

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' RESPONSE IN OPPOSITION TO PATENT OWNER'S
REVISED NON-CONTINGENT MOTION TO AMEND 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

I. INTRODUCTION

Patent Owner declined to defend its original claims, and instead filed a non-contingent motion to amend. Paper 20. Petitioner 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 Petitioner on all counts. Paper 23. In response, Patent Owner submitted its Revised Motion to Amend, seeking further amended substitute claims. Paper 24. However, the revised substitute claims suffer the same shortcomings and more. The Board should therefore deny Daingean's motion to amend and issue a final written decision finding both the original and the revised substitute claims unpatentable.

II. LEGAL STANDARD

A substituted claim "is broader in scope than the original claim if it contains within its scope any conceivable apparatus or which would not have infringed the original patent." *Sisvel Int'l S.A. v. Sierra Wireless, Inc.*, 81 F.4th 1231, 1237 (Fed. Cir. 2023). Such a claim would not comply with 35 U.S.C. § 316(d)(3). *Id.* at 1238. It is Patent Owner's burden to show its substitute claims comply with the relevant statutory and regulatory requirements, including the requirement that substitute claims not broaden the scope of the original claims. *Id.*

The definiteness requirement demands a claim provide clear notice to the

public of what is still open to them. *Nautilus, Inc. v. Biosig Instr., Inc.*, 572 U.S. 898, 899 (2014). Some objective standard is required to provide the public with the necessary notice, and claims that are open to purely subjective interpretation are indefinite. *Datamize v. Plumtree Software*, 417 F.3d 1342, 1350 (Fed. Cir. 2005).

III. ARGUMENT

A. The Revised Substitute Claims Improperly Broaden the Original Claims

Although Patent Owner only added claim language through its amendments, these additions changed the meaning of the claims so that the Substitute Claims now cover subject matter excluded from the original claims. As a result, the Substitute Claims broaden the original claims and are not permitted under 35 U.S.C. § 316(d)(3) or 37 C.F.R. § 42.121(a)(2)(ii). *Sisvel*, 81 F.4th at 1237.

Here, limitations 1g and 3e of the original claims required that “whether or not the second type SIB has changed [be] determined based on a value tag, associated with the second type SIB.” Ex. 1001 at 27:51-55, 28:12-16; Ex. 1010 ¶¶ 15, 27. This language required a 1:1 relationship between the value tag and the second type SIB, so that if the second type SIB changed, the value tag would indicate that the change had occurred, and if the second type SIB had not changed, then the value tag would likewise indicate that no change had occurred. Ex. 1010 ¶ 27; Paper 23 at 5. As a result, whether the second type SIB had changed could be determined by checking a single value tag, and a system that did not indicate whether a particular second type

SIB had changed through its corresponding value tag would fall outside the scope of the claim. *Id.*

Like the original Substitute Claims, the revised Substitute Claims fail to preserve this requirement. Ex. 1010 ¶¶ 15, 28-29; Paper 23 at 5. In Patent Owner’s revised MTA, Patent Owner presents two claims (7 and 8) and limitations 7g and 8e correspond to limitations 1g and 3e of the original claims. A comparison between substitute claim limitation 7g and revised substitute claim limitation 7g is reproduced below for comparison.

Substitute Claim Limitation 7g	Revised Substitute Claim Limitation 7g
whether or not <u>the group containing</u> the second type SIB has changed is determined based on a value tag, associated with <u>the group containing</u> the second type SIB, stored in the wireless terminal, and the value tag included in the first type SIB corresponding to <u>the group containing</u> the second type SIB.	whether or not the second type SIB <u>belonging to the group</u> has changed is determined based on a value tag, associated with <u>the group containing</u> the second type SIB, stored in the wireless terminal, and the value tag included in the first type SIB corresponding to <u>the group containing</u> the second type SIB; and ~~[[.]]~~

The revised substitute claims, like the original substitute claims, no longer recite this requirement. Ex. 1010 ¶¶ 15, 28-29. Instead, as amended and revised, the revised substitute claim language requires a determination based on “a value tag associated with the group containing the second type SIB” and not a determination based on “a value tag associated with the second type SIB.” Ex. 1010 ¶¶ 15, 28-29;

