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Paper 19
Date: March 5, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION, APPLE INC.,
and MOTOROLA MOBILITY LLC,
Petitioners,

v.

UNILOC 2017 LLC,
Patent Owner.

IPR2019-01471
Patent 6,836,654 B2

Before JENNIFER S. BISK, NEIL T. POWELL, and JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

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

I. INTRODUCTION

In this *inter partes* review, instituted pursuant to 35 U.S.C. § 314, Microsoft Corporation ("Microsoft"), Apple Inc. ("Apple"), and Motorola Mobility LLC ("Motorola") ("Petitioners") challenge the patentability of claims 10–20 ("the challenged claims") of U.S. Patent No. 6,836,654 B2 (Ex. 1001, "the '654 patent"), owned by Uniloc 2017 LLC ("Patent Owner"). We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons discussed herein, we determine that Petitioners have shown by a preponderance of the evidence that claims 10–20 are unpatentable.

II. BACKGROUND

A. Procedural History

Microsoft filed a Petition requesting *inter partes* review of the challenged claims of the '654 patent. Paper 2 ("Pet."). The Petition is supported by the Declaration of Henry Houh (Ex. 1010). Patent Owner filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

We instituted *inter partes* review of all of the challenged claims of the '654 patent on all of the grounds raised in the Petition with Microsoft as the sole petitioner. Paper 7 ("Dec. on Inst."), 8, 24. Thereafter, we instituted *inter partes* review in IPR2020-00701 (whose petition challenged the same claims of the '654 patent on the same grounds as Microsoft's Petition), and

granted Apple's and Motorola's Motion[1] for Joinder, joining them as petitioners in this proceeding. Paper 11, 10. Patent Owner filed a Response to the Petition. Paper 9 ("PO Resp."). Petitioners filed a Reply to Patent Owner's Response. Paper 10 ("Pet. Reply"). The Reply is supported by the Second Declaration of Henry Houh (Ex. 1020). Patent Owner filed a Sur-Reply to Petitioners' Reply. Paper 12 ("PO Sur-Reply").

An oral hearing was held on November 10, 2020. A transcript of the oral hearing is included in the record. Paper 19 ("Tr.").

B. Related Matters

Petitioners identify the following as related matters that involve the '654 patent.

1.	*Uniloc 2017 LLC v. Microsoft Corp.*, 8-19-cv-00781 (C.D. Cal.)
2.	*Uniloc USA, Inc. v. Apple Inc.*, 3-19-cv-01697 (C.D. Cal.)
3.	*Uniloc 2017 LLC v. HTC Am., Inc.*, 2:18-cv-01732 (W.D. Wash.)
4.	*Uniloc 2017 LLC v. Motorola Mobility, LLC*, 1:18-cv-01844 (D. Del.)
5.	*Uniloc 2017 LLC v. Google LLC*, 2:18-cv-00493 (E.D. Tex.)
6.	*Uniloc 2017 LLC v. Samsung Elecs. Am., Inc.*, 2:18-cv-00508 (E.D. Tex.)
7.	*Uniloc 2017 LLC v. Huawei Device USA, Inc.*, 2:18-cv-00509 (E.D. Tex.)
8.	*Uniloc 2017 LLC v. Google LLC*, 2:18-cv-00422 (E.D. Tex.)
9.	*Uniloc USA, Inc. v. Huawei Device USA, Inc.*, 2-18-cv-00357 (E.D. Tex.)
10.	*Uniloc USA, Inc. v. Motorola Mobility, LLC*, 1:18-cv-01230 (D. Del.)
11.	*Uniloc USA, Inc. v. Samsung Elecs. Am., Inc.*, 2:18-cv-00309 (E.D. Tex.)
12.	*Uniloc USA, Inc. v. Huawei Device USA, Inc.*, 2:18-cv-00310 (E.D. Tex.)
13.	*Uniloc USA, Inc. v. Apple Inc.*, 1:18-cv-00293 (W.D. Tex.)
14.	*Samsung Elecs. Am., Inc. v. Uniloc 2017 LLC*, IPR2019-01218 (PTAB)
15.	*Samsung Elecs. Am., Inc. v. Uniloc 2017 LLC*, IPR2019-01219 (PTAB)
16.	*Microsoft Corp. v. Uniloc 2017 LLC*, IPR2019-01470 (PTAB)

[1] Samsung Electronics America, Inc. ("Samsung") also was a petitioner seeking joinder at the time the petition in IPR2020-00701 was filed. IPR2020-00701, Paper 1. The -701 proceeding was terminated as to Samsung, however, before we instituted *inter partes* review in the -701 proceeding and joined it with this proceeding.

Pet. vii–viii. Patent Owner identifies nine of these matters as being "active proceedings." Paper 3, 2.

C. The Challenged Patent (Ex. 1001)

The '654 patent relates to deterring the theft of a mobile radiotelephony device. Ex. 1001, code (57), 1:60–65. In particular, the '654 patent discloses that it deters theft by making the device "totally unusable," if it is stolen. *Id.* at 1:60–65. The '654 patent states that it does so by resolving what it identifies as a problem in a prior art protection method. *Id.* at 1:31–41.

More specifically, and as described by the '654 patent, the prior art method provides protection by "establishing a link between [a] device and a specific user identification module and blocking the normal operation of the device when the user identification module that is placed inside the device is not the one that is linked to the device." *Id.* at 1:21–29. The '654 patent, however, identifies as a problem with this method that "[w]hen the device is lost or stolen with the identification module to which it is linked," the device can be freely used until the device's network operator is notified to block the device, which "may take a certain period of time." *Id.* at 1:31–37.

In resolving this problem, the '654 patent notes that "when the device falls into the hands of a third party together with the identification module to which it is linked, it has most probably been inactive for a period of time." *Id.* at 1:52–54. The '654 patent discloses that this inactive period is "sufficiently long" so that it can be used as a way to block the device's normal operation, and to require a deblocking code to use the device, in accordance with the '654 patent's invention. *Id.* at 1:55–59.

Figure 3, shown below, "represents a flow chart explaining the operation of the device," in accordance with the invention of the '654 patent. *Id.* at 2:26–27, 2:30–31.

