]* to the multi sensor detection device *[to]* from a satellite; *[or to a cell phone tower;]* or through short *[and/or]* and long range radio frequency; causes a signal to be sent to the monitoring equipment that includes location data and sensor data;

[wherein the communication device receives a signal via any of one or more products listed in any of the plurality of product grouping categories;]

wherein at least one satellite connection, *[Bluetooth connection, WiFi connection,]* internet connection, radio frequency (RF) connection, *[cellular connection, broadband connection,]* long and short range radio frequency (RF) connection is capable of signal communication with the transmitter and the receiver of the *[communication device]* monitoring equipment and transceivers of the products.

Claims Appendix (Ex. 2020), 1–6

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we interpret claim terms in unexpired patents according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1276–79 (Fed. Cir. 2015). There is a “heavy presumption” that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). However, a “claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a

definition of the disputed claim term in either the specification or prosecution history.” *Id.*

In the Decision to Institute, we construed certain claim terms. Those constructions are reproduced in the chart below.

Claim Term	Construction
“built in, embedded” (claim 74)	“something is included within, incorporated into, disposed within, affixed to, connected to, or mounted to another device, such that it is an integral part of the device”
“communication device” (claim 81)	“monitoring equipment”

Dec. to Inst. 11–16.

No party challenges these constructions. Both of these terms were modified or removed in the amendment. To the extent that any of these constructions remain relevant after the amendment, we see no reason to modify them.

We further determined that no explicit construction was necessary for any other claim terms. Dec. to Inst. 10–11. Based on the record adduced during trial, we see no need to construe any other terms.

B. Patent Owner Response

The Patent Owner Response contains arguments directed both to claims 11, 74, and 81 and to the proposed substitute claims. To the extent Patent Owner argues the patentability of claims 11, 74, and 81, those arguments are moot because Patent Owner has cancelled those claims. To the extent that Patent Owner wishes us to apply the arguments made regarding claims 11, 74, and 81 to the patentability of the amended claims or incorporate arguments regarding claims 154–156 from the Patent Owner

Response into the Motion to Amend, we decline to do so. Pursuant to 37 C.F.R. § 42.6(a)(3), “[a]rguments must not be incorporated by reference from one document into another document. Combined motions, oppositions, replies, or other combined documents are not permitted.” Patent Owner is precluded from incorporating arguments regarding the patentability of claims 11, 74, and 81 from the Patent Owner Response into the Motion to Amend to address how proposed substitute claims 154–156 are patentable. Such incorporation by reference circumvents our rule limiting the pages in a motion to amend to twenty-five pages. See 37 C.F.R. § 42.24(a)(v). Arguments that are not developed and presented in the Motion to Amend, itself, are not entitled to consideration. See *Intellectual Ventures Mgmt., LLC v. Xilinx, Inc.*, Case IPR2012-00023, slip op. at 41 (PTAB Feb. 11, 2014) (Paper 35).

We do address two arguments that Patent Owner raises in the Patent Owner Response that are applicable to the proceeding generally: (1) Patent Owner’s contention that Petitioner failed to name all of the real-parties-in-interest (PO Resp. 6–8); and (2) Patent Owner’s contentions regarding Petitioner’s expert (*id.* at 8–11).

i. Real Party In Interest

Petitioner has identified itself, the U.S. Department of Homeland Security, as the real party in interest. Pet. 1. Patent Owner contends that Petitioner should also have identified “the United States Department of the Treasury, seven (7) Government Agencies named as indirect infringers [in Patent Owner’s U.S. Court of Federal Claims action], and the at least twenty-seven (27) third-party direct infringing Companies.” PO Resp. 7.

A petition for *inter partes* review must identify “all real parties in interest.” 35 U.S.C. § 312(a)(2). The Office Patent Trial Practice Guide provides guidance regarding factors to consider in determining whether a party is a real party in interest. 77 Fed. Reg. 48,756, 48,759–60 (Aug. 14, 2012). Considerations may include whether a non-party “funds and directs and controls” an IPR petition or proceeding. *Id.* at 48,760. Additional relevant factors include: the non-party’s relationship with the petitioner; the non-party’s relationship to the petition itself, including the nature or degree of involvement in the filing; and the nature of the entity filing the petition. *Id.* Generally, a party does not become a “real party-in-interest” merely through association with another party in an unrelated endeavor. *Id.* A party also is not considered a real party in interest in an *inter partes* review solely because it is a joint defendant with a petitioner in a patent infringement suit or is part of a joint defense group with a petitioner in the suit. *Id.*

Whether a party who is not a named participant in a given proceeding is a “real party-in-interest” to that proceeding “is a highly fact-dependent question.” *Id.* at 48,759. There is no “bright line test.” *Id.* Courts invoke the term “real party-in-interest” to describe relationships and considerations sufficient to justify applying conventional principles of estoppel and preclusion. *Id.*