Paper 24 Appx. A at A1-A2. As a result, the original claims required a determination based on a tag associated with a particular second type SIB while the revised substitute claims do not. Instead, the revised substitute claims require a determination based on a tag that is associated with a group that contains a particular second-type SIB. These two associations are different in scope – something can be associated with a group without being associated with each member of the group. The United States Patent and Trademark Office, for example, is associated with the United States, but is not also associated with each individual state or territory included in the United States. The original claims required an association between the value tag and the particular second type SIB that changed while the revised substitute claims do not. As a result, the revised substitute claims may be practiced when the original claims were not, rendering the substitute claims broader in scope.

Additionally, new limitations 7h and 8f improperly broaden the original claims by changing the scope the broadcast requirements of the original claims. Original claim limitations 1b and 3a required information in the first type SIB to indicate “whether one or more second type system information blocks are provided by broadcast or on demand,” and then original claim limitations 1c and 3b required an on-demand second-type SIB to be provided by broadcast upon a change to that

second-type SIB.¹ In the revised substitute claims, limitations 7h and 8f recite that the changed second type SIB is not broadcast, and instead a “second type SIB in compressed format including only changed ones of plural parameters of the group containing the second type SIB” will be broadcast. Such a “compressed” broadcast would not contain the second type SIB, but instead only individual parameter values. The revised substitute claims are therefore either indefinite (addressed below) or improperly broaden the original claims to permit the broadcast of the second type SIB to include a broadcast of only a part of the second type SIB. This partial broadcast would not have practiced the original claims, but appears to practice the substitute claims. Because the revised Substitute Claims cover subject matter excluded from the original claims, the substitute claims improperly broaden the original claims and should be rejected. *Sisvel*, 81 F.4th at 1237.

¹ Arguably original claim limitations 1c and 3b only required the information in the first type SIB associated with the changed second type SIB to indicate that the changed second type SIB would be provided by broadcast, but if the second type SIB was not then provided by broadcast, then the information would not actually indicate that the second type SIB is provided by broadcast as required by limitations 1b and 3a.

B. The Revised Substitute Claims Are Indefinite and Lack Written Description and Enablement

In addition to improperly broadening the original claims, the amendments made to the revised Substitute Claims also render them indefinite. Each of the substitute claims is a “comprising” claim. Paper 24 Appx. A at A1-A2. Comprising claims permit the presence of additional, unrecited elements without negating the practice (or non-practice) of the claim. *Cias, Inc. v. Alliance Gaming Corp.*, 504 F. 3d 1356, 1360-61 (Fed. Cir. 2007). In the revised Substitute Claims, the addition of the requirement that the “group of plural second type [SIBs]” be “fewer than the total number of second type [SIBs],” combined with the claims’ lack of any requirements for the second type SIBs and the open nature of the claims, renders the claims indefinite. This is identical to the corresponding language in the substitute claims that the Board already agreed were indefinite. Paper 23 at 9-10.

As written, the revised Substitute Claims recite two types of information block – a first type SIB and a second type SIB – but only impose limitations on the first type SIB. The first type SIB must include the “value tag” and “information indicating whether one or more associated second type system information blocks are provided by broadcast or on-demand” and be “required for the wireless terminal to perform an initial access to the radio access network.” As a result, the second type SIB could include any kind of information, and the claim would permit other kinds of SIBs to

also exist, and for SIBs to be of more than one type. Ex. 1010 ¶¶ 31-32. There could be third or fourth type SIBs, or the first type SIB could also be a second type SIB. Ex. 1010 ¶ 33; Ex. 1011 at 49:2-6. How one classifies the SIBs is arbitrary and subjective, and not constrained by the claim or the patent.