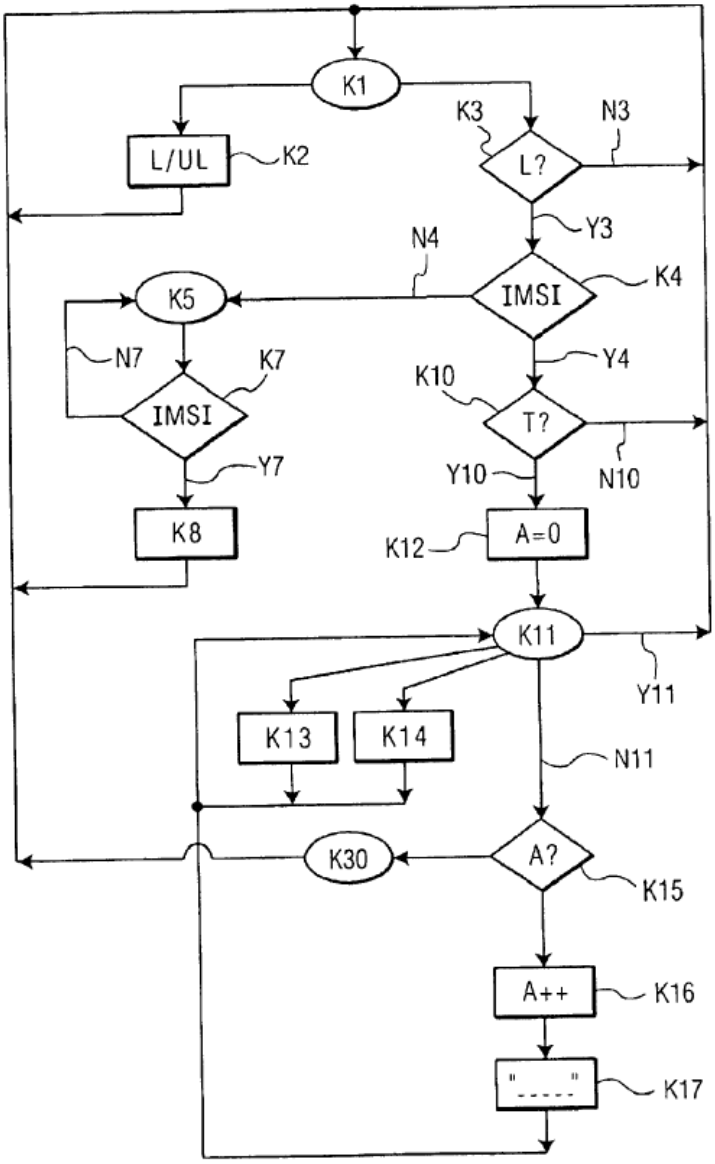

FIG. 3

Figure 3 illustrates "a function flow chart of a device in accordance with the invention" of the '654 patent. *Id.* at 2:61–62. Starting at box K1, "the device is in a state of availability, that is to say that the user has access to all the functions of the device." *Id.* at 2:62–65. As illustrated by box K2,

the user has the choice whether to lock the device. *Id.* at 2:65–66. If the user locks the device (box K2), "the identification module that is inside the device is automatically linked to the device. For this purpose, the device starts reading a data D1 in the identification module (for example, the international identification number IMSI) and he stores it in the random-access memory 24," the '654 patent states. *Id.* at 2:67–3:6. As illustrated, "[o]nce locked, the device remains in the state of availability indicated in box K1." *Id.* at 3:6–7.

In accordance with the '654 patent, "[w]hen the device is in the state of availability, one looks whether it is locked (box K3). If it is not locked (arrow N3), the device remains in the state of availability indicated in box K1." *Id.* at 3:7–10. However, "[i]f it is locked (arrow Y3), one looks whether the identification module which is placed inside the device is the one that is linked to the device (box K4)." *Id.* at 3:10–13. If the identification module inside the device "is not the one that is linked to the device (arrow N4), the device goes to a first blocking state indicated in box K5," and "is disconnected from the network." *Id.* at 3:14–18.

Alternatively, "[i]f the identification module that is placed inside the device is linked to the device (arrow Y4), one looks whether the device has remained in the state of availability for a certain period of time T . . . (box K10)," as illustrated. *Id.* at 3:32–36. If not T "(arrow N10), the device remains in the state of availability indicated in box K1." *Id.* at 3:36–37. However, if the device has remained available for time period T, the device "passes on to a second blocking state indicated in box K11," and "initialize[s] a variable A which represents the number of attempts made at supplying a deblocking code." *Id.* at 3:37–42. "In this second blocking state

the device only processes incoming calls (box K13) and, possibly, the outgoing calls that correspond to emergency numbers (box K14)." *Id.* at 3:44–46.

The '654 patent discloses that at this stage the user is prompted to supply a deblocking code, and "[i]f the code . . . is recognized (arrow Y11), the device goes back to the state of availability indicated in box Kl." *Id.* at 3:49–53. On the other hand, if the code is not recognized (arrow N11), variable A is tested (box K15), and if A is lower than a certain figure, A is incremented (box K16); otherwise "the test of box K15 causes the total blocking of the device indicated in box K30" (i.e., a third blocking state). *Id.* at 3:53–61. The '654 patent discloses that "[t]o leave this third blocking state[,] it is necessary to contact the organization that provides the identification module." *Id.* at 3:61–63.

D. The Challenged Claims

Petitioners challenge claims 10–20 of the '654 patent. Claims 10 and 17 are independent claims. Claim 10 is illustrative of the challenged claims and is reproduced below:

> 10. A method of protecting a mobile radiotelephony device, the method comprising:
>
> ver[i]fying a user identification module mounted inside the mobile radiotelephony device is linked to the mobile radiotelephony device;
>
> detecting a period of inactivity of the mobile radiotelephony device during a normal operation of the mobile radiotelephony device, wherein the normal operation includes a processing of all outgoing calls;
>
> preventing the normal operation of the mobile radiotelephony device in response to the verification of the linked user identification module and in response to the detection of the period of inactivity of the mobile radiotelephony device.

Ex. 1001, 5:27–40.

E. Instituted Grounds of Unpatentability

We instituted trial based on the following grounds of unpatentability, which are all the grounds of unpatentability raised in the Petition:

Claims Challenged	**35 U.S.C. §[2]**	**References/Basis**
10–20	103(a)	Nokia,[3] Barvesten[4]
10–20	103(a)	Barvesten, Schultz[5]

Pet. 12–64; Dec. on Inst. 8, 24.

III. LEVEL OF ORDINARY SKILL IN THE ART

To determine whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). In assessing 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) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955,

[2] The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the '654 patent issued from an application filed before March 16, 2013, we apply the pre-AIA version of the statutory basis for unpatentability.
[3] Owner's Manual for the Nokia 9000i Communicator, Issue 1.1 (Ex. 1003).
[4] Barvesten, US 5,940,773 (issued Aug. 17, 1999) (Ex. 1006).
[5] Charles P. Schultz, *Communication Device Inactivity Password Lock*, 29 MOTOROLA TECH. DEVS. 14–15 (Nov. 1996) (Ex. 1008).

