

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC.,
Petitioner,

v.

KONINKLIJKE KPN N.V.,
Patent Owner.

IPR2023-00583
Patent 7,092,705 B2

Before KEVIN F. TURNER, ROBERT J. WEINSCHENK, and
NORMAN H. BEAMER, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Ericsson Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–7, 22–26, 28, 29, 31, and 32 (“the challenged claims”) of U.S. Patent No. 7,092,705 B2 (Ex. 1001, “the ’705 Patent”). Koninklijke KPN N.V. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”) to the Petition. With our authorization, Petitioner filed a Reply (Paper 7, “Reply”) to the Preliminary Response, and Patent Owner filed a Sur-reply (Paper 8, “Sur-reply”) to the Reply, both directed to discretionary issues.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2016); 37 C.F.R. § 42.4(a) (2019). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. §314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons explained below, we deny institution of an *inter partes* review of the ’705 Patent.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies itself and Telefonaktiebolaget LM Ericsson as the real parties in interest. Pet. 1. Patent Owner identifies itself as the only real party in interest. Paper 3, 2.

B. *Related Matters*

The parties indicate that the ’705 Patent is the subject of the following district court case: *Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson*, No. 2:22-cv-00282 (E.D. Tex.). Pet. 1; Paper 3, 2.

C. The '705 Patent

The '705 Patent relates to a method and system for checking parameter settings of a radio network. Ex. 1001, code (57). To accommodate changes in use of a cellular radio network, a network operator may configure and reconfigure the network, by temporarily splitting a cell to deal with an expected increase in traffic, or to permanently integrate new components into the network, as examples of such changes. *Id.* at 2:6–16. The '705 Patent details such changes need to happen within a limited amount of time and with a high degree of accuracy, but as the complexity of networks increases, configuration and reconfiguration of a network becomes more difficult because parameter settings of the different components of the network affect each other. *Id.* at 1:52–56, 2:6–10.

The '705 Patent discusses Madebrink,¹ which describes a reconfiguration method and apparatus, wherein “cell parameters of particular mobile switching centres in a network are copied to a database,” “[a] set of proposed changes to the stored parameters is prepared and the consistency of the proposed changes is verified,” and “[t]he verified set of proposed changes is then introduced into the network.” Ex. 1001, 1:56–67. The '705 Patent notes that in Madebrink’s method, the consistency check of the proposed changes to the parameters uses “rules” that “originate solely from technical requirements derived from cellular network technology,” such that its method does not “apply rules derived from operational practice,” and these rules cannot “deviate from the technically sufficient parameter setting requirements if operational practice experience reveals a different more

¹ U.S. Patent No. 5,434,798, filed May 23, 1991, issued July 18, 1995 (Ex. 1005, “Madebrink”).

preferable technical parameter setting.” *Id.* at 2:38–45. The ’705 Patent also notes that in Madebrink’s method, the consistency check of the proposed changes to the parameters only uses pre-programmed rules, which decreases the flexibility of the system, and that only a limited part of the network hierarchy is checked, which results in a less reliable and efficient control of the network. *Id.* at 2:30–35, 46–50.

In order to overcome the listed shortcomings, the ’705 Patent discloses embodiments for checking modified parameters of components of a network based on rules deduced from operational use of the network, with the rules having two distinct components: (i) a technically sufficient parameter setting and (ii) a deviation from that value where the extent of the deviation is deduced from actual network operation. Ex. 1001, 6:4–7. The ’705 Patent describes its process according to a specific example:

Moreover, it is preferable that the bare technically sufficient requirements can be altered according to rules obtained from daily operational use of the radio network. It can, e.g., be technically sufficient to have a channel distance of 20 Hz between different cells. All channel distances above this value then will pass the bcc/bcch consistency check. However, in practice it may be that a channel difference of 50 Hz between the cells guarantees a more reliable operation. In that case, according to the invention, it is possible to use the preferred channel difference of 50 Hz as obtained from the operational practice as a business rule instead of the technically sufficient channel distance.

Ex. 1001, 6:4–15.

D. Illustrative Claim

Petitioner challenges claims 1–7, 22–26, 28, 29, 31, and 32 of the ’705 Patent. Pet. 13. Claims 1, 22, 26, 28, and 31 are the independent claims, with the remaining claims ultimately dependent on those claims.

Independent claim 1, reproduced below, is illustrative of the claimed subject matter.

1. [1pre] A method for verifying a modified parameter obtained from changing an operational parameter of a component of a radio network, the method comprising the steps of:

[1a] before the modified parameter is implemented in the network, checking the modified parameter on the basis of a rule so as to yield a result, said rule comprising both a technically sufficient parameter setting requirement and a deviation from the setting requirement based on an operational requirement deduced from use of the radio network; and

[1b] if the result indicates that the rule has been obeyed, storing the modified parameter in the network such that subsequent network operation will respond to the modified parameter.

Ex. 1001, 8:39–52 (with annotations from the Petition; *see* Pet. 15, 17, 26).