Because the claims fail to define what is or is not a “second type SIB,” the requirement that the recited “group of plural second type [SIBs]” be “fewer than the total number of second type [SIBs]” is subjective and arbitrary, and therefore indefinite because a POSITA would not be able to objectively determine the scope of the amended claims. Ex. 1010 ¶ 33. In a system with only the first type SIB including the recited value tag and information and a single group of second type SIBs indicated by the value tag, this claim element can be satisfied by designating the first type SIB to also be a second type SIB. Ex. 1010 ¶¶ 31-33. Similarly, in a system with many types of SIBs, each with its own value tag, this limitation can be satisfied by asserting that all of those types of SIBs are second-type SIBs, or can be avoided by asserting that each SIB corresponding to a different value tag is its own type of SIB, so that value tag A corresponded to SIBs of type A, value tag B corresponded to SIBs of type B, and so on. Ex. 1010 ¶ 33. In other words, the exact same arrangement of system information may or may not practice this limitation based solely on an arbitrary classification of SIBs into groups or sub-groups.

In response to Petitioner’s original response to its motion to amend, and the

Board's guidance, Patent Owner has not amended its claims to define what is or is not required for a SIB to be a second type SIB and instead argues claim construction. Paper 24 at 11-12. However, Petitioner's arguments fail under either the Broadest Reasonable Interpretation applied during prosecution or the *Phillips* standard applied in district court. Patent Owner argues that the patent has defined the universe of system information into two types: essential and non-essential, and argues that first type SIBs are the SIBs that contain essential information and second type SIBs are everything else. Paper 24 at 11-12.

In support, Patent Owner points to a discussion of Fig. 5 in column 8 of the '958 Patent. *Id.* Omitted from Patent Owner's quotations from that discussion is the '958 Patent's explanation that Fig. 5 illustrates only a "certain example embodiment" where "system information (SI) is classified into plural categories or types" and that the use of two types was "for sake of example." Ex. 1011 at 8:9-11, 26. The '958 Patent's treatment of Exhibit 5 disclaims any limitation of the invention to this embodiment by describing it as a mere "example" at least 11 times. Ex. 1011 at 3:4-8; 8:9-9:25. Further, the example of Fig. 5 is further illustrated by the example format of Fig. 7. Ex. 1011 at 3:11-13. However, as Fig. 7 makes clear, the example embodiment of Fig. 5 has no grouping of second type SIBs and is outside the scope of the revised Substitute Claims. Ex. 1011 at Fig. 7. Nor does the cited text define the term used in the claim (second type system information block) and instead relates

only to a second type of system information. A system information block (a SIB) is a block of system information, and may contain more than one kind of system information. In short, this discussion from a disclaimed example embodiment does not even address what kinds of system information blocks may exist, and instead only considers different kinds of system information in that example.

Even if this passage defined second type SIBs in the context of the disclaimed example embodiment of Fig. 5, it would be improper read a feature of an example embodiment into the claims under the *Phillips* standard. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323-1324 (Fed. Cir. 2005) (en banc) (explaining that “although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments” and that “persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments”). That is particularly the case here, where each of the 36 figures of the ’958 Patent state that they are mere examples (Ex. 1001 at 2:58-4:44), and the patent expressly disclaims any limitation in the scope of the invention that may be inferred from the specification (Ex. 1001 at 26:65-27:4). Rather, the *Phillips* standard requires that, in the absence of disclaimer or disavowal, the term “second type SIB” must be given the full scope of its plain and ordinary meaning. *See Thorner v. Sony Comput. Eng. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Patent Owner's construction of "second type SIB" also contradicts the claim itself. New limitations 7h and 8f introduce a new type of SIB – a "compressed" SIB that contains "only changed ones of plural parameters." Patent Owner cannot maintain the position that the claim somehow requires the existence of two and only two types of system information block when the claim itself requires three different kinds of system information block.

In addition to the problems with the undefined "second type SIB" limitations 7b and 8a inherited from the substitute claims, the revised Substitute Claims introduce additional ambiguity in limitations 7h and 8f that also render the claims indefinite. Limitations 7h and 8f introduce a broadcast transmission of a group of SIBs in a "compressed format" that "include[es] only changed ones of plural parameter of the group containing the second type SIB." This contracts the requirements of limitations 7b and 8a that information in the first type SIB "indicat[e] whether one or more associated second type information blocks are provided by broadcast or on demand" and the requirements of limitations 7c and 8b that "upon a change of a second type SIB belonging to the group ... to include in the first type SIB the information associated with the group containing the second type SIB indicating that the group containing the second type SIB is provided by broadcast." However, the second type SIB is not provided by broadcast if some or none of its constituent system information is actually broadcast, as would be the case

under limitations 7h or 8f.