Here, even assuming this contention is timely, Patent Owner has failed to provide any evidence, besides the mere fact that the other parties are co-defendants in a lawsuit or alleged infringers, to support the contention that Petitioner has failed to name all of the real parties in interest. That one fact, without any further proof of control or involvement by these parties in this proceeding, is insufficient to establish that Petitioner has failed to name

all of the real parties in interest. *See Sony Computer Entmt. Am., LLC v. Game Controller Tech. LLC*, Case IPR2013-00634, slip op. 8 (PTAB Apr. 2, 2015) (Paper 31) (denying request to terminate based on failure to name all real parties in interest when Patent Owner failed to provide sufficient evidence that other parties were a real party in interest); *see also First Quality Baby Prods., LLC v. Kimberly-Clark Worldwide, Inc.*, Case IPR2014-01021, slip op. 3–7 (PTAB July 16, 2015) (Paper 42) (same).

ii. *Petitioner's Expert*

Patent Owner asks that we “dismiss [Petitioner’s] Expert Declaration and disqualify [Petitioner’s Declarant] for making and using a false writing.” PO Resp. 9. Patent Owner contends that Petitioner’s Declarant falsely claimed that certain patent applications were patents by listing them under the heading “Patents” in his Resume. *Id.* at 8–9. A Patent Owner Response is not the proper vehicle to seek to exclude testimony. *See* 37 C.F.R. § 42.64(c). Moreover, even if it were the proper vehicle, we are not persuaded that the alleged “falsehood” that Patent Owner identified—listing patent applications, which are clearly identified as such, under a heading titled “Patents”—is, in any way, misleading. Thus, we decline Patent Owner’s request that we dismiss Dr. Vishwanath’s testimony.³

C. *Motion to Amend*

As discussed above, in the Motion to Amend, Patent Owner requests that challenged claims 11, 74, and 81 be canceled and replaced with

³ Patent Owner also argues that Petitioner’s declarant has a conflict of interest because he has received grants from the federal government. PO Resp. 10–11. Patent Owner, however, does not ask for any relief on this basis. *Id.*

proposed substitute claims 154–156. Non-Cont. Mot. to Amend 1; *see* 35 U.S.C. § 316(d)(1); 37 C.F.R. § 42.121(a)(3) (“A motion to amend may cancel a challenged claim or propose a reasonable number of substitute claims.”). Patent Owner’s request to cancel challenged claims 11, 74, and 81 is not contingent on the claims being determined to be unpatentable. *Id.* Patent Owner’s request to cancel challenged claims 11, 74, and 81 is *granted* and we need not address these claims further. Instead, we analyze proposed substitute claims 154–156 set forth in the Claims Appendix (Ex. 2020) to the Non-Contingent Motion to Amend.

i. Level of Ordinary Skill in the Art

Neither party puts forward a succinct definition of the level of ordinary skill in the art. Petitioner’s declarant, however, has put forward a detailed discussion of various references dated before April 2006⁴ (the date Patent Owner now alleges is the priority date) related to subject matter of the ’990 patent. *See* Ex. 1005 ¶¶ 20–74, 94–99. We have reviewed that discussion and the references cited in those paragraphs. We have found it accurately reflects the teachings of the references. Moreover, we agree with Petitioner’s declarant that the references are analogous to the claimed invention, and, as such, represent the level of skill in the relevant art at the time of the invention. *See In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (finding that the Board did not err in concluding that the level of ordinary skill was best determined by the references of record); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978) (“[T]he PTO usually must evaluate . . . the level of ordinary skill solely on the cold words of the literature.”); *see*

⁴ We accept this date as the priority date only for the sake of argument.

also Okajima v. Bourdeau, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown.’”).

ii. *Proposed Substitute Claims*

Unlike examination, entry of the proposed substitute claims in an *inter partes* review is not automatic. As the moving party, Patent Owner must establish that it is entitled to the requested relief. *See Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1304 (Fed. Cir. 2015); *see also* 37 C.F.R. § 42.20(c) (movant bears burden of showing entitlement to relief). In its motion to amend, a patent owner bears the burden to show, *inter alia*, that a reasonable number of substitute claims is proposed, there is no broadening of scope, the proposed claims are supported adequately by the written description of the application as filed originally, and the proposed claims are patentable over the prior art. *See* 37 C.F.R. § 42.121; *Idle Free Sys. Inc. v. Bergstrom, Inc.*, Case IPR2012-00027, slip op. at 5–6 (PTAB June 11, 2013) (Paper 26) (“*Idle Free*”) (informative). We address each of these requirements in turn.

