

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ECOWATER SYSTEMS LLC,
Petitioner,

v.

CULLIGAN INTERNATIONAL COMPANY,
Patent Owner.

Case IPR2013-00155
Patent 8,180,489 B2

Before HOWARD B. BLANKENSHIP, KRISTEN L. DROESCH, and
JUSTIN T. ARBES, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

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

I. INTRODUCTION

EcoWater Systems LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1–6 of U.S. Patent No. 8,180,489 B2 (“the ’489 Patent”) pursuant to 35 U.S.C. §§ 311–319. On August 7, 2013, the Board instituted *inter partes* review of all claims on two grounds of unpatentability (Paper 6, “Decision”).

Following institution, Patent Owner filed a Patent Owner Response (Paper 12, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 15, “Pet. Reply”). Along with its Response, Patent Owner filed a Motion to Amend (Paper 13, “Mot. Amend”), proposing substitute claims 16 and 17 if claims 1 and 2 of the ’489 Patent are found unpatentable, and substitute claim 18 to correct a typographical error in claim 6 of the ’489 Patent. Petitioner filed an Opposition to Patent Owner’s Motion (Paper 14, “Pet. Opp.”), and Patent Owner filed a Reply to Petitioner’s Opposition (Paper 16, “PO Reply Opp.”). Neither party requested Oral Hearing (Paper 17).

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–6 of the ’489 Patent are unpatentable, and we deny Patent Owner’s Motion to Amend.

A. *The ’489 Patent (Ex. 1001)*

The ’489 Patent relates to a “communication system for a water softener system that includes a controller configured for communicating with the water softener assembly and a remote display configured for sending and receiving at least one signal to and from the controller to a remote location.” Ex. 1001, Abs.

Figure 1 of the '489 Patent is reproduced below:

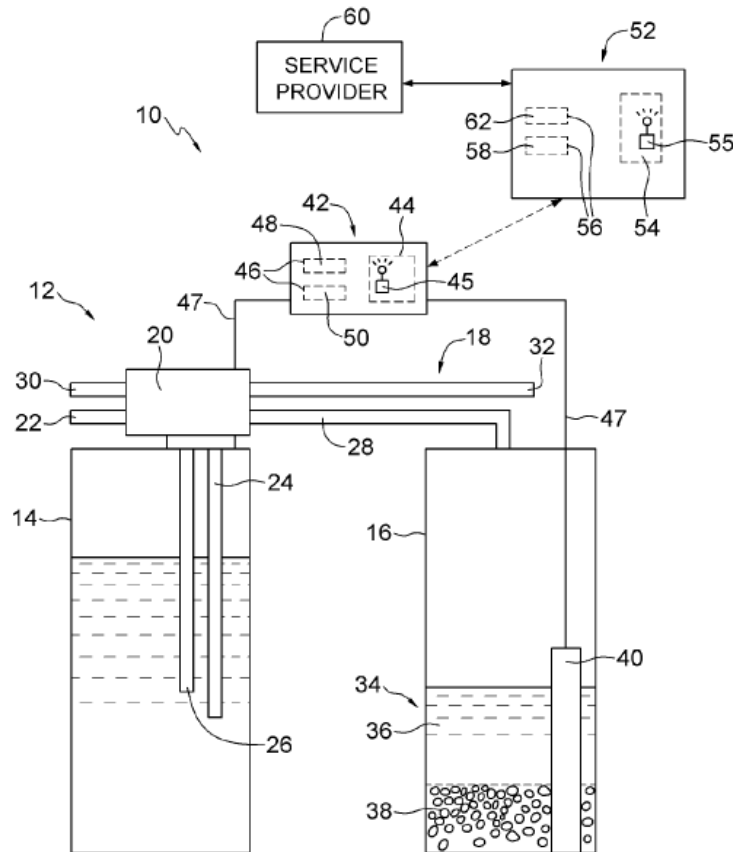


Figure 1 depicts communication system 10 and water softener assembly 12, which includes treatment tank 14 and brine tank 16 connected by piping 18. *Id.* at col. 2, ll. 46–49. Brine tank 16 is filled with brine solution 34 and includes sensor assembly 40 for measuring certain parameters, such as the amount of salt in the tank. *Id.* at col. 2, ll. 55–61. Valve assembly 20 controls the flow of water in the system. *Id.* at col. 2, ll. 49–54. Valve assembly 20 and sensor assembly 40 transmit data regarding the tanks to controller 42 via cables 47 or wireless connections. *Id.* at col. 3, ll. 10–20, 26–31. Controller 42 includes modem card 50, secondary circuit board 48, and primary circuit board 44, which includes radio transmitter 45. *Id.* at col. 3, ll. 21–26; col. 4, ll. 27–32. Controller 42 is configured for communicating with remote display 52. *Id.* at col. 3, l. 37–col. 4, l. 17. Remote display 52 enables a user to receive data at a location remote from

controller 42, and is configured for sending commands to controller 42. *Id.* at col. 3, ll. 32–34; col. 4, ll. 33–49. Remote display 52 includes minor circuit board 58, second modem card 62, and main circuit board 54, which includes radio transmitter 55. *Id.* at col. 3, ll. 34–37; col. 4, ll. 18–25. Data from water softener assembly 12 can be sent from remote display 52 to service provider network 60 by modem card 62, which translates data received from controller 42 into an email message, and sends it to service provider network 60 to display the message in a readable format. *Id.* at col. 4, ll. 18–25. Controller 42 also “optionally directly communicates with” service provider network 60 by sending a signal from primary circuit board 44 to modem 50, which connects to service provider network 60, logs in, and displays the message as an email. *Id.* at col. 4, ll. 27–32. Controller 42 and remote display 52 also are configured for automatically communicating with service provider network 60 to ensure, for example, that the system software is updated properly and has the correct time. *Id.* at col. 4, l. 50–col. 5, l. 3; col. 5, ll. 12–16.