Finally, the last portion of limitations 7h and 8f require the added compressed format transmission step or function to be “based on a comparison of the value tag, associated with the group containing the second type SIB, stored in the wireless terminal, and the value tag included in the first type SIB corresponding to the group containing the second type SIB.” Paper 24 Appx. A-2. While the patent mentions the “compressed format” concept in several places, nowhere does the patent state or explain how such a compressed format transmission is determined or generated based on a comparison of value tags, much less a comparison of the value tag stored in a wireless terminal. Patent owner points to Fig. 35 and a passage from Column 19 of the ’958 patent for support, but neither explains how a comparison of value tags could allow unchanged parameters from a group of SIBs to be either identified or excluded. This is especially puzzling given the tag values used in the cited disclosure: the prior value tag (m) is simply incremented by 1 when values change. Paper 24 at 8. As a group of second type SIBs would presumably include more than one parameter, it would not be possible to determine which parameter changed and would be broadcast from such a change in value tag, and the ’958 patent provides no explanation for how such a feat could be accomplished. This final portion of the claim appears to be nonsense neither contemplated nor enabled by the specification, and should found unpatentable as indefinite, not enabled, and not adequately

described.

C. The Substitute Claims are Anticipated or Obvious

1. The Revised Substitute Claims Are Anticipated or Obvious over Lee

For the reasons provided in the Petition, the original claim language in the Substitute Claims is anticipated and/or obvious over Lee (Ex. 1004). Patent Owner has filed a non-contingent motion to amend and has declined to defend its original claims, acquiescing to the arguments presented in the Petition. Paper 20. Patent Owner is therefore precluded from arguing that original claim language distinguishes any Substitute Claim over the grounds asserted in the Petition. *Lemelson v. Gen. Mills, Inc.*, 968 F.2d 1202, 1207-8 (Fed. Cir. 1992). The amendments added by Patent Owner are also taught or rendered obvious by Lee. Ex. 1010 ¶¶ 42-45, 49, 51, 53, 58. In its revised motion to amend, Patent Owner does not contest the obviousness or lack of novelty of limitations 7a-7f or 8a-8g over Lee or Lee and Agiwal. Paper 24 at 16-17.

The portions of Lee relied upon in the Petition are prior art for the reasons advanced in the Petition. Paper 2 at 11-14; Ex. 1002 ¶¶ 73-76. The analysis below relies upon additional portions of Lee, which are also supported by the Lee's priority application. Ex. 1010 ¶23. Accordingly, Lee qualifies as prior art for the subject matter relied upon below under at least pre-AIA 35 U.S.C. § 102(e) and post-AIA 35 U.S.C. § 102(a)(2).

Limitations 7b and 8a Are Taught by Lee

The first amendment to the independent Substitute Claims appears in limitations 7b and 8a. These claim limitations correspond to each other (differing only in their first two words) and have identical amendments relative to original claims 1 and 3. Ex. 1010 ¶ 13. To the original claim language, the Substitute Claims add the requirement that the value tag be “associated with a group of plural second type system information blocks fewer than the total number of second type information blocks, wherein each of the second type information blocks in the group has different sibIDs and the group has a group identifier” and that the value tag change when any second type SIB associated with the group is changed. Paper 24 Appx. A at A1-A2 (color and styling in original). Lee expressly teaches this limitation. Ex. 1010 ¶ 42-45, 58.

Lee teaches a large set of SIBs, each with an identifier or sibID. Ex. 1010 ¶ 43; Ex. 1004 at [0071]. For example, Lee teaches a system with n SIBs, numbered SIB1 to SIBn. *Id.* A POSITA would recognize this identifying SIB number as a SIB identifier, or sibID. Ex. 1010 ¶ 43.

