

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

IRON OAK TECHNOLOGIES, LLC,
Patent Owner.

IPR2019-00106
Patent 5,699,275

Before SALLY C. MEDLEY, PATRICK R. SCANLON, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining the Challenged Claim Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Microsoft Corporation (“Petitioner”) filed a Petition for *inter partes* review of claim 1 of U.S. Patent No. 5,699,275 (Ex. 1001, “the ’275 patent”). Paper 1 (“Pet.”). Iron Oak Technologies, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). Upon consideration of the Petition and Preliminary Response, we instituted *inter partes* review, pursuant to 35 U.S.C. § 314, as to claim 1 based on all challenges set forth in the Petition. Paper 7 (“Decision to Institute” or “Dec.”).

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 12, “PO Resp.”), Petitioner filed a Reply to Patent Owner’s Response (Paper 13, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 14, “Sur-reply”). On November 4, 2019, we held an oral hearing. A transcript of the hearing has been entered into the record. Paper 20 (“Tr.”).

In our Scheduling Order, we notified the parties that “any arguments for patentability not raised in the [Patent Owner] response may be deemed waived.” See Paper 8, 5; see also Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012) (“The patent owner response . . . should identify all the involved claims that are believed to be patentable and state the basis for that belief.”). In addition, “[a]rguments must not be incorporated by reference from one document into another document.” 37 C.F.R. § 42.6(a)(3) (2018). In violation of our rule and guidance, Patent Owner argues in its Patent Owner Response: “Patent Owner incorporates herein those arguments presented in its Preliminary Response for all purposes.” PO Resp. 1. We decline to consider whatever Patent Owner considers is “incorporated” from its Preliminary Response as if it were a part

of Patent Owner's Response, but only consider arguments substantively presented in Patent Owner's Response. Any arguments for patentability not raised in the Patent Owner Response are deemed waived.

For the reasons that follow, we conclude that Petitioner has proven by a preponderance of the evidence that claim 1 of the '275 patent is unpatentable.

A. Related Matters

The parties indicate that the '275 patent is the subject of several stayed court proceedings. Pet. 3–4; Paper 3, 2–3; Paper 9, 3–4. The '275 patent also is the subject of Board proceedings IPR2018-01552 and IPR2018-01553. A Final Written Decision is made in each of IPR2018-01552 and IPR2018-01553 concurrently with this Final Written Decision. In IPR2019-00110, Google LLC filed a motion to join IPR2018-01552, which we granted. *See Google LLC v. Iron Oak Techs., LLC*, IPR2019-00110, Paper 11 (PTAB Apr. 3, 2019). In IPR2019-00111, Google LLC filed a motion to join IPR2018-01553, which we granted. *See Google LLC v. Iron Oak Techs., LLC*, IPR2019-00111, Paper 10 (PTAB Apr. 3, 2019).

B. The '275 Patent

The Specification of the '275 patent describes a system “for remote patching or updating of operating code located in a mobile unit.” Ex. 1001, code (57). The system includes a manager host operable to initiate transmission of a discrete patch message to a mobile unit. *Id.* The mobile unit is operable to create patched operating code by merging the patch with the current operating code and to switch execution to the patched operating

code. *Id.* The mobile unit also can receive a download message defining new operating code to replace current operating code. *Id.*

C. Illustrative Claim

Petitioner challenges claim 1 of the '275 patent. Claim 1 is reproduced below.

1. A system for remote patching of operating code located in a mobile unit, comprising:

a manager host operable to initiate transmission through a wireless communication network of at least one discrete patch message defining at least one patch;

a first mobile unit operable to receive the at least one discrete patch message, the first mobile unit further operable to create patched operating code by merging the at least one patch with current operating code located in the first mobile unit and to switch execution to the patched operating code; and

a second mobile unit operable to receive the at least one discrete patch message, the second mobile unit further operable to create patched operating code by merging the at least one patch with current operating code located in the second mobile unit and to switch execution to the patched operating code; and

wherein the manager host is further operable to address the at least one discrete patch message such that the at least one discrete patch message is transmitted to the first mobile unit but not to the second mobile unit.

Id. at 13:32–53.

