

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T MOBILITY LLC, AT&T SERVICES INC., ERICSSON INC., NOKIA OF
AMERICA CORPORATION, AND T-MOBILE USA, INC.
Petitioners,

v.

DAINGEAN TECHNOLOGIES LTD.,
Patent Owner.

Case No. IPR2024-00402
U.S. Patent No. 10,841,958

**PETITIONERS' SUR-REPLY IN OPPOSITION TO
PATENT OWNER'S REVISED NON-CONTINGENT
MOTION TO AMEND PURSUANT TO 37 C.F.R. § 42.121(f)**

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LIST OF EXHIBITS

Exhibit	Description	Previously Submitted
Ex. 1001	U.S. Pat. No. 10,841,958 (“the ’958 Patent”)	X
Ex. 1002	Expert Declaration of Dr. Wayne Stark	X
Ex. 1003	Curriculum Vitae of Dr. Wayne Stark	X
Ex. 1004	U.S. Pat. Publication No. 2019/0158988 (“Lee”)	X
Ex. 1005	U.S. Pat. Publication No. 2015/0382284 (“Brismar”)	X
Ex. 1006	U.S. Provisional Patent Application No. 62/334,418 (“Lee Provisional”)	X
Ex. 1007	’958 Patent File History	X
Ex. 1008	U.S. Pat. Publication No. 2017/0251500 (“Agiwal”)	X
Ex. 1009	Provisional Patent Application No. 62/334,706 (“Agiwal Provisional”)	X
Ex. 1010	Second Expert Declaration of Dr. Wayne Stark	X
Ex. 1011	Deposition Transcript of Dr. Karthik Sundaresan, taken Dec. 13, 2024	X
Ex. 2001	Declaration of Mr. Michael McBride in Support of Patent Owner’s Motion for Admission <i>Pro Hac Vice</i> of Michael McBride	X
Ex. 2002	Expert Declaration of Dr. Karthikeyan Sundaresan	X
Ex. 2003	US20150223148A1 to Shi et al. (“Shi”)	X

Exhibit	Description	Previously Submitted
Ex. 2004	U.S. Patent Pub. No. 2018 0049024 to Schliwa-Bertling <i>et al.</i> (“Schliwa-Bertling”)	X
Ex. 2005	ETSI TS 125 211 V3.1.1 (2000-01) Technical Specification, Universal Mobile Telecommunications System (UMTS); Physical channels and mapping of transport channels onto physical channels (FDD) (3G TS 25.211 version 3.1.1 Release 1999)	X
Ex. 2006	Second Expert Declaration of Dr. Karthikeyan Sundaresan	X
Ex. 2007	’958 Patent’s Parent Application, Application No. 15/659,060 (“’060 App.”)	X
Ex. 2008	Provisional Application No. 62/368,126 to which the ’060 App. Claims priority (“’126 App.”)	X
Ex. 2009	U.S. Patent Application Publication No. US 2018/0288683 to Bendlin <i>et al.</i> (Published Oct. 4, 2018) (“Bendlin”)	X
Ex. 2010	LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification (3GPP TS 36.331 version 13.2.0 Release 13) (Aug. 2016) (“TS 36.331”)	X
Ex. 2011	Invalidity Contentions Chart Ex. C-1 re Brismar, <i>Daingean Techs. v. AT&T Corp. et al.</i> , No. 2:23-cv-00123-JRG-RSP (E.D. Tex.)	X
Ex. 2012	Invalidity Contentions Chart Ex. C-2 re Lee, <i>Daingean Techs. v. AT&T Corp. et al.</i> , No. 2:23-cv-00123-JRG-RSP (E.D. Tex.)	X

Exhibit	Description	Previously Submitted
Ex. 2013	Invalidity Contentions Chart Ex. C-3 re Bendlin, <i>Daingean Techs. v. AT&T Corp. et al.</i> , No. 2:23-cv-00123-JRG-RSP (E.D. Tex.)	X
Ex. 2014	Invalidity Contentions Chart Ex. C-4 re TS 36.331, <i>Daingean Techs. v. AT&T Corp. et al.</i> , No. 2:23-cv-00123-JRG-RSP (E.D. Tex.)	X