a. *Reasonable Number of Substitute Claims*

A patent owner may propose a reasonable number of substitute claims for each challenged claim. 35 U.S.C. § 316(d)(1)(B). Absent special circumstances, it is presumed that only one substitute claim is needed to replace each challenged claim. 37 C.F.R. § 42.121(a)(3). This presumption may be rebutted by showing that the substitute claims are patentably distinct from each other. *Idle Free*, Paper 26, 8–9. To the extent that no patentable

distinction is shown, we may deny entry of the excess claims, or group them together for purposes of considering patentability over the prior art. *See id.* In the Motion to Amend, Patent Owner proposes adding three new claims, 154, 155, and 156, as substitutes for the three challenged claims, 11, 74, and 81, respectively. Given this one to one correspondence, we determine the number of proposed substitute claims to be reasonable.

b. No Broadening of Scope

Proposed substitute claims in an *inter partes* review “may not enlarge the scope of the claims of the patent.” 35 U.S.C. § 316(d)(3); *see* 37 C.F.R. § 42.121(a)(2)(ii). In the Motion to Amend, Patent Owner proposes claim 154 as a substitute for claim 11, claim 155 as a substitute for claim 74, and claim 156 as a substitute for claim 81. Non-Cont. Mot. to Amend 1. Patent Owner has deleted limitations from each of the challenged claims in the proposed substitute claims. *See* Ex. 2020, 1–6.

Patent Owner does not represent that the proposed substitute claims do not enlarge the scope of the challenged claims of the ’990 patent. Mot. to Amend 2–7. Instead, Patent Owner appears to argue, as discussed below, that the amended claims are at least as broad as claims 11, 74, and 81 (“the original claims”). *Id.* Indeed, it appears that the purpose of Patent Owner’s amendment is not to narrow the claims to overcome the prior art, but rather to remove any matter in the claims supported only by the disclosure added in the ’573 application, so that the claims can receive the April 5, 2006 priority date of the ’118 application. *Id.* at 2. Patent Owner also appears to seek to correct some of the claim defects we noted, but did not act on, in our Decision to Institute. *Id.* at 7–9.

Petitioner argues that Patent Owner has enlarged the scope of challenged claims. Opp. 2–5. We agree with Petitioner that Patent Owner impermissibly has attempted to broaden the scope of the challenged claims. We consider each of the substitute claims in detail below.

1. Proposed Substitute Claim 154

With respect to claim 154, Petitioner points to two changes in the claim language that it contends broaden the scope. Opp. 3. First, Petitioner points to the amendment in the claim preamble. *Id.* Second, Petitioner points to the deletion of the entire claim passage “wherein the communication device receives a signal via any of the one or more products listed in any of the plurality of product grouping categories” *Id.* We agree with Petitioner that both of these amendments impermissibly broaden the scope of claim 154.

Beginning with the claim preamble amendment, the preamble of claim 11 originally read: “A communication device of at least one of *a cell phone a smart phone a desktop, a handheld, a PDA, a laptop, or a computer terminal at a monitoring site* for monitoring products for communication therebetween, comprising....” In claim 154, the language in italics has been eliminated and replaced with “the products grouped together by common features in the product groupings category of design similarity (e.g., computer terminal, personal computer (PC))....” Patent Owner contends that this new language is consistent with words found in the disclosure of the ’118 application. Mot. to Amend 4. Patent Owner further contends that this new language is broad enough to include the removed items, such as cell phones and smart phones, because those items are “species terms” that are “included in the genus ‘monitoring equipment’ and ‘communication device’

when the clause ‘products grouped together by common features in the product groupings category of design similarity’ is included.” *Id.* Patent Owner argues that “[t]he specific devices removed, such as the cell phones and smart phones would be recognized by one of ordinary skill in the art as a type of communication device or monitoring equipment because cell phones and smartphones are devices that are capable of communication and are capable of receiving signals.” *Id.*

We agree with Petitioner and find, based on the Patent Owner’s own arguments, that these terms improperly broaden the scope of the claims. As Patent Owner explains, the added language is broad enough to include the removed items, and is intended to reflect the entire genus of “monitoring equipment” and “communications devices” that “are capable of communication and capable of receiving signals.” Mot. to Amend 4, 5. Thus, the claim has been broadened to not only include the listed species that have been removed, but anything falling within the claimed genus. Accordingly, we find that this amendment impermissibly broadens the claim.

As for the second change in the claim language, we find that Patent Owner has failed to show why removal of the entire passage “wherein, the communication device receives a signal via any of one or more products listed in any of the plurality of product grouping categories,” would not impermissibly broaden the scope of claim 154. The deletion of this limitation necessarily broadens the claim in that limitation’s aspect. *See In re Clement*, 131 F.3d 1464, 1468 (Fed. Cir. 1997) (“For example, a reissue claim that deletes a limitation or element from the patent claims is broader in that limitation’s aspect.”). Given that Patent Owner has entirely deleted this

limitation and Patent Owner bears the burden of showing entitlement to the amendment, it was incumbent on Patent Owner to explain why removing this entire passage from claim 154 would not broaden the scope of the claim. *See In re Bennett*, 766 F.2d 524, 526 (Fed. Cir. 1985) (en banc) (“[A] claim is broadened if it is broader in any respect than the original claim, even though it may be narrowed in other respects.”).