962 (Fed. Cir. 1986)). "[O]ne or more factors may predominate." *Id.*

In our Decision on Institution, we adopted Petitioners' proposed definition for one having ordinary skill in the art at the time of the invention of the '654 patent as one who "would have a bachelor's degree in electrical engineering or computer science, and one year of general programming experience," and that "[a]dditional experience may substitute for education, and additional education may substitute for experience." Dec. on Inst. 14–15 (quoting Pet. 10–11 (citing Ex. 1010 ¶ 43)).

Patent Owner does not dispute our adoption of Petitioners' definition, and does not provide its own definition for the level of ordinary skill at the time of the invention of the '654 patent. *See* PO Resp. 4.

Because Petitioners' definition of the level of skill in the art is consistent with the '654 patent and the asserted prior art, we maintain Petitioners' definition for purposes of this Final Written Decision. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579; *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). We apply Petitioners' definition in our analysis below.

IV. CLAIM CONSTRUCTION

Because the Petition was filed after November 13, 2018, we construe the challenged claims by applying the standard used in federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b) (2019). Under *Phillips*, the words of a claim are generally given their "ordinary and customary meaning," which is the meaning they would have to a person of ordinary skill in the art at the time

of the invention, in light of the specification and prosecution history. *See Phillips*, 415 F.3d at 1312–13, 1315–16.

The parties argue that all claim terms[6] should be given their plain and ordinary meaning. Pet. 11; PO Resp. 6. The parties dispute, however, what the plain and ordinary meaning is for "ver[i]fying a user identification module mounted inside the mobile radiotelephony device is linked to the mobile radiotelephony device" (the "verifying step"), as recited in claim 10. *See, e.g.*, Pet. Reply 1–5; PO Sur-Reply 1–7. In particular, as we discuss below, the parties point to separate and contradictory district court construction orders to support what they argue is the plain and ordinary meaning of this limitation.

As background, terms of the '654 patent were construed in four district court litigations; we identify these claim construction orders in the table below.

1.	Mem. Opin. on Claim Construction, *Uniloc 2017 LLC v. Motorola Mobility, LLC*, 1-18-cv-01841 (consolidated with 1-18-cv-01844) (D. Del. Jan. 17, 2020) (Ex. 2001).
2.	Claim Construction Mem. Opin. and Order, *Uniloc 2017 LLC v. Samsung Electronics America, Inc.*, 2-18-cv- 00508, (Mag. J. Payne) (E.D. Tex. Jan. 20, 2020) (Ex. 2003), (adopted by J. Gilstrap (Ex. 2004)).
3.	Claim Construction Mem. Opin. and Order, *Uniloc 2017 LLC v. Google LLC*, 2-18-cv-00493, (Mag. J. Payne) (E.D. Tex. Jan. 20, 2020) (Ex. 2005), (adopted by J. Gilstrap (Ex. 2006)).

[6] Petitioners additionally argue that "deblocking code" (recited in dependent claims 11, 18, and 19) and "debugging code" (recited in dependent claim 15) would "benefit from construction to clarify their ordinary meaning." Pet. 11. Patent Owner, however, does not dispute the plain and ordinary meaning of these terms, nor that the cited references teach them. *See generally* PO Resp.; PO Sur-Reply. Thus, there is no controversy for us to resolve as to the plain and ordinary meaning of these terms.

4.	*Uniloc 2017 LLC v. HTC Am., Inc.*, C18-1732 RSM Order Re Claim Construction (W.D. Wash. Oct. 26, 2020) (Ex. 2007).

In particular, the parties express their dispute over the plain and ordinary meaning of the verifying step in the context of the related phrase "linked user identification module." *See, e.g.*, Pet. Reply 1–5; PO Sur-Reply 1–7. We set forth the district courts' constructions for this phrase below.

First, the *Motorola* court construed "linked user identification module" to mean "an authorized user identification module that permits the normal operation of the device." Ex. 2001, 3. In so doing, the *Motorola* court reasoned that "[t]here is nothing in the patent that requires that only one linked user identification module will permit the normal operation of the device for all embodiments." *Id.*

Second, the *Samsung* court instead construed "linked user identification module" to mean "a user identification module that is the only one that permits normal operation of the device." Ex. 2003, 17. Third, the *Google* court construed "linked user identification module" to have the same meaning as found by the *Samsung* court — both *Samsung* and *Google* were before Magistrate Judge Payne and Judge Gilstrap. Ex. 2005, 13.

Fourth, the *HTC* court recognized the different constructions of the *Motorola* court and the *Google*/*Samsung* courts, and found that "both constructions have support." Ex. 2007, 5; *see also id.* at 5–7 (the *HTC* court recounting reasoning from the *Motorola* and *Google*/*Samsung* courts). The *HTC* court, however, adopted the *Google*/*Samsung* courts' construction for "linked user identification module." *Id.* at 7.

In our proceeding, Petitioners argue that the *Motorola* court's construction for "linked user identification module" is aligned with the plain

and ordinary meaning of the verifying limitation. Tr. 9:14–12:7. On the other hand, Patent Owner argues that the *Samsung*, *Google*, and *HTC* courts' construction for "linked user identification module" is aligned with the plain and ordinary meaning of the verifying limitation. Tr. 30:22–31:20, 32:7–33:20. In other words, the parties dispute whether there is *only one* linked user identification module that will permit normal operation of the device. We also note that the *Google* court separately construed the verifying step (independent of the "linked user identification module") to mean "confirming that a user identification module mounted inside the mobile radiotelephony device permits normal operation of the mobile radiotelephony device." Ex. 2005, 14 (emphasis omitted). The parties do not dispute this construction, separate from their dispute over the meaning of "linked user identification module."

In addition, Patent Owner separately argues in its Response that the plain and ordinary meaning of the verifying limitation also requires "ensuring that the user identification module cannot be used with any other device." PO Resp. 7–8 (citing Ex. 1001, Fig. 3, 2:61–3:43); *see also id.* (citing Ex. 1001, 4:23–30) (arguing that the '654 patent teaches limiting use of the user identification module). We disagree with Patent Owner that the Specification supports such a requirement. *See* Ex. 1001, Fig. 3, 2:61–3:43, 4:23–30. Rather, the portions of the Specification that Patent Owner cites relate to limiting the normal operation of a device, and do not relate to limiting the operation of the identification module in the manner Patent Owner argues. *See id.* In addition, even if the cited portions of the Specification disclose what Patent Owner alleges, which they do not, Patent Owner does not provide sufficient justification for importing "such that [the

user identification module] can only function with that device" into this limitation. *See* PO Resp. 7–8; *see also Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1049 (Fed. Cir. 2019) (quoting *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1237 (Fed. Cir. 2001) ("[I]t is long-settled that even though 'claims must be read in light of the specification of which they are a part, it is improper to read limitations from the written description into a claim.'")).