I. INTRODUCTION

Patent Owner declined to defend its original claims and instead filed a non-contingent motion to amend. Paper 20. Petitioners opposed Patent Owner's original motion on the grounds they improperly enlarged the scope of the original claims, did not satisfy the definiteness requirements of §112, and were anticipated or obvious over the prior art. Paper 22. The Board agreed with Petitioners on all counts. Paper 23. In response, Patent Owner submitted its Revised Motion to Amend, seeking further revised substitute claims. Paper 24. However, Petitioner has not proven the revised substitute claims are non-broadening, and the revised substitute claims fail to satisfy the requirements of 35 U.S.C. §§102, 103, and 112. Patent Owner's motion should be denied.

II. ARGUMENT

A. The Revised Substitute Claims Improperly Broaden the Original Claims

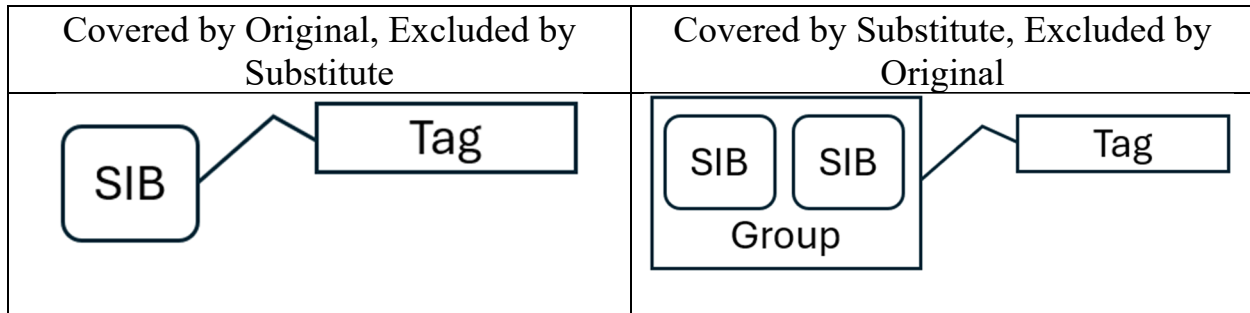
Patent Owner has not carried its burden to prove the revised substitute claims included have not been broadened beyond the scope of the original claims. See *Sisvel Int'l S.A. v. Sierra Wireless, Inc.*, 81 F.4th 1231, 1237-8 (Fed. Cir. 2023); 35 U.S.C. §316(d)(3); 37 C.F.R. §42.121(a)(2)(ii). In its reply, Patent Owner presents three arguments: (1) that the revised substitute claims change from a value tag associated with a SIB to a value tag associated with a group of SIBs is not broadening because value tags associated with groups can also be associated with individual SIBs (Paper

30, 1-2); (2) that original claim 1 never required the second-type SIB to actually be provided by broadcast, so the revised substitute claims' requirement for partial broadcast is non-broadening; and (3) the use of "comprising" permits the partial broadcast of the revised substitute claims (Paper 30, 2-3). Each argument fails.

1. A tag associated with a particular SIB (as originally claimed) and a tag associated with a group of SIBs (as now claimed) are different in scope. Patent Owner argues that a tag associated with a group is also associated with each member of that group, but this is not necessarily the case. As discussed in Petitioner's response (Paper 26, 3-4), association with a group and association with a member of a group are distinct, and the revised amended claim permits that claim to be practiced where the original claim would not be. The original claim required an association between a particular value tag and a particular second type SIB that permitted determination of whether or not that particular SIB had changed, a 1:1 association between a single value tag and a single SIB. As revised and amended, that value tag need only be associated with the group that contains a second type SIB – it is an association to a container rather than an item in the container.

In reply, Patent Owner advances a construction for "associated" to mean "connected or related," but this proposed construction confirms that the revised claim now covers subject matter excluded from the original claims. Applying that construction, the original claims required a value tag connected with a second type

SIB while the revised amended claims require a value tag connected with a group that contains a second type SIB. As illustrated below, the substitute claims permit tags connected with groups but not SIBs, which the original claims excluded.