2. Proposed Substitute Claim 155

The amendment of claim 155 deletes, among other things, the claim term “embedded” from wherever it is found in claim 74. Ex. 2020, 3–4. Petitioner argues that deleting this limitation broadens the claim. Opp. 3. Patent Owner merely states that “a built-in component could be an embedded component” (Mot. to Amend 3) and “that the term (embedded) has been examined, reviewed and accepted by the patent Examiner and was found to have a genus, species relationship with the term (built-in)” (Mot. to Amend 7).

We agree with Patent Owner’s understanding that “built-in” reflects a broader genus of which “embedded” is a particular species. As we explained in the Decision to Institute, the term “built-in” generally means “constructed to form an integral part of a larger unit.” Dec. to Inst. 12 (quoting OED ONLINE (OXFORD ENGLISH DICTIONARY (3d ed. 2003)) available at <http://www.oed.com/view/Entry/24414> (accessed: Oct. 6, 2014) (Ex. 3003)). As also discussed in the Decision to Institute, the term “embedded” is alternatively defined as “to enclose closely in or as if in a matrix” and “to make something an integral part of.” Dec. to Inst. 12 (quoting MERRIAM-WEBSTER.COM, available at <http://www.merriam-webster.com/dictionary/embedded> (accessed: Aug. 24, 2015) (Ex. 3007));

see also OED ONLINE (OXFORD ENGLISH DICTIONARY (3d ed. 2003)) available at <http://www.oed.com/view/Entry/60835> (accessed: Oct. 6, 2014) (“to enclose firmly”) (Ex. 3006). Thus, the ordinary meaning would suggest that something “embedded” necessarily is “built-in,” and that something “built-in” could be, but is not necessarily, “embedded.” As such, the term “built-in” alone would imply a broader genus than “built-in embedded.” Moreover, as discussed above, the removal of a limitation implies that the claim has been broadened. *See In re Clement*, 131 F.3d at 1468; *In re Bennett*, 761 F.2d at 526. Patent Owner has not shown otherwise. Thus, we find that Patent Owner has failed to show that claim 155 is not impermissibly broadened.

3. *Proposed Substitute Claim 156*

As for proposed claim 156, there are a number of amendments, but Petitioner directs our attention to four changes to the language of the claim. First, Petitioner points to the limitation reciting “monitoring equipment.” Opp. 4. In claim 81, the limitation originally recited “monitoring equipment *located at a determinate site, comprising at least one of plurality product groups based on the categories of a computer, laptop, notebook, PC, handheld, reader, cell phone, PDA or smart phone* for the receipt and transmission of signals therebetween.” In claim 156, the italicized portion was deleted, and replaced by the limitation that the “monitoring equipment” be “of at least one of the products grouped together by common features in the product groupings category of design similarity (e.g., computer terminal, personal computer (PC)).” This amendment is nearly identical to the change to the preamble of claim 154. For the same reasons discussed above with respect to the similar amendment to the preamble of claim 154, we find that

Patent Owner has failed to demonstrate that this claim amendment would not broaden the scope of the claim 156, as compared to claim 81.

Second, Petitioner argues that the removal of the limitation “at least one cell phone tower interconnected to the monitoring equipment for sending signals thereto and receiving signals therefrom” impermissibly broadened claim 156. Opp. 4. Patent Owner provides no argument why this would not broaden the scope.

Claim 156, unlike claim 81, has no requirement of a cell phone tower that is connected to the monitoring equipment and can send and receive signals to the monitoring equipment. The elimination of an entire physical structure from the claim has broadened its scope to include systems that do not include a cell phone tower. Moreover, as discussed above, the removal of a limitation implies that the claim has been broadened. *See In re Clement*, 131 F.3d at 1468. Patent Owner has not shown otherwise. Thus, we find that Patent Owner has failed to show this amendment would not impermissibly broaden the claim.

Third, claim 156 also has been amended to remove the entire limitation that “at least one satellite or at least one cell phone tower capable of two-way signal communication between the multi sensor detection device and the monitoring equipment.” Thus, in claim 156, there is no requirement, as was the case in claim 81, that there be a cell phone tower, or any requirement that the satellite be capable of two-way communication with the monitoring equipment. This impermissibly broadens the scope. In addition, as discussed above, the removal of an entire limitation implies that the scope is broader. *See In re Clement*, 131 F.3d at 1468; *In re Bennett*, 766 F.2d at

526. Patent Owner has not shown otherwise. Thus, we agree with Petitioner that this amendment is also impermissibly broadening in scope.

Finally, Petitioner points to the deletion of the entire limitation “wherein the communication device receives a signal via any of one or more products listed in any of the plurality of product grouping categories.”

Opp. 4. This amendment is identical to an amendment made in claim 154. For the reasons discussed above with respect the same change in claim 154, we also determine that Patent Owner has failed to show that this amendment is also not broadening in scope.