E. Asserted Grounds

Petitioner challenges the patentability of claims 1–7, 22–26, 28, 29, 31, and 32 of the '705 Patent on the following grounds:

Claims Challenged	35 U.S.C. §	References
1–7, 22–26, 28, 29, 31, 32	103(a) ²	Madebrink, Feuerstein ³
1–7, 22–26, 28, 29, 31, 32	103(a)	Madebrink, Feuerstein, Shipman ⁴
1, 22, 26, 28, 31	103(a)	Djoko ⁵

² The Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the '705 Patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA version of 35 U.S.C. § 103.

³ U.S. Patent No. 6,141,565, filed November 13, 1997, issued October 31, 2000 (Ex. 1006, “Feuerstein”).

⁴ GB Application No. 0022743.9, filed September 15, 2000, published June 13, 2002 and July 10, 2002 (Ex. 1010, “Shipman”).

⁵ U.S. Patent No. 6,085,335, filed December 31, 1997, issued July 4, 2000 (Ex. 1007, “Djoko”).

Claims Challenged	35 U.S.C. §	References
2–7, 23–25, 29, 32	103(a)	Djoko, Sheridan ⁶

Petitioner supports its challenge with a Declaration by Dr. Zygmunt Haas (Ex. 1002, “Haas Decl.”), and Patent Owner supports its arguments with a Declaration by Mr. Regis J. Bates (Ex. 2008, “Bates Decl.”).

III. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner argues that a person of ordinary skill in the art would have had “a[t] least a bachelor’s degree in electrical engineering or a related field, and two years of experience working with wireless networks, and related technologies.” Pet. 12–13 (citing Ex. 1002 ¶¶ 59–61). Patent Owner does not dispute Petitioner’s description at this stage of the proceeding. Prelim. Resp. 27. We adopt Petitioner’s description for purposes of this Decision.

B. Claim Construction

In an *inter partes* review proceeding, a patent claim is construed using the same standard used in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance with the ordinary and customary meaning of the claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b).

Petitioner asserts that “given the close correlation and substantial identity between the references and the ’705 Patent the Board need not construe any of the terms to resolve the underlying controversy, as any reasonable construction reads on the prior art.” Pet. 12. Patent Owner submits that the terms recited in the Challenged Claims can each be given its

⁶ U.S. Patent No. 6,725,032 filed October 8, 1999, issued April 20, 2004 (Ex. 1008, “Sheridan”).

plain and ordinary meaning, and that no express constructions of these terms are needed. Prelim. Resp. 27.

We determine that no claim terms require express construction in order to resolve the parties' disputes about the asserted grounds of unpatentability.

C. Legal Standards – Obviousness

The U.S. Supreme Court sets forth the framework for applying the statutory language of 35 U.S.C. § 103 in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966):

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

As explained by the Supreme Court in *KSR Int'l Co. v. Teleflex Inc.*,

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”)).

“Whether an ordinarily skilled artisan would have been motivated to modify the teachings of a reference is a question of fact.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1327 (Fed. Cir. 2016) (citations omitted).

“[W]here a party argues a skilled artisan would have been motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

D. Obviousness of Claims 1–7, 22–26, 28, 29, 31, and 32 over Madebrink and Feuerstein

Petitioner asserts that the combination of Madebrink and Feuerstein would have rendered the subject matter of claims 1–7, 22–26, 28, 29, 31, and 32 obvious to one of ordinary skill in the art at the time of the invention. Pet. 15–38. Patent Owner argues that the Petition fails to identify with particularity that the cited references teach or suggest at least limitations [1a] and [1b] of claim 1, and that the proposed combination would have changed the principle of operation of Madebrink. Prelim. Resp. 27–39. We begin with brief discussions of the cited references, and then consider Petitioner’s arguments with respect to the references’ teachings applied to the instant claims as well as Patent Owner’s arguments asserting deficiencies in this ground of unpatentability.

1. Madebrink

Madebrink was discussed above. *See* Section II.C. Figures 4A and 6, reproduced below, illustrate a method of reconfiguring the network and performing a consistency check routine.

