IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

KONINKLIJKE KPN N.V.,	§	
	§	
Plaintiff,	§	
	§	
	§	
v.	§	CIVIL ACTION NO. 2:21-CV-00113-JRG
	§	
TELEFONAKTIEBOLAGET LM ERICSSON, ERICSSON INC.,	§	
	§	
	§	
Defendants.	§	

CLAIM CONSTRUCTION
MEMORANDUM AND ORDER

Before the Court is the Opening Claim Construction Brief (Dkt. No. 58) filed by Plaintiff Koninklijke KPN N.V. ("Plaintiff" or "KPN"). Also before the Court is the Responsive Claim Construction Brief (Dkt. No. 65) filed by Defendants Telefonaktiebolaget LM Ericsson and Ericsson Inc. ("Defendants" or "Ericsson") as well as Plaintiff's reply (Dkt. No. 66).

The Court held a hearing on March 4, 2022.

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I. BACKGROUND

Plaintiff alleges infringement of United States Patents No. RE48,089 ("'089 Patent," Dkt. No. 58, Ex. 2), 8,881,235 ("'235 Patent," *id.*, Ex. 3), 9,253,637 ("'637 Patent," *id.*, Ex. 6), 9,549,426 ("'426 Patent," *id.*, Ex. 7), and 9,667,669 ("'669 Patent," *id.*, Ex. 10) (collectively, "the patents-in-suit").

Plaintiff asserts the following claims of each of the patents-in-suit (Dkt. No. 55, at 1):

Patent	Asserted Claims
RE48,089	Claims 1–5, 11, 13–15

8,881,235	Claims 1, 4–7, 11
9,253,637	Claims 16–20, 23–28, 58, 59
9,549,426	Claims 9, 10, 14, 16, 17
9,667,669	Claims 1–3, 6, 8, 10–12, 21, 22, 24, 25

II. LEGAL PRINCIPLES

It is understood that "[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

"In some cases, however, the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). "In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the 'evidentiary underpinnings' of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal." *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent's claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary,

which explains the invention and may define terms used in the claims. *Id.* "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims." *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's invention. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court's claim construction analysis is substantially guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313. This principle of patent law flows naturally from the recognition that

inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of "a fully integrated written instrument." *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314–17. As the Supreme Court stated long ago, "in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims." *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

> Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office ("PTO") understood the patent. *Id.* at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant,"

it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; *see Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that "a patentee's statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation").

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319–24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent." *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The Supreme Court of the United States has "read [35 U.S.C.] § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). "A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 572 U.S. 898. "Indefiniteness must be proven by clear and convincing evidence." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

III. AGREED TERMS

In their December 6, 2021 Joint Claim Construction and Prehearing Statement Pursuant to Patent Rule 4-3 (Dkt. No. 55, at 2) and in their February 28, 2022 Amended Joint Claim Construction Chart Pursuant to Patent Rule 4-5(d) (Dkt. No. 68-1, at 1), the parties submit the following agreements:

Term	Agreed Construction
"configured to" ('089 Patent, Claims 1–5, 11, 13–15)	Plain and ordinary meaning, not merely capable of
"coverage assessment" ('089 Patent, Claims 1–5, 11, 13–15)	"representation of locations/pixels and associated signal strengths and/or interference values"

IV. DISPUTED TERMS IN U.S. PATENT NO. RE48,089

The '089 Patent, titled "Method and System for Automatic Coverage Assessment for Cooperating Wireless Access Networks," issued on July 7, 2020, and bears an earliest priority date of December 21, 2009. Plaintiff submits that "[t]he reissued claims of the '089 Patent are directed

to performing a coverage assessment of a wireless access network using information collected through a different network." (Dkt. No. 58, at 1.) The Abstract of the '089 Patent states:

> The invention relates a method and system for assessing coverage of a wireless access network within a desired area via cooperating wireless access networks and terminals capable of measurement and reporting across the different wireless access networks. The cooperation refers to, among other things, the ability of obtaining coverage assessment for one of the wireless access networks using results of the measurements collected at one of the other wireless access networks. In this manner, more accurate and complete coverage assessment may be obtained, relative to the prior art approaches.

1. "means for selecting one or more terminals . . . capable of communicating with both . . . network[s]" and "means for generating the coverage assessment . . ."

"means for selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" ('089 Patent, Claim 13)	
Plaintiff's Proposal	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 410, 2:38-43, 2:65-3:6, 3:62-4:3, 4:4-36, 4:37-50, 5:24-28; 5:41-47, 5:48-67, 8:1-11, 8:12-25, 8:34-42, 8:43-60, 8:61-64, and/or 9:56-61, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, and 10:48-51."	§ 112 ¶ 6 applies Function: "select one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Structure: "circuitry and/or software that performs the algorithms of selecting terminals based on their ability to communicate with both a first and second wireless access network and depending on: (i) where and/or when the coverage assessment is needed (as recited in the '089 Patent at 4:1-3); or (ii) whether the terminal is located in the area for which the coverage assessment should be generated (as recited in the '089 Patent at 4:12-42, 5:41-44, and 8:15-20); or (iii) whether the terminal uses a particular service via a first wireless access network while, according to the operator policy, usage of that service is preferred via a second wireless access network (as recited in the '089 Patent at 5:51-55); or (iv) whether the terminal is in those cells within the UMTS network that have inter-RAT neighbor relation with cells of the LTE network where an optimization of radio coverage exists (as recited in the '089 Patent at 5:55-62); or (v) whether the terminal is from one or more cells in the UMTS network where there is a planned coverage overlap with one or more cells in the second wireless access network where the coverage should be assessed (as recited in the '089 Patent at 5:62-67)"[1]

[1] Defendants previously proposed: "circuitry and/or software that selects one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network." (Dkt. No. 55, Ex. A, at 6.)

"means for generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" ('089 Patent, Claim 15)	
Plaintiff's Proposal	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 450, 10:8-20, 10:21-47, and/or 11:16-22, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, 10:48-51, and 10:52-64"	§ 112 ¶ 6 applies Function: "generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software that performs algorithms of generating a coverage assessment for the second wireless access network by assembling a coverage map, representing the geographic locations/pixels with associated signal strengths of the LTE network (as recited in the '089 Patent at 10:13-16)"[2]

(Dkt. No. 55, Ex. A, at 6 & 19–20; Dkt. No. 65, at 5; Dkt. No. 68-1, at 17–18 & 21–22.)

(a) The Parties' Positions

Plaintiff argues that "[f]or the 'selecting one or more terminals' term, the specification discloses that the structure is 'the information collector,'" and "the specification discloses a large variety of criteria and configurations that the information collector may use to select one or more

[2] Defendants previously proposed: "circuitry and/or software that generates the coverage assessment for the second wireless access network of the telecommunications infrastructure." (Dkt. No. 55, Ex. A, at 19–20.)

terminals." (Dkt. No. 58, at 2 (citations omitted).) Plaintiff also argues that "the specification discloses that the 'coverage estimator' is what 'generat[es] the coverage assessment for the second wireless access network . . . based on the obtained measurement information' from the information collector," and "the specification discloses a variety of means for generating the coverage assessment . . . ." (*Id.*, at 3 (citations omitted).)

Defendants respond that they have modified their proposed constructions in response to Plaintiff's arguments. (*See* Dkt. No. 65, at 4–5.) Defendants also urge that "KPN's proposed constructions are unhelpful to the jury, merely providing a list of partial citations to the patent with no real instruction as to the scope of the element," and Defendants argue that "KPN's citations are overbroad, citing to passages that either simply repeat the recited claim function or relate to functionality other than the claimed function." (*Id.*, at 6.)

Plaintiff replies that Defendants' revised proposed constructions are untimely, and Plaintiff also argues that "[r]ather than proposing structure which would 'select,' Ericsson proposes reasons for or inputs into selection," and "Ericsson's construction for 'generating' a coverage assessment tries to limit what a coverage assessment is (i.e., the output of 'generating'), rather than specifying the relevant structure." (Dkt. No. 66, at 3–4.)

(b) Analysis

Title 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) provides: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." "In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly

link that structure to the function." *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

The parties agree that the "means for selecting . . ." and the "means for generating . . ." are means-plus-function terms governed by 35 U.S.C. § 112(f), and the parties agree on the claimed function. The parties dispute the proper corresponding structure.