4. Conclusion

In sum, the proposed amendments either replace existing claim language with new, broader claim language or delete entire limitations from claims without replacing them. For the reasons discussed above, we determine that Patent Owner has failed to show that any of the claims were not impermissibly broadened in scope. Accordingly, we find this sufficient by itself to deny the motion to amend as to claims 154–156.

c. Written Description Support

Pursuant to 37 C.F.R. § 42.121(b), Patent Owner bears the burden in the Motion to Amend to set forth “[t]he support in the original disclosure of the patent for each claim that is added or amended,” and “[t]he support in an earlier-filed disclosure for each claim for which benefit of the filing date of the earlier filed disclosure is sought.” The test for written description support is “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The purpose of the

written description requirement is to convey with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991).

Patent Owner has provided written description support only for the amendments to the claims, and has not provided written description support for the amended claims as a whole. Mot. to Amend 2–6. Without any explanation why a person of ordinary skill in the art would have recognized that the inventor possessed the claimed subject matter as a whole, we find that Patent Owner’s citation to written description support only for the added claim language is inadequate to satisfy the written description requirement for the claims overall. *See Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013) (claim is considered as an “integrated whole” when assessing written description). Accordingly, we find that Patent Owner has failed to show adequate written description support for the amended claims in their entirety, and that this defect is also sufficient to serve as a basis to deny the Motion to Amend. *See Microsoft Corp. v. Surfcaster, Inc.*, Cases IPR2013-00292, IPR2013-00293, IPR2013-00294, IPR2013-00295, slip op. at 46 (PTAB Oct. 14, 2014) (Paper 93); *Nichia Corp. v. Emcore Corp.*, Case IPR2012-00005, slip. op. at 4 (PTAB Feb. 11, 2014) (Paper 27).

d. Patentability Over the Prior Art

In a motion to amend, the patent owner bears the burden of proof to demonstrate patentability of its proposed substitute claims over the prior art, and, thus, entitlement to the claims. *Idle Free* at 7. This does not mean that the patent owner is assumed to be aware of every item of prior art known to

a person of ordinary skill in the art. *See MasterImage 3D, Inc. v. RealD, Inc.*, Case IPR2015-00040, slip op. at 2 (PTAB July 15, 2015) (Paper 42) (“*MasterImage 3D*”) (representative). The patent owner, however, should explain in its motion why the proposed substitute claims are patentable over the prior art of record, as well as prior art known to the patent owner:

A patent owner should identify specifically the feature or features added to each substitute claim, as compared to the challenged claim it replaces, and come forward with technical facts and reasoning about those feature(s), including construction of new claim terms, sufficient to persuade the Board that the proposed substitute claim is patentable over the prior art of record, and over prior art not of record but known to the patent owner. The burden is not on the petitioner to show unpatentability, but on the patent owner to show patentable distinction over the prior art of record and also prior art known to the patent owner. Some representation should be made about the specific technical disclosure of the closest prior art known to the patent owner, and not just a conclusory remark that no prior art known to the patent owner renders obvious the proposed substitute claims.

Idle Free at 7. These requirements include addressing the basic knowledge and skill set possessed by a person of ordinary skill in the art even without reliance on any particular item of prior art. *Id.* at 7–8. Prior art of record includes “any material art in the current proceeding, including art asserted in grounds on which the Board did not institute review.” *MasterImage 3D*, at 2.

The petitioner then has the opportunity, in its opposition, to argue any deficiency in the patent owner’s motion and “come forward with specific evidence and reasoning, including citation and submission of any applicable

prior art,” to rebut the patent owner’s position on patentability.

Idle Free at 8.

This case is unusual because the amendments at issue here did not add limitations to the claims, but rather, removed limitations from the claims. As we found above, the result of these amendments is that the substitute claims are not narrower, but broader than the original claims.

We instituted an *inter partes* review of claims 11, 74, and 81 of the ’990 patent because Petitioner had demonstrated a reasonable likelihood of showing that these claims were anticipated by Astrin (Ex. 1002)⁵ and Breed (Ex. 1004).⁶ Paper 16. We declined to institute on the grounds based on Mostov (Ex. 1003) because Astrin and Breed addressed all of the claims, and there was no explanation why that ground differed from the instituted grounds.⁷

In the Motion to Amend, Patent Owner states that in addition to these references, the closest “prior art of which the [Patent Owner] is aware” is U.S. Patent No. 8,564,661 to Lipton.⁸ Mot. to Amend 11–13. Patent Owner argues Lipton does not render claims 154–156 unpatentable. Mot. to Amend 11–13. Patent Owner submits that the proposed substitute claims are similar to claims that were submitted in the pending ’693 application. Non-Cont. Mot. to Amend 1–2. Patent Owner further asserts that Astrin, Mostov,

⁵ Astrin, US 2006/0250235 A1, published November 9, 2006, filed April 28, 2006.