Having reviewed the parties' arguments and the district court claim construction orders, we determine that we do not need to reach this dispute between the parties. Rather, we agree with Petitioners, as we discuss below, that the combination of Nokia and Barvesten teaches the verifying limitation under either parties' interpretation of its plain and ordinary meaning. *See infra* Section VI(C)(2). In other words, the combination of Nokia and Barvesten teaches the verifying limitation under both the *Motorola* court's construction and the *Samsung*/*Google*/*HTC* courts' construction. *Id.* Thus, we conclude that no express claim construction as to the plain and ordinary meaning of "linked user identification module" is necessary to determine whether Petitioners have shown by a preponderance of evidence that the challenged claims are unpatentable. *See, e.g.*, *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'").

V. PRINCIPLES OF LAW

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject

matter, as a whole, would have been obvious at the time of the invention to a person having ordinary skill in the art. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness, if present.[7] *See Graham*, 383 U.S. at 17–18. When evaluating a claim for obviousness, we also must "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

VI. ALLEGED OBVIOUSNESS OVER NOKIA AND BARVESTEN

Petitioners argue that the combination of Nokia and Barvesten renders claims 10–20 of the '654 patent obvious under 35 U.S.C. § 103(a). Pet. 12–44. We have reviewed the parties' arguments and the evidence of record. For the reasons that follow, we determine that Petitioners show by a preponderance of the evidence that one of ordinary skill in the art would have found claims 10–20 obvious over the combination of Nokia and Barvesten.

[7] Patent Owner does not present arguments or evidence of such objective evidence of non-obviousness in its Response. *See generally* PO Resp.

A. Summary of Nokia

Nokia is the "Owner's Manual" for Nokia's 9000i Communicator, which is "a mobile phone, messaging device, Internet access terminal and palmtop organizer all in one compact unit." Ex. 1003, 1, 7. Nokia explains that the 9000i Communicator has two interfaces, including a phone interface, and a communicator interface. *Id.* at 7–8.

For the first start-up, Nokia instructs the user to "[i]nstall the SIM card and switch on the phone interface before opening the communicator interface. In most locations, this will configure the settings for your voice mail and the" Short Message Service Center. *Id.* at 10. Nokia instructs the reader to then perform certain other steps for configuring the device's settings and completing the start-up procedure. *Id.* at 11.

Nokia provides a "Security" section that discusses the option of locking the communicator, which would, *inter alia*, prevent outgoing calls. *Id.* at 81. Nokia also explains that "[i]f autolock is on, the communicator will lock automatically after [a] defined inactivity period." *Id.*

B. Summary of Barvesten

Barvesten relates to improving security (e.g., making safe against theft) of terminals (e.g., mobile telephones) having an access unit (e.g., a card) that can be inserted into the device. Ex. 1006, 1:10–28, 2:8–11. Barvesten teaches one way to improve security is "to protect the terminal unit as well as the access unit [by] . . . implement[ing] a 'lock' in the terminal unit as well as in the access unit wherethrough a user has to enter a code to 'unlock' the terminal unit and a further code to" get access to the card. *Id.* at 1:24–29. Barvesten teaches that "[t]his however is tedious since

two different codes have to be entered each time upon use which is very inconvenient." *Id.* at 1:29–31.

Barvesten provides a solution such that a user does not have to enter two different codes upon every activation of a mobile telephone. Ex. 1006, 1:42–50. To that end, Barvesten teaches storing the code (e.g., IMSI-code) for an access unit (e.g., a SIM-card) "in an EEPROM-storage" in the telephone. *Id.* at 3:18–25, 4:26–28. Upon subsequent activation of the telephone, the telephone and the card inserted therein communicate with each other. *Id.* at 4:24–26. In particular, the card's IMSI-code is compared to the IMSI-code stored in the telephone. *Id.* at 4:47–50. If the card's IMSI-code corresponds to the IMSI-code stored in the telephone, the telephone starts up without asking for any further code. *Id.* at 4:50–53.

C. Challenged Claim 10

1. Protecting a Mobile Radiotelephony Device

Petitioners argue that Nokia teaches "[a] method of protecting a mobile radiotelephony device," as recited in claim 10's preamble. Pet. 16–18; *id.* at 16 (citing Ex. 1010 ¶¶ 121–123). More specifically, Petitioners argue that Nokia teaches "protecting the mobile device by describing the use of SIM cards as a security measure." *Id.* at 17–18 (citing Ex. 1003, 11). Petitioners argue that Nokia also "describe[s] a locking system as an additional security measure." *Id.* at 18 (citing Ex. 1003, 81, 111).

After reviewing Petitioners' arguments and evidence, including Dr. Houh's Declaration, which are not addressed by Patent Owner (*see generally* PO Resp.), we are persuaded that Petitioners demonstrate by a preponderance of the evidence that the combination of Nokia and Barvesten

teaches claim 10's preamble. In light of this finding, we need not, and thus do not, reach whether claim 10's preamble is limiting.

2. Verifying a User Identification Module

Claim 10 further recites "ver[i]fying a user identification module mounted inside the mobile radiotelephony device is linked to the mobile radiotelephony device." Ex. 1001, 5:29–31. For the reasons we discuss below, we agree with Petitioners and we find that Nokia, Barvesten, and the combination thereof each teach this limitation under the plain and ordinary meaning of this term, and as construed by the *Motorola* and *Samsung*/*Google*/*HTC* courts. Pet. 19–25; Pet. Reply 6–16.

a. Nokia

We agree with Petitioners and find that Nokia teaches mounting a SIM card (a user identification module) inside Nokia's communicator (mobile radiotelephony device). Ex. 1003, 7–8, 11–12, Figs. 2-1–2-4; Pet. 19–20. Nokia also teaches a "SIM change security" feature that "checks whether the SIM card in the communicator has been changed . . . every time the phone interface is switched on." Ex. 1003, 82; Pet. 20. In accordance with this security feature, "[i]f the SIM card has been changed and the new SIM card has not previously been used with [the] communicator, the communicator locks itself until the lock code . . . is correctly entered." Ex. 1003, 82; Pet. 20. Nokia teaches that "the communicator recognizes five different SIM cards as the owner's cards." Ex. 1003, 82; Pet. 20.