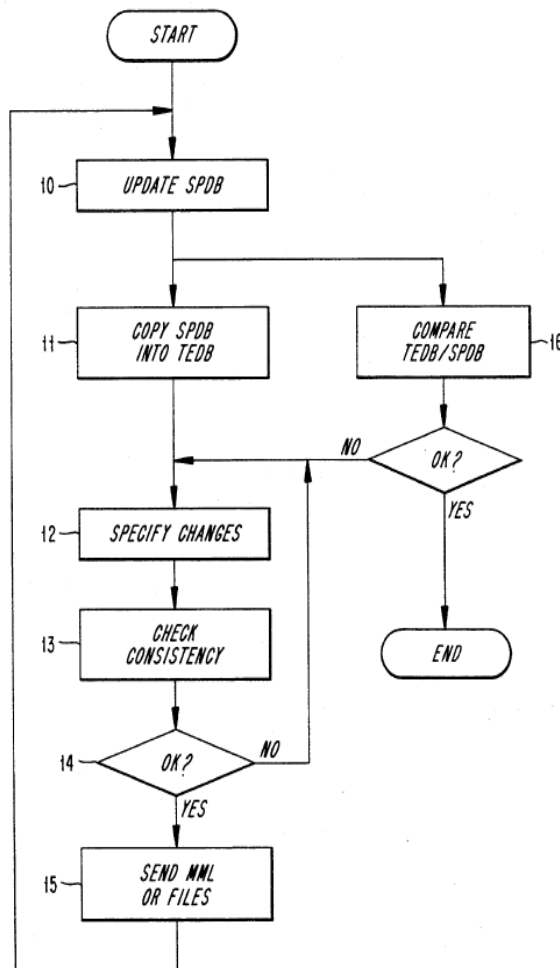
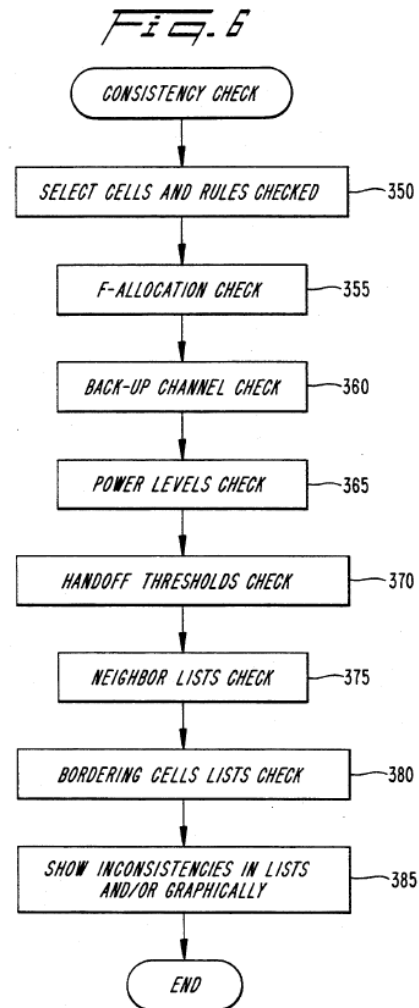


FIG. 4A



At block 12 of Figure 4A, proposed changes to parameters are specified, and at block 13, a consistency check (Figure 6) is performed on the entered changes before they are introduced into the network. Ex. 1005, 11:1–2, 15–18, 64–65. In Figure 6, step 355 checks frequency allocations, step 360 determines if the cells have backup channel devices, step 365 determines the cells' power level (e.g., base station power level must correspond to the size of the cell), step 370 checks the hand-off and locating thresholds, step 375 checks the relationship between the neighboring cell and adjacent cells, and step 380 checks the inter-exchange handoff relationships. *Id.* at 13:31–59.

Madebrink also discloses that after the updated parameters are activated in the network, the network operator may optimize the newly changed parameters. Ex. 1005, 11:64–67. Madebrink discloses that “live traffic measurements may be taken which may be used to optimize the cell parameters and if necessary, further changes may be implemented responsive to the optimization.” *Id.* at 12:1–4.

2. Feuerstein

Feuerstein discloses systems and methods for providing network parameters to network elements. Ex. 1006, code (57). Feuerstein discloses a network control system includes a control processor and a database, where the database stores network parameters and “[e]ach such set of network parameters is optimized so as to result in desired system behavior when particular communication conditions are determined to exist.” *Id.* at 7:45–46, 57–60, Fig. 2.

Feuerstein discloses “where network parameters are not available which are optimized for particular communication conditions, or where it is otherwise determined advantageous, parameters may be generated, i.e., calculated, which are optimized based on network theory or equations representing network operation.” Ex. 1006, 7:64–8:2. Feuerstein discloses that the control processor includes “network simulation software in order to provide network modeling,” which uses “real-time optimization paradigms.” *Id.* at 12:27–33.

Further, Feuerstein discloses, “in a preferred embodiment of the present invention, optimization of network parameters is accomplished in real-time or near real-time” and “updates to database 203 may be based on real-time measurements of the traffic load or the interference levels on the network.” Ex. 1006, 11:63–67, 9:43–46.