The specification discloses an "information collector 7" and a "coverage estimator 8":

> FIG. 3 illustrates an example of implementing a coverage assessment system 300, according to one embodiment of the present invention. As shown, the coverage assessment system 300 includes an *information collector 7* and a *coverage estimator 8*. The information collector 7 is configured for collecting information from some of the terminals 5 via the first wireless access network 2A and providing the information to the coverage estimator 8. The coverage estimator 8 is configured for connecting to and receiving information from the information collector 7 and, based on the received information, generating the coverage assessment for the second wireless access network 2B.

'089 Patent at 7:10–22.

> In step 410, the information collector 7 selects one or more of the terminals 5 for obtaining measurement information. This instruction may also be sent via the RRC signalling of the UMTS network. It should be noted that when the location information is obtained prior to step 410, then in step 410 only terminals located in the area for which the coverage assessment should be generated may be selected for obtaining the measurement information, thus avoiding collection of excessive measurement information.
>
> The information collector 7 may also be configured to select the one or more of the terminals 5 according to one of the following alternative embodiments. In one embodiment, those terminals are selected that use a particular service via the UMTS network while, according to the operator policy, usage of that service is preferred via the LTE network. In another embodiment, a self-optimization or a manual optimization of a radio coverage may be performed for one or more base stations within the LTE network, and then the selected one or more terminals only comprise terminals in those cells within the UMTS network that have inter-RAT neighbour relation with cells of the LTE network where the optimization takes place. In yet another embodiment, the selected one or more terminals comprise terminals from one or more cells in the UMTS network where there is a planned coverage overlap with one or more cells in the second wireless access network 2B where the coverage should be assessed.

> Persons skilled in the art will be able to complement the selection criteria described herein with additional selection criteria that may be relevant for the assessment of the coverage of the second wireless access network 2B.

Id. at 8:34–36 (emphasis added); *see id.* at 8:1–25 (regarding "information collector 7").

> The coverage estimator 8 is in charge of the coverage estimation of the LTE network (the second wireless access network 2B in this example), with the measurement information and, optionally, location information received from the information collector 7. Once the coverage estimator 8 obtains the measurement information (and, optionally, the location information) from the information collector 7, then, in step 450, the coverage estimator 8 generates the coverage assessment for the LTE network based on the information obtained from the information collector 7. The coverage assessment is generated by assembling a coverage map, representing the geographic locations/pixels with associated signal strengths of the LTE network. The coverage estimator 8 may also be configured to instruct the information collector 7 with some specifications for measurement, for example where to measure, when to measure, how often to measure or which particular LTE cells to measure.

Id. at 10:4–20; *see id.* at 10:21–11:22 ("The coverage estimator 8 may be also configured to compare the current coverage assessment with a previously generated coverage assessment to determine whether the coverage optimization actions in the past have led to a coverage improvement . . . .").

On balance, for the disputed "means for selecting . . ." and "means for generating . . ." terms, the disclosures in the specification such as set forth above link the claimed functions to the "information collector 7" and the "coverage estimator 8," respectively.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"means for selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network"	This is a means-plus-function term. Function: "selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"means for generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information"	This is a means-plus-function term. Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

2. "means for instructing the selected one or more terminals to measure signal . . ." and "means for obtaining measurement information indicative of the signals measured . . ."

"means for instructing the selected one or more terminals to measure signals from the second wireless access network" ('089 Patent, Claim 13)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "instructing the selected one or more terminals to measure signals from the second wireless access network" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 420, 2:48-59, 5:34, 8:65-9:1, and/or 9:50, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "instruct the selected one or more terminals to measure signals from the second wireless access network" Structure: "interface to [3] the first wireless access network that instructs the selected one or more terminals to measure signals from the second wireless access network"

[3] Defendants previously proposed "of." (Dkt. No. 55, Ex. A, at 9.)

"means for obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" ('089 Patent, Claim 13)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 430, 2:43-64, and/or 9:1-19, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Structure: "interface from[4] the first wireless access network over which measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals are received"

(Dkt. No. 55, Ex. A, at 9, 11–12, 18 & 19; Dkt. No. 68-1, at 18 & 19.)

(a) The Parties' Positions

Plaintiff argues that "the information collector 'instruct[s]' the terminal[s] to 'measure signals from the second wireless access network,'" and "[m]easured signals are varied, and the instructions can be delivered by the information collector in a variety of ways." (Dkt. No. 58, at 4 (citations omitted).) "Similarly, the information collector is what obtains 'measurement information indicative of the signals measured from the second wireless access network.'" (*Id.* (citations omitted).)

Defendants respond:

[4] Defendants previously proposed "of." (Dkt. No. 55, Ex. A, at 11–12.)

> The patent does not, as KPN contends, merely recite some generic free floating "information collector" as performing the recited claim functions at issue here. Rather, the element identified in the specification as providing instructions for measuring on the "second network" and for obtaining those measurements is specified in all cases as one that provides those instructions and receives those measurements *via the "first" network*. The specific structure that provides instructions and obtains measurements is an interface to the first network. ['089 Patent] at 9:16–19. Ericsson's construction recognizes this, while KPN's construction seeks to eliminate the patent's deliberate distinction between the roles of first and second networks.

(Dkt. No. 65, at 3.)

Plaintiff replies that Defendants admit that the claims do not require any particular type of interface. (Dkt. No. 66, at 2–3.)

(b) Analysis

Claim 13 of the '089 Patent recites (emphasis added):

> 13. A network node for use in a telecommunications infrastructure comprising a first wireless access network and a second wireless access network, the first and second wireless access networks capable of providing services to a plurality of terminals, the node comprising:
>
> means for selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network;
>
> *means for instructing the selected one or more terminals to measure signals from the second wireless access network,*
>
> *means for obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals*; and
>
> means for providing the measurement information to a coverage estimator,
>
> wherein the coverage estimator is configured to generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the measurement information provided by the network node.

The parties agree that the "means for instructing . . ." and the "means for obtaining . . ." are means-plus-function terms governed by 35 U.S.C. § 112(f), and the parties agree on the claimed function. The parties dispute the proper corresponding structure.

The specification discloses:

> In step 410, the information collector 7 selects one or more of the terminals 5 for obtaining measurement information.
>
> * * *
>
> The method then continues to step 420, where the information collector 7 instructs the selected one or more terminals, *via the UMTS network*, to measure signals from the LTE network. In step 430, the information collector 7 obtains measurement information indicative of the *signals measured from the LTE network* by the selected one or more terminals. The measurement information may e.g. include indications about cell identification, indications about signal strength, indications about system information provided by the measured cells, indications about timing, indications about the moment a measurement has been made, indications about the location or estimated location where a measurement has been made, etc. The measurement information relates at least to the LTE network and may additionally relate to measurements in the UMTS network, for example in order to obtain an LTE network signal strength measurement relative to a UMTS signal strength measurement and/or to use either information to perform, to support or to verify a location estimate. The measurement information *may* be sent via RRC signalling *to the UMTS network and further via the Itf-N interface to the information collector 7*.
>
> * * *
>
> Generating coverage assessment for one of the wireless access networks using results of the measurements collected at one of the other, cooperating, wireless access networks allows obtaining a more accurate and complete coverage assessment, relative to the prior art approaches. In addition, in contrast to the current coverage estimation methods, the proposed approach is able to account for the fact that a given wireless operator may operate multiple wireless access networks with non-identical coverage area (for example, one wireless access network may have an extensive, possibly near-complete, coverage area, while another wireless access network has a more limited, possibly discontinuous, coverage area).

'089 Patent at 8:34–9:19 & 10:52–64 (emphasis added); *see id.* at 7:10–21.

On balance, these disclosures demonstrate that the specification links the claimed function to the "information collector 7," and Defendants do not persuasively show any "clear[] link[age]" between the claimed function and any "interface." *Triton Tech*, 753 F.3d at 1378. To whatever extent an "interface" is necessary for operation of the corresponding structure, any such necessity

does not compel including the interface as part of the corresponding structure because the specification does not clearly link performance of the recited functions to the interface. *See, e.g., Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1370 (Fed. Cir. 2001) ("Structural features that do not actually perform the recited function do not constitute corresponding structure and thus do not serve as claim limitation.").