Nothing in the claims or patent requires a group to be static or immutable, and the substance of the claim itself addresses changes in system information. Connecting a tag with a group that may contain a particular SIB (substitute claims) rather than a particular SIB (original claims) is an impermissibly broadening amendment.

2. The original claims required the second type SIB to be broadcast, while the substitute claims preclude it. Patent Owner argues that the original claims do not require broadcast of the second type SIB because the broadcast step is not affirmatively recited in the original independent claims. Paper 30, 1-3. However, this misreads the original claims. Each original independent claim recites “upon a change of a second type SIB ... to include in the first type SIB the information associated with the second type SIB indicating that the second type SIB is provided by broadcast.” If the second type SIB of the original claims is not “provided by broadcast,” the information in the first type SIB “indicating that the second type SIB

is provided by broadcast” would not “indicat[e] that the second type SIB is provided by broadcast.” Accordingly, for the original claim to be practiced, the claimed second type SIB must be “provided by broadcast.” And, as the original claims use antecedent basis for the second type SIB that “is provided by broadcast,” it must be the originally recited second type SIB that “is provided by broadcast,” not a new, reformatted SIB, as recited in the revised substitute claim.

This original requirement of a second type SIB “provided by broadcast” after a change contradicts the revised substitute claims, which now recite “including only changed ones of plural parameters of the group containing the second type SIB” in the post-change broadcast. As a result, the substitute claims cover a scenario where the second-type SIB is not broadcast after the change, but instead some or none of the second-type SIB is broadcast.

Covered by Original, Excluded by Substitute	Covered by Substitute, Excluded by Original
SIB (Post-change broadcast) Param 1 X (changed) Param 2 Y (changed) Param 3 Z	SIB (Post-change broadcast) Param 1 X (changed) Param 2 Y (changed) ~~Param 3 Z~~

Patent Owner argues that the “comprising” transition of the claim permits the revised substitute claim’s partial transmission scheme, but this ignores the negative limitation in limitations 7h and 8f. The claimed broadcast “include[es] only changed

ones of plural parameters of the group containing the second type SIB,” so that if the broadcast also included the unchanged parameters, it could not satisfy the new claim language. As a result, the revised substitute claims cover a post-change broadcast excluded by the original claims, and therefore broaden the scope of those claims.

B. The Revised Substitute Claims Are Invalid Under § 112

1. The revised substitute claims’ recitation of “a group of plural second type system information blocks fewer than the total number of second type information blocks” is indefinite for failing to adequately define what is, or is not, a second type information block. As set out in Petitioner’s response, nothing in the patent or the claims limits the universe to only two types of system information blocks, and the claim itself contemplates at least three types (first type SIB, second type SIB, and compressed format second type SIB). Paper 26, 6-10. In order for the revised elements 7b or 8a to be definite, a POSITA must be able to determine with reasonable certainty whether a SIB is a second type SIB or some other kind of SIB. Because nothing in the patent or the claim defines what is required of a second type SIB, the substitute claims permit SIBs to be subjectively classified, and infringement to be achieved or avoided by that arbitrary and subjective classification. The substitute claims are therefore indefinite.

Patent Owner asserts that there are two and only two types of SIB, but the only support Patent Owner has identified for this proposition is a description of the

embodiment of Figs. 5-7. Paper 24, 11-12; Paper 26, 8-9 (addressing Patent Owner's arguments). The cited disclosure pertains to the non-grouped SIB embodiment covered by the original claims but disclaimed by the substitute claims. *Id.* And the patent itself expressly and extensively disclaims any limitation from its own examples, including the one relied upon by Patent Owner. *Id.*; Ex. 1001, 2:58-4:44, 2:26-27:4. Patent Owner suggests that *Phillips*' requirement that a claim be read in light of the specification would require the PTAB to interpret SIBs to be of two and only two types, but this requires ignoring both the patent's express instruction not to so limit the claims, as well as the claims' recitation of a third kind of SIB (a "compressed format" second type SIB). *Phillips*' instruction to interpret claim terms in view of the claims themselves and the specification therefore precludes the narrow reading of second type SIB that Patent Owner now urges. Patent Owner's unsupported assertion that a POSITA would understand there are only two kinds of SIBs also fails in view of the art of record here, which contemplates many different types of system information. See, e.g., Ex. 1010 ¶ 44; Ex. 1004, [0118].