Independent claims 1 and 3, reproduced below, are illustrative of the claims at issue (emphases added):

1. A communication system for a water softener system, comprising:
 - a water softener assembly;
 - a controller at a first location*, said controller configured for communicating with said water softener assembly;
 - a remote display at a second location*, said remote display configured for communicating with said controller and enabling a user to receive data from said controller, *wherein said first location is different from said second location*; and
 - a service provider at a third location configured for communicating with said controller or said remote display via an interne [sic] connection,

said controller or said remote display automatically transmitting a condition of said water softener assembly to the service

provider and said controller configured to download updated software from said service provider.

3. A method of communicating information about a water softener system, comprising:

- providing a water softener assembly;
- providing a controller at a first location configured for communicating with the water softener assembly;
- providing a remote display at a second location configured for communicating with said controller, said remote display enabling a user to receive data from said controller, wherein said first location is different from said second location;
- providing a service provider at a third location in communication with said controller or said remote display, said service provider enabling communication over an internet network between said controller or said remote display, and said service provider;
- automatically sending error messages on an operating condition of the water softener assembly via said internet network to said remote display;
- controlling the water softener assembly using said internet network for transmitting control commands from the remote display to the water softener assembly;
- determining whether a current software version utilized by said controller is an updated software version; and
- automatically downloading the updated software version to said controller from said service provider* when the current software version is not the updated software version.

B. Prior Art Relied Upon

1. Japan Patent Publication No. 2003-136057A, published May 13, 2003 (“Iizuka”) (Ex. 1006);¹

2. Patent Application Publication No. 2001/0010516 A1, published Aug. 2, 2001 (“Roh”) (Ex. 1003); and

¹ We refer to “Iizuka” as the English translation (Ex. 1006) of the original reference (Ex. 1002). Petitioner provided an affidavit attesting to the accuracy of the translation. *See* Ex. 1006; 37 C.F.R. § 42.63(b).

3. U.S. Patent No. 6,023,769, issued Feb. 8, 2000 (“Gonzalez”) (Ex. 1004).

C. Grounds of Unpatentability

The Board instituted *inter partes* review based on the following grounds of unpatentability:

claims 1–3, 5, and 6 under 35 U.S.C. § 103(a) over Iizuka and Roh; and claim 4 under 35 U.S.C. § 103(a) over Iizuka, Roh, and Gonzalez.

II. ANALYSIS

A. Claim Construction

Consistent with the statute and legislative history of the America Invents Act (AIA), Pub. L. No. 112-29, § 6(a), 125 Stat. 284, 299–305 (2011), the Board interprets claims using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The Office must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification. *Id.* (citing *In re Bass*, 314 F.3d 575, 577 (Fed. Cir. 2002)). 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). The “ordinary and customary meaning” is that which the term would have to a person of ordinary skill in the art in question. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). “Although an inventor is indeed free to define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

To act as its own lexicographer, a patentee must “clearly set forth a definition of the disputed claim term” other than its plain and ordinary meaning. It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must “clearly express an intent” to redefine the term.

Thorner v. Sony Computer Ent. Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citations omitted).

1. “*Said First Location Is Different From Said Second Location*”

Claim 1 recites “a controller at a first location,” “a remote display at a second location,” and “wherein said first location is different from said second location.” Claim 3 recites the same limitations in the context of the recited method. Neither Patent Owner nor Petitioner proposes an explicit claim construction for the phrase “said first location is different from said second location.”

Nonetheless, Patent Owner implicitly construes “said first location is different from said second location” such that it excludes a first element (i.e., controller) that “is located at or near” a second element (i.e., remote display). PO Resp. 10–11 (“The control center 33 . . . is located at or near the water softening equipment 10 and management device 31 Thus, the water softening equipment 10, the management device 31 and the control center 33 of Iizuka are at the same location.”). In other words, Patent Owner construes “said first location is different from said second location” to require the elements to be located at an unspecified distance away from one another, and to exclude elements located in close proximity.

Turning to the ’489 Patent Specification, we do not identify a reasonably clear, deliberate, and precise definition for “said first location is different from said second location.” Instead, the ’489 Patent discloses, for example, the following:

(1) “a remote display configured for sending and receiving at least one signal to and from the controller to a remote location”; and (2) “[t]he . . . system [] enables both wireless and wired communication between [] softener 12 and [] remote display 52 provided in a separate location in the user’s house.” Ex. 1001, Abs.; col. 2, ll. 20–22; col. 5, ll. 4–7. We decline to read the ’489 Patent disclosure of a “remote location” and “separate location in the user’s house” into the claims. See *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

Therefore, we resort to the ordinary and customary meaning of the terms “different” and “location,” in order to construe the phrase “said first location is different from said second location.” The ordinary and customary meaning of “different” is: “unlike in form, quality, amount, or nature; dissimilar.” AMERICAN HERITAGE® DICTIONARY OF THE ENGLISH LANGUAGE (5th ed. 2011) (Ex. 3002). The ordinary and customary meaning of “location” is: “a place where something is or could be located; a site.” AMERICAN HERITAGE® DICTIONARY OF THE ENGLISH LANGUAGE (5th ed. 2011) (Ex. 3003). Accordingly, the ordinary and customary meaning for “said first location is different from said second location” is “the first site dissimilar from the second site.” The ordinary and customary meaning is consistent with the Specification. See Ex. 1001, Fig. 1 (depicting the first site of controller 42 dissimilar from the second site of remote display 52). The ordinary and customary meaning of “the first site dissimilar from the second site” does not limit the proximity of the first site relative to the second site, or prohibit the first and second sites from being “near” one another, as Patent Owner contends.

2. “Automatically”

Claim 1 recites “said controller or said remote display automatically transmitting a condition of said water softener assembly to the service provider.”

Patent Owner and Petitioner do not propose an explicit claim construction for “automatically,” as recited in claim 1. Patent Owner implicitly construes the term “automatically” in this context as excluding intermediate or extra steps. PO Resp. 12 (“Iizuka . . . stat[es] that the maintenance company 36 receives a notice like a letter with the information needed Sending such a request, notice or letter is an intermediate or extra step that is not automatically performed by the control center.”); see PO Resp. 13–15.