As to whether the information collector must be in the "first" wireless network, as proposed by Defendants, the Summary of the Invention states:

> The system includes an information collector and a coverage estimator. In one embodiment, the information collector may be included within the first wireless access network, while the coverage estimator may be included within the second wireless access network. The information collector may be configured for collecting information from terminals via the first wireless access network. *In another embodiment, the information collector and the coverage estimator may be included within the second wireless access network.* In such an embodiment, the information collector may be configured for collecting information from terminals via the first and the second wireless access networks.

'089 Patent at 2:25–36 (emphasis added). The specification thus does not limit the information collector to being in the "first" wireless network, and Defendants do not otherwise persuasively justify requiring instructions to be sent (or measurements to be received) using the "first" wireless network, so the Court rejects Defendants' proposal in that regard.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"means for instructing the selected one or more terminals to measure signals from the second wireless access network"	This is a means-plus-function term. Function: "instructing the selected one or more terminals to measure signals from the second wireless access network" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"means for obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals"	This is a means-plus-function term. Function: "obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

3. "means for providing the measurement information to a coverage estimator" and "means for obtaining measurement information from an information collector"

"means for providing the measurement information to a coverage estimator" ('089 Patent, Claim 13)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "providing the measurement information to a coverage estimator" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 440, 2:37-38, 2:47-48, 2:59-61, 5:15-17, 9:62-10:3, and/or 10:7-10, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "provide the measurement information to the coverage estimator" Structure: "interface to the communication link that carries information to the coverage estimator"

"means for obtaining measurement information from an information collector" ('089 Patent, Claim 15)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "obtaining measurement information from an information collector" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 440, 2:37-38, 2:47-48; 2:59-61, 5:15-17, 7:17-20, 9:62-10:3, and/or 10:7-10, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain measurement information from an information collector" Structure: "interface to the communication link that carries measurement information from an information collector"

(Dkt. No. 55, Ex. A, at 14 & 17; Dkt. No. 68-1, at 19 & 21.)

(a) The Parties' Positions

Plaintiff argues that the specification "discloses that the information collector obtains measurement information and provides it to the coverage estimator, which receives that information," and "[t]he specification discloses numerous ways in which this may occur." (Dkt. No. 58, at 5 (citations omitted).)

Defendants respond that "Ericsson's construction of the corresponding structure for this claim element . . . is the interface to the communication link that is shown and described with respect to Figure 3 and explicitly shown in that Figure." (Dkt. No. 65, at 6.) Defendants argue that "KPN cites to several passages that repeat the function of obtaining or providing measurement information, but none disclose any *structure* for doing so." (*Id.*)

Plaintiff replies that Defendants' proposal of "communication link" is an "undefined term Ericsson all but admits it invented from whole cloth . . . ." (Dkt. No. 66, at 3.)

(b) Analysis

The parties agree that the "means for providing . . ." and the "means for obtaining . . ." are means-plus-function terms governed by 35 U.S.C. § 112(f), and the parties agree on the claimed function. The parties dispute the proper corresponding structure.

Defendants do not persuasively support their proposal of "interfaces" as corresponding structure of these claimed functions. For example, the illustration of a bidirectional arrow between the "1st Network" and "2nd Network" in Figure 3 of the '089 Patent, cited by Defendants, is unpersuasive. Instead, the specification links these claimed functions to the "information collector 7" and "coverage estimator 8," respectively:

> In another embodiment, the information collector 7 may be configured to update the location information for each of the selected one or more terminals after obtaining the measurement information from them.

> * * *
>
> The coverage estimator 8 is in charge of the coverage estimation of the LTE network (the second wireless access network 2B in this example), with the measurement information and, optionally, location information received from the information collector 7. Once the coverage estimator 8 obtains the measurement information (and, optionally, the location information) from the information collector 7, then, in step 450, the coverage estimator 8 generates the coverage assessment for the LTE network based on the information obtained from the information collector 7.

'089 Patent at 9:40–10:20; *see id.* at 2:37–38 ("The coverage estimator may be configured for receiving information from the information collector.") & 2:44–48 ("The information collector may further be configured to obtain measurement information . . . and provide the measurement information to the coverage estimator.").

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"means for providing the measurement information to a coverage estimator"	This is a means-plus-function term. Function: "providing the measurement information to a coverage estimator" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

"means for obtaining measurement information from an information collector"	This is a means-plus-function term. Function: "obtaining measurement information from an information collector" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

4. "means for measuring signals from the second wireless access network" and "means for providing the measurement information to at least one of an information collector or a coverage estimator based on the measured signals"

"means for measuring signals from the second wireless access network" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "measuring signals from the second wireless access network" Structure: "circuitry and/or software capable of performing as described in 2:48-59, 8:65-9:19, and/or 11:16-19, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "measuring signals from the second wireless access network" Structure: "radio receiver of terminal 5 that measures signals from the second wireless access network"

"means for providing the measurement information to at least one of an information collector or a coverage estimator based on the measured signals" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
§ 112 ¶ 6 applies Function: "providing the measurement information to at least one of an information collector or a coverage estimator based on the measured signals" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 430 and/or step 440, 2:43-64, and/or 9:1-9:19, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "providing the measurement information to at least one of an information collector or a coverage estimator based on the measured signals" Structure: "interface of terminal 5 to the first wireless access network over which measurement information based on the measured signals are sent"

(Dkt. No. 55, Ex. A, at 23–24; Dkt. No. 68-1, at 10–11.)

(a) The Parties' Positions

Plaintiff argues that "the invention is not limited to radio transmission or radio receivers, but may use any data connection." (Dkt. No. 58, at 6 (citations omitted).) Plaintiff also argues that nothing supports Defendants' proposal of "limiting the invention to use with a single terminal (rather than, as is clearly stated, 'one or more' terminals)." (*Id.*, at 6–7.)

Defendants respond that "[t]he only structure identified in the patent as performing this function is a 'terminal.'" (Dkt. No. 65, at 6 (citing '089 Patent at 2:43–47).) Defendants also argue that "Ericsson's construction does not seek to limit the structure to one and only one mobile terminal," and "KPN is wrong that the corresponding structure need not be a radio receiver of the

transmitter, because the claim explicitly requires measuring received 'wireless' signals." (*Id.*, at 7.)

Plaintiff replies that Defendants' proposal of "radio receiver" should be rejected because "the terms Ericsson seeks to construe are not 'receiving' wireless signals; they are 'measuring' those signals and conveying that measurement information," and "Ericsson cites nothing in the intrinsic or extrinsic record requiring that this function be performed by the receiver itself." (Dkt. No. 66, at 3.)

(b) Analysis

The parties agree that the "means for providing . . ." and the "means for measuring . . ." are means-plus-function terms governed by 35 U.S.C. § 112(f), and the parties agree on the claimed function. The parties dispute the proper corresponding structure.

The specification links the claimed functions to "terminals 5":

> The information collector may be configured to select one or more terminals from at least part of the plurality of the terminals, where the at least part of the plurality of the terminals is capable of communicating with both the first wireless access network and the second wireless access network. The information collector may further be configured to obtain measurement information indicative of the signals *measured from the second wireless access network by the selected one or more terminals* and provide the measurement information to the coverage estimator.
>
> * * *
>
> For example, some or all of the *terminals 5* in a particular city area, a whole city, a district, a province, or a state may be selected for performing the measurements described below.
>
> * * *
>
> In step 410, the information collector 7 selects one or more of the *terminals 5* for obtaining measurement information.

'089 Patent at 2:38–48, 8:17–20 & 8:34–36 (emphasis added); *see id.* at 2:51–52 ("terminals to measure signals from the second wireless access network"), 3:50–53 ("terminals capable of

measurement and reporting across the different wireless access networks"), 8:65–9:1 ("information collector 7 instructs the selected one or more terminals, via the UMTS network, to measure signals from the LTE network").

Defendants do not demonstrate any "clear[] link[age]" between the claimed function and any "radio receiver" or "interface." *Triton Tech*, 753 F.3d at 1378. Finally, Defendants do not persuasively justify limiting the information to being provided over the first wireless access network. *See id.* at 2:29–36 (information may be collected "via the first wireless access network" or "via the first and second wireless access network").

