

# United States Court of Appeals for the Federal Circuit

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SISVEL INTERNATIONAL S.A.,  
*Appellant*

v.

SIERRA WIRELESS, INC., TELIT CINTERION  
DEUTSCHLAND GMBH,  
*Appellees*

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2022-1387, 2022-1492

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Appeals from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in Nos. IPR2020-  
01070, IPR2020-01071.

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Decided: September 1, 2023

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Before PROST, REYNA, and STARK, *Circuit Judges*.

STARK, *Circuit Judge*.

Sisvel International S.A. (“Sisvel”) appeals from the Patent Trial and Appeal Board’s (“Board”) decisions in IPR2020-01070 and IPR2020-01071.<sup>1</sup> In those decisions, the Board concluded that claims 10, 11, 13, 17, and 24 of U.S. Patent No. 7,433,698 (the “698 patent”) and claims 1, 2, 4, and 13-18 of U.S. Patent No. 8,364,196 (the “196 patent”) are unpatentable as anticipated and/or obvious in view of certain prior art.

On appeal, Sisvel challenges the Board’s construction of a single claim term, “connection rejection message.” Sisvel also faults the Board’s denial of its revised motion to amend the claims of the ’698 patent. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A). For the reasons provided below, we affirm.

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<sup>1</sup> Appellees Sierra Wireless, Inc. and Thales DIS AIS Deutschland GmbH (collectively, “Appellees”) filed the petitions seeking inter partes review. Dell, Inc. and Cradlepoint, Inc. did as well and were initially parties to this appeal. Subsequently, the Court granted Dell’s and Cradlepoint’s motions to withdraw. *See Sisvel Int’l S.A. v. Sierra Wireless, Inc.*, No. 2022-1387 (Fed. Cir. 2022), ECF Nos. 21, 39. The Court also granted Thales DIS AIS Deutschland GmbH’s motion for leave to be substituted by Telit Cinterion Deutschland GmbH. *See id.*, ECF No. 61.

## I

## A

The '698 and '196 patents claim methods and apparatuses that rely on the exchange of frequency information in connection with cell reselection between a mobile station (or user cell phone) and a central mobile switching center. *See* '698 patent col. 8 l. 1-col. 10 l. 40; '196 patent col. 8 l. 1-col. 10 l. 10. The '698 patent, entitled "Cell Reselection Signalling Method," employs "a connection setup rejection message . . . to direct a mobile communication means to attempt a new connection with certain parameter values such as a certain carrier frequency." '698 patent Abstract. The connection rejection message is "used to direct a mobile communication means to attempt a new connection with certain parameter values such as a certain carrier frequency." *Id.* col. 3 ll. 9-11.

Claim 10, reproduced below, is representative:

10. A channel reselection method in a mobile communication means of a cellular telecommunication system, the method comprising the steps of:

receiving a *connection rejection message*;

observing at least one parameter of said *connection rejection message*; and

setting a value of at least one parameter for a new connection setup attempt based at least in part on information in at least one frequency parameter of said *connection rejection message*.

*Id.* col. 8 ll. 34-43 (emphasis added). The other challenged claims of the '698 patent depend from claim 10.

## B

The '196 patent, sharing the title “Cell Reselection Signalling Method,” is a continuation of the application that eventually gave rise to the '698 patent. Claim 1, reproduced below, is representative:

1. An apparatus, where the apparatus is configured:

to receive a *connection rejection message* in a mobile cellular network, the *connection rejection message* comprising a value of at least one parameter;

to set a reception frequency for a connection setup procedure based on the value of the at least one parameter of the *connection rejection message*; and

to select, for the connection setup procedure, a channel transmitting on the reception frequency based on the at least one parameter of the *connection rejection message*.

'196 patent col. 8 ll. 2-12 (emphasis added). All the challenged claims depend from claim 1.

## II

We begin by considering Sisvel’s contention that the Board erred in construing “connection rejection message.”