Lee also teaches grouping system information according to different services a base station may offer, such as MBMS, D2D, V2X, or WLAN, and that the SIBs associated with those services may not be broadcast. Ex. 1010 ¶ 44; Ex. 1004 at [0118]. Lee teaches that value tags may be applied for particular types of on-demand

system information. Ex. 1010 ¶ 44; Ex. 1004 at [0168]. A POSITA would understand these types of system information to include the SIBs for MBMS, D2D, V2X, or WLAN services, and understand the value tags of Lee [0168] to apply to the SIBs for a particular service. Ex. 1010 ¶ 44. Lee further teaches that SIBs may be identified by the service with which they are associated from the SIB list, and that a UE may request the missing SIBs it needs by identifying the service. Ex. 1010 ¶¶ 44-45, Ex. 1004 at [0175]-[0178]. A POSITA would therefore understand the service associated with a set of SIBs (e.g., MBMS, D2D, V2X, or WLAN) to be a group identifier, and the SIBs corresponding to each of these services to be sub-types of non-essential SIBs (i.e., second-type SIBs). Ex. 1010 ¶ 45. Accordingly, the amendments added in revised substitute limitations 7b and 8a are anticipated by or obvious over Lee. As the remainder of limitations 7b and 8a are unchanged, the remaining claim language is taught by Lee for the same reasons provided in the Petition. Paper 2 at 20-24, 35-36; Ex. 1002 at ¶¶ 98-106, 138.

a. Limitations 7c and 8b Are Taught by Lee

In limitations 7c and 8b, the original claim language is amended to require that a group of SIBs that is “on demand” be changed to “broadcast” upon a change of a second type SIB belonging to that group, and for the change to be reflected in the first type SIB. Paper 24 Appx. A at A1-A2. In the original claims, in contrast, this change of status from on-demand to broadcast only applied to the changed

second-type SIB. *Id.* Lee expressly teaches this limitation. Ex. 1010 ¶ 49, 58.

For example, Lee teaches that “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 at [0167]. Accordingly, Lee teaches at least that when a particular second type SIB changes, all system information may be broadcast during a specified period, including any SIBs in the same group as a changed SIB. Ex. 1010 ¶ 49. Accordingly, the amendments added in Substitute Limitations 7c and 9b are anticipated by or obvious over Lee. Ex. 1010 ¶ 49. As the remainder of limitations 7c and 9b are unchanged, the remaining claim language is taught by Lee for the same reasons provided in the Petition. Paper 2 at 24-26, 36; Ex. 1002 at ¶¶ 107-112, 139.

b. Limitations 7g and 8e Are Taught by Lee

In limitations 7g and 8e, the original claim language is amended to require that “whether or not the second type SIB belonging to the group has changed is determined based on a value tag, associated with the group containing the second type SIB, stored in the wireless terminal, and the value tag included in the first type SIB corresponding to the group containing the second type SIB.” Paper 24 Appx. A at A1-A2 (color and styling in original). In the original claims, in contrast, the corresponding limitation required only a determination as to whether a single second-type SIB had changed based on a value tag associated with that SIB. *Id.*; Ex.

1010 ¶ 15. Lee expressly teaches this limitation. Ex. 1010 ¶ 51, 58.

Lee teaches that a value tag may be used to indicate whether a particular type of on-demand system information is changed. Ex. 1004 at [0168]; Ex. 1010 ¶ 51. A POSITA would understand this to refer to the SIBs for a particular service, e.g., MBMS, D2D, V2X, or WLAN. Ex. 1004 at [0177]-[0178]; Ex. 1010 ¶ 51. UEs (wireless terminals) then check the value tag to determine whether the on-demand system information has changed. Ex. 1004 at [0169]; Ex. 1010 ¶ 51. Accordingly, the amendments added in Substitute Limitations 7g and 8e are anticipated by or obvious over Lee. Ex. 1010 ¶ 51. As the remainder of limitations 7g and 8e are unchanged, the remaining claim language is taught by Lee for the same reasons provided in the Petition. Paper 2 at 31-33, 37; Ex. 1002 at ¶¶ 127-131, 142.