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"means for measuring signals from the second wireless access network"	This is a means-plus-function term. Function: "measuring signals from the second wireless access network" Corresponding Structure: "terminals 5 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"means for providing the measurement information to at least one of an information collector or a coverage estimator based on the measured signals"	This is a means-plus-function term. Function: "providing the measurement information to at least one of an information collector or a coverage estimator based on the measured signals" Corresponding Structure: "terminals 5 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

5. "information collector is configured to: (i) select one or more terminals . . . capable of communicating with both . . . network[s]" and "information collector carries out operations including . . . selecting one or more terminals . . . capable of communicating with both . . . network[s]"

"information collector is configured to: (i) select one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" ('089 Patent, Claims 1, 15)	
Plaintiff's Proposal	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 410, 2:38-43, 2:65-3:6, 3:62-4:3, 4:4-36, 4:37-50, 5:24-28; 5:41-47, 5:48-67, 8:1-11, 8:12-25, 8:34-42, 8:43-60, 8:61-64, and/or 9:56-61, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, and 10:48-51"	§ 112 ¶ 6 applies Function: "select one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Structure: "circuitry and/or software that performs the algorithms of selecting terminals based on their ability to communicate with both a first and second wireless access network and depending on: (i) where and/or when the coverage assessment is needed (as recited in the '089 Patent at 4:1-3); or (ii) whether the terminal is located in the area for which the coverage assessment should be generated (as recited in the '089 Patent at 4:12-42, 5:41-44, and 8:15-20); or (iii) whether the terminal uses a particular service via a first wireless access network while, according to the operator policy, usage of that service is preferred via a second wireless access network (as recited in the '089 Patent at 5:51-55); or (iv) whether the terminal is in those cells within the UMTS network that have inter-RAT neighbor relation with cells of the LTE network where an optimization of radio coverage exists (as recited in the '089 Patent at 5:55-62); or (v) whether the terminal is from one or more cells in the UMTS network where there is a planned coverage overlap with one or more cells in the second wireless access network where the coverage should be assessed (as recited in the '089 Patent at 5:62-67)"[5]

[5] Defendants previously proposed: "circuitry and/or software that selects one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals

"information collector carries out operations including collecting information from terminals by: selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" ('089 Patent, Claim 11)	
Plaintiff's Proposal	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 410, 2:38-43, 2:65-3:6, 3:62-4:3, 4:4-36, 4:37-50, 5:41-47, 5:48-67, 8:1-11, 8:12-25, 8:34-42, 8:43-60, 8:61-64, and/or 9:56-61, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, and 10:48-51"	§ 112 ¶ 6 applies Function: "select one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Structure: "circuitry and/or software that performs the algorithms of selecting terminals based on their ability to communicate with both a first and second wireless access network and depending on: (i) where and/or when the coverage assessment is needed (as recited in the '089 Patent at 4:1-3); or (ii) whether the terminal is located in the area for which the coverage assessment should be generated (as recited in the '089 Patent at 4:12-42, 5:41-44, and 8:15-20); or (iii) whether the terminal uses a particular service via a first wireless access network while, according to the operator policy, usage of that service is preferred via a second wireless access network (as recited in the '089 Patent at 5:51-55); or (iv) whether the terminal is in those cells within the UMTS network that have inter-RAT neighbor relation with cells of the LTE network where an optimization of radio coverage exists (as recited in the '089 Patent at 5:55-62); or (v) whether the terminal is from one or more cells in the UMTS network where there is a planned coverage overlap with one or more cells in the second wireless access network where the coverage should be assessed (as recited in the '089 Patent at 5:62-67)."

(Dkt. No. 55, Ex. A, at 7–9; Dkt. No. 68-1, at 12–13 & 22–23.)

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capable of communicating with both the first wireless access network and the second wireless access network." (Dkt. No. 55, Ex. A, at 7–9.)

(a) The Parties' Positions

Plaintiff argues that the specification supports finding that the phrase "information collector" connotes structure, and Plaintiff also submits that the limitations at issue recite details regarding the "information collector." (Dkt. No. 58, at 8–9.) Alternatively, Plaintiff argues that Defendants' proposed corresponding structures should be rejected for the same reasons as for the above-discussed "means . . ." terms. (*Id.*, at 9–10.)

Defendants respond that "[b]ecause the terms 'information collector' and 'coverage estimator' are nonce terms that correspond to no known class of structures and could cover any device that performs the claimed functions, the Court should find that these terms and their recited functions are governed by § 112, ¶ 6." (Dkt. No. 65, at 7 (citation omitted).) Defendants argue that "each of these terms are coined terms on which the '089 Patent relies for novelty," and Defendants also argue that "because these nonce words perform the same functions as the admitted means-plus-function terms discussed above, they should be given the same constructions." (*Id.* at 7–8.)

Plaintiff replies that Defendants fail to address the presumption against means-plus-function treatment for these non-means terms and improperly rely on similarities between these terms and the terms that expressly recite "means." (Dkt. No. 66, at 1.) Plaintiff also argues that the claims themselves provide instructions for these computer functions. (*Id.*) For example, Plaintiff argues that "[a] skilled artisan would easily understand that the information collector here is computer hardware and/or software that follows the 'specific set of instructions' disclosed in the claim of selecting terminal(s) and instructing them to measure signals." (*Id.*)

(b) Analysis

"[T]he failure to use the word 'means' . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply." *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (citations and internal quotation marks omitted). "When a claim term lacks the word 'means,' the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Id.* at 1349 (citations and internal quotation marks omitted).

Williamson, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word "means" gives rise to a "strong" presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption "is not readily overcome" and that this presumption cannot be overcome "without a showing that the limitation essentially is devoid of anything that can be construed as structure." *Id.* (citations omitted). Instead, *Williamson* found, "[h]enceforth, we will apply the presumption as we have done prior to *Lighting World* . . . ." *Id.* (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court's finding that the term "distributed learning control module" was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that "'module' is a well-known nonce word." 792 F.3d at 1350.

Here, Claim 1 of the '089 Patent, for example, recites (formatting modified; emphasis added):

> 1. An automatic coverage assessment system configured for generating a coverage assessment for a second wireless access network of a telecommunications

> infrastructure comprising a first wireless access network and the second wireless access network, the first and second wireless access networks capable of providing services to a plurality of terminals, the system comprising:
>
> an information collector; and
>
> a coverage estimator,
>
> wherein the *information collector is configured to:*
>
> *(i) select one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network,*
>
> (ii) instruct the selected one or more terminals to measure signals from the second wireless access network,
>
> (iii) obtain measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals, and
>
> (iv) provide the measurement information to the coverage estimator,
>
> and wherein the coverage estimator is configured to:
>
> (i) obtain the measurement information from the information collector, and
>
> (ii) based on the obtained measurement information, generate the coverage assessment for the second wireless access network of the telecommunications infrastructure.

Defendants persuasively argue that "information collector" is a coined term. That is, Plaintiff does not show that the phrase "information collector" has any known meaning in the art. The phrase "information collector" lacks sufficient structural connotations, even when read in the context of surrounding claim language as well as in the context of the specification, and the presumption against means-plus-function treatment for this non-means term is therefore overcome. *See id.* at 1349 ("When a claim term lacks the word 'means,' the presumption can be overcome . . . if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.") (citation and internal quotation marks omitted).

The disclosure that an "information collector" "may be largely implemented as software executed by a processor and making use of memory" or "may be implemented in hardware or in a

combination of software and hardware" ('089 Patent at 7:29–41) is insufficient to demonstrate any structural connotations. Notable, the patentee did not identify any known type of software structure. On the contrary, this disclosure reinforces that the patentee used the phrase "information collector" to refer to anything that performs the recited functions. *See id.*

Plaintiff cites *Samsung Electronics America, Inc. v. Prisua Engineering Corp.*, which found that "[a]s used in the claims of the [patent-in-suit], the term 'digital processing unit' clearly serves as a stand-in for a 'general purpose computer' or a 'central processing unit,' each of which would be understood as a reference to structure in this case, not simply any device that can perform a particular function." 948 F.3d 1342, 1354 (Fed. Cir. 2020). To whatever extent *Samsung* can be found analogous, the "information collector" term at issue in the present case does not carry the same connotations as the "digital processing" term at issue in *Samsung*. The *Personalized Media*, *CXT*, *Amdocs*, *Intelligent Water*, *Uniloc*, and *Panoptis* cases cited by Plaintiff are likewise unpersuasive. *See Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 704–05 (Fed. Cir. 1998) ("detector" connoted sufficiently definite structure); *see also CXT Sys., Inc. v. Academy, Ltd.*, No. 2:18-CV-171-RWS-RSP, 2019 WL 4253841, at *11 (E.D. Tex. Sept. 6, 2019) ("[T]he 'processing module for processing' of the claims is inherently structural[.]"); *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, No. 1:10-CV-910, 2018 WL 1699429, at *17 (E.D. Va. Apr. 6, 2018) ("computer code" found to not be means-plus-function where "the claim language provides a description as to how the computer code operates" and "describes the objectives of the 'computer code'"); *Intelligent Water Solutions, LLC v. Kohler Co.*, 2:16-CV-689-RSP, 2017 WL 2444723, at *13 (E.D. Tex. June 5, 2017) ("remote system monitoring/control device"); *Uniloc USA, Inc. v. Autodesk, Inc.*, No. 2:15-CV-1187-JRG-RSP, 2016 WL 3647977, at *19 (E.D. Tex. July 7, 2016) ("That is, the claim itself connotes the structural nature of the 'add-

on computer software code' by describing how the add-on computer software code operates within the claimed invention.") (collecting cases); *Panoptis Patent Mgmt., LLC v. Blackberry Ltd.*, No. 2:16-CV-62-JRG-RSP, 2017 WL 497571, at *17–*19 (E.D. Tex. Feb. 7, 2017) ("a processor for associating a text message with an attachment").