D. Instituted Grounds of Unpatentability

We instituted trial based on all asserted grounds of unpatentability under 35 U.S.C.¹ as follows (Dec. 4, 24):

Claim Challenged	35 U.S.C. §	Reference(s)
1	102	Sugita ²
1	103	Sugita
1	103	Sugita, Burson ³
1	103	Sugita, Kirouac, ⁴ with or without Burson
1	103	Sugita, Ballard, ⁵ with or without Burson and Kirouac

II. ANALYSIS

A. Principles of Law

To prevail in its challenge to Patent Owner’s claim, Petitioner must demonstrate by a preponderance of the evidence⁶ that the claim is

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the ’275 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

² JP Published Patent Application No. 1993-128022, published May 25, 1993 (Ex. 1005, “Sugita”).

³ U.S. Patent No. 5,550,895, issued Aug. 27, 1996 (Ex. 1008, “Burson”).

⁴ U.S. Patent No. 5,155,847, issued Oct. 13, 1992 (Ex. 1007, “Kirouac”).

⁵ Australian Patent Application No. 77395/91, published May 12, 1991 (Ex. 1006, “Ballard”).

⁶ The burden of showing something by a preponderance of the evidence simply requires the trier of fact to believe that the existence of a fact is more probable than its nonexistence before the trier of fact may find in favor of the party who carries the burden. *Concrete Pipe & Prods. of Cal., Inc. v. Constr. Laborers Pension Tr. for S. Cal.*, 508 U.S. 602, 622 (1993).

unpatentable. 35 U.S.C. § 316(e) (2012); 37 C.F.R. § 42.1(d). To establish anticipation, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *See Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). Although the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsissimis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *accord In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

B. Level of Ordinary Skill

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). Petitioner relies on the testimony of Dr. Steve R. White, who testifies that a person with ordinary skill in the art “would have a Bachelor’s degree in computer engineering, computer science, electrical engineering, physics, or a similar discipline.” Pet. 8–9 (citing Ex. 1003 ¶ 32). Dr. White further testifies that the “person would also have at least two years of relevant experience including, for example, work related to device software development and computer or telecommunications networking.” Ex. 1003 ¶ 32. Patent Owner does not propose an alternative assessment. *See generally* PO Resp.

We adopt Dr. White’s assessment of a person with ordinary skill in the art as it is consistent with the ’275 patent and the asserted prior art. We

further note that the prior art of record in the instant proceeding reflects the appropriate level of ordinary skill in the art. *Cf. Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (holding the Board may omit specific findings as to the level of ordinary skill in the art “where the prior art itself reflects an appropriate level and a need for testimony is not shown”).

C. Claim Construction

The '275 patent is expired. Ex. 1001; Pet. 13. For claims of an expired patent, our claim interpretation is similar to that of a district court. *See In re Rambus, Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). In particular, for claims of an expired patent, the Board construes claims to generally have their ordinary and customary meaning, as that meaning would be understood by one of ordinary skill in the art in the context of the entire patent disclosure. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Petitioner, recognizing that the '275 patent is expired, contends that the claims should be construed consistent with the principles set forth in *Phillips*. Pet. 13. Patent Owner does not contend otherwise. *See* PO Resp.

Petitioner proposes constructions for the following claim terms found in claim 1: “mobile unit,” “current operating code,” “manager host operable to initiate transmission through a wireless [communication] network of at least one discrete patch message defining at least one patch,” “merging the at least one patch with current operating code,” and “manager host is further operable to address the at least one discrete patch message.” Pet. 13–19.

In our Decision to Institute, we adopted Petitioner’s proposed claim construction for “merging the at least one patch with current operating code” to mean “incorporating the at least one patch into the current operating code,

without replacing the entire current operating code.” Dec. 5. Neither party has indicated that our interpretation was improper and we do not perceive any reason or evidence that now compels any deviation from our initial interpretation. Accordingly, “merging the at least one patch with current operating code” means “incorporating the at least one patch into the current operating code, without replacing the entire current operating code.”

“second mobile unit” and the “wherein” limitation

Claim 1 recites that the “manager host is further operable to address the at least one discrete patch message such that the at least one discrete patch message is transmitted to the first mobile unit but not to the second mobile unit,” (the “wherein limitation”). In our Decision to Institute, we adopted Petitioner’s claim construction and interpreted “manager host is further operable to address the at least one discrete patch message” as “manager host is further operable to decide which specific mobile unit to send the at least one discrete patch message to before beginning transmission” of the message. Dec. 5–6. Neither party has indicated that our interpretation was improper and we do not perceive any reason or evidence that now compels any deviation from our initial interpretation. *See generally* PO Resp. and Pet. Reply.