⁶ Breed, US 7,961,094 B2, issued June 14, 2011, filed November 29, 2007.

⁷ Mostov, US 2006/0181413 A1, published Aug. 17, 2006, filed January 30, 2006.

⁸ Lipton, US 8,564,661 B2, issued October 22, 2013, priority date October 24, 2000.

and Breed were submitted to the Examiner in the '693 application and were not found to be relevant. *Id.* at 2.

We do not consider Patent Owner's arguments that the examiner of the '693 application considered Astrin, Breed, and Mostov and found them irrelevant to the patentability of the claims in the '693 application to be entitled to any weight in this proceeding for several reasons. First, the actions of an examiner in another, related case pending in the PTO are not necessarily binding upon us. *See Sze v. Block*, 458 F.2d 137, 140–41 (CCPA 1972) (*inter partes* interference not bound by prior *ex parte* examination); *Switzer v. Sockman*, 333 F.2d 935, 940–43 (CCPA 1964) (*ex parte* proceeding not binding on subsequent *inter partes* proceeding); *see also Dayco Prods. Inc. v. Total Containment Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003) (noting examiners are not bound to follow other examiners' interpretations). Thus, the mere fact that an examiner made statements in the '693 application regarding these references does not require us to follow them in this proceeding. Second, Patent Owner fails to establish that the claims at issue in this proceeding are identical to the claims in the '693 application. Thus, there is no link shown between this proceeding and the claims in the '693 application to allow us to assess accurately the relevance of that examiner's action. Finally, it is unclear precisely what feature that examiner found to be lacking from Astrin, Breed, and Mostov. Thus, Patent Owner has failed to provide adequate support for us to assess whether that examiner is correct. Accordingly, we do not find that the examiner's statements in the '693 application are sufficient to establish the patentability of the substitute claims here.

We next consider Patent Owner’s argument that Astrin, Mostov, and Breed are not prior art because the amended claims are entitled to the April 5, 2006 priority date. Mot. to Amend 2–7. Even accepting, for the sake of argument, that the substitute claims are entitled to this earlier priority date, at the very least, Mostov remains prior art under 35 U.S.C. § 102(e) because Mostov’s non-provisional filing date is January 30, 2006. Ex. 1003, at [22]. The fact that we did not institute this proceeding on Mostov does not mean it is no longer relevant to the patentability of the substitute claims. In deciding not to institute on Mostov, we did not rule on the merits of Petitioner’s case. Dec. to Inst. 28–29. We merely determined that, given the Astrin and Breed references, instituting on Mostov was not a necessary use of resources. We consider Mostov still to be relevant to the patentability of the claims. Thus, Petitioner’s arguments regarding the priority date, even if accepted, do not show patentability over Mostov, which we discuss below.

Mostov (Exhibit 1003)

Mostov is titled “Transportation Security System and Associated Methods.” Ex. 1003, at [54]. Mostov describes a security system for monitoring shipping containers by the use of Container Security Devices (CSDs) 140 within the containers. Ex. 1003, Abstract, Figs. 1–3.

Figure 22 of Mostov is reproduced below:

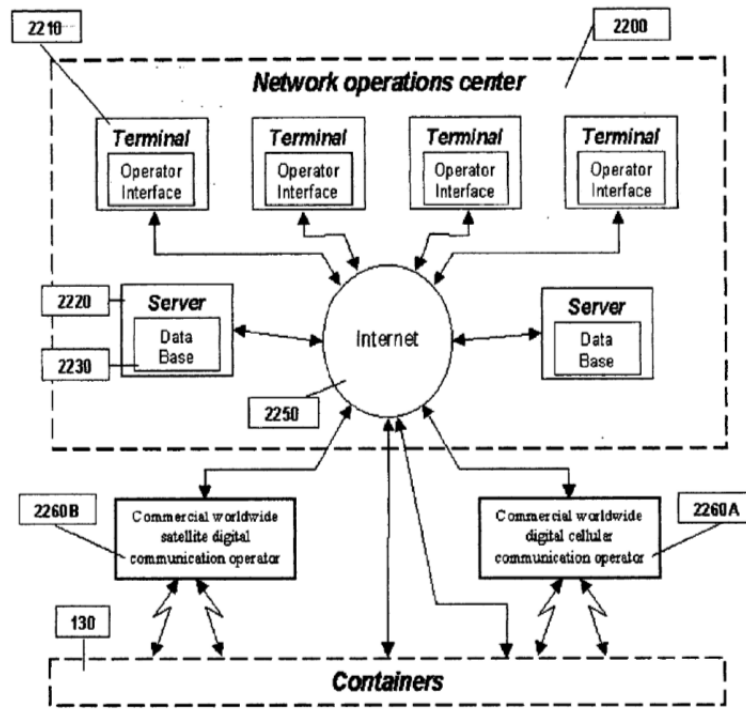


FIG. 22 NOC Structure 170

Figure 22 of Mostov is a block diagram illustrating the structure of Network Operations Center 170.