1. *Claim 1*

a. *Element [1p]: Preamble*

With respect to the preamble of independent claim 1, Petitioner asserts that Madebrink disclose the preamble, to the extent it is limiting. Pet. 15. Petitioner asserts that Madebrink discloses a technique for performing cellular network reconfiguration, which includes copying cell parameters from an operational network and storing them in a database, where the consistency of the prepared set of proposed changes is verified. *Id.* (citing Ex. 1005, code (57)). Subsequently, any necessary alterations to the set of proposed changes responsive to the verification are made and the verified set of proposed changes is deployed to the network. *Id.* at 15–16. Patent Owner does not traverse this part of the ground. *See* Prelim. Resp.

b. *Element [1a]: “checking the modified parameter”*

With respect to element [1a], Petitioner asserts that the ’705 Patent admits that Madebrink’s rule corresponds to “a technically sufficient parameter setting requirement,” and that Madebrink also discloses checking the modified parameter against a technically sufficient rule before implementing the modified parameter into the network. Pet. 17 (citing Ex. 1001, 2:36–40; Ex. 1005, 9:49–60). Petitioner also quotes Madebrink as providing that “live traffic measurements may be taken which may be used to optimize the cell parameters and if necessary, further changes may be implemented responsive to the optimization.” *Id.* at 17–18 (quoting Ex. 1005, 12:1–4). Petitioner also acknowledges that “Madebrink does not explicitly disclose deviating from the technically sufficient parameter setting requirements *before* the parameter is deployed when operational practice experience reveals a different, more preferable technical parameter setting.” *Id.* at 18–19 (citing Ex. 1005, 13:27–28). However, Petitioner asserts that

it would have been obvious to a POSITA to implement a modified parameter checking (before the modified parameter is deployed) that verifies that the modified rule not only satisfies a baseline parameter setting (“a technically sufficient parameter setting requirement”) but that it will also be an optimization over the baseline setting for the given network conditions.

Id. at 19. Although this portion of the Petition could be taken to assert that claim 1 is obvious over Madebrink alone, and Patent Owner argues against such an apparent position (Prelim. Resp. 27–31), we are not persuaded that the Petition intends to assert Madebrink alone, but that it is merely proposing that Madebrink is applicable to modification by persons of ordinary skill in the art.

Petitioner further asserts that Feuerstein teaches optimizing the parameter before deploying it into the network by simulating the modified parameter against real-time traffic information, and that it would have been obvious for persons of ordinary skill in the art to modify Madebrink, such that Madebrink’s technically sufficient parameter setting is deviated from using a pre-deployment optimization, like the one disclosed in Feuerstein. Pet. 19 (citing Ex. 1006, 12:29–39; Ex. 1002 ¶¶ 65–99). Petitioner further asserts that given the problem identified by Feuerstein, persons of ordinary skill in the art would have understood that a need existed for “dynamically adjusting network parameters” for “a particular portion of the network based on localized conditions” before deploying the modified parameters into the actual network. *Id.* at 21 (citing Ex. 1006, 2:15–24; Ex. 1002 ¶ 90).

Petitioner further asserts that Feuerstein simulates network conditions in response to adjusting various network parameters, in an optimum manner, based on actual network conditions, which is similar to Madebrink’s after-the-fact optimization based on “live traffic measurements” that “optimizes

the cell parameters” and make “further changes,” if necessary. Pet. 23 (citing Ex. 1005, 12:1–4; Ex. 1006, 12:29–39, Ex. 1002, ¶¶64–80, 85–98).

Patent Owner takes issue with the Petitions’ reliance on the equivalence of optimizing a parameter, such as in Madebrink and Feuerstein, with the claimed “a deviation from the setting requirement based on an operational requirement deduced from the use of the radio network.”

Prelim. Resp. 29. Patent Owner’s declarant testifies that there is no equivalence between optimizing a parameter and checking a parameter on the basis of a rule having a deviation from a setting requirement. Ex. 2008 ¶ 120. We agree with Patent Owner. Petitioner does not present specific evidence indicating that Feuerstein’s teaching of optimizing a parameter for a given environment is the same as checking the parameter on the basis of a rule comprising a deviation from a setting requirement. *See* Pet. 17–26. In fact, the evidence of record indicates that optimizing a parameter does not necessarily require checking the parameter against a rule. Ex. 2008 ¶ 120 (“the ‘rule’ recited in [1a] may reject verification of a modified network parameter even if it has been optimized”). We further agree with Patent Owner that Madebrink and Feuerstein teach optimization based on live traffic, and not based on a “rule,” per se. Prelim. Resp. 30–31 (citing Ex. 2008 ¶ 122).

With respect to the combination of Madebrink and Feuerstein, Patent Owner argues that Feuerstein’s simulation does not teach or suggest “checking the modified parameter on the basis of a rule,” per limitation [1a], because Feuerstein teaches “parameters may be generated, i.e., calculated ... based on network theory or equations representing network operation.” Prelim. Resp. 31–32 (citing Ex. 1006, 7:67–8:2). Patent Owner also argues that Feuerstein’s “network simulation software,” “calculat[es] optimum

network parameters” from scratch, and does not “check[] the modified parameter on the basis of rule.” *Id.* at 32 (citing Ex. 1006, 12:27–39; Ex. 2008 ¶ 125).