Patent Owner, however, argues that the wherein limitation, and claim 1 in general, implicates a narrow construction having temporal restrictions. *See* PO Resp. 4–7; Sur-reply 2–10; Tr. 4:17–25, 9:22–24. Patent Owner argues that the “second mobile unit of claim 1 must be in a condition that its current operating code **could** be updated by the patch message sent to the first mobile unit” and that a “mobile unit whose operating code has been updated by **the patch message** cannot be a ‘second mobile unit.’” PO Resp.

6 (emphasis in original); *see also* Sur-reply 6 (“a Mobile Unit that has created ‘patched operating code’ by incorporating the ‘at least one patch’ into the current operating code cannot be the ‘Second Mobile Unit’ required by Claim 1”). Patent Owner further argues, “*at the time of transmission of the patch message by the manager host* both mobile units must be operable to create patched operating code from current operating code.” PO Resp. 7 (emphasis added).

Patent Owner does not direct us to evidence, such as the prosecution history or specification of the ’275 patent, to support its contentions. In particular, Patent Owner does not direct us to evidence to support reading claim 1 to include that *at the time of transmission* of the patch message by the manager host both mobile units must be operable to create patched operating code from current operating code. The claim language does not specify when the mobile units must be “operable to create patched operating code” from current operating code, only that they are “operable to” do so. Ex. 1001, 13:37–49.

Moreover, we disagree that a second mobile unit that has already created patched operating code from the at least one patch message cannot meet the “second mobile unit” limitation as Patent Owner argues. PO Resp. 6; Sur-reply 6. We note that claim 14, which depends directly from claim 1, recites “wherein the manager host is further operable to address the at least one discrete patch message such that the *at least one discrete patch message is transmitted* to the first mobile unit and *to the second mobile unit.*” Ex. 1001, 14:22–26 (emphasis added). Accordingly, the full scope of claim 1 encompasses that the at least one patch message is transmitted to the second mobile unit. There is nothing in claim 1 that excludes a second mobile unit

that has already created patched operating code from the at least one patch message from meeting the claim 1 wherein limitation. A second mobile unit that is capable of creating patched operating code in some circumstances still satisfies the claim. Claim 1 is an apparatus claim, not a method claim. “[A] prior art reference may anticipate or render obvious an apparatus claim—depending on the claim language—if the reference discloses an apparatus that is reasonably capable of operating so as to meet the claim limitations, even if it does not meet the claim limitations in all modes of operation.”

ParkerVision, Inc. v. Qualcomm Inc., 903 F.3d 1354, 1361 (Fed. Cir. 2018).

We agree with Petitioner that mobile devices “that have already created patched operating code via the system of Sugita are demonstrably ‘operable’ to do so precisely because they have already created patched operating code.” Pet. Reply 7 (emphasis in original). A mobile unit that has created patched operating code is clearly operable to do so, because it has created the patched operating code. Again, there are no timing requirements for the *apparatus* claim 1 as Patent Owner argues.

Accordingly, as in our Decision to Institute, we construe “manager host is further operable to address the at least one discrete patch message” to mean that the “[manager host is further operable to] decide which specific mobile unit to send [the at least one discrete patch message] to before beginning transmission” of the message. *See* Dec. 6.

For purposes of this decision, we need not expressly construe any other claim term at this time. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”); *see also Nidec Motor Corp. v. Zhongshan Broad*

Ocean Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs.* in the context of an *inter partes* review).

D. Asserted Anticipation of Claim 1 over Sugita

Petitioner contends claim 1 is unpatentable under 35 U.S.C. § 102(a) and (b) as anticipated by Sugita. Pet. 20, 27–47. In support of its showing, Petitioner relies upon the declaration of Dr. White. *Id.* (citing Ex. 1003).