“The Board’s claim constructions . . . are determinations of law reviewed de novo where based on intrinsic evidence, with any Board findings about facts extrinsic to the patent record reviewed for substantial-evidence support.” *St. Jude Med., LLC v. Snyders Heart Valve LLC*, 977 F.3d 1232, 1238 (Fed. Cir. 2020) (citing *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325-27 (2015)). The *Phillips* claim-construction standard – whereby “[t]he words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the

art when read in the context of the specification and prosecution history,” *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc)) – applies here. *See, e.g.*, J.A. 11. A claim term’s plain and ordinary meaning will not apply “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner*, 669 F.3d at 1365.

Reviewing the issue de novo, we agree with the Board that “connection rejection message” should be given its plain and ordinary meaning of “a message that rejects a connection.” Sisvel’s proposed construction – “a message from a GSM or UMTS telecommunications network rejecting a connection request from a mobile station” – would improperly limit the claims to embodiments using a Global System for Mobile Communication (“GSM”) or Universal Mobile Telecommunications System (“UMTS”) network. “[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.” *Phillips*, 415 F.3d at 1323.

Here, the intrinsic evidence provides no persuasive basis to limit the claims to any particular cellular networks. To the contrary, the claim language itself is not so limited. *See, e.g.*, ’698 patent col. 8 ll. 34-43 (claim preamble reciting “channel reselection method in a mobile communication means of a cellular telecommunication system”); ’196 patent col. 8 ll. 2-12 (claim limitation directed to “receiv[ing] a connection rejection message in a mobile cellular network”). The specification, while only expressly disclosing embodiments in a UMTS or GSM network, also broadly teaches:

[t]he invention is applicable in *many* different cellular telecommunication systems, *such as* the UMTS system or the GSM system. The invention is *applicable in any such cellular telecommunication system*, in which the cellular telecommunication network sends a rejection message as a response to a connection setup request from a mobile station, if the network is unable to provide the requested connection.

'698 patent col. 7 ll. 40-46 (emphasis added); *see also* '196 patent col. 7 ll. 41-47 (same). We agree with the Board, which wrote:

[T]his language [of the specification] clearly is permissive, not mandatory. At most, this sentence [which the Court has reproduced above] explains that the cellular telecommunication system *can be* a UMTS system or GSM system; not that the cellular telecommunication system *must be* a UMTS system or GSM system.

J.A. 13.

Sisvel counters that UMTS and GSM “are the only specific networks identified by [the] '698 and '196 patents that actually send connection rejection messages.” Appellant’s Reply Br. 3 (emphasis omitted).<sup>2</sup> Sisvel provides no actual evidence for this proposition and cites only to its Patent Owner Response as support. J.A. 10884 (“Since the '196 patent does not disclose that the invention is applicable to

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<sup>2</sup> Sisvel does not contend that the patentee was its own lexicographer or that there is a clear and unmistakable disclaimer of claim scope. *See* Appellant’s Reply Br. 8 (“Patent Owner is not [providing], and has not, provided a construction for connection rejection message that relies on ‘lexicography’ or ‘disclaimer’ theories.”).

any networks other than the GSM and UMTS networks, and primarily discusses 3G networks, the invention is thus limited to these two networks.”). We have no basis to accept Sisvel’s contention that a person of ordinary skill in the art would read the broad claim language, accompanied by the broad specification statement we have quoted above, to be limited to GSM and UMTS networks.

As we agree with the Board on the proper construction of “connection rejection message,” and Sisvel has not made any arguments relating to the patentability of the challenged claims that do not depend on its preferred claim construction,<sup>3</sup> we affirm the Board’s conclusion that the challenged claims of the ’698 patent and ’196 patent are unpatentable.

### III

We next consider Sisvel’s contention that the Board erred in IPR2020-01070 by denying its motion to amend the claims of the ’698 patent.

