

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CRADLEPOINT, INC., SIERRA WIRELESS, INC., and  
THALES DIS AIS DEUTSCHLAND GMBH,  
Petitioner

v.

SISVEL INTERNATIONAL S.A.,  
Patent Owner.

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IPR2020-01103  
Patent 8,879,503 B2

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Before TERRENCE W. McMILLIN, MONICA S. ULLAGADDI,  
and AARON W. MOORE, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

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

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## I. INTRODUCTION

### A. *Background*

Cradlepoint, Inc., Dell, Inc., Sierra Wireless, Inc., and Thales DIS AIS Deutschland GmbH, ZTE Corporation (collectively, “Petitioner”<sup>1</sup>) filed a Petition requesting *inter partes* review of claims 1–13 of U.S. Patent No. 8,879,503 B2 (Ex. 1001, “the ’503 patent”). Paper 1 (“Pet.”). 3G Licensing S.A. (“Patent Owner”) filed a Preliminary Response. Paper 10 (“Prelim. Rep.”). On January 19, 2021, we instituted an *inter partes* review of claims 1–13. Paper 13 (“Decision”), 18.

An oral hearing was held on November 16, 2021, and a transcript of the hearing is included in the record, as are the demonstratives.

The Board has jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Petitioner has shown that claims 1–13 are unpatentable.

### B. *Related Matters*

The parties identify the following as related matters: *Sisvel International SA et al. v. ZTE (USA), Inc. et al.*, No. 3:19-cv-01694 (N.D. Tx.); *Sisvel International SA v. Dell Inc.*, No. 1:19-cv-01247 (D. Del.); *Sisvel International SA v. AnyData Corporation*, No. 1:19-cv-01140 (D. Del.); *Sisvel International SA v. Blu Products, Inc.*, No. 1:19-cv-01141 (D. Del.); *Sisvel International SA v. Cradlepoint, Inc.*, No. 1:19-cv-01142 (D.

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<sup>1</sup> Dell, Inc., ZTE Corporation and ZTE (USA) Inc. have settled with Patent Owner. Cradlepoint, Inc., Sierra Wireless, Inc., Thales DIS AIS Deutschland GmbH remain in the case as the “Petitioner.”

Del.); *Sisvel International SA v. Honeywell International, Inc.*, No. 1:19-cv-01143 (D. Del.); *Sisvel International SA v. Verifone Systems, Inc.*, No. 1:19-cv-01144 (D. Del.); *Sisvel International SA v. Xirgo Technologies, LLC*, No. 1:19-cv-01145 (D. Del.); *Sisvel International SA et al v. Tesla, Inc.*, No. 1:19-cv-02288 (D. Del.); *Sisvel International S.A. v. Blu Products, Inc.*, No. 1:20-cv-20813 (S.D. Fl.); *u-blox AG et al. v. Sisvel Int'l SA et al.*, No. 3:20-cv-494 (S.D. Cal.); and U.S. Patent Application No. 12/793,670. Pet. 2–3; Paper 7, 2–3.

C. *The '503 Patent*

In 2008, 3GPP, a consortium of telecommunication standards organizations that develop cellular-related specifications, published “Release 8” of the technical specification for Long Term Evolution (“LTE”), which is also referred to as the Evolved Universal Terrestrial Access Network (“E-UTRAN”). See Pet. 11 (citing Ex. 1002 ¶¶ 49–51, 85–96). LTE is the radio access scheme for the Evolved Packet System (“EPS”) Internet Protocol (“IP”)-based packet-switched network. See *id.* ¶¶ 49–51. LTE and EPS provide access to the IP Multimedia Core Network Subsystem (“IMS”). See *id.* ¶¶ 85–96. Before Release 8, voice sessions were supported with circuit switched (“CS”) radio access, but LTE added capabilities for user equipment (“UE”) and the network to support packet-switched (“PS”) voice sessions. See *id.* ¶¶ 55–56.

Voice over IMS (“VoIMS”) is a packet-switched voice session conducted over LTE. See Ex. 1002 ¶ 109. The network and UE determine whether both can support VoIMS and, if one cannot, the user equipment would instead rely on a circuit-switched fallback (“CSFB”), which is another

radio access technology (“RAT”), such as GERAN, UTRAN, or WCDMA. *See id.* ¶¶ 108–110.