Turning to the ’489 Patent Specification, we do not identify a reasonably clear, deliberate, and precise definition for “automatically” in the context of automatically transmitting data. For example, the ’489 Patent provides the following disclosure related to transmitting data from the controller or remote display to the service provider:

[t]he present communication system 10 also enables the data to be sent from the water softener assembly 12 to a service provider network 60. Specifically, the minor circuit board 58 [of remote display 52] includes a second modem card 62, which translates the data received from the controller 42 into an email message, sends it to the service provider via telephone and logs into the service provider network 60 to display the message in readable format. Accordingly, if the softener 12 is malfunctioning, the service provider is alerted to the error and schedules an appointment for servicing the softener. The controller 42 also optionally directly communicates with the service provider network 60 by sending a signal from the primary circuit board 44 to the modem 50, which connects to the service provider network 60, logs in and displays the message as an email.

Ex. 1001, col. 4, ll. 18–32. Notably, in the context of transmitting data from remote display 52 to service provider network 60, the ’489 Patent discloses the following intermediate steps: translating data into an email message, sending the email message, and logging into service provider network 60 to display the message. Similarly, in the context of transmitting data from controller 42 to service provider network 60, the ’489 Patent discloses the intermediate step of

logging in to service provider network 60 and displaying the message.

Accordingly, Patent Owner's implicit construction of "automatically" as excluding intermediate or extra steps, contradicts the '489 Patent Specification, which discloses intermediate steps in transmitting data from remote display 52 or controller 42 to service provider network 60.

Rather than adopting Patent Owner's incorrect and contradictory implicit construction for "automatically," we adopt the ordinary and customary meaning of "automatically." The dictionary definition for "automatic" is "acting or operating in a manner essentially independent of external influence or control." AMERICAN HERITAGE® DICTIONARY OF THE ENGLISH LANGUAGE (5th ed. 2011) (Ex. 3004). Accordingly, the ordinary and customary meaning for the adverb "automatically," is "independent of external influence or control." The ordinary and customary meaning for "automatically" is consistent with the '489 Patent Specification. *See, e.g.*, Ex. 1001, col. 2, ll. 23–34; col. 4, ll. 18–32.

Independent claim 3 also utilizes the term "automatically" in the recitation "automatically downloading the updated software version to said controller from said service provider." Patent Owner and Petitioner do not propose an explicit claim construction for "automatically," as recited in claim 3. Patent Owner implicitly construes the term "automatically" in this context, such that it excludes downloading by a user. PO Resp. 17 ("[I]n Roh, the manual and/or the operating program of the refrigerator are downloaded by the user and not automatically by the microcomputer 30.").

Turning to the '489 Patent Specification, we do not identify a reasonably clear, deliberate, and precise definition for "automatically" in the context of downloading updated software. For example, the '489 Patent provides the following disclosure related to downloading updated software:

The present communication system is also configured for automatically communicating with the service provider to ensure that the system is properly updated. Specifically, the controller 42 can communicate with the service provider by modem communication initiated by either the controller or the remote display 52, as described above, and log itself into the service provider's network 60. While on the network 60, it can be determined whether . . . the current controller includes the most updated software version for the softener assembly 12. . . . [I]f the controller 42 does not have updated software, it can be downloaded from the network 60 via a TCP/IP protocol 64 provided in the minor circuit board 58 and sent to the controller 42 as described above.

Ex. 1001, col. 4, l. 50–col. 5, l. 3.

We adopt again the ordinary and customary meaning for “automatically,” relying upon the same dictionary definition for “automatic.” As previously discussed, the ordinary and customary meaning of “automatically” is “independent of external influence or control.” The ordinary and customary meaning of “automatically” in the context of downloading updated software is consistent with the '489 Patent Specification. *See e.g.*, Ex. 1001, col. 4, l. 50–col. 5, l. 5.

3. Other Terms

In the Decision on Institution, we interpreted various other claim terms of the '489 Patent as follows:

Term	Interpretation
“interne connection” (claim 1)	a connection over the Internet
“internet network” (claims 3 and 5) and “interne network” (claim 6)	a network that is part of the Internet

Decision 7–9. Neither party disputes these interpretations, and we incorporate our previous analysis for purposes of this Decision.

B. 35 U.S.C. § 325(d)

Patent Owner argues that the Petition was improper under 35 U.S.C. § 325(d) because Roh (Ex. 1003) is cumulative to references already cited and considered by the Examiner during examination of the application issuing as the '489 Patent (i.e., the same or substantially the same prior art). PO Resp. 5–6, 8. In particular, Patent Owner argues that Roh (Ex. 1003) is cumulative to Navarro (U.S. Pat. No. 6,657,546 B2, Ex. 1017), which was cited and considered by the Examiner during prosecution of U.S. Patent Application No. 12/238,786 (“the '786 Application”), which issued as the '489 Patent. PO Resp. 5–6, 8.

Section 325(d) states the following: “[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.”

We are not persuaded by Patent Owner’s arguments that the Petition was improper under 35 U.S.C. § 325(d). Section 325(d) provides the Office with discretion to reject a petition because the same or substantially the same prior art previously was presented to the Office; there is no requirement that a petition must be rejected for this reason.

In addition to the Director’s discretion to reject, or not reject, a petition for *inter partes* review, we also are persuaded (Pet. Reply 2–4) that the teachings of Roh are not substantially the same as, or cumulative to, Navarro. Specifically, we agree with Petitioner that Patent Owner’s chart (PO Resp. 6–7), which compares the teachings of Roh and Navarro, identifies where Roh discloses “downloading updated software,” but fails to identify any disclosure in Navarro directed to “downloading updated software.” Pet. Reply 3–4.