The requirements for a motion to amend are set out in, among other places, 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121. As relevant to this appeal, 35 U.S.C. § 316(d)(3) provides that when a patent owner seeks to amend its claims during an inter partes review, the amended claims “may not enlarge the scope of the claims of the patent.” Similarly, 37 C.F.R. § 42.121(a)(2)(ii) explains that “[a] motion to amend may be denied where . . . [t]he amendment seeks to enlarge the scope of the claims.” In the similar

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<sup>3</sup> The Board concluded that all challenged claims were unpatentable as anticipated and/or obvious over a collection of prior-art references. J.A. 77; J.A. 129-30. Sisvel does not appeal the Board’s conclusion that the claims are unpatentable under the Board’s construction. *See* Appellant’s Br. 13-17; Appellant’s Reply Br. 2-8.

contexts of claim reissuance<sup>4</sup> and reexamination,<sup>5</sup> which likewise disallow a patent owner from enlarging the scope of its claims, we have explained that a claim “is broader in scope than the original claim[] if it contains within its scope any conceivable apparatus or process which would not have infringed the original patent.” *Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999); *see also id.* at 1373-74 (“In determining whether a patentee broadened a reexamined claim under 35 U.S.C. § 305, this court uses the same test as for reissue claims . . .”).

While it is a petitioner’s burden to show, by a preponderance of the evidence, that any proposed substitute claims are unpatentable, *see* 37 C.F.R. § 42.121(d)(2) (“A petitioner bears the burden of persuasion to show, by a preponderance of the evidence, that any proposed substitute claims are unpatentable.”), it is Sisvel’s burden, as the patent owner, to show that the proposed amendment complies with relevant regulatory and statutory requirements, *see* 37 C.F.R. § 42.121(d)(1) (“A patent owner bears the burden of persuasion to show, by a preponderance of the evidence, that the motion to amend complies with the [applicable] requirements . . .”).

We review the Board’s decision to deny the motion to amend according to the standards set out in the Administrative Procedure Act, 5 U.S.C. § 706 (“APA”), meaning we

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<sup>4</sup> *See* 35 U.S.C. § 251(d) (“No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.”).

<sup>5</sup> *See* 35 U.S.C. § 305 (“No proposed amended or new claim enlarging the scope of a claim of the patent will be permitted in a reexamination proceeding under this chapter.”).



will set aside Board actions that are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, and factual findings that are unsupported by substantial evidence. *See Veritas Techs. LLC v. Veeam Software Corp.*, 835 F.3d 1406, 1413 (Fed. Cir. 2016) (reviewing denial of contingent motion to amend under APA). Legal error constitutes an abuse of discretion. *See Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 572 U.S. 559, 563 n.2 (2014). In the reexamination context, we have explained that “[w]hether claims have been enlarged is a matter of claim construction, a question of law subject to complete and independent review on appeal.” *Quantum Corp. v. Rodime, PLC*, 65 F.3d 1577, 1580 (Fed. Cir. 1995); *see also ArcelorMittal Fr. v. AK Steel Corp.*, 786 F.3d 885, 888 (Fed. Cir. 2015) (“Whether amendments made during reissue enlarge the scope of the claim . . . is a matter of claim construction, which we review de novo, while giving deference to subsidiary factual determinations.”).

We apply these same standards here. If the Board legally erred in concluding that the proposed substitute claims were broader than Sisvel’s original claims, the Board would have abused its discretion in denying the motion to amend on that ground, and we would have to reverse (absent any alternative ground justifying the denial). Reviewing the scope of the claims de novo, we agree with the Board that the proposed substitute claims are broader than the original claims. Thus, the Board did not abuse its discretion (or err in any respect) and we will affirm its denial of Sisvel’s revised motion to amend.

The parties both propose that we are reviewing for substantial evidence. *Compare* Appellant’s Reply Br. 15 (“Accordingly, substantial evidence does not support the Board’s determination that Patent Owner’s substitute claims failed to satisfy 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121.”) *with* Appellee’s Br. 28 (“It is not this Court’s job to reweigh the substantial evidence on appeal.”). We

disagree. Instead, as we have noted, we are applying the APA standard of review, which here requires us to determine if the Board abused its discretion by committing legal error in its construction of the scope of the amended claims as compared to the scope of the original claims.

During inter partes review of the '698 patent, Sisvel submitted a revised motion to amend, proposing substitute claims contingent on the Board concluding (as it later did) that claims 10, 11, 13, 17, and 24 were unpatentable. J.A. 67. Proposed substitute claim 36, representative of all of the proposed substitute claims, J.A. 69, is reproduced below, with additions shown underlined and deletions stricken out.