1. Sugita

Sugita describes a method for updating software within multiple mobile communication terminals using a wireless circuit. Ex. 1005 ¶ 1.⁷ In particular, Sugita describes that a

base station side (sending side) transmits the update information (all or part of the software) to each mobile communications terminal, with transmission at first performed based on the group ID of the group unit (all units, or the unit addresses belonging to a specific group), then the number of terminals in the group unit that complete the update in one round of transmission is investigated, and if the remaining number of units has decreased, the individual ID is used to perform updates of each unit one at a time.

Id. ¶ 13.

Figure 1 of Sugita is reproduced below.⁸

⁷ Exhibit 1005 includes a certified English translation of Sugita and a declaration from a translator attesting to the accuracy of the translation.

⁸ Figure 1 reproduced below is an accurate depiction from the translated version of Sugita that is in the record. Ex. 1005, 7.

[Figure 1]

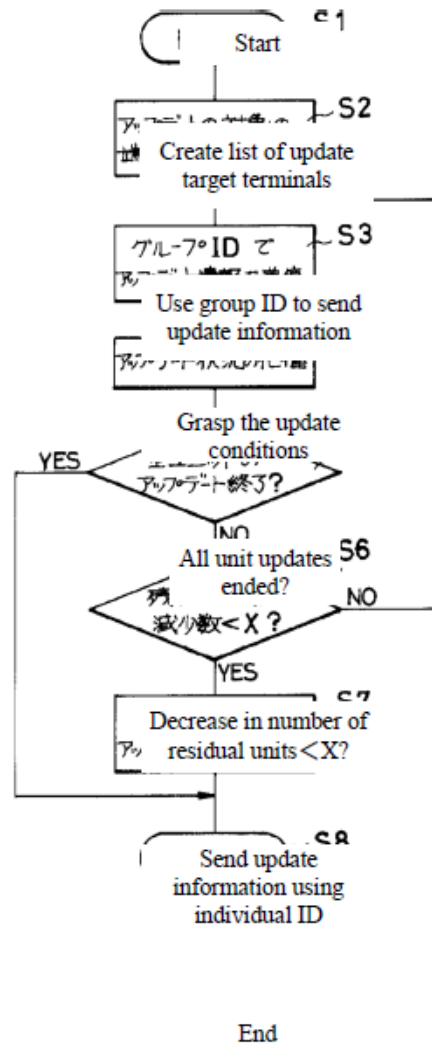


Figure 1 of Sugita shows the transmission process completed with the multiple mobile units. As seen in Sugita's Figure 1, when the update process starts, there is a list of targeted mobile units for updating. *Id.* ¶ 34. Once the targeted terminals are listed, their group ID is used in order to send the targeted terminals the update. *Id.* ¶¶ 35–37. If there are terminals that did not receive the update, then those terminals' individual IDs are used to send the update information to the individual terminals. *Id.* ¶¶ 38–39.

Figure 2 of Sugita is reproduced below.

[Figure 2]

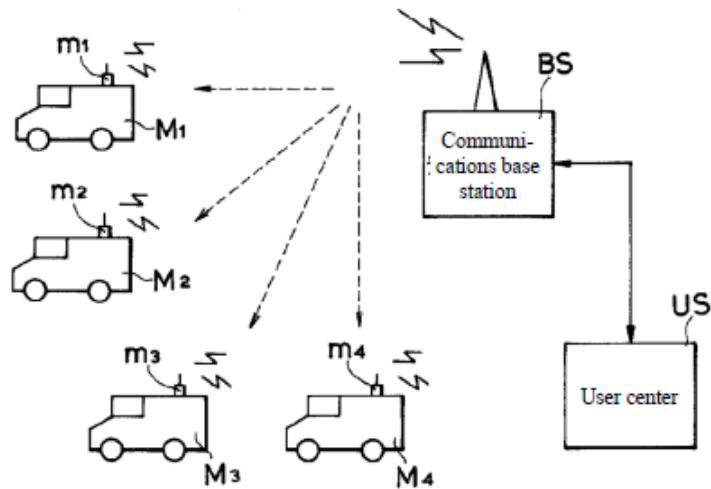


Figure 2 discloses a communication system with multiple communication terminals communicating with a base station. *Id.* ¶ 19. Sugita explains that “updates of software for said mobile communications terminals m1, m2, m3, m4, ... are performed by using wireless circuit with base station BS.” *Id.* ¶ 20.