Patent Owner also argues that optimization and the “rule” recited in [1a] are different, with the ’705 Patent’s example of 50 Hz channel distance being such a “rule” that proves the point: Feuerstein’s simulation software can yield an optimal channel distance (e.g., 51 Hz) that violates the 50 Hz rule, and Petitioner has not presented any evidence to the contrary. Prelim. Resp. 33 (citing EX1001, 6:4-15; Ex. 2008 ¶ 128). Patent Owner also argues that Feuerstein teaches that simulation is used “where network parameters are not available which are optimized for particular communication conditions, or where it is otherwise determined advantageous,” such that Feuerstein’s real-time optimization is no different than Madebrink’s optimization based on live traffic, and both fail to teach or suggest [1a]. *Id.* (citing Ex. 1006, 7:64–67; Ex. 2008 ¶ 130).

We are persuaded by Patent Owner’s arguments and the testimony of Mr. Bates. Element [1a] of independent claim 1 recites, in part, that the modified parameter is checked on the basis of a rule, with that rule including “a deviation from the setting requirement based on an operational requirement deduced from use of the radio network.” Petitioner does not show sufficiently that the combination of Madebrink and Feuerstein teaches checking a modified parameter on the basis of a rule comprising a deviation from a setting requirement. We agree with Patent Owner that both Madebrink and Feuerstein can determine initial parameters via the use of rules, but Feuerstein’s simulation software is a modeling tool that uses “real-time optimization paradigms” (Ex. 1006, 8:1–2, 12:33), and does not utilize or apply a rule to check the parameters, as recited in element [1a] of

independent claim 1. Further, we are persuaded by the testimony of Mr. Bates that “the ’705 Patent’s example of 50 Hz channel distance being such a ‘rule’ once again proves the point: Feuerstein’s simulation software can yield an optimal channel distance (e.g., 51 Hz) that violates the 50 Hz rule.” Ex. 2008 ¶ 128–129 (citing Ex. 1001, 6:4–15). The system of Madebrink and Feuerstein could provide optimum parameters for operation of a communications network, but it would not necessarily follow the method recited in independent claim 1, whereby the modified parameter is checked on the basis of a rule having a deviation, as claimed. As such, we are not persuaded by the Petition that the combination of Madebrink and Feuerstein teaches or suggests element [1a] of independent claim 1.

c. Element [1b]: “storing the modified parameter in the network”

With respect to element [1b], Petitioner asserts that the combination of Madebrink and Feuerstein simulates and verifies the consistency of the proposed parameter changes against rules that account for technical sufficiency and deviations given the real-world conditions experienced by the network before storing the modified parameters for introduction into the network. Pet. 26 (citing Ex. 1005, 7:55–58; Ex. 1006, 9:35–59, 11:50–12:39).

Patent Owner responds that neither Madebrink nor Feuerstein teaches or suggests the “rule” recited in [1a], for the reasons discussed above, such that the Madebrink-Feuerstein combination does not teach or suggest “if the result indicates that the rule has been obeyed” recited in [1b]. Prelim. Resp. 36. We agree with Patent Owner based on the discussion in the prior section, that Petitioner does not show sufficiently that the combination of Madebrink and Feuerstein teaches or suggests element [1a], such that Petitioner also does not show sufficiently that the combination teaches or

suggests “if the result indicates that the rule has been obeyed,” per element [1b].

d. Conclusion

Patent Owner also provides arguments that the Petition’s proposed modification of Madebrink with Feuerstein would change the principle of operation of Madebrink (Prelim. Resp. 36–39), but we need not consider these arguments to reach our conclusion with respect to this ground. With respect to independent claim 1, we are not persuaded that the Petition demonstrates the obviousness of that claim over Madebrink and Feuerstein under this ground.

2. Independent Claims 22, 26, 28, and 31

Petitioner relies on the same rationale and reasons for asserting that independent claims 22, 26, 28, and 31 are obvious in view of Madebrink and Feuerstein as provided with respect to independent claim 1. Pet. 33, 35–38. For the same reasons discussed above, we are not persuaded that Petitioner has shown the obviousness of independent claims 22, 26, 28, and 31 under this ground.

3. Dependent Claims 2–7, 23–25, 29, and 32

Petitioner provides additional assertions and arguments with respect to dependent claims 2–7, 23–25, 29, 32. See Pet. 27–35, 37, 38. By virtue of their dependence on the independent claims discussed above, we are not persuaded that Petitioner has shown the obviousness of dependent claims 2–7, 23–25, 29, and 32 under this ground.

E. Obviousness of Claims 1–7, 22–26, 28, 29, 31, and 32 over Madebrink, Feuerstein, and Shipman

Petitioner argues that “[t]o the extent it is found that Madebrink in view of Feuerstein does not render obvious a rule that includes ‘a deviation from the setting requirement based on an operational requirement deduced from use of the radio network’ as recited by independent claim 1,” it would have been obvious to modify the combination of Madebrink and Feuerstein in view of Shipman. Pet. 38. Petitioner further asserts that “[g]iven the disclosures of Shipman and the knowledge of a POSITA, it would have been obvious to further to modify Madebrink in view of Shipman such that the consistency check is performed not only on baseline technically sufficient rules, but also on deviations of those rules that revealed a particularly successful design during simulations using real traffic data.” *Id.* at 42 (citing Ex. 1002 ¶ 130). Petitioner also asserts that the same claims are obvious “for substantially similar reasons as those discussed above for Ground 1,” and the further modification in view of Shipman provides “no meaningful effect on the for these *additional* claims.” *Id.* at 42–43.