This remains true even when considering the language of the entire limitation, as urged by Plaintiff. *See Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372–73 (Fed. Cir. 2003). Moreover, the "circuit" term at issue in the *Apex* case cited by Plaintiff is not analogous to the coined "information collector" term at issue in the present case. *Id.* ("a first interface circuit for receiving keyboard and cursor control device signals from the workstation"). Rather, the phrase "information collector" is more analogous to the phrase "symbol generator" in *Advanced Ground Information Systems, Inc. v. Life360 Inc.*, 830 F.3d 1341, 1347–48 (Fed. Cir. 2016), wherein the Federal Circuit noted that "symbol generator" was "a term coined for the purposes of the patents-in-suit." *Id.* at 1347–48; *see id.* at 1348 ("Irrespective of whether the terms 'symbol' and 'generator' are terms of art in computer science, the combination of the terms as used in the context of the relevant claim language suggests that it is simply an abstraction that describes the function being performed (i.e., the generation of symbols)."); *see also id.* ("the term 'symbol generator' does not describe anything structural").

The Court therefore hereby finds that these disputed "information collector . . ." terms are means-plus-function terms governed by 35 U.S.C. § 112, ¶ 6. As for the proper corresponding structure, substantially the same analysis applies as set forth regarding the "means for . . ." terms discussed above.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"information collector is configured to: (i) select one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network"	This is a means-plus-function term. Function: "selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"information collector carries out operations including collecting information from terminals by: selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network"	This is a means-plus-function term. Function: "selecting one or more terminals from at least part of the plurality of the terminals, the at least part of the plurality of the terminals capable of communicating with both the first wireless access network and the second wireless access network" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

6. "information collector is configured to: . . . instruct the selected one or more terminals to measure signals . . ." and "information collector carries out operations including . . . instructing the selected one or more terminals to measure signals . . ."

"information collector is configured to: . . . (ii) instruct the selected one or more terminals to measure signals from the second wireless access network" ('089 Patent, Claims 1, 15)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "instructing the selected one or more terminals to measure signals from the second wireless access network" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 420, 2:48-59, 5:34, 8:65-9:1, and/or 9:50, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "instruct the selected one or more terminals to measure signals from the second wireless access network" Structure: "interface of the first wireless access network that instructs the selected one or more terminals to measure signals from the second wireless access network"

"information collector carries out operations including collecting information from terminals by: . . . instructing the selected one or more terminals to measure signals from the second wireless access network" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "instructing the selected one or more terminals to measure signals from the second wireless access network" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 420, 2:48-59, 5:34, 8:65-9:1, and/or 9:50 or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "instruct the selected one or more terminals to measure signals from the second wireless access network" Structure: "interface of the first wireless access network that instructs the selected one or more terminals to measure signals from the second wireless access network"

(Dkt. No. 55, Ex. A, at 10–11; *see* Dkt. No. 68-1, at 13 & 23–24.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for these terms as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to these terms together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for these terms as for the "information collector" terms discussed above.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"information collector is configured to: . . . (ii) instruct the selected one or more terminals to measure signals from the second wireless access network"	This is a means-plus-function term. Function: "instructing the selected one or more terminals to measure signals from the second wireless access network" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"information collector carries out operations including collecting information from terminals by: . . . instructing the selected one or more terminals to measure signals from the second wireless access network"	This is a means-plus-function term. Function: "instructing the selected one or more terminals to measure signals from the second wireless access network" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

7. "information collector is configured to . . . obtain measurement information indicative of the signals measured . . ." and "information collector carries out operations including . . . obtaining measurement information indicative of the signals measured . . ."

"information collector is configured to: . . . (iii) obtain measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" ('089 Patent, Claims 1, 15)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 430, 2:43-64, and/or 9:1-19, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Structure: "interface from the first wireless access network over which measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals are received"

"information collector carries out operations including collecting information from terminals by: . . . obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 430, 2:43-64, and/or 9:1-19, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Structure: "interface of the first wireless access network over which measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals are received"

(Dkt. No. 55, Ex. A, at 12–14; *see* Dkt. No. 68-1, at 13–14 & 24–25.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for these terms as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to these terms together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for these terms as for the "information collector" terms discussed above.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"information collector is configured to: . . . (iii) obtain measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals"	This is a means-plus-function term. Function: "obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"information collector carries out operations including collecting information from terminals by: . . . obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals"	This is a means-plus-function term. Function: "obtaining measurement information indicative of the signals measured from the second wireless access network by the selected one or more terminals" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

8. "information collector is configured to: . . . provide the measurement information to the coverage estimator," "information collector carries out operations including . . . providing the measurement information to a coverage estimator," and "information collector is configured to: . . . provide the measurement information to the network node"

"information collector is configured to: . . . (iv) provide the measurement information to the coverage estimator" ('089 Patent, Claim 1)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "providing the measurement information to the coverage estimator" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 440, 2:37-38, 2:47-48, 2:59-61, 5:15-17, 7:17-20, 9:62-10:3, and/or 10:7-10, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "provide the measurement information to the coverage estimator" Structure: "interface to the communication link that carries information to the coverage estimator"

"information collector carries out operations including collecting information from terminals by: . . . providing the measurement information to a coverage estimator" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "providing the measurement information to a coverage estimator" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 440, 2:37-38, 2:59-61, and/or 9:62-10:3, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "provide the measurement information to the coverage estimator" Structure: "interface to the communication link that carries information to the coverage estimator"

"information collector is configured to: . . . (iv) provide the measurement information to the network node" ('089 Patent, Claim 15)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "providing the measurement information to the network node" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 440, 2:37-38, 2:47-48, 2:59-61, 5:15-17, 7:17-20, 9:62-10:3, and/or 10:7-10, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "provide the measurement information to the network node" Structure: "interface to the communication link that carries information to the network node"

(Dkt. No. 55, Ex. A, at 14–17; Dkt. No. 68-1, at 4, 14–15 & 23.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for these terms as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to these terms together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for these terms as for the "information collector" terms discussed above.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"information collector is configured to: . . . (iv) provide the measurement information to the coverage estimator"	This is a means-plus-function term. Function: "provide the measurement information to the coverage estimator" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"information collector carries out operations including collecting information from terminals by: . . . providing the measurement information to a coverage estimator"	This is a means-plus-function term. Function: "provide the measurement information to a coverage estimator" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"information collector is configured to: . . . (iv) provide the measurement information to the network node"	This is a means-plus-function term. Function: "provide the measurement information to the network node" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

9. "coverage estimator is configured to: (i) obtain the measurement information from the information collector" and "coverage estimator carries out operations including . . . obtaining the measurement information from the information collector"

"coverage estimator is configured to: (i) obtain the measurement information from the information collector" ('089 Patent, Claim 1)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "obtaining measurement information from an information collector" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 440, 2:37-38, 2:47-48, 2:59-61, 5:15-17, 7:17-20, 9:62-10:3, and/or 10:7-10, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain the measurement information from the information collector" Structure: "interface to the communication link that carries the measurement information from the information collector"

"coverage estimator carries out operations including generating the coverage assessment for the second wireless access network by: obtaining the measurement information from the information collector" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "obtaining measurement information from an information collector" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 440, 2:37-38, 2:47-48; 2:59-61, 5:15-17, 7:17-20, 9:62-10:3, and/or 10:7-10, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain the measurement information from the information collector" Structure: "interface to the communication link that carries the measurement information from the information collector"

(Dkt. No. 55, Ex. A, at 17–19; Dkt. No. 68-1, at 5 & 15.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for these terms as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to these terms together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for these terms as for the "information collector," "generating the coverage assessment," and "obtaining measurement information" terms discussed above. *See, e.g.,* '089 Patent at 10:4–20; *id.* at 10:21–11:22.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"coverage estimator is configured to: (i) obtain the measurement information from the information collector"	This is a means-plus-function term. Function: "obtaining measurement information from the information collector" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"coverage estimator carries out operations including generating the coverage assessment for the second wireless access network by: obtaining the measurement information from the information collector"	This is a means-plus-function term. Function: "obtaining measurement information from the information collector" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

10. "coverage estimator is configured to . . . generate the coverage assessment . . .," "coverage estimator carries out operations including generating the coverage assessment . . .," and "coverage estimator is configured to generate the coverage assessment . . . ."