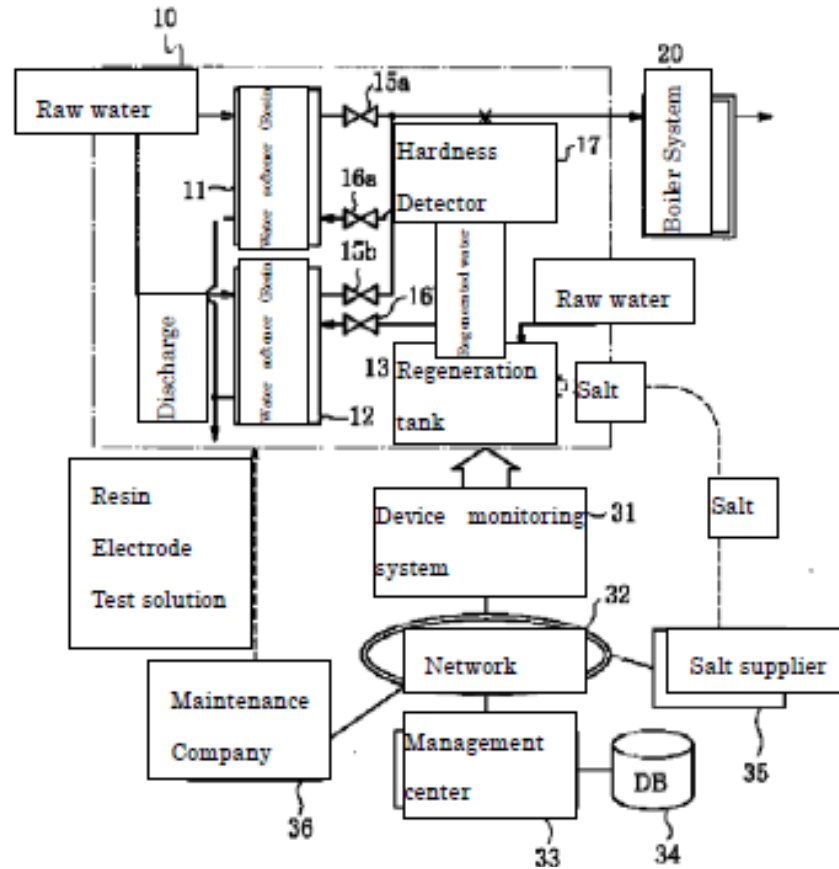
For all of these reasons, we are not persuaded that the Petition should be rejected under 35 U.S.C. § 325(d).

C. Obviousness of Claims 1–6

With respect to the assertions of unpatentability of claims 1–6, we have reviewed the Petition, Patent Owner Response, and Petitioner’s Reply, as well as the evidence discussed in each of those papers. We are persuaded by a preponderance of the evidence that claims 1–3, 5, and 6 are unpatentable under 35 U.S.C. § 103(a) over Iizuka and Roh, and claim 4 is unpatentable under 35 U.S.C. § 103(a) over Iizuka, Roh, and Gonzalez. *See* Pet. 18–52.

1. Iizuka (Ex. 1006)

Iizuka discloses a water softening device and “management center for supporting working of the water softener by monitoring the operating state of the water softener through a given communication cable.” Ex. 1006, 3, paragraph entitled “Solution.” Figure 1 of Iizuka is reproduced below:



As shown in Figure 1, the system comprises two water softening elements (resin towers) 11, 12 for alternating use, regeneration tank 13 for storing salt water, water level sensor 13c (not shown in Figure 1) in regeneration tank 13, hardness detector 17 for detecting the hardness of the processed water, and various valves 15, 16.

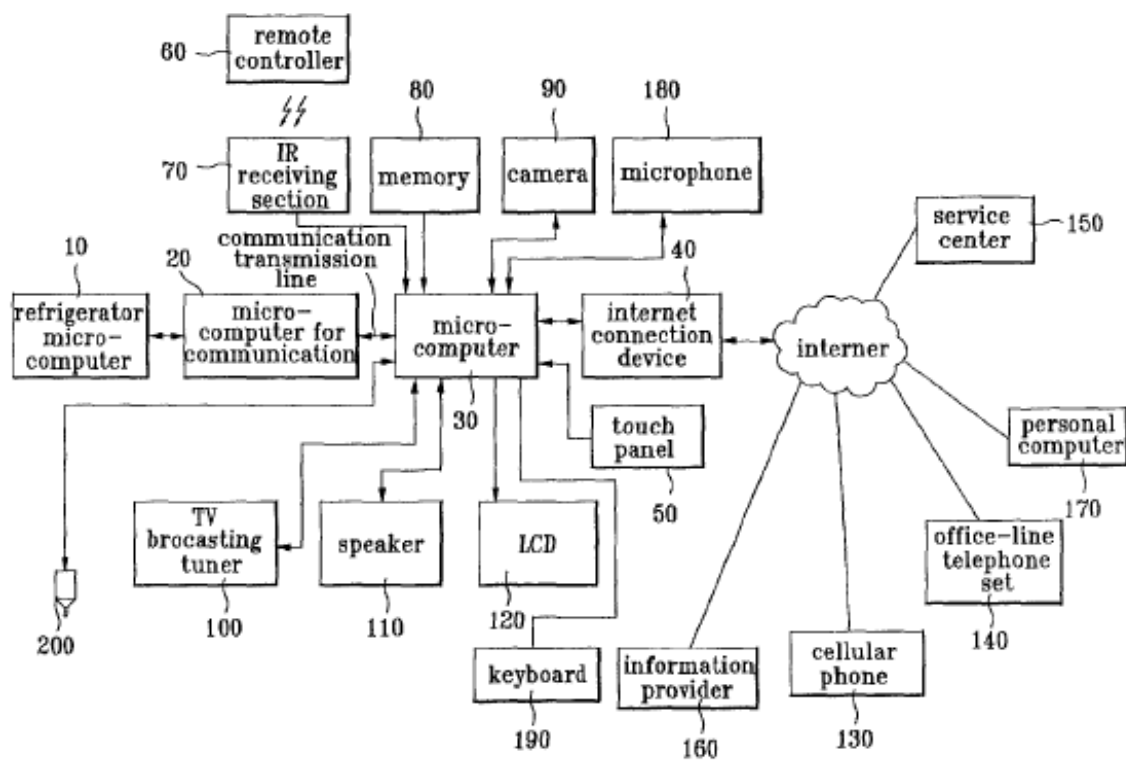
Id. ¶¶ 11–15. Device monitoring system 31, which is “attached to the installation site of the water softener equipment 10,” monitors the operating condition of the various parts of the system and provides data regarding those conditions (e.g., operational status, water level, salt level) to management center 33 over network 32. *Id.* ¶¶ 16, 17, 20, 21, 28, 29. Specifically, device monitoring system 31 is “provided with an information-communication terminal (not shown), such as a portable telephone terminal, to access the control center 33 via the above-mentioned network 32 through packet telecommunication, etc.” *Id.* ¶ 17. When it is determined that additional salt is needed, management center 33 notifies salt