3GPP defined “voice service indicators” regarding the availability and capabilities of a network, including an “IMS Voice over PS session supported” or “VoIMS” indicator.” Ex. 1001, 1:24–33. The standard also included a Tracking Area Update (“TAU”), which is a procedure initiated by the UE to alert the network to the UE’s location and provide the UE with information about the networks available where it is located. *See* Ex. 1002 ¶¶ 73–84.

The ’503 patent explains that the prior art method for using the VoIMS indicators had two problems: “there [was] no guarantee that the UE will initiate IMS registration” and “there [was] no guarantee IMS registration for voice [would] succeed.” Ex. 1001, 14:4–6, 15:20–22. The patent sought to address those issues with a method that includes “[exchanging] an indicator regarding whether a voice-over-packet session is supported, “[attempting] to register with an appropriate [IMS]” and, “[i]f the UE fails to register with the IMS,” performing a “combined TAU to initiate connection with an alternate network” or, “[a]lternatively,” attempting “to select another radio access technology.” Prelim. Resp. 10 (citing Ex. 2001 ¶¶ 49–50).

*D. The Challenged Claims*

Independent claim 1 is reproduced below:

1. A method in a User Equipment (UE), the method comprising:

receiving a Non Access Stratum (NAS) protocol Accept message with a first indicator indicating that an IMS voice over packet-switched session is supported, the first indicator being

provided by lower layers of the UE to upper layers of the UE;  
responsive to the first indicator, performing an attempt to register with an Internet Protocol Multimedia Subsystem (IMS);  
and  
based on a failure of the attempt to register with the IMS, performing, by the UE, a combined tracking area update (TAU).

Ex. 1001, 26:40–52.

Independent claim 4 is similar to claim 1 but drawn to a computer readable medium with instructions to perform the method, and independent claim 7 is a corresponding apparatus claim. Independent claim 10 is to a similar apparatus, but recites that the failure to register causes the UE to “perform . . . a selection to another radio access technology (RAT)” instead of a TAU.

## II. LEVEL OF ORDINARY SKILL IN THE ART

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *See Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1323 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). The level of skill in the art also informs the claim construction analysis. *See Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 332 (2015) (explaining that claim construction seeks the meaning “a skilled artisan would ascribe” to the claim term “in the context of the specific patent claim”).

Petitioner asserts that a person of ordinary skill in the art at the time of the invention “would have had a degree in electrical engineering or a similar discipline, with at least three years of relevant industry or research experience, including designing or implementing cellular radio systems,”

and that this person “would also have familiarity with WCDMA” and “with the 3GPP technical specifications and packet data in cellular networks.” Pet. 40 (citing Ex. 1001, 1:18–20, 1:24–27; Ex. 1002 ¶¶ 28–38). Patent Owner does not address the level of ordinary skill in the art in the Response.

We adopt Petitioner’s formulation because we find it consistent with the disclosures of the ’503 patent, which “relates generally to mobile communication system and, more particularly, to the provision of voice services in Evolved Packet System.” Ex. 1001, 1:18–20. We note in particular that the ’503 patent cites a voluminous amount of 3GPP prior art (*see* Ex. 1001, pp. 2–5), which suggests that a person working in this particular field would have been “familiar[] with the 3GPP technical specifications and packet data in cellular networks,” as Petitioner asserts.

### III. CLAIM CONSTRUCTION

The parties do not raise any claim construction issues and we, accordingly, do not construe any claim terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (explaining that construction is needed only for terms that are in dispute, and only as necessary to resolve the controversy).

### IV. THE PRIOR ART

#### A. TS24.301

TS24.301, produced by 3GPP, “specifies the procedures used by the protocols for mobility management and session management between User Equipment (UE) and Mobility Management Entity (MME) in the Evolved Packet System (EPS),” which “belong to the non-access stratum (NAS).” Ex. 1005, 16. “The reference specifies certain methods by which user

equipment may implement a preference for certain network-services.”

Prelim. Resp. 12.