"coverage estimator is configured to: . . . (ii) based on the obtained measurement information, generate the coverage assessment for the second wireless access network of the telecommunications infrastructure" ('089 Patent, Claim 1)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 450, 10:8-20, 10:21-47, and/or 11:16-22, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, 10:48-51, and 10:52-64"	§ 112 ¶ 6 applies Function: "generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software that performs algorithms of generating a coverage assessment for the second wireless access network by assembling a coverage map, representing the geographic locations/pixels with associated signal strengths of the LTE network (as recited in the '089 Patent at 10:13-16)"

"coverage estimator carries out operations including generating the coverage assessment for the second wireless access network by: . . . based on the obtained measurement information, generating the coverage assessment for the second wireless access network of the telecommunications infrastructure" ('089 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software capable of performing as described in Fig. 4 step 450, 10:8-20, 10:21-47, and/or 11:16-22, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, 10:48-51, and 10:52-64"	§ 112 ¶ 6 applies Function: "generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software that performs algorithms of generating a coverage assessment for the second wireless access network by assembling a coverage map, representing the geographic locations/pixels with associated signal strengths of the LTE network (as recited in the '089 Patent at 10:13-16)"[6]

[6] Defendants previously proposed: "circuitry and/or software that generates the coverage assessment for the second wireless access network of the telecommunications infrastructure." (Dkt. No. 55, Ex. A, at 19–21.)

"coverage estimator is configured to generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the measurement information provided by the network node" ('089 Patent, Claim 13)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software configured to perform as described in Fig. 4 step 450, 10:8-20, 10:21-47, and/or 11:16-22, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, 10:48-51, and 10:52-64"	§ 112 ¶ 6 applies Function: "generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Structure: "circuitry and/or software that performs algorithms of generating a coverage assessment for the second wireless access network by assembling a coverage map, representing the geographic locations/pixels with associated signal strengths of the LTE network (as recited in the '089 Patent at 10:13-16)"[7]

(Dkt. No. 55, Ex. A, at 20–23; Dkt. No. 68-1, at 6, 15–16 & 20.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for these terms as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to these terms together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

[7] Defendants previously proposed: "circuitry and/or software that generates the coverage assessment for the second wireless access network of the telecommunications infrastructure." (Dkt. No. 55, Ex. A, at 19–23.)

(b) Analysis

The parties present the same arguments for these terms as for the "information collector," "generating the coverage assessment," and "obtaining measurement information" terms discussed above. *See, e.g.,* '089 Patent at 10:4–20; *id.* at 10:21–11:22.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"coverage estimator is configured to: . . . (ii) based on the obtained measurement information, generate the coverage assessment for the second wireless access network of the telecommunications infrastructure"	This is a means-plus-function term. Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"coverage estimator carries out operations including generating the coverage assessment for the second wireless access network by: . . . based on the obtained measurement information, generating the coverage assessment for the second wireless access network of the telecommunications infrastructure"	This is a means-plus-function term. Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

"coverage estimator is configured to generate the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the measurement information provided by the network node"	This is a means-plus-function term. Function: "generating the coverage assessment for the second wireless access network of the telecommunications infrastructure based on the obtained measurement information" Corresponding Structure: "coverage estimator 8 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

11. "information collector is further configured to obtain location information . . . prior to selecting . . ."

"information collector is further configured to obtain location information for at least one of the at least part of the plurality of terminals prior to selecting the one or more terminals" ('089 Patent, Claim 3)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "obtain location information for at least one of the at least part of the plurality of terminals prior to selecting the one or more terminals" Structure: "circuitry and/or software configured to perform as described in 4:4-32, 4:37-50, 8:1-11, 8:12-25, 8:26-34, and/or 8:55-60, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, and 10:48-51"	§ 112 ¶ 6 applies Function: "obtain location information for at least one of the at least part of the plurality of terminals prior to selecting the one or more terminals" Structure: "interface of the first wireless access network over which location information for at least one of the at least part of the plurality of terminals is received"

(Dkt. No. 55, Ex. A, at 24–25; *see* Dkt. No. 68-1, at 6–7.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for this term as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to this term together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for this term as for the "information collector" terms discussed above.

The Court therefore hereby construes this disputed term as set forth in the following chart:

Term	Construction
"information collector is further configured to obtain location information for at least one of the at least part of the plurality of terminals prior to selecting the one or more terminals"	This is a means-plus-function term. Function: "obtain location information for at least one of the at least part of the plurality of terminals prior to selecting the one or more terminals" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

12. "information collector is further configured to associate the location information with at least one of the selected one or more terminals"

"information collector is further configured to associate the location information with at least one of the selected one or more terminals" ('089 Patent, Claim 4)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "associate the location information with at least one of the selected one or more terminals" Structure: "circuitry capable of performing as described in 5:11-15, 5:17-18, 5:25-26, 5:28-29, and/or 9:65-10:3, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "associate the location information with at least one of the selected one or more terminals" Structure: "circuitry and/or software that associates the location information with at least one of the selected one or more terminals"

(Dkt. No. 55, Ex. A, at 25–26; Dkt. No. 68-1, at 7–8.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for this term as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to this term together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for this term as for the "information collector" terms discussed above.

The Court therefore hereby construes this disputed term as set forth in the following chart:

Term	Construction
"information collector is further configured to associate the location information with at least one of the selected one or more terminals"	This is a means-plus-function term. Function: "associate the location information with at least one of the selected one or more terminals" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

13. "information collector is further configured to . . . provide the location information . . . to the coverage estimator" and "information collector is further configured to provide location information . . ."

"information collector is further configured to . . . provide the location information associated with the at least one of the selected one or more terminals to the coverage estimator" ('089 Patent, Claim 4)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "provide the location information associated with the at least one of the selected one or more terminals to the coverage estimator" Structure: "circuitry capable of performing as described in 5:15-22, 5:28-29, and/or 9:65-10:3, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "provide the location information associated with the at least one of the selected one or more terminals to the coverage estimator" Structure: "interface to the communication link that carries the location information associated with the at least one of the selected one or more terminals to the coverage estimator"

"information collector is further configured to provide location information valid upon obtaining the measurement information for at least one of the selected one or more terminals" ('089 Patent, Claim 5)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed and § 112 ¶ 6 does not apply Alternatively, if construed so that § 112 ¶ 6 applies: Function: "provide the location information associated with the at least one of the selected one or more terminals to the coverage estimator" Structure: "circuitry capable of performing as described in 4:51-5:4, 5:5-10, 5:11-22, 5:23-40, 9:20-39, 9:40-46, 9:47-61, and/or 9:65-10:3, or their equivalents, including as further described at 3:14-32, 6:44-65, 7:10-47, 8:1-6, and 10:48-51"	§ 112 ¶ 6 applies Function: "provide location information valid upon obtaining the measurement information for at least one of the selected one or more terminals" Structure: "interface to the communication link that carries location information valid upon obtaining the measurement information for at least one of the selected one or more terminals"

(Dkt. No. 55, Ex. A, at 26–27; Dkt. No. 68-1, at 8–10.)

(a) The Parties' Positions

Plaintiff presents essentially the same arguments for these terms as Plaintiff presents for the above-addressed terms. (*See* Dkt. No. 58, at 7–12.)

Defendants respond as to these terms together with the above-addressed terms. (*See* Dkt. No. 65, at 7–9.)