supplier 35 through network 32. *Id.* ¶¶ 21, 24, 25; Fig. 4, steps S12–S14. When it is determined that maintenance is needed, management center 33 notifies maintenance company 36. *Id.* ¶¶ 28, 31, 32; Fig. 4, step S32.

2. Roh (Ex. 1003)

Roh discloses an “Internet refrigerator” having “a modem for performing a data communication with remote communication devices through the Internet.”

Ex. 1003, Abs. Figure 1 of Roh is reproduced below:



As shown in Figure 1 above, the Internet refrigerator in Roh includes main microcomputer 30 and Internet connection device 40 for communicating with various devices over the Internet, such as cellular phone 130, personal computer 170, and service center 150. *Id.* ¶¶ 37, 41. Various types of information are exchanged between the Internet refrigerator and external devices, such as “the operation state of the refrigerator” and “information for externally controlling the operation of the refrigerator.” *Id.* ¶¶ 39–40. Roh further discloses that because

“the refrigerator can be connected to the Internet, it can obtain the updated manual information or operating program downloaded from the Internet by the user or through a periodic Internet connection by a predetermined program. Accordingly, the software of the refrigerator can be upgraded.” *Id.* ¶ 69.

3. Claims 1 and 2

Patent Owner does not dispute that Iizuka and Roh teach the majority of limitations of claim 1. Patent Owner argues that Iizuka and Roh fail to teach or suggest the following limitations of claim 1: (a) “a controller at a first location . . . a remote display at a second location . . . wherein said first location is different from said second location”; and (b) “said controller or said remote display automatically transmitting a condition of said water softener assembly to the service provider.” PO Resp. 8–15.

a. *“Said First Location Is Different From Said Second Location”*

Claim 1 recites “a controller at a first location,” “a remote display at a second location,” and “wherein said first location is different from said second location.” In regard to the aforementioned limitations, Petitioner makes the following assertions: (1) “a controller at a first location” is taught by Iizuka’s device monitoring system 31 attached to the installation site of the water softener equipment 10; and (2) “a remote display at a second location,” and “wherein said first location is different from said second location,” are taught by “[m]anagement center 33[, which is] apparently at another or second location and communicates with [] device monitoring system 31.” Pet. 20 (citing Ex. 1006 ¶ 16; Fig. 1); see Pet. Reply 5–7. Petitioner further asserts Iizuka discloses device monitoring system 31 provides information related to the condition of water softener equipment 10 through network 32 to management center 33. *Id.*

Patent Owner contends that Iizuka's "control center 33 (i.e., [management center]) is located at or near the water softening equipment 10 and management device 31 [i.e., device monitoring system 31] for closely supervising the operating status of the water softeners." PO Resp. 10 (citing Ex. 1006 ¶¶ 27, 28; Fig. 1). On this basis, Patent Owner contends that Iizuka's water softening equipment 10, device monitoring system 31, and management center 33 are at the same location, not that the latter two devices are at different locations, as required by claim 1. PO Resp. 10–11.

Patent Owner's arguments are premised on a misplaced construction of "said first location is different from said second location" that excludes a first location near a second location. As previously discussed in Section II.A.1, the ordinary and customary meaning for "said first location is different from said second location" is "the first site dissimilar from the second site." The ordinary and customary meaning does not limit the relative proximity of the first site to the second site. Consistent with Petitioner's contentions (*see* Pet. 20; Pet. Reply 7) and Iizuka's disclosure (Ex. 1006 ¶ 16; Fig. 1), Iizuka describes device monitoring system 31 at a first site, management center 33 at a second site, and where the first site is dissimilar from the second site, because Iizuka discloses: (1) the use of network 32 for communication between device monitoring system 31 and management center 33; and (2) Figure 1, reproduced above, depicting network 32 at a site between first device monitoring system 31 site and second management center 33 site. Further, Iizuka discloses that "management device 31 is provided with an information-communication terminal (not shown), such as a *portable* telephone terminal, to access the control center 33 via the above-mentioned network 32 through *packet telecommunication*, etc." Ex. 1006 ¶ 17 (emphasis added). Thus, we are not persuaded by Patent Owner's arguments. We are persuaded by a preponderance of the evidence that Iizuka teaches a controller at a first location, a remote display at a

second location, and where said first location (i.e., site) is different (i.e., dissimilar) from said second location (i.e., site).

*b. Controller or Remote Display Automatically Transmitting
Condition to Service Provider*

Claim 1 further recites “said controller or said remote display automatically transmitting a condition of said water softener assembly to the service provider.”

Petitioner asserts that Iizuka’s management center 33 automatically transmits a condition of water softening equipment 10 to maintenance company 36 and salt distribution company 35. Pet. 21 (citing Ex. 1006, Figs 1, 3, 4; ¶¶ 19, 21, 28); see Pet. Reply 8–9.

Patent Owner asserts that Iizuka describes management center 33 as performing the following functions: (1) notifying or sending a request to salt distribution company 35 to supply salt when the salt levels are low; and (2) contacting maintenance company 36, which receives a notice, like a letter, with information needed to exchange an ion electrode. PO Resp. 11–12 (citing Ex. 1006 ¶¶ 21, 28, 31, 32). Patent Owner asserts that sending such a request, notice, or letter is an intermediate or extra step that is not “automatically” performed by control center 33. PO Resp. 12.