*B. Nokia-002*

Nokia-002 is a 3GPP change request that proposes “[a]dding IMS voice supported indication from MME toward UE in Attach and TAU procedure.” Ex. 1006, 1. The reference explains that “IMS voice supported indication is needed in order to provide the proper voice selection input to the UE” as, “[o]therwise, [the] UE may select an inappropriate domain . . . for [a] voice call, which can result in bad user experiences.” *Id.*

*C. T-Mobile*

T-Mobile is a 3GPP slide set that “clarifies how to assure proper voice mode selection by the UE.” Ex. 1007, 1. It concludes that “most of the required functionality is already specified in the current 3GPP TSs, while a user selection of ‘voice centric’ vs. ‘data centric’ on the UE might need to be added as the final bit in order to make the overall selection process complete.” *Id.*

*D. Nokia-533*

Nokia-533 is a 3GPP discussion document, titled “Handling of IMS VoIP indicator and CS/IMS Mode Selection,” that “tries to propose a logical view on CS vs. IMS domain selection from the UE’s point of view, and propose a way forward.” Ex. 1008, 1.

*E. Samsung*

Samsung is 3GPP discussion document, titled “CS Fallback interactions with IMS,” that “[c]larifies the relationship between CS fallback and IMS in the UE and the network.” Ex. 1009, 1.



*F. Status as Printed Publications*

Petitioner supports the prior art status of the 3GPP references with the Declaration of Craig Bishop, filed as Exhibit 1003. Mr. Bishop describes the “prominence and purpose of 3GPP,” 3GPP’s policies concerning the documents it maintains, 3GPP’s structure and the standards Development Process, the different types of documents generated and maintained by 3GPP, a 3GPP “listserv,” and 3GPP’s public file repository. *See* Ex. 1003, 7–35. He then discusses the public availability of 3GPP Exhibits 1005–1010. *See id.* 35–56.

Mr. Bishop explains that “[w]ithin 3GPP, responsibility for producing specifications was delegated to the Technical Specification Groups (‘TSGs’)” and that “[e]ach TSG [was] further divided into a number of Working Groups (‘WGs’).” Ex. 1003 ¶ 29.

Mr. Bishop explains that skilled artisans “would have been aware of the division of work by subject matter among the TSGs and among the Working Groups within each TSG” and that “[a] brief description of each Working Group’s technology area could be found on the Working Group home pages on the 3GPP website.” Ex. 1003 ¶ 30.

Mr. Bishop further testifies that “[t]he TSGs held quarterly plenary meetings where member companies’ contributions, draft specifications/reports, and other documents that had been agreed upon by the Working Groups were presented for approval,” that “[o]nce a Technical Specification was, or Change Requests creating a new version of a Technical Specification were, formally approved by TSG plenary, the latest version of said Technical Specification would be . . . uploaded to the file server,” such that “the conclusions of 3GPP TSG plenary meetings [would] serve as notice

that new versions of specifications incorporating Change Requests approved by the TSG meeting will shortly be made available on the public 3GPP server.” Ex. 1003 ¶ 32. He further explains that “[t]he working Groups also met regularly” and that “[t]he attendees . . . at these meetings were engineers representing telecommunications organizations from around the world such as equipment manufacturers, mobile network operators, and services providers, including for example AT&T, Ericsson, Nokia, Qualcomm, and Samsung, among many others.” *Id.*

Mr. Bishop testifies that “the 3GPP process involved the consideration of temporary documents” called “TDocs,” that were also “referred to as ‘technical contributions,’ or ‘member contributions,’ and in some cases referred to as ‘change requests.’” Ex. 1003 ¶ 35. Mr. Bishop states that “POSITAs would have known that TDocs could be a helpful source of technical information regarding the 3GPP specifications” and that “[e]ach TDoc was assigned a TDoc number, according to a standard format set by 3GPP.” *Id.* ¶ 37.