Patent Owner argues that the addition of Shipman is meant to address “a deviation from the setting requirement based on an operational requirement deduced from use of the radio network,” per independent claim 1, but does not address the remaining limitations of element [1a], nor element [1b]. Prelim. Resp. 40. As such, Patent Owner argues that the combination of Madebrink, Feuerstein, and Shipman fails to teach or suggest all of the limitations of independent claim 1, for the reasons discussed above, with respect to the first ground. *Id.* at 41.

We agree with Patent Owner, with respect to this ground. The deficiencies of the combination of Madebrink and Feuerstein with respect to

the prior ground are not cured by the addition of the disclosure of Shipman. Although Petitioner cites to Shipman's simulator that simulates modified parameter settings, which satisfy the variable rules, against real network data (Pet. 41 (citing Ex. 1010, 7:5–8; 8:5–14; Ex. 1012, ¶¶ 23, 25)), the overall system of Madebrink and Feuerstein would still not provide a check of the modified parameter, per element [1a] and as discussed above, even with the inclusion Shipman. Shipman discloses that its system tests its parameter values in a simulator using real traffic data (Ex. 1010, 3:18–21), the same way that Feuerstein does. As such, the Petition does not demonstrate how the addition of Shipman would alter the checking process to comport with independent claim 1. As such, we are not persuaded that there is a reasonable likelihood that the Petitioner will prevail with respect to at least one of the claims challenged under this ground.

F. Obviousness of Claims 1, 22, 26, 28, and 31 over Djoko

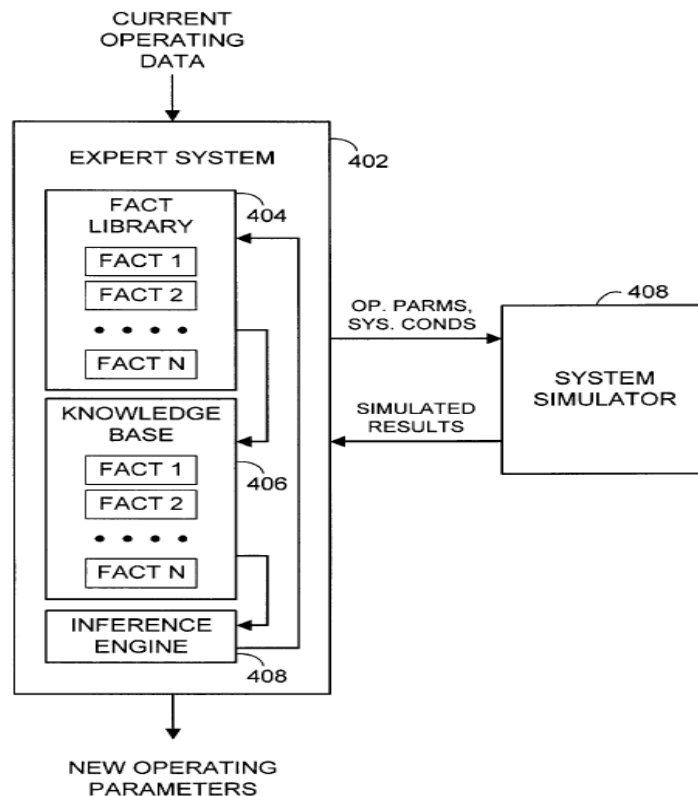
Petitioner argues that claims 1, 22, 26, 28, and 31 are anticipated by Djoko or rendered obvious over Djoko. *See* Pet. ii, 13, 43–51. We agree with Patent Owner that it is not clear whether this ground is intended to be made under anticipation or obviousness. Prelim. Resp. 17 (*comparing* Pet. 13, *with id.* at 43–51). We interpret this ground under the strictures of obviousness, as we determine them to be less constricting than anticipation, such that inferences made in the Petition can be viewed to support the case for obviousness. Nonetheless, we are not persuaded that the Petition demonstrates the obviousness of 1, 22, 26, 28, and 31 under this ground, as discussed below.

Patent Owner argues that the Petition fails to identify with particularity that the cited reference teaches or suggests at least limitations [1a] and [1b] of claim 1. Prelim. Resp. 43–55. We begin with a brief

discussion of Djoko, and then consider Petitioner’s arguments with respect to the reference’s teachings applied to the instant claims as well as Patent Owner’s arguments asserting deficiencies in this ground of unpatentability.

1. Djoko

Djoko is directed to a self-engineering system for use with a communication system. Ex. 1007, code (57), Fig. 1. Djoko discloses that based upon the current operating data and parameters of the communication system, the self engineering engine determines new operating parameters of the communication system to improve and enhance operation of the communication system. *Id.* at 5:44–46, 6:5–10. Figure 4 of Djoko, reproduced below, illustrates that the self-engineering engine has an expert system 402, where the expert system produces “NEW OPERATING PARAMETERS.”