We find that these disclosures from Nokia teach having a user identification module (a SIM card) mounted (installed) inside Nokia's mobile phone, and verifying that the SIM card is linked to the Nokia phone (checking whether or not the SIM card in the communicator is new and not

previously used with the communicator)). Ex. 1003, 12, 82; Pet. 20. In other words, Nokia teaches confirming that a user identification module (SIM card) mounted inside the mobile radiotelephony device (communicator) permits normal operation of the mobile radiotelephony device. *Id.*; Pet. 20; Pet. Reply 6–8. Nokia also teaches that its communicator can recognize the owner's SIM cards, but requires a lock code if a SIM card is new and unused previously. Ex. 1003, 82. In other words, each of the recognized owner's SIM cards are "an authorized user identification module that permits the normal operation of the device," in accordance with the *Motorola* court's construction. Ex. 1003, 12, 82; Ex. 2001, 3; Pet. 20; Pet. Reply 6–8. Moreover, we credit Dr. Houh's testimony that these disclosures from Nokia teach "verifying the user identification module is linked to the mobile phone in the context of describing the 9000i Communicator's 'SIM change security' feature." Ex. 1010 ¶ 127 (citing Ex. 1003, 82); Pet. 19–20; Pet. Reply 7. This testimony is consistent with Nokia's teachings discussed above. *Compare* Ex. 1010 ¶ 127, *with* Ex. 1003, 11–12, 82.

In summary, we find that Nokia teaches this limitation under its plain and ordinary meaning, and as construed, in relevant part, by the *Motorola* court.

Additionally, we agree with Petitioners and find that Nokia also teaches to one of ordinary skill in the art having a SIM card "that is the only one that permits normal operation of the device," in accordance with the *Samsung*/*Google*/*HTC* courts' construction. Pet. Reply 13–15. Nokia teaches that its SIM change security feature allows for an owner to have five different SIM cards. Ex. 1003, 82. Nokia also teaches, however, that

the owner needs to enter a lock code when changing to a SIM card that was not previously used. *Id.* Thus, without the owner entering the lock code, a new, unused SIM card is not linked to the communicator and does not permit normal operation of the device — "the communicator locks itself" until the owner enters the lock code. *Id.* And Dr. Houh testifies that one of ordinary skill in the art would have understood "that notwithstanding [Nokia's] statement about five SIM cards, in many cases the owner of the device will use only a single SIM card with the device," and "that at least one linked SIM card would enable the Nokia device to be able to be used to make . . . calls." Ex. 1020 ¶ 6; Pet. Reply 14–15. Thus, there is only one SIM card that permits normal operation of the device for the many instances where the owner of the device only uses a single SIM card with the device. Ex. 1003, 82; Ex. 1020 ¶ 6.

In summary, we find that Nokia teaches the verifying step under its plain and ordinary meaning, and as construed, in relevant part, by the *Samsung*/*Google*/*HTC* courts.

In addition, we find unavailing Patent Owner's argument that Nokia is not enabled. PO. Resp. 8–9. This argument "is misplaced, since even '[a] non-enabling reference may qualify as prior art for the purpose of determining obviousness,' . . . and even 'an inoperative device . . . is prior art for all that it teaches.'" *ABT Sys., LLC v. Emerson Elec. Co.*, 797 F.3d 1350, 1360 n.2 (Fed. Cir. 2015) (quoting *Beckman Instruments, Inc. v. LKB Produkter AB,* 892 F.2d 1547, 1551 (Fed. Cir. 1989) and *Symbol Tech., Inc. v. Opticon, Inc.,* 935 F.2d 1569, 1578 (Fed. Cir. 1991)).

We also find unavailing Patent Owner's argument that Nokia's "security option could be performed anywhere in the network of the

network operator," and that "[t]here exists no teaching or suggestion within the entirety of Nokia that the phone checks whether the SIM card in the communicator has changed." PO Resp. 10. According to Patent Owner, Nokia "only teaches '[w]hen active, this security option checks whether the SIM card in the communicator has been changed.'" *Id.* (quoting Ex. 1003, 82) (emphasis omitted). We disagree. First, we find that Nokia's teaching that the "*security option* checks whether the SIM card in the communicator has been changed" at least suggests that it is the communicator (the phone) that performs the check because the security option is a feature of the phone, as described in Nokia (i.e., the phone's Owner's manual). Ex. 1003, 1, 82 (emphasis added); Pet. Reply 7. Second, additional portions of Nokia's "SIM change security" disclosure also teach or suggest that the phone performs this security option. In particular, Nokia teaches that "[i]f the SIM card has been changed and the new SIM card has not previously been used with [the] communicator, *the communicator locks itself* until the lock code . . . is correctly entered." Ex. 1003, 82 (emphasis added). The communicator performing the locking function itself evidences, or at least suggests, that the communicator performs the functions of this security feature. And Nokia teaches that it is "*[t]he communicator* [that] recognizes five different SIM cards as the owner's cards." *Id.* (emphasis added). This too evidences, or at least suggests, that the communicator performs the functions of this security feature. Accordingly, we find that Nokia teaches that the communicator performs the SIM change security feature (the verifying step). *See* Ex. 1003, 1, 82; *see also Bradium*, 923 F.3d at 1049 (quoting *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994) ("[A] reference

must be considered not only for what it expressly teaches, but also for what it fairly suggests.").

We also find unavailing Patent Owner's argument that Nokia fails to teach that "a user identification module (SIM card) that once linked, is restricted to use with only the mobile phone (device) that it is initially linked with." *See, e.g.*, PO Resp. 8; PO Sur-Reply 7–10. As we discuss above, the verifying step has no such requirement. *See supra* Section IV. Thus, this argument is unavailing as it differs from the requirements of the claim language. *See In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998) (finding "the name of the game is the claim"); *see also In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (stating limitations not appearing in the claims cannot be relied upon for patentability).

We also find unavailing Patent Owner's statements that Petitioners, in their Reply, "newly argue that Nokia also teaches the 'linked to' limitations under the district court construction." PO Sur-Reply 8 (citing Pet. Reply 14). To the extent that Patent Owner is arguing that Petitioners' arguments should not be considered, we disagree. Rather, these arguments are responsive to arguments made by Patent Owner in its Response, and are allowed by our Rules. *See* 37 C.F.R. § 42.23(b); PO Resp. 8; Tr. 30:22–31:20, 32:7–18 (Patent Owner arguing that it endorsed the *Google* court's construction in its Response and Sur-Reply); Consolidated Trial Practice Guide November 2019 ("CTPG"), 74. Regardless, the *Samsung*, *Google*, and *HTC* claim construction orders were entered by the district courts after the Petition was filed; Patent Owner submitted the *Samsung* and *Google*

orders with its Response, and the *HTC* order after its Sur-Reply.[8] Thus, these orders could not have been addressed in the Petition.