2. Discussion

The preamble of claim 1 recites “a system for remote patching of operating code located in a mobile unit.”⁹ Petitioner contends, and we are persuaded, that Sugita describes a system with multiple mobile communication terminals m1, m2, m3, m4 (“mobile unit”) containing software that is updated wirelessly from a communication base station (BS). Pet. 27–28 (citing Ex. 1005 ¶¶ 12–13, 17, 19–20, 24–25, 46, Figs. 2, 3; Ex. 1003 ¶¶ 78–79). Petitioner further explains that each mobile terminal, in Sugita, stores software in RAM 15 and ROM 14, which are located within

⁹ We need not resolve the issue of whether the preamble is limiting because, regardless of whether the preamble is limiting, Petitioner shows that Sugita meets the preamble.

each mobile terminal. *Id.* at 28 (citing Ex. 1005 ¶¶ 24–25, 46; Ex. 1003 ¶ 79). Petitioner asserts, and we agree, that a person having ordinary skill in the art would have understood that the software in ROM 14 and RAM 15 has corresponding software code which is the “operating code” of the mobile terminal and that any software updates to program code stored on Sugita’s RAM alters the “operating code.” *Id.* at 29 (citing Ex. 1005 ¶¶ 13, 25; Ex. 1003 ¶ 80). Petitioner further establishes, by a preponderance of the evidence, that a person having ordinary skill in the art would have understood that alteration of software code operable on a processor is “patching,” and that Sugita’s description of replacement of “part of the software” using update information alters part of the stored “operating code,” and thus, meets the “patching of operating code” limitation. *Id.* at 29–30 (citing Ex. 1001, 2:9–13, 9:16–56, 46; Ex. 1005 ¶¶ 13, 35; Ex. 1003 ¶¶ 81–82 (citing Ex. 1011, 293)).

Claim 1 further recites “a manager host operable to initiate transmission through a wireless communication network of at least one discrete patch message defining at least one patch.” Petitioner contends, and we are persuaded, that Sugita’s base station, capable of transmitting software update information through a wireless network, meets the “manager host” limitation. *Id.* at 31 (citing Ex. 1005 ¶¶ 13, 20, Fig. 2; Ex. 1003 ¶ 85). Petitioner explains, and we agree, that the base station is operable to initiate transmission of software updates because Sugita describes that the base station creates a list of update target terminals containing the mobile terminals that require software updates and that the base station sends the update to those mobile terminals on the list using wireless channels. *Id.* (citing Ex. 1005 ¶¶ 8, 13, 34–36, Fig. 1; Ex. 1003 ¶ 85). We find that Sugita

discloses that the update information is divided into multiple packets (at least one discrete patch message) before transmission to the terminals. *Id.* (citing Ex. 1005 ¶¶ 35, 45; Ex. 1003 ¶ 86). Petitioner further explains, and we are persuaded, Sugita describes the claimed “initiates a transmission” in two ways. *Id.* at 32–35 (citing multiple paragraphs from Ex. 1005; Ex. 1003 ¶¶ 87–91). Petitioner shows, and we find, that base station (manager host) initiates transmission of update packets to mobile terminals using a group ID. *Id.* (citing Ex. 1005 ¶¶ 13, 26, 35, 39, 42; Ex. 1003 ¶¶ 87–88). Petitioner further contends, and we find, that Sugita teaches how the base station (manager host) can also initiate transmission by using individual IDs associated with each mobile unit. *Id.* at 34–35 (citing Ex. 1005 ¶¶ 13, 28, 37–39, 42; Ex. 1003 ¶¶ 90–91).

Patent Owner does not dispute Petitioner’s showing with respect to Sugita meeting the claim elements discussed above. *See generally* PO Resp.

Claim 1 further recites “a first mobile unit operable to receive the at least one discrete patch message” and “a second mobile unit operable to receive the at least one discrete patch message.” Petitioner addresses these limitations together. *Id.* at 35. Notwithstanding Patent Owner’s arguments regarding the “second mobile unit” in connection with the wherein limitation discussed below, we determine that Petitioner has shown by a preponderance of the evidence that Sugita describes a “first mobile unit” and a “second mobile unit” as follows.