Nor does Petitioner's ability to marshal prior art against the substitute claims militate against a finding of indefiniteness. Indefiniteness concerns the certainty with which the boundary of the claim can be discerned, but here Patent Owner does not dispute that the prior art identified and applied by Petitioner discloses limitations 7b

and 8a. There is no need to probe the boundary of the limitation when neither party disputes that it is taught by the prior art.

2. The revised substitute claims’ introduction of a new broadcast “compressed format” second type SIB renders the claims indefinite. As laid out in Petitioner’s response, Patent Owner’s introduction of a new “compressed format” broadcast in its substitute claims creates ambiguity as to whether a SIB is or is not broadcast, which renders the claims indefinite. Paper 26, 10-11. Limitations 7b and 8a each require “information indicating whether one or more associated second type information blocks are provided by broadcast or on demand,” a binary choice. And limitations 7c and 8b require that, and upon a change in a second type SIB in a group, the information in the first type SIB for the group containing the second type SIB changes from indicating that the group was provided on-demand to indicate that the group is provided by broadcast. Again, this is a binary choice, and the claim requires a change from one option to the other.

However, under the “compressed format” broadcast scheme introduced in limitations 7h and 8f, the changed second type SIB, and the group containing the changed second type SIB, is provided neither on demand nor by broadcast. Instead, some part of the SIBs in the group, “only changed ones of plural parameters of the group” based on a comparison of value tags, are transmitted by broadcast. Under this scheme, all, some, or none of the second type SIBs may be provided by broadcast,

and none of the second type SIBs would be provided on-demand. As a result, the information required by limitations 7b, 7c, 8a, and 8b no longer holds, and the binary choice between on-demand and broadcast is invalid. These two conflicting requirements that the second-type SIB be transmitted either on-demand or by broadcast according to the information in the first-type SIB, and that only the changed part of a changed second-type SIB be broadcast place the claim in irreconcilable conflict with itself.

Further, the revised claim's introduction of "broadcast" transmission mode where less than the entire second-type SIB or the group containing it is broadcast introduces ambiguity as to what information is required by 7b, 7c, 8a, and 8b. Under the "compressed format" broadcast scheme, some, all, or none of a second-type SIB may be broadcast depending on comparisons of value tags. If this counts as a broadcast, then the information required by 7b, 7c, 8a, and 8b cannot indicate whether any part of any second-type SIB is transmitted by broadcast, even though that is an express requirement of the claim. Instead, broadcast or non-broadcast of some, all, or none of a second-type SIB is indicated by comparisons of value tags.

3. The revised substitute claims' introduction of a new broadcast "compressed format" second type SIB lacks supporting disclosure for written description and enablement. As laid out in Petitioner's response, new limitations 7h and 8f are neither described nor enabled in the '958 Patent. Paper 26, 11. In

particular, limitations 7h and 8f require “transmit[ting] by broadcast ... only changed ones of plural parameters of the group containing the second type SIB based on a comparison of the value tag, associated with the group containing the second type SIB, stored in the wireless terminal, with the value tag included in the first type SIB corresponding to the group containing the second type SIB.” *Id.* However, the patent provides no support for this limitation.

In reply, Patent Owner points to Fig. 17 and corresponding description in the '958 specification, but this disclosure cannot support the limitations 7h or 8f. As an initial matter, Fig. 17 is unrelated to the transmission “by broadcast” of system information and instead relates to on-demand transmission. Fig. 17 takes the value tag in a “request message” from a terminal (act 17-2) and then uses a comparison between the value tag reported in the request and the current value tag (act 17-3) to prepare a “response message” (act 17-4). Ex. 1001, Fig. 17; 14:24-39. However, nothing in this disclosure teaches that a “compressed format including only changed ones of plural parameters” based on the comparison of the value tags, nor could it, as the disclosed value tags are simply numbers incremented when second type SIBs are changed. These are essentially version numbers, and do not contain the information required to identify which parameters changed.