In summary, we find that Nokia teaches "ver[i]fying a user identification module mounted inside the mobile radiotelephony device is linked to the mobile radiotelephony device."

b. Barvesten

We agree with Petitioners and find that Barvesten teaches mounting a user identification module (a SIM card) inside a mobile radiotelephony device (mobile telephone), and that the SIM card has an IMSI-code stored in its memory. *See* Ex. 1006, Fig. 1, 3:12–25, 3:66–4:15; Pet 21–24. In accordance with Barvesten's invention, "[u]pon starting up or activation of the telephone 1, the telephone 1 and the SIM-card 2 communicate with each other," and "[t]he IMSI-code for the SIM-card(-s) 2 is (are) to be stored in a memory in the phone, e.g. in an EEPROM storage." Ex. 1006, 4:24–28; Pet. 24. Barvesten teaches that subsequently:

> Upon activation of the telephone, wherein either a card already is present in the telephone 1 or a new one has been introduced, the actual IMSI-code is sent to the telephone 1 . . . via the microprocessor 4, . . . where it is compared to in the telephone 1 stored IMSI-code(s). If IMSI corresponds to any IMSI-code being stored in the telephone 1, the telephone is started up without requiring any further measure to be taken or without asking for any further code. If on the other hand there is no correspondence between the codes, the telephone 1 demands a PIN-code for the terminal unit or the telephone 1.

[8] The *HTC* claim construction order (Ex. 2007) was entered by the district court after Patent Owner's Sur-Reply. Patent Owner, with our authorization, filed the order as an exhibit in this proceeding. Ex. 3001 (authorizing filing of the order).

Ex. 1006, 4:45–56; Pet. 24. In other words, upon subsequent activation of the phone, the phone and the SIM card inserted therein communicate with each other, and the IMSI-code of the SIM card is compared to the IMSI-code(s) stored in the phone, and if the SIM card's IMSI-code corresponds to an IMSI-code stored in the phone (i.e., if the user identification module is linked to the mobile device), the phone starts up without asking for any further code. Ex. 1006, 4:45–56.

We find that these disclosures from Barvesten teach having a user identification module (a SIM card) mounted (installed) inside its phone, and verifying that the SIM card is linked to the phone (checking whether the SIM card's IMSI corresponds to any IMSI-code stored in the telephone). *Id.* In other words, Barvesten teaches confirming that a user identification module (SIM card) mounted inside the mobile radiotelephony device (e.g., telephone 1) has a IMSI-code that corresponds to any IMSI-code stored in telephone 1, which permits normal operation of the phone (i.e., "the telephone is started up without requiring any further measure to be taken"). *Id.*; Pet. Reply 6–7. In other words, a SIM card having an IMSI-code that corresponds to an IMSI-code stored on telephone 1 is "an authorized user identification module that permits the normal operation of the device," in accordance with the *Motorola* court's construction. Ex. 1006, 4:45–56; Ex. 2001, 3. Moreover, we credit Dr. Houh's testimony that these disclosures from Barvesten teach "determining whether a SIM card is linked to a mobile device based on whether the same data is stored on both the SIM card and the device." Ex. 1010 ¶ 128 (citing Ex. 1006, 4:24–56); Pet. 21; Pet. Reply 12. This testimony is consistent with Barvesten's teachings discussed above. *Compare* Ex. 1010 ¶ 128, *with* Ex. 1006, 4:24–56.

In summary, we find that Barvesten teaches this limitation under its plain and ordinary meaning, and as construed, in relevant part, by the *Motorola* court.

Additionally, we agree with Petitioners and find that Barvesten also teaches to one of ordinary skill in the art having a SIM card "that is the only one that permits normal operation of the device," in accordance with the *Samsung*/*Google*/*HTC* courts' construction. Pet. Reply 15–16. In other words, and for the reasons below, we find that Barvesten explicitly teaches embodiments where there are only one SIM card. In particular, Barvesten teaches that "[a]ccording to an advantageous embodiment of the invention[,] it is possible to, apart from storing of the identity of the own [*sic*] SIM-card, i.e. its IMSI-code, also store the IMSI-codes of a number of other SIM-cards which should have a simplified or prioritized access to the terminal unit or the telephone 1." Ex. 1006, 4:33–37; Pet. Reply 15–16. We find this passage teaches that certain embodiments have only one SIM card because it describes having multiple SIM cards as a possibility in an advantageous embodiment. Ex. 1006, 4:33–37. We also credit Dr. Houh's testimony that one of ordinary skill in the art would have readily understood that Barvesten discloses the scenario of having a single SIM card linked to a device. Ex. 1020 ¶ 12 (citing Ex. 1006, 4:33–37); Pet. Reply 15–16. In addition, Barvesten teaches storing an IMSI-code "for a given number (n) of access units (SIM)." Ex. 1006, 2:29–30; Pet. Reply 15. We agree with and credit Dr. Houh's testimony that one of ordinary skill in the art would have understood that "the 'n' could be one, such that there would be a single SIM card associated with the device." Ex. 1006, 2:29–30; Ex. 1020 ¶ 11; Pet. Reply 15. Barvesten does not limit "n" to specific values. Lastly,

Barvesten teaches that "[u]pon starting up or activation of the telephone 1, the telephone 1 and the SIM-card 2 communicate with each other," and "[t]he IMSI-code for the *SIM-card(-s) 2 is (are)* to be stored in a memory in the phone, e.g. in an EEPROM storage." Ex. 1006, 4:24–28 (emphasis added); Pet. 23–24. Thus, Barvesten explicitly also accounts for embodiments having just one SIM card by its phrasing of "SIM-card(-s) 2 is (are)," which is expressed in the singular, as well as the plural. Ex. 1006, 4:24–28.

In summary, we find that Barvesten teaches this limitation under its plain and ordinary meaning, and as construed, in relevant part, by the *Samsung*/*Google*/*HTC* courts.

In addition, we find unavailing Patent Owner's argument that Dr. Houh's testimony does not use "the couplet 'only one,'" but instead at most provides that "Barvesten disclose[s] the scenario where a single SIM card is linked to a particular device." PO Sur-Reply 14 (quoting Ex. 1020 ¶ 11). As we discuss above, Barvesten teaches embodiments having a single SIM card. We see no discernible difference between saying an embodiment has a single SIM card versus an embodiment has only one SIM card. Nor does Patent Owner cite any expert testimony that one of ordinary skill in the art would see any discernible difference. *See generally* PO Sur-Reply.