(b) Analysis

The parties present the same arguments for these terms as for the "information collector" terms discussed above.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"information collector is further configured to . . . provide the location information associated with the at least one of the selected one or more terminals to the coverage estimator"	This is a means-plus-function term. Function: "provide the location information associated with the at least one of the selected one or more terminals to the coverage estimator" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"
"information collector is further configured to provide location information valid upon obtaining the measurement information for at least one of the selected one or more terminals"	This is a means-plus-function term. Function: "provide location information valid upon obtaining the measurement information for at least one of the selected one or more terminals" Corresponding Structure: "information collector 7 having the features and configuration disclosed in the '089 Patent; and equivalents thereof"

V. DISPUTED TERMS IN U.S. PATENT NO. 8,881,235

The '235 Patent, titled "Service-Based Authentication to a Network," issued on November 4, 2014, and bears an earliest priority date of December 15, 2008. Plaintiff submits that "[t]he claims of the '235 Patent are directed to methods and systems for authentication in telecommunications networks." (Dkt. No. 58, at 12–13.) The Abstract of the '235 Patent states:

> A method and a system for service-based authentication of a terminal to a network is described, wherein the terminal comprises a number of communications interfaces, each communications interface allowing the terminal to set-up a predetermined communication channel with the network. The method comprises

the steps of: sending a service request for access to a network service; receiving in response to the service request an authentication request from the network; identifying the communication channel through which the authentication request was received; and, sending an authentication response RES to the network, wherein the authentication response depends on the identified communication channel.

14. "service code" and "an expected service code"

"a service code" **"an expected service code"** ('235 Patent, Claims 1, 4–7, 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed. Alternatively, "[expected] information associated with a communication channel"	"[expected] identifier of a service interface used by a terminal to set up a wired or wireless communication channel"

(Dkt. No. 55, Ex. A, at 28; Dkt. No. 68-1, at 24 & 25–26.)

(a) The Parties' Positions

Plaintiff argues: "The meaning of this term is clear and does not require construction. At a minimum, however, Ericsson's attempt to limit 'service code' to certain disclosed embodiments should be rejected." (Dkt. No. 58, at 13 (citation omitted).)

Defendants respond that these are coined terms and should therefore be construed according to their usage in the specification, and Defendants also argue that "KPN's alternative proposed construction improperly seeks to remove the concept of 'service' entirely." (Dkt. No. 65, at 9–10 & 11.)

Plaintiff's reply brief does not address this term. (*See* Dkt. No. 66; *see also id.* at 1 (resting on opening brief as to terms not addressed in reply brief).)

(b) Analysis

Claims 1 and 11 of the '235 Patent, for example, recite (emphasis added):

> 1. Method for service-based authentication of a terminal to a network, the terminal comprising one or more communications interfaces for setting-up a communication channel with the network, the method comprising:
>
> the terminal sending a service request for access to a network service;
>
> the terminal receiving in response to the service request an authentication request from the network;
>
> the terminal identifying the communication channel through which the authentication request was received;
>
> the terminal determining a *service code* associated with the identified communication channel; and
>
> the terminal sending an authentication response to the network, wherein the authentication response depends on the identified communication channel in that the response is calculated on the basis of the information in the authentication request and the determined *service code*, thereby securely including information regarding the identified communication channel through which the authentication request was received into the response.
>
> * * *
>
> 11. A network node for service-based authentication of a terminal to a network, the network node comprising:
>
> a receiver configured to receive an authentication data request;
>
> a first generator configured to determine an *expected service code* associated with the type of communication channel via which the authentication data request was received by the network; and
>
> a second generator configured to generate in response to the receipt of an authentication data request a modified expected response, wherein the modification of the expected response depends on the determined *expected service code*.

The specification discloses:

> In one embodiment the method further comprises the steps of determining a *service code associated with the identified communication channel*; calculating the response RES on the basis of the information in the authentication request and the service code, thereby securely including, preferably cryptographically, information regarding the *identity of the communication channel* through which the authentication request was received into the response.

’235 Patent at 2:25–32 (emphasis added).

Thus, at least one embodiment uses service codes without referring to a service interface and without referring to “set[ting] up” a particular communication channel. *See id.* The specification also discloses:

> The SI [(service interface)] module is configured to generate a *service code (SC) identifying the specific service interface used to set up a wired or a wireless communication channel*. To that end, the AC manager 304 in the SI module may use a look-up table 306 comprising the different types of service interfaces supported by the mobile terminal and the associated service codes. The AC manager may be implemented in the form of a processor and one or more memory modules comprising e.g. the configuration data of the look-up table.
>
> The hardware of the terminal is preferably configured in such a way that all incoming authentication requests for a network service received by one of the interfaces 302a-302e will be centrally routed via the SI module to the UICC connected to the SI module. Such hardware architecture ensures that all incoming authentication requests are identified with respect to the communication channel the request was received by the terminal. Further, the SI module is configured to provide a secure communication channel 308 with the UICC 310 connected to the SI module. Hence, preferably, the SI module is implemented in the form of one or more trusted hardware components.

'235 Patent at 7:52–8:5 (emphasis added); *see id.* at 10:17–67 (conventional systems did not use service codes or expected service codes).

Plaintiff does not, however, demonstrate that the term "service code" has any established meaning in the relevant art. Instead, this is a coined term in the '235 Patent, and such a term "cannot be construed broader than the disclosure in the specification." *Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016); *see Intervet, Inc. v. Merial Ltd.*, 617 F.3d 1282, 1287 (Fed. Cir. 2010) ("Idiosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification.") (citing *Phillips*, 415 F.3d at 1315).

As set forth above, the specification describes a "service code" as a code that identifies a particular communication channel. This does not require a "service code" to be used to set up a communication channel. Rather, the specification discloses that a "service code" can be "identifie[d]" as the appropriate service code for a particular connection. '235 Patent at 8:11–14 ("[T]he AC manager 304 identifies the service code associated with the 3G RF interface 302c using a look-up table 306."); *see id.* at 8:62–9:4 (determining expected service code based on

"which service interface (UMTS, GSM, WiFi, Bluetooth, etc.) contact was established with the terminal").

Also, Defendants argue that construing "service code" without referring to a "service interface" would read out the word "service" (*see* Dkt. No. 65, at 11), but the patentee used "service" to refer to the communication service provided by a particular communication channel.

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"service code"	**"code that identifies a communication channel"**
"an expected service code"	**"expected code that identifies a communication channel"**

15. "communication channel"

"communication channel" ('235 Patent, Claims 1, 4–7, 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed. Alternatively, "channel that allows a terminal to communicate with a network"	"a channel extending between a terminal and an access node"

(Dkt. No. 55, Ex. A, at 28; Dkt. No. 68-1, at 24.)

(a) The Parties' Positions

Plaintiff argues that "[t]he specification uses the term 'communication channel' broadly to refer to various mediums for communication . . . between various types of devices using various telecommunications technologies," and "[n]othing in the claims or specification limits the term

'communication channel' to only those channels 'extending between a terminal and an access node' as Ericsson's construction would require." (Dkt. No. 58, at 14.)

Defendants respond that "while Ericsson's construction correctly limits the term to channels extending between the terminal and an access node to the network, KPN seeks to expand this term to cover any channel involved in any network communication." (Dkt. No. 65, at 12.)

Plaintiff replies that a communication channel may extend between two terminals, not necessarily between a terminal and an access node, and Plaintiff cites claim language that specifies "a communication channel with the network" as well as disclosures in the specification regarding a communication channel between terminals. (Dkt. No. 66, at 4.)

(b) Analysis

Claim 1 of the '235 Patent, for example, recites (emphasis added):

> 1. Method for service-based authentication of a terminal to a network, the terminal comprising one or more communications interfaces for setting-up a communication channel with the network, the method comprising:
>
> the terminal sending a service request for access to a network service;
>
> the terminal receiving in response to the service request an authentication request from the network;
>
> the terminal identifying the *communication channel* through which the authentication request was received;
>
> the terminal determining a service code associated with the identified communication channel; and
>
> the terminal sending an authentication response to the network, wherein the authentication response depends on the identified communication channel in that the response is calculated on the basis of the information in the authentication request and the determined service code, thereby securely including information regarding the identified communication channel through which the authentication request was received into the response.

The specification discloses:

> The SI module is configured to generate a service code (SC) identifying the specific service interface used to set up a *wired or a wireless communication channel*.