The disclosure related to Fig. 17 also states that it relates to the message flow of Fig. 16 (Ex. 1001, 14:27-30), which specifies on-demand transmission of

secondary SIB group a (elements 16-1a and 16-1b) and a request/response for system information. The use of the “compressed format” in on-demand rather than broadcast distribution of system information groups is also illustrated in Fig. 19 (acts 19-4 (request); 19-5 (response)). Ex. 1001, Fig. 19; 14:55-15:2. This embodiment is unclaimed, as limitations 7f and 8f require transmission by broadcast.

To satisfy written description under §112, the specification must demonstrate possession of the claimed invention. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Here, there is no disclosure of the use of the compressed format in distribution of system information by broadcast as claimed, nor could there be. The revised substitute claims require the compressed format broadcast, transmitted by the base station, to be based on a comparison of a value tag stored in the wireless terminal. Leaving aside the physical impossibility of this limitation and allowing that the terminal could transmit that stored value to the base station for the claimed comparison, the patent teaches that this occurs only in the context of on-demand distribution, which is not claimed.

Similarly, the '958 Patent also fails to provide enabling disclosure of the revised substitute claims. Nothing in the '958 Patent teaches how a value stored in the terminal would be compared at the base station or used to formulate a compressed format transmission, nor how that value would be accessed by the base station for transmission by broadcast, nor how any terminal could possibly decipher

such a transmission, as the disclosed value tags do not indicate which parameters within a group of SIBs have changed. This does not prove enablement for the revised claims, instead leaving to others the “painstaking experimentation to see what works.” *Amgen Inc. v. Sanofi*, 598 U.S. 594, 614 (2023).

C. The Substitute Claims are Anticipated or Obvious

Patent Owner contests only that Lee or Lee/Agiwal teach or render obvious limitations 7h and 8f. Paper 30 at 10-12. Accordingly, Patent Owner does not contest that Lee or Lee/Agiwal disclose or render obvious the grouping of second type SIBs, the use of value tags for those groups, the transition of those groups from on-demand to broadcast upon a change, or the use of a tag associated with a group to determine whether a second-type SIB has changed, as required by limitations 7pre-7g and 8pre-8e. Paper 24, 16-17; Paper 30, 10-12. Patent Owner accuses Petitioner of oversimplifying the remaining limitations and not addressing them, but Patent Owner, not Petitioner, identified “sending of only changed parameters of a group—i.e., a group in compressed format—as defined in the revised claims” as the alleged distinction of the revised claims over Lee and Agiwal. Paper 24, 17.

Limitations 7h and 8f of the revised substitute claims include the same requirement of “transmit[ing] ... the group identifier and the group containing the second type SIB” by broadcast after the change recited in original substitute claims

8 and 10, though the placement of “by broadcast” and “after the change” differ. These are taught by Lee and Lee/Agiwal as set out in Patent Owner’s prior papers.

The substantive difference between substitute claims 8 and 10 and revised substitute claim limitations 7h and 8f is the inclusion of the compressed format, where only the changed ones of plural parameters are included, as Patent Owner admitted in its revised motion to amend. Paper 24, 17. However, Lee teaches exactly this: “when a network changes a particular type of on-demand system information, the network may broadcast the changed system information or all system information during a specified period.” Ex. 1004, [0167] (emphasis added). And as Patent Owner does not dispute that Lee and Lee/Agiwal teach limitations 7g or 8e, which require determining whether a second type SIB in the group has changed based on the same pair of value tags recited in 7h and 8f, it would have been obvious to a POSITA to use the same value tags to determine the system information broadcast in Lee’s compressed format embodiment.

III. CONCLUSION

As set out above, the Revised Substitute Claims improperly broaden the claims, fail to comply with § 112, and are obvious over or anticipated by the prior art. The revised Substitute Claims should therefore be rejected for failure to comply with 35 U.S.C. § 316(d)(3) and 37 C.F.R. § 42.121(a)(2)(ii) or denied as unpatentable.

Dated: May 6, 2025

Respectfully submitted,

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CERTIFICATION OF SERVICE

The undersigned hereby certifies that the foregoing **PETITIONERS' SUR-
REPLY IN OPPOSITION TO PATENT OWNER'S REVISED NON-
CONTINGENT MOTION TO AMEND PURSUANT TO 37 C.F.R. § 42.121(f)**

has been served on Patent Owner via email on the following counsel of record for
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