Mr. Bishop next explains that “[a]ll TDocs, technical reports, and technical specifications were also freely available to interested POSITAs (and to any interested member of the public) through the public file repository on the 3GPP website,” that “interested POSITAs would have been well aware of 3GPP and of the 3GPP website,” and that “[a]ny interested individual . . . could download documents from the 3GPP website’s file repository without providing any login credentials or other exclusive access criteria.” Ex. 1003 ¶ 56. Mr. Bishop opines that “an interested POSITA could have located relevant documents of interest on the 3GPP website using

reasonable diligence based on the website's indexing scheme" (Ex. 1003 ¶ 57) and describes how that would have been done (*see id.* ¶¶ 58–61).

Regarding Nokia-002, for example, Mr. Bishop explains that "a user could access 3GPP's public file repository through the 'Meeting documents' link on the relevant Working Group home page." *Id.* ¶ 74. "The Working Group home pages could be accessed from the 3GPP home page by selecting 'SA' from the 'Specification Groups' drop-down box," then "select[ing] 'TSG SA WG2,'" taking the user to the "TSG SA2 home page," which "contained a list of useful links and information including a link to the 'Meeting documents' for the working group." *Id.*

Mr. Bishop testifies that "an interested POSITA would have known which TSG and WG to focus on based on the subject matter he or she was interested in" and that those "interested in the subject matter of the '503 patent would have known to look to 3GPP documents because the '503 patent explains that the patent relates "to the provision of voice services in Evolved Packet System." *Id.* ¶ 75. Mr. Bishop states that the "Meeting documents" link would have taken the user directly to the documents for that working group, which was organized by Working Group meetings" and "would have used the meeting agendas, meeting reports, Change Requests, and the list of TDocs to identify a narrow set of documents pertaining to the particular subject matter of interest." *Id.* ¶ 76.

Mr. Bishop concludes that, "an interested POSITA using reasonable diligence could have located Nokia-002 on the 3GPP website, downloaded the reference without providing any credentials, and disseminated the reference to others without restriction." Ex. 1003 ¶ 79. Mr. Bishop provides similar evidence for the other references. *See id.* ¶¶ 62–70, 80–108.

Mr. Bishop also testifies that 3GPP used “e-mail listservs” to “disseminate ideas and information broadly, among 3GPP participants as well as non-3GPP participants, to generate discussion and ultimately to help identify the best technical proposals to include in the standard,” and that “[s]ubscribing to a listserv was simple and was open to any member of the public—not just 3GPP members.” Ex. 1003 ¶ 48. Mr. Bishop opines that the listservs “were well known among persons interested in following or participating in the development of wireless cellular standards.” *Id.* ¶ 49.

Patent Owner argues that “Petitioners have failed to show that any of the claims of the ’503 patent are unpatentable because Petitioners assert references without providing sufficient evidence of those references’ public availability to a POSITA at the time of invention.” PO Resp. 1. Patent Owner offers a series of arguments to support that conclusion, which we address in turn.

Patent Owner first argues that “[n]owhere in Petitioners’ proposal do they even assert that a POSITA would be familiar with the inner-workings of 3GPP or its document storage processes” and that “Petitioner’s proposal does not even include a reference to familiarity with 3GPP, let alone familiarity with the labyrinthine structure of 3GPP’s structure and database system.” PO Resp. 7–8.

We find this unpersuasive because we conclude that one of skill in the art would not need to be “familiar with the inner-workings of 3GPP,” and that the “document storage processes” were not “labyrinthine,” but rather a fairly simple set of folders neatly organized on the website by subject matter and meeting date.

We credit Mr. Bishop’s testimony that “[c]ompanies around the world—and the interested POSITAs employed by those companies—would have been motivated to stay up to date regarding 3GPP developments to ensure their products, networks, and research programmes remained consistent with and relevant to the specifications being developed.” Ex. 1003 ¶ 33. We further credit Mr. Bishop’s testimony that “an interested POSITA could have located relevant documents of interest,” including the references at issue in this case, “on the 3GPP website using reasonable diligence based on the website’s indexing scheme.” *Id.* ¶ 57; *see id.* ¶¶ 57–108. *Cf. M & K Holdings, Inc. v. Samsung Elecs. Co., Ltd.*, 985 F.3d 1376, 1381–82 (Fed. Cir. 2021) (“A skilled artisan browsing the JCT-VC website would understand that the website is structured to serve the purpose of the JCT-VC organization, i.e., to develop HEVC standards through member meetings and communications, not to function as a passive digital library. Hence, a skilled artisan browsing the JCT-VC website would realize that documents are hosted under the meeting pages.”).