Likewise, we find unavailing Patent Owner's argument that Dr. Houh repeatedly references "SIM cards *in the plural*." PO Sur-Reply 15 (citing Ex. 1020 ¶ 10). The fact that Barvesten also teaches embodiments that have multiple SIM cards does not negate Barvesten's teachings of embodiments having only one SIM card. Nor does it negate Dr. Houh's testimony that "Barvesten . . . disclose[s] the scenario where a single SIM card is linked to

a particular device." Ex. 1020 ¶ 11. Similarly, we find unavailing Patent Owner's argument that the phrase "for a given number (n) of access units (SIM)" expresses "'access units' *in the plural*," which "reflects the teaching that Barvesten is purposefully and expressly designed to enable a given mobile terminal to accept *multiple* SIM cards for activation." PO Sur-Reply 15 (quoting Ex. 1006, 2:29–30, citing Ex. 1006, 4:45–47). Rather, this language covers both embodiments (i.e., having a single card or having multiple cards). Ex. 1006, 2:29–30. Again, however, Barvesten teaches embodiments having only one SIM card, regardless of Barvesten's other teachings of other embodiments having multiple SIM cards. *See* Ex. 1006, 2:29–30, 4:24–28, 4:33–37; Ex. 1020 ¶¶ 11–12.

We also find unavailing Patent Owner's statements that Dr. Houh's Second Declaration and Petitioners' arguments in their Reply addressing the district court claim construction orders are new or untimely. As above, these arguments are responsive to arguments made by Patent Owner in its Response, and are allowed by our Rules. *See* 37 C.F.R. § 42.23(b); PO Resp. 8; Tr. 30:22–31:20, 32:7–18; CTPG 73 ("A party also may submit rebuttal evidence in support of its reply.") (citation omitted). And again, the claim construction orders were entered by the district courts after the Petition was filed, which thus could not have addressed the orders. Accordingly, we find it appropriate to consider Petitioners' arguments.

Lastly,[9] we find unavailing Patent Owner's argument that "Barvesten does not teach or suggest a user identification module (SIM card) that once

[9] We need not, and thus do not, reach Patent Owner's arguments (PO Sur-Reply 11–12) about Petitioners improperly relying on inherency (Pet. Reply 16) because our Decision does not rely on these arguments from Petitioners.

linked, is restricted to use with only the mobile phone (device) that it is initially linked with." PO Resp. 11. Again, this claim limitation has no such requirement. *See supra* Section IV. Thus, this argument is unavailing as it differs from the requirements of the claim language. *See Hiniker*, 150 F.3d at 1369; *In re Self*, 671 F.2d at 1348.

In summary, we find that Barvesten teaches "ver[i]fying a user identification module mounted inside the mobile radiotelephony device is linked to the mobile radiotelephony device."

c. Nokia and Barvesten

Petitioners rely on Barvesten's teachings to address potential deficiencies in Nokia. Pet. 21–25; Pet. Reply 10–18. More specifically, Petitioners alternatively argue that Barvesten teaches the verifying step, including teaching a device that compares data stored in the identification module with data stored in the device for verifying that they are linked, and having only one identification module that permits normal operation of the device. Pet. 21–25; Pet. Reply 10–18.

In addition, Petitioners argue that one of ordinary skill in the art would have been motivated to combine the teachings of "Nokia . . . with Barvesten, and would have had a reasonable expectation of success in making the combination to implement a device that integrated the mobile device and security measures of Barvesten with the device inactivity lock security measure of Nokia." Pet. 14 (citing Ex. 1010 ¶¶ 55–58). To that end, Petitioners argue that Nokia "and Barvesten [are] expressly aimed at improving security for mobile telephone devices," and one of ordinary skill in the art, reading Nokia, would have understood "that implementing the teachings of Barvesten into Nokia would have improved the security taught

by Nokia." *Id.* at 15 (citing Ex. 1010 ¶¶ 56–57). Petitioners add that one of ordinary skill in the art "would have had no issues integrating the Barvesten and Nokia device security technologies into the same mobile device, and doing so would have predictably resulted in a mobile device with both the device inactivity locking of Nokia and the single-code verification of Barvesten." *Id*. at 15–16 (citing Ex. 1010 ¶ 55).

We are persuaded that Petitioners provide "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Kahn*, 441 F.3d at 988 (citations omitted), *cited with approval in KSR*, 550 U.S. at 418. In other words, we agree with Petitioners that one of ordinary skill in the art would have found it obvious to combine Nokia's and Barvesten's teachings.

We find unavailing Patent Owner's argument that "Barvesten cannot be reasonably combined with Nokia because it was well known to any [person of ordinary skill in the art] at the time of the '654 Patent that a network operator subsidized use of the phone in return for profits associated with providing its communication services." PO. Resp. 12. Patent Owner continues that "[w]ere the SIM card checking technique of Barvesten to be implemented in the Communicator described in Nokia, the network operator could not monitor or control how the Communicator is used." *Id.* Patent Owner similarly argues that "Barvesten effectively teaches away from a SIM card checking technique used by Barvesten because such a system would not allow a network operator to control when and how its subsidized phones are used." *Id.* We are not persuaded by these arguments, including because the premise of Patent Owner's arguments (i.e., a subsidizing network operator could not monitor or control how the device is used) is unsupported by

evidence, such as expert testimony, and thus we afford it little, if any weight. *See In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (explaining that attorney arguments that are unsupported by factual evidence are entitled to little probative value). Moreover, we credit Dr. Houh's testimony "that the device subsidy applies to the device, not the SIM card that represents the account for a phone line," and thus, "Patent Owner's reasoning is flawed." Ex. 1020 ¶ 9; Pet. Reply 18. Furthermore, Patent Owner does not identify any specific teaching in Barvesten or Nokia that supports its argument that they teach away from the claimed invention — a reference teaches away if it criticizes, discredits, or otherwise discourages modifying the reference to arrive at the claimed invention. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

3. Detecting a Period of Inactivity

Petitioners argue that Nokia teaches "detecting a period of inactivity of the mobile radiotelephony device during a normal operation of the mobile radiotelephony device, wherein the normal operation includes a processing of all outgoing calls," as recited in claim 10. Pet. 25–26. More specifically, Petitioners argue that Nokia "teaches a mobile telephone that becomes locked; i.e., normal operation (such as 'making and receiving calls' . . .) is prevented, upon expiration of a predefined period of inactivity." *Id.* (citing Ex. 1003, 81). Moreover, Petitioners argue that Nokia teaches a "configuration menu to set a 5 minute defined inactivity period (Autolock)." *Id.* at 26 (citing Ex. 1003, 82, Fig. 10-2; Ex. 1010 ¶ 130).