Original Claim 10	Substitute Claim 36
<p>A channel reselection method in a mobile communication means of a cellular telecommunication system, the method comprising the steps of:</p> <p>receiving a connection rejection message;</p> <p>observing at least one parameter of said connection rejection message; and</p> <p>setting a value of at least one parameter for a new connection setup attempt based at least in part on information in at least one frequency parameter of</p>	<p>A channel reselection method in a mobile <del>communication means of a cellular telecommunication system</del> <u>station of a telecommunications network implementing the RRC protocol</u>, the method comprising the steps of:</p> <p>receiving a connection rejection message <u>containing a frequency parameter indicated by the telecommunications network implementing the RRC protocol</u>;</p> <p>observing <del>at least one parameter</del> <u>of the</u></p>

<p>said connection rejection message.</p> <p>'698 patent col. 8 ll. 34-43.</p>	<p><u>frequency parameter contained within</u> said connection rejection message; and</p> <p>setting a value of at least one <u>frequency</u> parameter for a new connection setup attempt <del>based at least in part on information in at least one frequency parameter of,</del> <u>the connection setup attempt using the frequency parameter contained within</u> said connection rejection message.</p> <p>J.A. 831 (Sisvel's Revised Motion to Amend).</p>
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The Board denied Sisvel's motion, concluding that the amendments to original claim 10 would have impermissibly enlarged claim scope. J.A. 69-71. The Board focused on the last ("setting a value") limitation, comparing the original claim's requirement that the value be set "*based at least in part on* information in at least one frequency parameter" of the connection rejection message, while in the substitute claims the value may be set merely by "*using* the frequency parameter" contained within the connection rejection message. J.A. 71 (emphasis added). As the Board correctly reasoned, "[i]n proposed substitute claim 36, the value that is set need not be based, in whole or in part, on information in the connection rejection message and, thus, claim 36 is broader in this respect than claim 10." J.A. 73.

In the context of these claims, “using” is broader than “based on.” Whereas the original claim language required that the value in a new connection setup attempt be at least in some respect impacted by (i.e., “based” on) the frequency parameter, the substitute claim removes this requirement. The removal of a claim requirement can broaden the resulting amended claim, and that is what has occurred here. *See Pannu v. Storz Instruments, Inc.*, 258 F.3d 1366, 1371 (Fed. Cir. 2001) (“A reissue claim that does not include a limitation present in the original patent claims is broader in that respect.”) (internal quotation marks omitted).

As a result of Sisvel’s proposed amendment, it is conceivable there could be embodiments that would come within the scope of substitute claim 36 but would not have infringed original claim 10. During oral argument, Appellees provided a helpful illustration of this point, explaining that if the mobile station “took this frequency parameter [from the connection rejection message] and . . . calculated frequency [for the new connection setup attempt] by multiplying and then dividing by the same frequency parameter, [the new connection setup attempt] *used* [the frequency parameter], but the end result will not be *based on* it.” Oral Arg. at 20:13-31 (emphasis added). In other words, the value,  $V$ , multiplied by  $X$  and then divided by  $X$ , is still equal to  $V$  – and in that instance the determination of  $V$  has “used”  $X$  but  $V$  is clearly *not* “based on”  $X$ . It follows that, in this context, “using” is broader than “based on.”

Appellees describe another way in which the substitute claim is broader than the original.<sup>6</sup> While original claim 10 required that the value of at least one parameter be

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<sup>6</sup> The Court reads the Board’s decision at J.A. 72-73 as being based on this reasoning as well.

based “at least in part on *information* in at least one frequency parameter,” in substitute claim 36 the value of at least one frequency parameter need only “us[e] the frequency parameter,” not necessarily use any *information* in the frequency parameter. In substitute claim 36, then, it could be that the mere existence of the frequency parameter is used, while in the original claim – more narrowly – at least some content (i.e., “information”) from the parameter had to be used. Embodiments that only use the existence of the frequency parameter would be within the scope of substitute claim 36 but not within the scope of original claim 10, confirming, again, that the former is impermissibly broader than the latter. *See* J.A. 71.