Petitioner explains, and we agree, that Sugita describes a first and a second mobile unit m1 and m2, for example, of Sugita Figure 2. Petitioner contends, and we are persuaded, that each mobile terminal has an individual ID (e.g., m1 for “first mobile unit” and m2 for “second mobile unit”) or a

unique group ID, and that the base station addresses update information using the unique identifiers (individual or group ID) to send update information to specific mobile terminals. *Id.* at 36 (citing Ex. 1005 ¶¶ 13, 26–27). Petitioner shows, and we find, that Sugita discloses that each mobile terminal uses a transceiver to receive wireless communications from the base station, which wirelessly transmits update information to the mobile terminals using multiple packets (“at least one discrete patch message”) that is used to update the mobile terminal’s software. *Id.* at 36–37 (citing Ex. 1005 ¶¶ 21–23, 25, 35, 43–45, Fig. 3; Ex. 1003 ¶¶ 96–97). We further agree with Petitioner that each of Sugita’s mobile terminals necessarily is battery-powered and capable of use while in motion. *Id.* at 37 (citing Ex. 1005 ¶¶ 4, 19; Ex. 1003 ¶ 98; Ex. 1009, 9:27–29, 10:54–60, 12:43–45).

Claim 1 further recites that the first mobile unit (and second mobile unit) are “operable to create patched operating code by merging the at least one patch with current operating code located” in the first (and second) mobile unit. Petitioner explains, and we find, that Sugita discloses each mobile terminal executes a software program installed in its memory and that such software is “current operating code.” *Id.* at 38–39 (citing Ex. 1005 ¶¶ 25, 46; Ex. 1003 ¶ 113). Petitioner shows, and we agree, that each mobile terminal temporarily stores update information in RAM before using it and that the update information can replace part of the software in the mobile terminal. *Id.* at 39 (citing Ex. 1005 ¶¶ 25, 35, 46; Ex. 1003 ¶ 114).

Petitioner explains, and we are persuaded, that once reception of the update information is completed, the update information is combined with the mobile terminal’s software (“merging the at least one patch with the current operating code”). *Id.* (citing Ex. 1005 ¶ 46). We agree with Petitioner that

the update information only contains “part of the software,” and that a person having ordinary skill in the art would have understood Sugita’s implementation of the update information not to be a full replacement of the software. *Id.* (citing Ex. 1003 ¶ 114). Petitioner contends, and we agree, that the entire update is moved to the program area at step S14 of Figure 6 and that once in the program area, the mobile terminal uses the updated software, which is the “patched operating code”. *Id.* at 40–41 (citing Ex. 1005 ¶¶ 46–47; Ex. 1003 ¶¶ 117–118).

Claim 1 requires that the first and second mobile units must be operable to “switch execution to the patched operating code.” Petitioner explains, and we find, that Sugita discloses creating and copying update information from two areas within a single RAM and that the update information is copied from the area where it is temporarily stored in the RAM to the area where the program operates, and that the updated program information would be the code that is executed. *Id.* at 42–43 (citing Ex. 1005 ¶¶ 13, 46–47; Ex. 1003 ¶¶ 130–131).

Claim 1 further recites the wherein limitation, namely “wherein the manager host is further operable to address the at least one discrete patch message such that the at least one discrete patch message is transmitted to the first mobile unit but not to the second mobile unit.” Petitioner argues that Sugita discloses this limitation in two ways. In the first way, Petitioner contends that Sugita discloses that the base station (manager host) initially addresses update information to multiple mobile terminals using a group ID. *Id.* at 44 (citing Ex. 1005 ¶ 35; Ex. 1003 ¶ 150). Petitioner further contends that the base station (manager host) transmits update packets based on an update target list using a group ID. *Id.* at 44 (citing Ex. 1005 ¶ 35).

Petitioner argues that a person of ordinary skill in the art would have understood that Sugita's disclosure of multiple "group units" means that some mobile terminals belong to different groups. *Id.* at 44 (citing Ex. 1005 ¶¶ 15, 26, 49; Ex. 1003 ¶ 151). Petitioner further contends that Sugita's base station sends update information addressed to a first group unit containing a first mobile unit, but that does not include a second mobile unit (e.g., transmitted to a first mobile unit, but not to the second mobile unit). *Id.* at 44–45 (citing Ex. 1005 ¶¶ 13, 15, 26, 34–35, 49; Ex. 1003 ¶¶ 150–152).