c. Limitations 7h and 8f Are Taught by Lee

Limitations 7g and 8f are taught or rendered obvious by Lee. These limitations require that, upon an update of non-broadcast system information, that the changed system information be broadcast without the broadcast of unchanged non-broadcast system information. Lee teaches the broadcast of previously non-broadcast system information generally for the same reasons provided for substitute claims 8 and 10, which are now withdrawn, as well as original claims 2 and 4 from which they were amended. Ex. 1010 ¶¶ 53, 58; Ex. 1004 at [0167], [0175]-[0178]; Ex. 1002 at ¶¶ 132-134, 143; Paper 2 at 33-34, 37. Further, Lee teaches that “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 at [0167] (emphasis added). The “or” used in this description indicates that one of the options contemplated by this portion of Lee’s disclosure is the broadcast of only the changed system information following a change in on-demand system information. This is the supposed novelty added by limitations 7g and 8f. Accordingly, the revised substitute claims should be rejected as obvious or anticipated over Lee alone.

2. The Substitute Claims are Obvious over Lee in View of Agiwal

a. Agiwal is Prior Art

Agiwal (Ex. 1008) is a published patent application claiming priority to a provisional patent application (Ex. 1009) filed on May 16, 2016. Ex. 1008 at 1. Agiwal’s May 16, 2016 provisional discloses both the subject matter claimed by Agiwal and the subject matter relied upon below. Ex. 1010 § XI.B.2 (pp. 17-29). The earliest claimed priority date for the ’958 Patent is July 28, 2016, which post-dates Agiwal’s provisional application. Accordingly, Agiwal is prior art to the Substitute Claims under at least pre-AIA 35 U.S.C. § 102(e) and post-AIA 35 U.S.C. § 102(a)(2).

b. A POSITA Would Have Been Motivated to Combine Lee with Agiwal

Lee and Agiwal each address the problem of system information in a 5G network, and adopt similar, analogous solutions to that problem. For example, both Lee and Agiwal describe system information organized into units called system information blocks, which may be transmitted by broadcast or upon demand by a UE, and both describe the use of value tags to indicate when system information blocks have changed or to identify the version of system information blocks in use by a base station. Further, both Lee and Agiwal describe grouping system information blocks to use one value tag across a group of blocks to indicate changes in system information. Ex. 1004 at [0168]; Ex. 1010 at [0256]; Ex. 1010 ¶¶ 38-39.

Agiwal, like Lee, teaches categorizing system information into groups (also called parts or sets) and using value tags (also called identifiers or configuration indices) for each supported system information group to indicate changes in the system information included in that group. Ex. 1008 at Fig. 3; [0066]-[0068], [0256]; Ex. 1010 ¶¶ 38-39. Agiwal also teaches assigning a value tag for each service, with a change in that value tag indicating that the system information for that service has changed. Ex. 1008 at [0257]; Ex. 1010 ¶ 39. Each group of SIBs includes at least one SIB, and the same SIB can be part of more than one group of SIBs. Ex. 1008 at [0067]-[0068]. Minimum or essential SI (first type SIBs) may include a separate

indication for each SIB or set of SIBs indicating whether the SIBs are broadcast or on demand. Ex. 1008 at [0080]-[0081]; Ex. 1010 ¶ 39. A POSITA would therefore understand the SI distribution system of Agiwal to teach identifiers for both individual second-type SIBs and sets of second-type SIBs included, with scheduling information and value tags, in a broadcast first-type SIB. Ex. 1010 ¶ 39.

A POSITA would have found it obvious to combine the SI system of Agiwal with the SI system of Lee to make Lee's system more flexible. Ex. 1010 ¶ 40. Agiwal expressly teaches overlapping groups of SI, with SIBs belonging to more than one group. Ex. 1008 at Fig. 3; [0066]-[0068], [0256]. A POSITA would have recognized that services may require overlapping system information, so that partially overlapping groups of SIBs each with their own value tags would allow UEs to determine when system information relevant to their services changed with fewer value tags than second-type SIBs. Ex. 1010 ¶ 40. By combining Lee and Agiwal, a POSITA would recognize that fewer value tags could be maintained and transmitted, conserving resources. Ex. 1010 ¶ 40. A POSITA would have reasonable success in making the combination, and that the combination would work for its intended purpose. Ex. 1010 ¶ 40.