Patent Owner’s arguments are premised on an incorrect construction of “automatically” that excludes intermediate or extra steps. As previously discussed in Section II.A.2, the ordinary and customary meaning for “automatically” is “independent of external influence or control.” Consistent with Petitioner’s contentions (see Pet. 21; Pet. Reply 8–9), Iizuka describes management center 33 transmitting, essentially independent of external influence or control, a condition of water softening equipment 10 to maintenance company 36 and salt distribution company 35, because Iizuka discloses that management center 33 notifies salt supplier 35 when salt is needed (Ex. 1006 ¶¶ 21, 24, 25; Fig. 4, steps S12–S14).

For example, Iizuka discloses that management center 33 “send[s] notification about salt delivery to the side of water softening equipment 10 *when* delivery of salt is indicated.” Ex. 1006 ¶ 21 (emphasis added). Iizuka also discloses that management center 33 notifies maintenance company 36 when maintenance is needed. *Id.* ¶¶ 28, 31, 32; Fig. 4, step S32. Specifically, “*when* deterioration in the detection characteristics of said ion electrode is detected[, management center 33] generates an order for electrode replacement to a maintenance company 36.” *Id.* ¶ 31 (emphasis added). Patent Owner acknowledges that Iizuka’s management center 33 notifies or sends a request to salt distribution company 35 to supply salt, and contacts maintenance company 36, providing information for exchanging the ion electrode. PO Resp. 11–12 (citing Ex. 1006 ¶¶ 21, 28, 31, 32). However, Patent Owner does not assert that any external influence or control is exercised over Iizuka’s management center 33, when management center 33 contacts salt supplier 35 and maintenance company 36. Accordingly, we are not persuaded by Patent Owner’s arguments. We are persuaded by a preponderance of the evidence that Iizuka teaches the controller or the remote display automatically transmits a condition of the water softener assembly to the service provider.

Because we are persuaded by a preponderance of the evidence that Iizuka teaches “said controller or said remote display automatically transmitting a condition of said water softener assembly to the service provider,” we need not address Patent Owner’s arguments (PO Resp. 13–15) that Roh does not disclose these limitations.

c. Additional Limitations of Claims 1 and 2

Petitioner correctly points out that Patent Owner presents arguments addressing limitations that are not recited in claim 1, but are recited in proposed substitute claim 16 of Patent Owner’s Motion to Amend. Pet. Reply 7–8, 10, 12.

Patent Owner's arguments are directed to the following limitations allegedly recited in claim 1 (emphases added): (1) "said controller or said remote display automatically transmitting a condition of said water softener assembly *directly* to the service provider" (PO Resp. 11–13, 15); and (2) "said controller configured to *automatically* download updated software from said service provider" (PO Resp. 16–18). These limitations can be found in proposed substitute claim 16 in Patent Owner's Motion to Amend, not in claim 1. *Compare* Ex. 1001, claim 1, with Mot. Amend 2. We consider only the arguments for proposed substitute claim 16 that are presented in Patent Owner's Motion, which we address below in Section II.D.

Based on our review of the record and the parties' arguments, we are persuaded that Petitioner has established by a preponderance of the evidence that claims 1 and 2 are unpatentable under U.S.C. § 103(a) over Iizuka and Roh.

4. Claims 3, 5, and 6

Patent Owner argues that because one or more limitations of independent claim 3 are the same as, or similar to, claim 1, Iizuka and Roh fail to disclose or suggest the subject matter of independent claim 3 for the same reasons as claim 1. PO Resp. 18–20. However, claim 3 differs from claim 1 because claim 3 recites "*automatically* downloading the updated software version to said controller from said service provider" (emphasis added), whereas claim 1 recites "said controller configured to download updated software from said service provider." *Compare* Ex. 1001, claim 1, with Ex. 1001, claim 3. In other words, claim 3 includes the adverb "automatically" to modify "downloading," while claim 1 does not. Although not argued directly by Patent Owner, we consider Patent Owner's arguments in the Response directed to the "automatically download updated software" limitation of proposed substitute claim 16 to be applicable to the "automatically downloading the updated software" recitation in claim 3.

Petitioner relies on Roh, not Iizuka, as teaching “automatically downloading the updated software version to the controller from the service provider.” Pet. 36–37, 47. Specifically, Petitioner relies on the following disclosure in Roh to teach this limitation: “since the refrigerator can be connected to the Internet, it can obtain the updated manual information or operating program downloaded from the Internet . . . through a periodic Internet connection by a predetermined program. Accordingly the software of the refrigerator can be upgraded.” *Id.* (quoting Ex. 1003 ¶ 69). Petitioner further contends that Roh’s disclosure that the downloading may be through a periodic Internet connection by a predetermined program suggests that the downloading is done automatically. Pet. Reply 13; *see also* Pet. 37, 47 (asserting that “periodic” suggests “automatically”).

Patent Owner asserts that in Roh, the operating program of the refrigerator is downloaded by the user, and not automatically by microcomputer 30. PO Resp. 17 (citing Ex. 1003 ¶ 69). Patent Owner further contends that even if microcomputer 30 ultimately stores the operating program, the user must first download the operating program. *Id.* at 17 (citing Ex. 1003 ¶¶ 61, 69). We agree with Petitioner that Patent Owner’s arguments focus on one disclosed option for downloading the updated operating program—by the user—while discounting the disclosure of the alternative option—through a “periodic Internet connection by a predetermined program.” Pet. Reply 13 (citing Ex. 1003 ¶ 69).