Patent Owner next argues that “[t]he facts established before and after institution have borne out the understanding that a POSITA’s familiarity with final standards promulgated by 3GPP does not necessitate that they be familiar with the 3GPP’s byzantine structure of working groups and specification groups.” PO Resp. 8. Patent Owner argues that Petitioner’s expert testified that skilled artisans “may or may not understand how standard bodies work and they arrive at standards and what mechanisms they use.” PO Resp. 9 (quoting Ex. 2006 at 14:9–19). Patent Owner then argues that this “further confirms Petitioners’ failure to meet their burden of

demonstrating this the prior art status of the cited references by clear and convincing evidence.” *Id.*

The first, and most glaring, problem with this argument is that the burden of proof in this proceeding is “preponderance of the evidence,” not clear and convincing evidence. *See* 35 U.S.C. § 316(e) (“In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”). In any event, in view of Mr. Bishop’s testimony, we find the 3GPP Technical Specification Groups and Working Groups clearly organized and explained, not “byzantine.” *See* Ex. 1003 ¶¶ 29–31. We also find the argument about “how standard bodies work and . . . arrive at standards and what mechanisms they use” not particularly relevant to the issue at hand, which is whether a skilled artisan would reasonably have been able to locate the documents relevant to their work. We credit Mr. Bishop’s testimony that the ordinarily skilled artisan would have been motivated to locate the relevant technical information and could have done so by navigating the 3GPP archive. *See* Ex. 1003 ¶¶ 29–108.

Patent Owner next tries to create inconsistency between Petitioner’s experts, contending that Dr. Olivier’s testimony that one of skill in the art would be able to “figure out where information was in the 3GPP standards body” because “[o]therwise, it would be difficult for them to do their job” is inconsistent with Mr. Bishop’s testimony that, when he was at Samsung, part of his job was to make sure the engineers were aware of changes being made to the standard. *See* PO Resp. 10. There is no inconsistency. It may have been efficient for Samsung to have one person collect the documents then for each engineer to have done it individually, but that does not mean

that engineers working in this area could not locate the documents themselves. Dr. Olivier and Mr. Bishop are both of the view that those of ordinary skill in the art would have been able to locate the documents, and Patent Owner's expert, Mr. Bates, does not offer contrary testimony.

Finally, Patent Owner argues that Mr. Bates' declaration testimony "regarding his many failed attempts to locate the references[]" further establishes the lack of public availability to a POSITA." PO Resp. 11. We are not persuaded. As Mr. Bishop explains (*see* Ex. 1003 ¶¶ 56–58), one looking for relevant materials on the website would navigate to 3GPP's SA WG2 Architecture page, which includes a "Meeting Documents" link to a page with various folders that house the relevant documents, organized by meeting number and including agendas. The web page, file structure, and documents exist today. Mr. Bates, however, does not seem to have followed that procedure. Instead, he describes only attempting to locate the references using the 3GPP "email exploder" and "listserv." *See* Ex. 2001 ¶¶ 66–71. That approach may not have been the most effective because the email exploder and listserv appear to have been intended primarily for contemporaneous distribution of information, not for later research and retrieval. *See* Ex. 1003 ¶¶ 34, 47–57. In any event, we find Mr. Bates' testimony unpersuasive because he does not describe even attempting to locate the materials using the web pages and meeting folders, as Mr. Bishop describes in detail.

We do find, however, that the Bishop testimony concerning the email exploder and listserv provide further support for a conclusion of public accessibility because it tends to show that 3GPP was known beyond its

members, that the meetings were widely publicized, and that 3GPP documents were, in general, widely available. *See* Ex. 1003 ¶¶ 47–55.