c. Lee combined with Agiwal Teaches the Original Claims

Lee alone anticipates or renders obvious the original claims for the reasons set

out in the Petition. Paper 2 at 17-37; *Lemelson*, 968 F.2d at 1207-8. Lee combined with Agiwal teach the original claims for the same reason. Ex. 1010 ¶ 41.

d. Limitations 7b and 8a Are Taught by Lee Combined with Agiwal

Lee alone anticipates or renders obvious limitations 7b and 8a for the reasons provided in Section 0 above. Lee combined with Agiwal further teaches these limitations. For example, the SI system of Agiwal includes both SIBs (with associated identifiers) and groups of SIBs (with associated identifiers). Ex. 1008 at Fig. 3; [0066]-[0068], [0256]; Ex. 1010 ¶¶ 46-47. Although Agiwal's groups of second type SIBs permit single-SIB groups, Agiwal's teaching of second-type SIBs in more than one group indicates that at least some of Agiwal's groups include two or more second-type SIBs, and less than all second-type SIBs. Ex. 1010 ¶ 46. And Agiwal, like Lee, teaches using minimum or essential SI (first-type SIBs) to broadcast information about second-type SIBs. Ex. 1008 at [0080]-[0081]; Ex. 1010 ¶ 46. So a POSITA combining Lee and Agiwal would include in the combined system's first-type SIB an identification of second-type SIBs and SIB groups with their associated distribution information and value tags. Ex. 1010 ¶¶ 48, 58. A POSITA would therefore find limitations 7b and 8a obvious over Lee and Agiwal.

e. Limitations 7c and 8b Are Taught by Lee Combined with Agiwal

Lee alone anticipates or renders obvious limitations 7c and 8b for the reasons

provided in Section III.C.1.a above. Lee combined with Agiwal further teaches these limitations. For example, Agiwal teaches both that updated system information may be broadcast for a defined period and that, in response to receiving many requests for on-demand system information, the system may switch system information from on demand to broadcast. Ex. 1008 at [0079], [0263]; Ex. 1010 ¶ 50. A POSITA would recognize that many requests would likely be received following a change in on-demand system information, and so would be motivated to switch the delivery of the system information to broadcast following a change as suggested in Agiwal paragraph [0263]. Ex. 1010 ¶¶ 50, 58. Accordingly, a POSITA would find limitations 7c and 9b obvious over Lee and Agiwal.

f. Limitations 7g and 8e Are Taught by Lee Combined with Agiwal

Lee alone anticipates or renders obvious limitations 7g and 8e for the reasons provided in Section III.C.1.b above. Lee combined with Agiwal further teaches these limitations. For example, Agiwal teaches the organization of system information blocks into groups with corresponding value tags that, when changed, indicate a change in the corresponding group of system information blocks. Ex. 1008 at [0256]. The UE can then compare the new value tag against a prior value tag to determine that the corresponding system information has been updated, and request the updated system information. Ex. 1008 at [0256], [0262]; Ex. 1010 ¶ 52, 58. Accordingly, a

POSITA would find limitations 7g and 8e obvious over Lee and Agiwal.

g. Limitations 7h and 8f Are Taught by Lee Combined with Agiwal

Lee alone anticipates or renders obvious limitations 7g and 8f for the reasons provided in Section III.C.1.c above. Accordingly, a POSITA would find limitations 7h and 8f obvious over Lee and Agiwal.

IV. CONCLUSION

As set out above, the revised Substitute Claims improperly broaden the claims and, even if they did not, are also unpatentable as indefinite, lacking in written description and enablement, and anticipated or obvious over Lee or Lee combined with Agiwal. As a result, the revised Substitute Claims should either 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.

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Respectfully submitted,

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CERTIFICATION OF SERVICE

The undersigned hereby certifies that the foregoing **PETITIONERS' RESPONSE IN OPPOSITION TO PATENT OWNER'S REVISED NON-CONTINGENT MOTION TO AMEND 37 C.F.R. § 42.121** has been served on Patent Owner via email on the following counsel of record for Patent Owner:

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