Network Operations Center (NOC) 170 (or 2200) consists of servers and computer terminals. *Id.* ¶¶ 9, 22, 28, 47, 88, 89. NOC 170 (or 2200) is interconnected to and serves to monitor containers 130 containing CSDs (not depicted). *Id.* ¶¶ 11–13. NOC 170 (or 2200) includes communication capabilities to communicate with CSDs. *Id.* ¶¶ 44, 45, 48, 93, 96, 97, 98, 102, 106, 112, 113, 117, Figs. 1, 2, 22, 23, 25. The CSDs report condition information to Network Operations Center 170 via a bridge, cellular, or satellite antenna. *Id.* ¶¶ 44, 46, 48, 112, 113. Based on the condition information received, NOC 170 (or 2200) may use the same communications channels to transmit instructions (e.g., an activate or deactivate instruction) back to CSD 140. *Id.* ¶¶ 96, 113, Fig. 24.

CSD 140 contains a number of built-in sensors for detecting various conditions (e.g., temperature, humidity, tampering, theft, breach, personal conditions, physical load, explosions, gunshots, etc.).⁹ *Id.* ¶¶ 4, 9, 11, 22, 28, 47, 61, 88, 89, 115, Figs. 3, 4, 10. CSD 140 can contain a variety of communications devices including cellular model 350A and satellite modem 350B, which CSD 140 uses to communicate with NOC 170 (or 2200). *Id.* ¶¶ 93, 112, Figs. 1, 3. Figure 3 of Mostov is reproduced below.

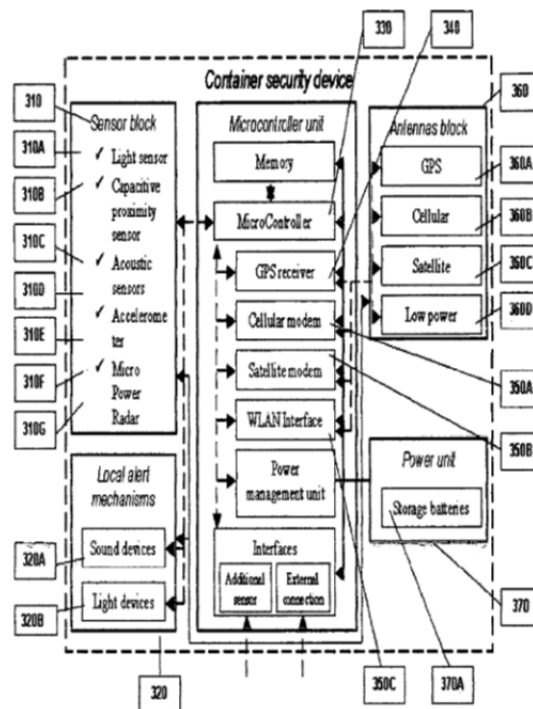


FIG.3

Figure 3 of Mostov is a block diagram of CSD 140.

⁹ To the extent that Patent Owner contends that the sensors are RFID tags (PO Resp. 46), we do not agree. As paragraphs 47 and 58 of Mostov, which were cited by Patent Owner, make clear, the RFID reader is in addition to the sensors and receives data from sources other than the sensors. See Ex. 1003 ¶¶ 47, 58.

Proposed substitute claim 154

As discussed above, Patent Owner does not contend that claim 154 has been narrowed in any way over claim 11, or that any individual claim element of claim 154 is meaningfully narrower than the corresponding claim element of claim 11. See Mot. to Amend 5–6. Mostov discloses a PC at a monitoring site (NOC 170 (or 2200)) that can communicate, via cellular or satellite connections, with containers containing CSDs 140. Ex. 1003 ¶¶ 9, 22, 28, 44, 45, 47, 48, 88, 89, 93, 96, 97, 98, 102, 106, 112, 113, 117, Figs. 1, 2, 22, 23, 25. CSDs 140 include a number of different sensors and can be activated or deactivated by NOC 170 (or 2200). See ¶¶ 4, 9, 11, 22, 28, 47, 61, 88, 89, 93, 112, 115, Figs. 1, 3, 4, 10. We have reviewed Petitioner’s evidence and arguments regarding why Mostov anticipates claim 11. Pet. 29–35; Ex. 1005 ¶¶ 95–99. We are persuaded that the evidence and citations establishes that claim 154, which is at least as broad in every element as claim 11, is anticipated by Mostov. Patent Owner presents no persuasive evidence or argument addressing why Mostov, which is prior art of record in this proceeding, does not anticipate claim 154, nor any persuasive evidence or argument addressing Petitioner’s analysis with respect to this reference. Patent Owner bears the burden of showing that claim 154 is patentable, but has failed to show that Mostov does not anticipate claim 154. Thus, we find that Patent Owner has failed to meet the burden of showing that claim 154 is patentable over Mostov.