Mr. Bates testified that “if a person having ordinary skill in the art did not know that T-Mobile had created a document, did not already know what was contained in the reference, or did not already know precisely where to find such a document, it would have been exceedingly difficult to find, if not impossible.” Ex. 2001 ¶ 71. We do not agree with this assertion and, instead, find the record to show (a) that a skilled artisan would have known to look on the 3GPP website for documents regarding a particular aspect of the standard in which they were interested and (b) that they could have located the references with reasonable effort.<sup>2</sup> *See M&K Holdings*, 985 F.3d at 1382 (“[T]he dispositive question is whether interested users of the JCT-VC website could have located Park and Zhou through reasonable diligence.”).

The evidence shows that 3GPP was prominent among those of ordinary skill in the art working in this field, and that they would have been aware of the website. *See* Ex. 1003 ¶¶ 20–26. It further shows that a person working on changes to this very complex and fluid specification would have followed developments as the standard evolved across the various meetings,

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<sup>2</sup> For example, the T-Mobile reference, which is from 3GPP TSG SA WG2 Meeting #73, can be found by clicking on “Meeting documents” on the “SA2 – Architecture” page and then clicking on the “TSGS2\_73\_Tallinn” folder (for Meeting #73). This presently is at <[https://www.3gpp.org/ftp/tsg\\_sa/WG2\\_Arch/TSGS2\\_73\\_Tallinn](https://www.3gpp.org/ftp/tsg_sa/WG2_Arch/TSGS2_73_Tallinn)>. The folder includes a spreadsheet called “SA2-73\_Index\_2009,” which lists and describes the papers for the meeting, including T-Mobile. The “TSGS273\_Tallinn” folder also includes a folder called “Docs,” that includes among other files, “S2-093814.zip,” which contains the T-Mobile document.



much like any other scientist would follow their subject area of interest through meetings and publications of the bodies operating in the relevant subject area. *See id.* We determine that someone interested in improving an aspect of UMTS, and thus needing to understand that area of the standard in great detail, would have looked to the 3GPP archive, as *the* repository of the relevant information, and could have located the relevant materials, including the references cited in this case, with reasonable diligence.

We accordingly conclude that Petitioner has shown, by a preponderance of the evidence, that Nokia-002, T-Mobile, Nokia-533, and Samsung are prior art printed publications.

## V. OBVIOUSNESS

Petitioner argues that claims 1–13 would have been obvious in view of TS 24.301, Nokia-002, and any one of T-Mobile, Nokia-533, or Samsung. *See* Pet. 42–80. Patent Owner does not argue otherwise.

Petitioner reads the limitations of claim 1 on TS 24.301, Nokia-002, and T-Mobile as follows.

*“[a] method in a User Equipment (UE)”*

Petitioner first argues that “[t]o the extent [the] preamble is limiting, TS 24.301 discloses methods for use in a UE.” Pet. 47 (citing Ex. 1005; Ex. 1002 ¶¶ 306–314).

*“receiving a Non Access Stratum (NAS) protocol Accept message with a first indicator indicating that an IMS voice over packet-switched session is supported, the first indicator being provided by lower layers of the UE to upper layers of the UE”*

Petitioner then argues that “TS 24.301 teaches user equipment receiving a NAS protocol Accept message,” that “TS 24.301 further teaches that the Accept message can contain several information elements—i.e.,

indicators,” and that Nokia-002 “teaches that a ‘Voice over IMS Session Supported Indication’ is included in the Accept messages, which are defined in TS 24.301.” Pet. 47–49 (citing Ex. 1005, 16, 59, 143; Ex. 1006, 1–2, 8, 13; Ex. 1002 ¶¶ 315–326). Petitioner argues that “T-Mobile similarly teaches that the UE receives a “VoIMS support indicator” when the UE attaches to EPS.” Pet. 49 (citing Ex. 1007, 4).

Petitioner also argues that “[a] POSITA would have further understood that the NAS Accept message containing the VoIMS indicator is first received by the AS layer of the user equipment, which is responsible for data transmission, and then provided up the protocol stack to the NAS layer.” Pet. 49 (citing Ex. 1002 ¶¶ 97–104, 223–225, 339–342); *see* Ex. 1001, 5:44–52.

*“responsive to the first indicator, performing  
an attempt to register with an  
Internet Protocol Multimedia Subsystem (IMS)”*

Petitioner argues that “IMS registration is necessary for the UE to use voice over IMS services over the EPS.” Pet. 50 (citing Ex. 1002 ¶¶ 85–96, 123–124).