Patent Owner argues that Petitioner has failed to show that the first way, i.e., Sugita's group unit embodiment, meets the wherein limitation. PO Resp. 7–15. Patent Owner argues that Sugita discloses only transmitting a patch message to all mobile terminals that are capable of being updated and that a group update is sent by the base station to all mobile terminals. *Id.* We are not persuaded by such arguments, because they are not based on record evidence.

We give substantial weight to Dr. White's testimony that "update information sent to the one or more mobile terminals using the group ID for the first group unit would not be meant for the one or more mobile terminals in the second group unit" such that "update information transmitted to the first group ID is '*transmitted to the first mobile unit but not to the second mobile unit.*'" Ex. 1003 ¶ 151 (emphasis in original). His testimony is supported by record evidence. Ex. 1005 ¶ 13. A portion of paragraph 13 of Sugita is reproduced as follows:

[T]he base station side (sending side) transmits the update information (all or part of the software) to each mobile communications terminals, *with transmission at first performed based on the group ID of the group unit (all units, or the unit*

addresses belonging to a specific group), then the number of terminals in the group unit that complete the update in one round of transmission is investigated, and if the remaining number of units has decreased, the individual ID is used to perform updates of each unit one at a time. With this action, highly efficient updates can be performed.

Id. (emphasis added). Sugita describes sending update information to each of the mobile communication terminals by first transmitting based on the group ID of each group unit. *Id.* The transmitting of the update information “at first” is addressed to all units or to units belonging to a specific group.

Id. We agree with Petitioner’s position, which is supported by Dr. White’s testimony, that terminals in a specified group receive the update, while those terminals that are not in the specified group do not receive the update. Pet. 44–45 (citing at least Ex. 1003 ¶ 151). Patent Owner’s attorney argument that the same Sugita description makes clear that Sugita forwards the update information to all mobile terminals (*see, e.g.*, PO Resp. 14¹⁰) does not rebut sufficiently Petitioner’s showing, which we determine is supported by the preponderance of the evidence. Ex. 1003 ¶ 151; Ex. 1005 ¶ 13.

For similar reasons, we are not persuaded by Patent Owner’s argument that to the extent Sugita describes not sending update information to a mobile communication terminal, Petitioner fails to show that such an “excluded” terminal was operable to update current operating software with the update information, as required by claim 1. PO Resp. 15; Sur-reply 10. We agree with Petitioner that Sugita describes that each mobile unit in the

¹⁰ Patent Owner cites to, and discusses, a translated version of Sugita that is not of record in this proceeding, but in IPR2018-01552 (Ex. 1005). PO Resp. 14. Our analysis relies on the translated version of Sugita that is of record in this proceeding.

system has the same ability to create patched operating code from the patch and its own current operating code. Pet. Reply 8 (citing Ex. 1005 ¶¶ 43, 46); *see also* Pet. 38–42. And as explained above, the transmitting of the update information “at first” is addressed to all units *or to units belonging to a specific group*. *Id.* Terminals in a specified group receive the update, while those terminals that are not in the specified group do not receive the update, such as those terminals belonging to a different group that does not receive the update in the first round transmission. Pet. Reply 9–11; Pet. 44–45 (citing at least Ex. 1003 ¶ 151). Patent Owner’s apparent assertion that in Sugita the base station sends the message to all of the mobile units, at the same time, is in contrast to what Sugita actually describes. Ex. 1005 ¶¶ 4, 9–13. For all of the above reasons, Petitioner has shown by a preponderance of the evidence that Sugita’s group ID embodiment meets the wherein limitation.

In the second way that Petitioner alleges Sugita discloses the wherein limitation, Petitioner relies on Sugita’s use of individual IDs for updating individual terminals. Pet. 45–47 (citing Ex. 1005 ¶¶ 28, 36–39, 41, Fig. 1; Ex. 1003 ¶¶ 153–157). Petitioner contends that the base station decides which mobile terminals need software updates and begins transmission without receiving a request to do so. *Id.* at 46 (citing Ex. 1005 ¶¶ 37, 38, 42; Ex. 1003 ¶ 155). Petitioner further contends that in the case where a mobile terminal did not successfully receive the update information using the group ID, the base station would then transmit packets addressed only to that mobile terminal. *Id.* Petitioner explains that by using individual IDs, Sugita’s base station can transmit packets with the update information to certain mobile terminals and not others and thus the message is transmitted

to a first mobile unit but not to a second mobile unit. *Id.* at 47 (citing Ex. 1005 ¶¶ 28, 39; Ex. 1003 ¶ 156).