Proposed Substitute Claim 155

As discussed above, Patent Owner does not contend that claim 155 has been narrowed in any way over claim 74, or that any individual claim element in claim 155 is meaningfully narrower than the corresponding

element in claim 74. Mot. to Amend 3–4. Indeed, as discussed above, one of Patent Owner’s amendments to claim 74 was to remove the limitation “embedded” wherever it was found in the claim. Ex. 2020, 3–4. Thus, as discussed above, Patent Owner broadened the claim to include not only those sensors that were “built-in embedded,” but also those that were merely “built-in.” *See supra* § II.C.ii.b.2. Patent Owner’s other amendments remove certain communication techniques from the claim (*see* Ex. 2020, 4), but not satellite communications, which Mostov discloses (Ex. 1003 ¶¶ 44, 46, 48, 112, 113).

Mostov discloses a multi-sensor detection system for monitoring products with a plurality of sensors including sensors built into CSDs 140 for detecting chemical agents and explosives, that CSDs may be fixed to the container, and that CSDs 140 can communicate alarms to the monitoring site, NOC 170. Ex. 1003 ¶¶ 4, 9, 11, 22, 28, 46, 47, 61, 87, 88, 89, 97, 112, 115, Fig. 3, 4, 25. We have reviewed Petitioner’s evidence and arguments regarding why Mostov anticipates claim 74. Pet. 36–38; Ex. 1005 ¶¶ 95–99. We are persuaded that the evidence and citations also establish that claim 155 is anticipated by Mostov. Patent Owner presents no persuasive evidence or argument addressing why Mostov, which is prior art of record in this proceeding, does not anticipate claim 155, nor any persuasive evidence or argument addressing Petitioner’s analysis with respect to this reference. Patent Owner bears the burden of showing that claim 155 is patentable, but has failed to show that Mostov does not anticipate claim 155. Thus, we find that Patent Owner has failed to show that claim 155 is patentable over, at the very least, Mostov.

Proposed Substitute Claim 156

As discussed above, Patent Owner does not contend that claim 156 has been narrowed in any way over claim 81, or that any individual claim element in claim 156 is meaningfully narrower than claim 81. Mot. to Amend 3–7. As described above, Mostov discloses a multi-sensor detection system for detecting explosives and other compounds, including a plurality of sensors in CSD 140, and monitoring equipment, such as PCs at the NOC. In addition, both the CSDs and NOC including satellite and other types of radio transmission, to allow internet communication between the NOC and CSD. Ex. 1005 ¶¶ 95–99; Ex. 1003 ¶¶ 9, 11, 89, 90, 101–103; Figs. 1, 3, 22. We have reviewed Petitioner’s evidence and arguments regarding why Mostov anticipates claim 81. Pet. 37–42; Ex. 1005 ¶¶ 95–99. We are persuaded that the evidence and citations establish that claim 156 is anticipated by Mostov. Patent Owner presents no persuasive evidence or argument addressing why Mostov, which is prior art of record in this proceeding, does not anticipate claim 156, nor any persuasive evidence or argument addressing Petitioner’s analysis with respect to this reference. Patent Owner bears the burden of showing that claim 156 is patentable, but has failed to show that Mostov does not anticipate claim 156. Thus, we find that Patent Owner has failed to show that claim 156 is patentable over, at the very least, Mostov.

e. Conclusion

In sum, Patent Owner has failed to show that the motion to amend to substitute claims 154–156 should be granted. Specifically, Patent Owner has failed to show that claims 154–156: (1) are not broader in scope than

claims 11, 74, and 81; (2) have written description support in the originally filed application; and (3) are patentable over the prior art of record.

III. CONCLUSION

Patent Owner has not demonstrated by a preponderance of the evidence that proposed substitute claims 154–156 are patentable over the prior art of record. Moreover, Patent Owner fails to demonstrate that the Motion to Amend complies with our requirements that the claims not be broadening in scope, and that the amended claims have written description support. Therefore, we grant Patent Owner’s Motion to Amend solely as to the non-contingent request to cancel challenged claims 11, 74, and 81 of the ’990 patent, and deny the Motion to Amend as to the proposed substitution of claims 154–156.

IV. ORDER

Accordingly, it is

ORDERED that Patent Owner’s Motion to Amend is *granted* as to the request to cancel claims 11, 74, and 81 of the ’990 patent; and

FURTHER ORDERED that Patent Owner’s Motion to Amend is *denied* as to the request to add proposed substitute claims 154–156.

Because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2014-00714
Patent RE43,990 E

For PETITIONER:

Lavanya Ratnam
lavanya.ratnam@hq.dhs.gov

Nathan Grebasch
nathan.grebasch@hq.dhs.gov

William Washington
william.washington@tsa.dhs.gov

For PATENT OWNER:

Larry Golden
atpg-tech@charter.net