Additionally, Patent Owner acknowledges that Roh discloses the option of downloading the operating program through a periodic Internet connection by a predetermined program, but argues that this still requires the user to establish an Internet connection before the predetermined program downloads the operating program. PO Resp. 17 (citing Ex. 1003 ¶ 69). We are not persuaded by Patent Owner’s additional argument that because a user must first establish the Internet connection before the update can be downloaded, this disclosure in Roh does not

teach “automatically downloading the updated software version to the controller from the service provider.” The plain language of claim 3 does not require automatically connecting to the Internet. Similarly, the plain language of claim 3 does not preclude a user (i.e., an outside influence or control) from establishing the Internet connection. In claim 3, the adverb “automatically” immediately precedes “downloading” and therefore modifies the term “downloading.” When accounting for the ordinary and customary meaning of “automatically,” as discussed previously in Section II.A.2, claim 3 requires downloading, without external influence or control, the updated software version to the controller from the service provider. We are persuaded by a preponderance of the evidence that Roh’s disclosure of a refrigerator that obtains an updated operating program downloaded from the Internet through a periodic Internet connection by a predetermined program, teaches downloading, without external influence or control, the updated software version to the controller from the service provider, as required by claim 3.

Patent Owner does not present arguments separately addressing the limitations of claims 5 and 6, which depend from claim 3. Based on our review of the record and the parties’ arguments, we are persuaded that Petitioner has shown by a preponderance of the evidence that claims 3, 5, and 6 are unpatentable under U.S.C. § 103(a) over Iizuka and Roh.

5. Claim 4

Claim 4 depends from claim 3. We instituted *inter partes* review of claim 4 as unpatentable under 35 U.S.C. § 103(a) over Iizuka, Roh, and Gonzalez. Patent Owner contends that Iizuka and Roh fail to disclose or suggest the subject matter of claim 3. PO Resp. 20. Patent Owner does not address the additional limitations of claim 4, and does not cite the teachings of Gonzalez to address further the limitations of claims 1 and 3, already discussed by Patent Owner with respect to

Iizuka and Roh. PO Resp. 20–21; *see also* PO Resp. 8–20 (addressing the alleged deficiencies of Iizuka and Roh with respect to the limitations of claims 1 and 3).

Based on our review of the record and the parties’ arguments regarding claim 4, we are persuaded that Petitioner has established by a preponderance of the evidence that claim 4 is unpatentable under U.S.C. § 103(a) over Iizuka, Roh, and Gonzalez.

D. Motion to Amend

Patent Owner’s Motion to Amend requests, in the event that claims 1 and 2 are found unpatentable, to replace claims 1, 2, and 6 of the ’489 Patent with proposed substitute claims 16–18. Mot. Amend 1. An *inter partes* review is neither a patent examination proceeding nor a patent reexamination proceeding. The proposed substitute claims, in a motion to amend, are not entered automatically and then subjected to examination. Rather, the proposed substitute claims will be added directly to the patent, without examination, if the motion to amend the claims is granted. A patent owner bears the burden of proof in demonstrating the patentability of the proposed substitute claims, and thus, entitlement to add the proposed substitute claims to its patent. *See* 37 C.F.R. § 42.20(c).

1. Proposed Substitute Claim 16

Patent Owner proposes substitute independent claim 16, reproduced below (with underlining indicating additions and strikethrough indicating deletions), to replace claim 1 of the ’489 Patent. Mot. Amend 1–2.

16. A communication system for a water softener system, comprising:
 - a water softener assembly;
 - a controller at a first location, said controller configured for communicating with said water softener assembly;
 - a remote display at a second location, said remote display configured for communicating with said controller and enabling a user

to receive data from said controller, wherein said first location is different from said second location; and

a service provider at a third location configured for communicating with said controller or said remote display via an internet~~interne~~ connection,

said controller or said remote display automatically transmitting a condition of said water softener assembly directly to the service provider and said controller configured to automatically download updated software from said service provider.

2. Written Description Support

Patent Owner has the burden to set forth written description support in the original disclosure for each proposed substitute claim. 37 C.F.R. § 42.121(b)(1). The written description test is whether the original disclosure of the application relied upon reasonably conveys to a person of ordinary skill in the art that the inventor had possession of the claimed subject matter as of the filing date. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

To demonstrate written description support, Patent Owner references the '489 Patent, asserting that the Specification of the '786 Application, which issued as the '489 Patent, was not amended during examination, and that the Specification and drawings of the '489 Patent are the same as the original Specification and drawings. Mot. Amend 6. Patent Owner reproduces proposed substitute claims 16–18 and provides citations to the '489 Patent in parentheses following each recitation in the proposed substitute claims. Mot. Amend 6–8. Patent Owner proffers no more than the parenthetical citations to the '489 Patent Specification. *Id.*

For proposed substitute claim 16's recitation of "said controller configured to automatically download updated software from said service provider," Patent Owner parenthetically cites to column 4, lines 50–52, and column 4, line 56–

column 5, line 3 of the '489 Patent. Mot. Amend 7; *see* PO Reply Opp. 2–3. The aforementioned portions of the '489 Patent provide the following disclosures:

The present communication system is also configured for automatically communicating with the service provider to ensure that the system is properly updated. . . . While on the network 60, it can be determined whether the time on the controller 42 is consistent with the current time on the network, ensuring proper operation, and whether the current controller includes the most updated software version for the softener assembly 12. If the time of day on the controller 42 is not consistent with that of the service provider network, the minor circuit board 58 downloads the updated time and communicates the current time to the controller 42 through the secondary and primary circuit boards 48, 44, respectively, either via radio transmitter or modem communication, as described above. Similarly, if the controller 42 does not have updated software, it can be downloaded from the network 60 via a TCP/IP protocol 64 provided in the minor circuit board 58 and sent to the controller 42 as described above.

Ex. 1001, col. 4, ll. 50–52, col. 4, l. 56–col. 5, l. 3. We agree with Petitioner's observation that "automatically" in the context of downloading updated software does not appear in the '489 Patent Specification as originally filed.² Pet. Opp. 5. We further agree with Petitioner that the '489 Patent Specification, and the passage relied upon by Patent Owner, only discloses automatically "communicating." Pet. Opp. 5–7. Patent Owner does not provide an explanation to address the omission of "automatically download[ing]" updated software in the '489 Patent Specification, or explain in any way why the specific step of automatic downloading is supported by mere communication. Mot. Amend 7; PO Reply Opp. 2–3. We recognize that the proposed substitute claims need not be described

² During prosecution of the '786 Application that issued as the '489 Patent, "automatically downloading the updated software" was added to independent claim 11 in an amendment filed July 30, 2011. Ex. 1009, 5. Claim 11 ultimately issued as independent claim 3 of the '489 Patent.