Djoko discloses “new operating parameters are selected by the inference engine 408 at step 514” and “at step 516, the control module 108 implements the new operating parameters in the communication system.” Ex. 1007, 11:28–31, Fig. 5. The operation of the self engineering system utilizes a communication system simulator, where new operating procedures are selected, the communication system simulator is executed to evaluate the proposed operation parameters, and the control module implements the new operating parameters in the communication system. *Id.* at 11:41–46, 11:49–52.

2. Claim 1

a. Element [1p]: Preamble

Petitioner asserts that although Patent Owner argued during the prosecution of the application that issued as the '705 Patent (Ex. 1004 59–64) that Djoko is limited to producing “new” parameters, Djoko also discloses “adjusting” and “altering” existing parameters. Pet. 43. Petitioner asserts that Djoko discloses “alter[ing] operating parameters,” “parameter adjustment,” and an “adjustment process” in connection with the self engineering system which are equivalent to the preamble’s “[a] method for verifying a modified parameter obtained from changing an operational parameter of a component of a radio network.” *Id.* at 43–45 (citing Ex. 1007, 5:50–54, 6:21–23, 6:30–34, 6:41–47, 13:26–32, Figs. 1, 4).

Petitioner also asserts that Djoko discusses an example where changes in the wireless communication system require parameters related to handoff need to be altered, and Djoko addresses that “[h]andoff parameter optimization [was] performed [previously] by experienced engineers and [did] not lend itself to easy automation,” but that such alterations can occur automatically through Djoko’s system. Pet. 46 (citing Ex. 1007, 12:9–23,

13:19–23). Petitioner also asserts that, in Djoko, the parameters are initially optimized using rules from human experts, i.e., technically sufficient rules; however, as the conditions in the field change, the system will automatically change the relevant parameter values based on the field data, and iteratively evaluate their merits using the simulator, which Petitioner’s declarant asserts “is a ‘deviation’ from the technically sufficient rule.” *Id.* (citing Ex. 1007, 13:23–32; Ex. 1002 ¶ 139). Once a stable result in the simulator is achieved, the results are implemented in the communications system, which Petitioner asserts is equivalent to “verifying a modified parameter obtained from changing an operational parameter of a component of a radio network.” *Id.* at 47 (citing Ex. 1007, 13:32–35; Ex. 1002 ¶ 140).

Patent Owner argues that Djoko does not teach or suggest the preamble of independent claim 1 because Djoko discloses that its self engineering system “determines new operating parameters.” Prelim. Resp. 44. Patent Owner also argues that the parameters determined by the self-engineering module are not just new, but are based on network configuration data and historical operating conditions that are stored, not based on “an operational parameter of a component of a radio network” as in [1pre]. *Id.* at 45. Patent Owner continues that Djoko discloses that field conditions are considered via their potential effects on the new parameters through simulation, and although the rules are used for producing new parameters, they are not applied to operational parameters. *Id.* at 45–46 (citing Ex. 1004, 61–62). Patent Owner also argues that the Petition relies “on isolated phrases of Djoko to allegedly disclose” the preamble, but those citations refer to the determination of *new* operating parameters, and not verifying a modified parameter. *Id.* at 48–50 (citing Ex. 2004 ¶¶ 158–163).

We are persuaded by Patent Owner’s arguments and the testimony of Mr. Bates. The preamble of independent claim 1 recites, in part, a “method for verifying a modified parameter obtained from changing an operational parameter of a component of a radio network.” Djoko discloses that the inference engine, given network configuration data, historical operating data, and rules, produces proposed new operating parameters, and once these proposed new parameters are produced, they are evaluated through the simulator prior to their being deemed new operating parameters suitable for actual network use. Ex. 1007, 6:41–50, 11:32–53. We find persuasive Mr. Bates’ testimony that “[w]hen read in context, Djoko’s mention of ‘alter operating parameters’ refers to the self-engineering system 100 determining new operating parameters, and not ‘verifying a modified parameter’ recited in [1a].” Ex. 2008 ¶ 158. We are also persuaded by his testimony that Djoko “never uses the term ‘existing’—much less ‘existing parameter[s] values,’” and instead discloses changing the relevant parameter values based on the field data. *Id.* ¶ 163. Even if the overall function of the system in Djoko could obtain the same set of operating parameters as those obtained by the method of independent claim 1, Petitioner does not show sufficiently that Djoko teaches or suggests the same method recited in independent claim 1. As such, we are not persuaded by the Petition that Djoko teaches or suggest the preamble of independent claim 1.

b. Element [1a]: “checking the modified parameter”

Petitioner’s assertions with respect to this element parallel those discussed above for the preamble. Pet. 47–51. Petitioner relies on Djoko disclosing that before the adjusted parameter is implemented in the communication system, the system simulator verifies the adjusted parameter

before it is implemented into the system. *Id.* at 47 (citing Ex. 1007, 13:18–37).