Sisvel offers multiple arguments for why the Board’s conclusion was incorrect, but none of them persuades us.

First, Sisvel points out that it submitted the substitute claims after receiving the Board’s preliminary guidance in response to its original motion to amend. To the extent Sisvel is suggesting the Board was thereby required to approve the substitute claims, this is incorrect. *See Medytox, Inc. v. Galderma S.A.*, 71 F.4th 990, 999-1000 (Fed. Cir. 2023) (recognizing that Board is not bound to its preliminary guidance and can change its views of merits on more fulsome record, and due to application of different standard of proof at final merits stage, without acting in arbitrary and capricious manner). Preliminary guidance is just that, preliminary, and the Board retains authority to reject proposed substitute claims even if it preliminarily indicates it is likely to grant such claims. *See id.* at 1000 (“[T]he Board has an obligation to assess the question anew after trial based on the totality of the record, particularly where the standard changes.”) (internal quotation marks omitted).

Next, Sisvel contends that when all of the limitations are considered as a whole, the scope of substitute claim 36 is narrower than the scope of original claim 10. But if a

substitute claim “is broader *in any respect* [it] is considered to be broader than the original claim[] even though it may be narrower in other respects.” *Hockerson-Halberstadt*, 183 F.3d at 1374 (emphasis added); *see also* 37 C.F.R. § 1.175(b) (“A claim is a broadened claim if the claim is broadened in any respect.”). Here, substitute claim 36 is broader than original claim 10 in at least two respects, as we have explained. Therefore, the amendment is improper even if, in other aspects, the substitute claim is narrower than the original claim.

Sisvel also argues that the Board erred in its obviousness analysis of substitute claims 36-40 because it focused on the preamble of substitute claim 36 and did not provide enough reasoning for its conclusion. Even if this were correct (an issue we need not decide), the amendment process does not permit a patentee to add claims that are broader in scope than the original claims, even if the substitute claims were nonobvious. *See* Oral Argument at 0:37-0:55 (Sisvel conceding it would have to prevail on both issues).<sup>7</sup>

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<sup>7</sup> During oral argument, Sisvel asserted that the Board failed to consider its argument that the teachings of certain prior art references did not render substitute claim 36 obvious, in view of the limitations Sisvel added to the new claim. *See, e.g.*, Oral Arg. at 0:58-7:20. Counsel acknowledged, however, that it did not make this argument in its briefing to us. *See id.* at 8:40-9:20. Thus, the issue is forfeited. *See SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006). Even if it were not, and even if Sisvel were correct that its substitute claims were not obvious, there was still no abuse of discretion in the Board’s denial of the motion to amend, given that the proposed substitute claims were broader than the original claims.

Finally, as the Board stated, “[e]ach of the proposed substitute dependent claims is amended to depend from proposed substitute independent claim 36.” J.A. 70. Sisvel does not argue that the substitute claims that depend from claim 36 would not also be impermissibly broadened, should this Court agree with the Board that substitute claim 36 is broader than original claim 10. *See* Appellant’s Br. 18-27; Appellant’s Reply Br. 10-15. “When a dependent claim and the independent claim it incorporates are not separately argued, precedent guides that absent some effort at distinction, the claims rise or fall together.” *Soverain Software LLC v. Newegg Inc.*, 728 F.3d 1332, 1335 (Fed. Cir. 2013). Because substitute claim 36 is impermissibly broader than original claim 10, the dependent claims, which are not separately argued, are also impermissibly broadened.

We conclude, therefore, that the Board correctly determined that Sisvel failed to meet its burden to show that the scope of its substitute claims is not broader than the scope of its original claims. Specifically, we agree with the Board that substitute claim 36 is impermissibly broader than original claim 10. It follows that the Board did not abuse its discretion in denying Sisvel’s contingent revised motion to amend as to substitute claims 36-40.

#### IV

We have considered Sisvel’s other arguments and find them unpersuasive. For the foregoing reasons, we affirm.

**AFFIRMED**