After reviewing Petitioners' arguments and evidence, including Dr. Houh's Declaration, which are not addressed by Patent Owner (*see*

generally PO Resp.), we are persuaded that Petitioners demonstrate by a preponderance of the evidence that the combination of Nokia and Barvesten teaches "detecting a period of inactivity of the mobile radiotelephony device during a normal operation of the mobile radiotelephony device, wherein the normal operation includes a processing of all outgoing calls."

4. Preventing the Normal Operation of the Device

Petitioners argue that Nokia teaches "preventing the normal operation of the mobile radiotelephony device in response to the verification of the linked user identification module and in response to the detection of the period of inactivity of the mobile radiotelephony device," as recited in claim 10. Pet. 27–29. More specifically, Petitioners argue that Nokia combined with Barvesten teaches "that normal operation of the mobile device is prevented in response to verifying the linked user identification module . . ., and upon expiration of the period of inactivity." *Id.* at 27 (citing Ex. 1010 ¶¶ 131–134; Pet. 19–26). Furthermore, Petitioners argue that Nokia teaches "preventing normal operation of the device upon determining that an unlinked user identification module is installed in the device" via Nokia's teaching that "the device becomes locked if it is determined that a new SIM card is installed in the device, and remains locked until a proper lock code is supplied." *Id.* at 28–29 (quoting Ex. 1003, 82). Nokia "further teaches that upon verification of the SIM card (either because it is linked or by entry of the device lock code), normal operation can ensue, but will then be prevented in response to a period of inactivity," according to Petitioners. *Id.* (citing Pet. 21–25).

After reviewing Petitioners' arguments and evidence, including Dr. Houh's Declaration, which are not addressed by Patent Owner (*see*

generally PO Resp.), we are persuaded that Petitioners demonstrate by a preponderance of the evidence that the combination of Nokia and Barvesten teaches "preventing the normal operation of the mobile radiotelephony device in response to the verification of the linked user identification module and in response to the detection of the period of inactivity of the mobile radiotelephony device."

5. Summary

In summary, based on the arguments and evidence of record, we find that Petitioners demonstrate by a preponderance of the evidence that claim 10 is unpatentable under 35 U.S.C. § 103(a) over the combination of Nokia and Barvesten.

D. Challenged Claims 11–20

Petitioners argue, with specific cites to Nokia and Barvesten, as well as Dr. Houh's testimony, that the combination of Nokia and Barvesten teaches the limitations recited in claims 11–20. Pet. 29–44. Patent Owner's Response does not separately address Petitioners' arguments directed to these claims. PO Resp. 7–13 (grouping independent claims 10 and 17[10] together in arguing that Petitioners fail to show unpatentability of the independent claims), 14 (arguing that "[t]he deficiencies of the Petition . . . concerning the challenged independent claims also apply to the analysis of the challenged dependent claims"); PO Sur-Reply 7, 16–17 (same).

[10] To the extent that any of Patent Owner's arguments in its Sur-Reply (PO Sur-Reply 10–13) focus on claim 17's "computer readable code" or "computer readable medium" separately from Patent Owner's arguments for claim 10 regarding where the verifying step occurs (which Patent Owner raised in its Response, PO Resp. 10–11), they are new arguments that should have been raised in Patent Owner's Response, if at all. *See* CTPG 74 (citing 37 C.F.R. § 42.23). Thus, we do not consider claim 17 separately.

Based on the evidence and arguments of record, we find that Petitioners demonstrate by a preponderance of the evidence that claims 11–20 would have been obvious to one of ordinary skill in the art over the combined teachings of Nokia and Barvesten.

VII. ALLEGED OBVIOUSNESS OVER BARVESTEN AND SCHULTZ

Petitioners argue that claims 10–20 are unpatentable over the combination of Barvesten and Schultz. Pet. 44–64. Thus, this ground of unpatentability challenges the same claims we already determine are unpatentable over the combination of Nokia and Barvesten. *See supra* Section VI(C)–(D) (determining Petitioner shows that claims 10–20 are unpatentable). Under the circumstances of this case, analyzing an additional ground challenging the same claims, which we have determined to be unpatentable, would not be an efficient use of the Board's time and resources. *See Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984, 990 (Fed. Cir. 2020) ("We agree that the Board need not address issues that are not necessary to the resolution of the proceeding.").

Accordingly, we do not reach this remaining obviousness ground. *Cf. In re Gleave*, 560 F.3d 1331, 1338 (Fed. Cir. 2009) (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) (determining once a dispositive issue is decided, there is no need to decide other issues).

VIII. CONSTITUTIONAL CHALLENGE

Patent Owner argues that Administrative Patent Judges are unconstitutionally appointed principal officers, and that the decision in

Arthrex, Inc. v. Smith & Nephew, Inc., 941 F.3d 1320, 1337 (Fed. Cir. 2019), *cert. granted sub nom. United States v. Arthrex, Inc.*, 2020 WL 6037206 (Oct. 13, 2020), was impermissible and inadequate to cure the Constitutional violation. PO Resp. 14–17. We note that Patent Owner's constitutional challenge was addressed by the Federal Circuit's *Arthrex* decision. *Arthrex*, 941 F.3d at 1337 ("This as-applied severance . . . cures the constitutional violation."); *see also Arthrex, Inc. v. Smith & Nephew, Inc.*, 953 F.3d 760, 764 (Fed. Cir. 2020) (en banc) (Moore, J., concurring in denial of rehearing) ("Because the APJs were constitutionally appointed as of the implementation of the severance, *inter partes* review decisions going forward were no longer rendered by unconstitutional panels."). Accordingly, we do not consider this issue any further.

IX. CONCLUSION[11]

Based on the full record, we determine that Petitioners show by a preponderance of the evidence that claims 10–20 of the '654 patent are unpatentable under 35 U.S.C. § 103(a) in view of the combination of Nokia and Barvesten.

[11] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

Claim(s)	35 U.S.C. §	Reference(s) /Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
10–20	103(a)	Nokia, Barvesten	10–20	
10–20	103(a)	Barvesten, Schultz[12]		
Overall Outcome			10–20	

X. ORDER

In consideration of the foregoing, it is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), Petitioners have shown by a preponderance of the evidence that claims 10–20 of the '654 patent are unpatentable; and

FURTHER ORDERED that parties to the proceeding seeking judicial review of this Final Written Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

[12] As we explain above, because we determine that claims 10–20 are unpatentable over Nokia and Barvesten, we decline to address this ground.

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