Patent Owner responds that “nowhere does Djoko disclose verification by the simulator uses any rules, much less” a rule compliant with the limitations of element [1a]. Prelim. Resp. 53 (citing Ex. 2008 ¶ 168). Patent Owner argues that, to the contrary, simulation is employed in Djoko after the rules have selected modified parameters, such that, in Djoko, parameters are modified based on rules, and subsequently the simulator verifies the parameters. *Id.* at 53–54 (Ex. 1007, 10:63–66, 11:41–47; Ex. 2008 ¶ 169). Patent Owner also argues that the Petition does not allege how the simulator does the verification using the “rule” recited in [1a] because the simulator does not do so. *Id.* at 54 (citing Pet. 48–51).

We agree with Patent Owner’s arguments, based on our discussion of the preamble of independent claim 1 under this ground. Limitation [1a] recites, in part, “checking the modified parameter on the basis of a rule.” We agree with Patent Owner that, in Djoko, the modified parameters are verified by the simulator *after* the rules have created the modified parameters, and the simulator does not act on the basis of the rules. We find no disclosure in Djoko that the simulator therein applies rules, only that the simulator simulates the system with the modified parameters, and Petitioner has not directed us to any such disclosure in Djoko. Again, as discussed in the prior section, even if the system in Djoko could obtain parameters identical to those obtained through the method of independent claim 1, Petitioner does not show sufficiently that Djoko teaches or suggests the same method. As such, we are not persuaded of the obviousness of this element of independent claim 1 in view of Djoko.

c. Element [1b]: “storing the modified parameter in the network”

With respect to element [1b], Petitioner asserts that Djoko discloses that “[o]nce a stable assignment has been achieved the results are implemented in the wireless communication system,” such that the modified parameter would be stored if the result indicates that the rule has been obeyed. Pet. 51 (citing Ex. 1007, 13:32–35; Ex. 1002 ¶ 147).

Patent Owner responds that because Djoko does not disclose the “rule” recited in [1a], as discussed above, Djoko does not disclose “if the result indicates that the rule has been obeyed” recited in [1b]. Prelim. Resp. 55. We agree with Patent Owner based on the discussion in the prior section, that Petitioner does not show sufficiently that Djoko teaches or suggests element [1a], such Petitioner also does not show sufficiently that Djoko teaches or suggests “if the result indicates that the rule has been obeyed,” per element [1b].

d. Conclusion

With respect to independent claim 1, we are not persuaded that the Petition demonstrates the obviousness of that claim over Djoko under this ground.

3. Independent Claims 22, 26, 28, and 31

Petitioner relies on the same rationale and reasons for asserting that independent claims 22, 26, 28, and 31 are anticipated by or obvious over Djoko as provided with respect to independent claim 1. Pet. 51. For the same reasons discussed above, we are not persuaded that Petitioner has shown the obviousness of independent claims 22, 26, 28, and 31 under this ground.

G. Obviousness of Claims 2–6, 23–25, 29, and 32 over Djoko and Sheridan

Petitioner argues that claims 2–6, 23–25, 29, and 32 are obvious over Djoko and Sheridan. Pet. 52–55. Petitioner relies on Sheridan as a system for cellular network configuration and management, which receives a copy of “configuration data” from the cell site complex, such that persons of ordinary skill in the art would have found it obvious to use Sheridan’s available mechanism of copying parameters from the network to a database as the technique for collecting the current operating parameters in Djoko’s system. *Id.* at 53.

Patent Owner argues that, as argued above, Djoko fails to teach or suggest specific elements of independent claim 1, and the Petition does not cite Sheridan to teach or suggest any claim elements Patent Owner has alleged are not taught by Djoko. Prelim. Resp. 56 (citing Pet. 52–55). We agree with Patent Owner that the Petition has not demonstrated the obviousness of the challenged, independent claims over Djoko alone, and the Petition has not asserted that Sheridan cures the noted deficiencies. As such, the deficiencies of the prior ground remain with respect to this ground, applicable to the dependent claims. Thus, we are not persuaded that Petitioner has demonstrated the obviousness of claims 2–6, 23–25, 29, and 32 over Djoko and Sheridan.

H. Discretion under 35 U.S.C. § § 314(a), 325 (d)

The parties also provide arguments as to whether we should exercise our discretion under 35 U.S.C. § 314(a), to deny the Petition in light of the district court litigation, or under 35 U.S.C. § 325(d), to deny the Petition in light of prior prosecution of the application that issued as the ’705 Patent. Pet. 56–62; Prelim. Resp. 56–70; Reply 1–5, Sur-reply 1–5. Because we

deny on the merits of the Petition itself, we do not reach the arguments raised with respect our discretion to deny the Petition.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner's request for an *inter partes* review of claims 1–7, 22–26, 28, 29, 31, and 32 of the '705 Patent is *denied*.

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