*“based on a failure of the attempt to register with  
the IMS, performing, by the UE, a  
combined tracking area update (TAU)”*

Finally, Petitioner argues that “TS 24.301 teaches the protocol for a UE to initiate a combined TAU procedure for activating the circuit-switched fallback” and that, “[w]hile TS 24.301 does not explicitly link the performance of a combined TAU to an IMS registration failure, T-Mobile does.” Pet. 51–52 (citing Ex. 1005, 90, 91–97; Ex. 1007, 4, 5; Ex. 1002 ¶¶ 358–363).

Petitioner argues that it would have been obvious to combine these references because (1) 3GPP “already taught that the teachings of TS 24.301 and Nokia-002 were to be combined,” (2) “T-Mobile and Nokia-533 . . . themselves . . . teach a POSITA that they were intended for combination with TS 24.301,” and (3) “a POSITA, understanding Nokia-002’s instruction that the VoIMS indicator is intended to guide network selection for voice services,” would have been motivated to add “Samsung’s teachings, which also referenced TS 24.301, especially when they were submitted for the same working group meeting.” Pet. 42–44. We find this to be a sufficient motivation, and Patent Owner does not argue otherwise.

Petitioner provides a similar analysis for independent claims 4, 7, and 10, dependent claims 2, 3, 5, 6, 8, 9, 11, and 13, and for claims 1–13 using Nokia-533 or Samsung in place of T-Mobile. *See* Pet. 53–55 (claim 4, to a “non-transitory computer readable medium,” citing Ex. 1001, 24:42–46), 55 (claim 7, to a method with a “processor,” citing Ex. 1002 ¶¶ 378–382), 56–58 (claim 10, adding “selection of another radio access technology, citing, e.g., Ex. 1005, 16, 10; Ex. 1002 ¶¶ 215–240), 58–59 (claims 2, 5, 8, and 12, adding that “the NAS protocol Accept message is an ATTACH accept message,” citing, e.g., Ex. 1006, 8), 60–61 (claims 3, 6, 9, and 13, adding that “the NAS protocol Accept message is a TRACKING AREA UPDATE ACCEPT message,” citing, e.g., Ex. 1006, 13), 61–62 (claim 11, adding that “the first indicator is a IMS voice over packet-switched session (IMS VoPS) indicator,” citing, e.g., Ex. 1006, 2, 8, 13), 62–73 (Nokia-533 instead of T-Mobile: citing Ex. 1008; Ex. 1002, 440–441), and 73–80 (Samsung instead of T-Mobile: citing Ex. 1009, 3; Ex. 1002 ¶ 491). We agree with Petitioner’s analysis.

Patent Owner does not argue that the combination is not sufficient to render claims 1–13 obvious. Instead, Patent Owner argues *only* that T-Mobile, Nokia-002, Nokia-533, and Samsung are not available as prior art and that TS 24.301 alone is not sufficient to render the claims obvious. *See* Prelim. Resp. 23 (“Without supporting references, TS 24.301 is insufficient to disclose the ’503 patent’s teachings or render any claim obvious.”).

As explained above, however, we find that Petitioner has shown that the 3GPP references are prior art printed publications. *See* Section IV.F. We conclude that Petitioner’s contentions, as detailed in the Petition and summarized above, are sufficient to show, by a preponderance of the evidence, that claims 1–13 of the ’503 patent would have been obvious in view of TS 24.301, Nokia-002, and T-Mobile, Nokia-533, or Samsung.

## VI. CONCLUSION

Claims 1–13 of the ’503 patent have been shown to be unpatentable. The results are summarized below.

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–13	102	TS 24.301, Nokia-002, T-Mobile	1–13	
1–13	103	TS 24.301, Nokia-002, Nokia-533	1–13	
1–13	103	TS 24.301, Nokia-002, Samsung	1–13	
<b>Overall Outcome</b>			<b>1–13</b>	

## VII. ORDER

For the reasons given, it is:

ORDERED that claims 1–13 of U.S. Patent 8,879,503 B2 have been shown to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.<sup>3</sup>

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<sup>3</sup> 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. 16654 (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).

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