Patent Owner argues, with respect to Sugita’s individual ID description, that Petitioner does not carry its burden to show that the manager host is operable to “decide” which specific mobile unit to send the patch message to when relying on Sugita’s “targeted list” because Sugita does not disclose how the terminals are targeted. PO Resp. 15–18. Patent Owner also argues that Sugita’s “target list” embodiment does not meet the “second mobile unit” because a mobile unit that has already been updated with a patch is no longer capable of creating patched operating code from the patch message. PO Resp. 15–18; Sur-reply 11.

As explained above in the claim construction section, there is nothing in the language of claim 1 that precludes sending an update to both mobile units, followed by sending an update to only one mobile unit. Claim 14, which depends from claim 1, contemplates exactly that. As further explained above, mobile devices “that have already created patched operating code via the system of Sugita are demonstrably ‘operable’ to do so precisely because they have already created patched operating code.” Pet. Reply 7 (emphasis in original).

Sugita describes using individual IDs to perform updates one unit at a time. Ex. 1005 ¶¶ 13, 34–39. Sugita describes determining, after sending the update to a group of terminals, whether there are non-update communications terminals remaining and uses individual IDs to send the update information to the remaining terminals. *Id.* We agree with Petitioner and find that updating an individual terminal meets the wherein limitation. Pet. Reply 6, 13–14; *see also* Pet. 45–47 (Ex. 1005 ¶¶ 28, 36–39, 41, Fig. 1;

Ex. 1003 ¶¶ 153–157). This occurs when a transmission is made to an individual terminal on the list. *Id.* A terminal that is not on the list (such as one that was successfully updated previously) or a terminal that is on the list that receives its own individual update, meet the second mobile unit and wherein limitation. *Id.* For all of the above reasons, Petitioner has shown by a preponderance of the evidence that Sugita’s individual ID embodiment meets the wherein limitation.

Accordingly, for the reasons given above, having considered Petitioner’s and Patent Owner’s arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that claim 1 is anticipated by Sugita.

E. Remaining Grounds Challenging Claim 1 of the ’275 Patent

For the reasons discussed above, Petitioner has shown, by a preponderance of the evidence, that claim 1, the sole challenged claim of the ’275 patent is unpatentable as anticipated by Sugita. In addressing this ground, we have addressed the challenged claim. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2108) (holding that a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *see also* 35 U.S.C. § 318(a). Accordingly, we need not and do not decide whether Petitioner has shown by a preponderance of the evidence that claim 1 also would have been obvious based on Sugita alone, Sugita in view of Burson, Sugita in view of Kirouac (with or without Burson), and Sugita in view of Ballard (with or without Burson and Kirouac). *Cf. In re Gleave*, 560 F.3d at 1338 (not reaching other grounds of unpatentability after affirming the anticipation ground); *see also Beloit Corp. v. Valmet Oy*, 742 F.2d 1421,

1423 (Fed. Cir. 1984) (holding that once a dispositive issue is decided, there is no need to decide other issues).

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has shown by a preponderance of the evidence that claim 1 of the '275 patent is unpatentable, as summarized in the following table:

Claim	35 U.S.C. §	Reference(s)	Claim Shown Unpatentable	Claim(s) Not Shown Unpatentable
1	102	Sugita	1	
1	103 ¹¹	Sugita		
1	103	Sugita and Burson		
1	103	Sugita and Kirouac with or without Burson		
1	103	Sugita and Ballard with or without Burson and Kirouac		
Overall Outcome			1	

¹¹ As explained immediately above, we need not and do not decide whether Petitioner has shown by a preponderance of the evidence that claim 1 also would have been obvious based on Sugita alone, Sugita in view of Burson, Sugita in view of Kirouac (with or without Burson), and Sugita in view of Ballard (with or without Burson and Kirouac).

IV. ORDER

Accordingly, it is:

ORDERED that claim 1 of the '275 patent has been shown to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written 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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