“*in haec verba*” in the original disclosure in order to satisfy the written description requirement. However, under the circumstances, mere citation to the original disclosure, without *any* explanation as to why a person of ordinary skill in the art would have recognized that the inventor possessed the claimed subject matter as a whole, including automatic downloading, is inadequate to satisfy the written description requirement. We conclude that Patent Owner has not met its burden to show written description support for proposed substitute claim 16 in the original disclosure.

Similarly, for proposed substitute claim 16’s recitation of “said controller or said remote display automatically transmitting a condition of said water softener assembly directly to the service provider,” Patent Owner parenthetically cites column 2, lines 23–27, and column 4, lines 50–56 of the ’489 Patent. Mot. Amend 7. Column 2, lines 23–27 of the ’489 Patent (Ex. 1001) provide the following disclosure: “[a]nother embodiment of the present communication system includes a water softener assembly and a controller configured for communicating with the water softener assembly and a service provider for automatically transmitting a condition of the water softener system to the service provider.” Column 4, lines 50–56 of the ’489 Patent provide the following disclosure:

The present communication system is also configured for automatically communicating with the service provider to ensure that the system is properly updated. Specifically, the controller 42 can communicate with the service provider by modem communication initiated by either the controller or the remote display 52, as described above, and log itself into the service provider’s network 60.

The portions of the ’489 Patent cited by Patent Owner, and reproduced above, do not disclose a controller or remote display transmitting a water softener assembly condition “directly” to the service provider. The aforementioned cited portions of

the '489 Patent do not include the term “directly” in the context of transmitting. Similarly, Patent Owner does not address the omission of “directly,” in the context of transmitting, in the cited portions of the '489 Patent Specification, and does not proffer any explanation as to how the original disclosure of the '786 Application reasonably conveys to a person of ordinary skill in the art that the inventor had possession of the claimed subject matter. Mot. Amend 7; PO Reply Opp. 2.

For the foregoing reasons, Patent Owner's Motion to Amend fails to set forth sufficient written description support for proposed substitute independent claim 16, as well as proposed substitute claim 17, which depends from claim 16, as required by 37 C.F.R. § 42.121(b)(1).

As to proposed substitute claim 18, which would substitute for claim 6, Patent Owner only cites alleged support in the '489 Patent Specification for the limitation recited in claim 6. Mot. Amend 7–8. As written, however, proposed substitute claim 18 depends from claim 3. Patent Owner does not identify support in the original disclosure for proposed substitute claim 18 *as a whole* (i.e., including all of the limitations of claim 3), as required by 37 C.F.R. § 42.121(b)(1). Patent Owner, therefore, has not made a sufficient showing that its proposed substitute claim 18, as a whole, has written description support in the original disclosure.

3. Patentability of Substitute Claims 16–18 Over the Prior Art

A motion to amend the claims is not comparable to rebutting a rejection in an Office Action, as though this proceeding is a patent examination or a reexamination. “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.” *Idle Free Sys., Inc. v. Bergstrom, Inc.*, IPR2012-00027, Paper 26 at 7 (June 11, 2013).

In its Motion to Amend, Patent Owner focuses solely on Iizuka and Roh, asserting that these references are considered to be the closest prior art to the subject matter of the '489 Patent claims. Mot. Amend 8; *see* PO Reply Opp. 3–4. Patent Owner asserts that proposed substitute claims 16–18 are patentable, because Iizuka and Roh fail to disclose or suggest the following limitations of claim 16: (1) a “controller or . . . remote display automatically transmitting a condition of said water softener assembly directly to the service provider”; and (2) a “controller configured to automatically download updated software from said service provider.” Mot. Amend 9–11 (emphases omitted); *see* PO Reply Opp. 3–5. Patent Owner does not present arguments in its Motion to Amend that address the patentability of claims 16–18 based on the addition of the word “directly” in proposed substitute claim 16. *See* Mot. Amend 9–11. Patent Owner’s arguments for patentability of the proposed substitute claims mirror those made for the existing claims, and we disagree for all of the reasons stated above.

Furthermore, despite Patent Owner’s assertion that a person of ordinary skill is skilled in the art of communication systems for a water softener system (Mot. Amend 8–9), Patent Owner fails to assert that automatically downloading updated software, as taught by Iizuka and Roh for the reasons stated above, would have been beyond the knowledge, skill, and ordinary creativity of one with ordinary skill in the art.

Here, Patent Owner’s limiting its patentability arguments to the references relied upon in the instituted grounds of unpatentability, without meaningfully discussing the knowledge, skill, and ordinary creativity of one with ordinary skill in the art, is insufficient to demonstrate that the proposed substitute claims are patentable over the prior art. Accordingly, Patent Owner has not, in its Motion to Amend, demonstrated the patentability of the proposed substitute claims over the prior art.

For all of the foregoing reasons, Patent Owner has not, in its Motion to Amend, demonstrated that it is entitled to add proposed substitute claims 16–18 to the '489 Patent.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that (1) claims 1–3, 5, and 6 are unpatentable under 35 U.S.C. § 103(a) over Iizuka and Roh; and (2) claim 4 is unpatentable under 35 U.S.C. § 103(a) over Iizuka, Roh, and Gonzalez. Patent Owner has not shown that it is entitled to add proposed substitute claims 16–18 to the '489 Patent.

IV. ORDER

In consideration of the foregoing, it is
ORDERED that claims 1–6 of the '489 Patent are unpatentable;
FURTHER ORDERED that Patent Owner's Motion to Amend is *denied*;
and

FURTHER ORDERED that because this is a final decision, 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.

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