’235 Patent at 7:52–54 (emphasis added); *see id.* at 8:28–31 (“communication channel (Bluetooth 314a, WLAN 314b, 3G 314c, Ethernet 314d, etc.”)); *see also id.* at 10:37–39 (“A conventional (U)SIM cannot distinguish between requests originating from different *communication channels* (e.g. UMTS, GSM, WiFi, Bluetooth, etc.)”) (emphasis added).

This usage is consistent with evidence submitted by Plaintiff regarding the well-established meaning of “communication channel” in the relevant art. (*See* Dkt. No. 58, Ex. 4, *Newton’s Telecom Dictionary* 307 (26th ed. 2011) (defining “communication channel” as a “two-way path for transmitting voice and/or data signals”).

Also, the specification encompasses setting up a communication channel “to another terminal.” ’235 Patent at 6:11–15 (“An access and configuration (AC) manager in the [service interface] module manages the set-up of a communication channel to an access node of a network or—in case of a short-range connection such as Bluetooth—to another terminal.”); *see id.* at 10:24–29.

Defendants argue that construing “communication channel” to encompass “terminal-to-terminal” communications would be inconsistent with “[t]he fundamental purpose of the ’235 Patent . . . to prevent attacks *on the channel used by the terminal to gain access to the network*, such as a ‘man-in-the-middle’ attack” because “[t]hose attacks occur when an attacking terminal injects itself in the middle of the channel between the authentic terminal and the node that serves as the access point for the network.” (Dkt. No. 65, at 12 (citing ’235 Patent at 10:17–47).)

These disclosures regarding objectives set forth by the specification, cited by Defendants, do not warrant imposing a narrow construction on the generic term “communication channel,” a term that, as noted above, is used in the specification in accordance with its usual general meaning in the relevant art. *See Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1325 (Fed. Cir. 2008) (“it is

generally not appropriate to limit claim language to exclude particular devices because they do not serve a perceived purpose of the invention") (citations and internal quotation marks omitted).

The Court therefore hereby expressly rejects Defendants' proposed construction, and no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims."); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) ("Unlike *O2 Micro*, where the court failed to resolve the parties' quarrel, the district court rejected Defendants' construction."); *ActiveVideo Networks, Inc. v. Verizon Commcn's, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012); *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

The Court accordingly hereby construes **"communication channel"** to have its **plain meaning**.

16. "authentication data request" and "the authentication data request"

"an authentication data request" **"the authentication data request"** ('235 Patent, Claim 11)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed. Alternatively, "request for authentication data"	indefinite; alternatively, "a service request" / "the service request"

(Dkt. No. 55, Ex. A, at 29; Dkt. No. 68-1, at 26.)

(a) The Parties' Positions

Plaintiff argues that "[t]his straightforward term is not indefinite, and is easily understood as exactly what is stated—a request for authentication data." (Dkt. No. 58, at 15.) As to the prosecution history cited by Defendants, Plaintiff urges that "[a]t no point did the patentee define the term or state that an authentication data request always should be treated the same as a 'service request.'" (*Id.*, at 16.) Further, Plaintiff submits that "the claims use different language to identify a 'service request' and an 'authentication data request,' and it is a basic canon of claim construction 'that different claim terms are presumed to have different meanings.'" (*Id.*, at 17 (citations omitted).)

Defendants respond that this claim contains drafting errors that should be corrected or held indefinite, and Defendants also argue that "double recitation of 'an authentication data request' makes the scope unclear whether those requests are the same or different." (Dkt. No. 65, at 14; *see id.* at 14–17.)

Plaintiff replies that "Ericsson attempts to redefine the term 'authentication data request' to mean 'service request'—a term used elsewhere in the patent," and "in the guise of a claim

construction argument, Ericsson bases its position on a tacit contention that Claim 11 lacks written description or enablement support." (Dkt. No. 66, at 4–5.)

At the March 4, 2022 hearing, Plaintiff again urged that Defendants are presenting a written description argument, not a claim construction argument. Defendants responded that its argument demonstrates a lack of written description *and* indefiniteness.

(b) Analysis

Claim 11 of the '235 Patent recites (emphasis added):

> 11. A network node for service-based authentication of a terminal to a network, the network node comprising:
>
> a receiver configured to receive *an authentication data request*;
>
> a first generator configured to determine an expected service code associated with the type of communication channel via which *the authentication data request* was received by the network; and
>
> a second generator configured to generate in response to the receipt of *an authentication data request* a modified expected response, wherein the modification of the expected response depends on the determined expected service code.

To the extent that Defendants are requesting that the Court "correct" the claim, the standard for judicial correction has not been met. Judicial correction of an error in a patent may be available "only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims." *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1357 (Fed. Cir. 2003); *see LG Elecs., Inc. v. Quanta Computer Inc.*, 566 F. Supp. 2d 910, 913 (W.D. Wis. 2008).

Defendants argue that whereas the claim recites "a first generator configured to determine an expected service code associated with the type of communication channel via which the *authentication data request* was received by the network," the specification only describes determining the expected service code based on the channel via which the *service request* was

received by the network. (Dkt. No. 65, at 14–15 (citing '235 Patent at 3:14–17, 4:25–27 & 8:59–66 & Fig. 4).)

Defendants thus essentially argue that Claim 11 lacks support in the specification. While this argument perhaps may bear on issues such as enablement or written description, the purported lack of support does not give rise to any lack of reasonable certainty as to the claim scope, and Defendants fail to demonstrate that their proposal of replacing "authentication data request" with "service request" "is not subject to reasonable debate based on consideration of the claim language and the specification." *Novo*, 350 F.3d at 1357.

As to the recital of "an authentication data request" in both the first and third limitations of above-reproduced Claim 11, Defendants do not show how this gives rise to indefiniteness. Rather, the recitation of "an authentication data request" in the third limitation can be readily understood as encompassing the same authentication data request recited in the first and second limitations and/or an additional authentication data request. The *Kristensen* administrative case cited by Defendants does not compel otherwise. *See Ex parte Kristensen*, 10 U.S.P.Q.2d (BNA) 1701 (B.P.A.I. 1989).

Defendants submit that Claim 1 "is written from the terminal's perspective" and "correctly recites that the terminal sends a 'service request' that is received by the network" (Dkt. No. 65, at 16), but Defendants' arguments are based on purported lack of support in the specification. Again, such arguments perhaps may bear on issues such as purported lack of enablement or written description, but these arguments do not give rise to indefiniteness or otherwise affect claim construction. *See Phillips*, 415 F.3d at 1327 ("we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction").

The Court therefore hereby expressly rejects Defendants' indefiniteness argument as well as Defendants' proposed correction. Defendants present no alternative proposal, so no further construction is necessary.

The Court accordingly hereby construes **"authentication data request"** to have its **plain meaning**.

VI. DISPUTED TERMS IN U.S. PATENT NO. 9,253,637

The '637 Patent, titled "Telecommunications Network and Method for Time-Based Network Access," issued on February 2, 2016, and bears an earliest priority date of February 29, 2008. Plaintiff submits that "[t]he claims of the '637 Patent are directed to improving access to a telecommunications network by telecommunications devices ('terminals')." (Dkt. No. 58, at 17.) The Abstract of the '637 Patent states:

> The invention relates to a telecommunications network configured for providing access to a plurality of terminals is proposed and a method therefore. Each terminal comprises a unique identifier for accessing the telecommunications network. The telecommunications network comprises a register, an access request receiver and an access module. The register is configured for storing the unique identifier of at least one terminal in combination with at least one grant access time interval, or an equivalent thereof, during which access for the terminal is permitted. The access request receiver is configured for receiving the access request and the unique identifier for accessing the telecommunications network from the terminal. The access module is configured for denying access for the terminal if the access request is received outside the time interval, or the equivalent thereof.

17. "access deny time interval"

"access deny time interval" ('637 Patent, Claims 16–20, 23–28, 58, 59)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
"time slot during which access to the telecommunications network is denied"	"time slot, bounded by particular beginning and end times, during which access to the telecommunications network is denied"

(Dkt. No. 55, Ex. A, at 29–30; Dkt. No. 68-1, at 28.)

(a) The Parties' Positions

Plaintiff argues that the Court should adopt the same construction for this term that the Court adopted for the similar term "deny access time interval" in United States Patent No. 9,014,667 in *Koninklijke KPN N.V. v. Samsung Electronics Co.*, No. 2:14-CV-1165-JRG, 2016 WL 2610649, at *38 (E.D. Tex. May 6, 2016). (Dkt. No. 58, at 18.) Plaintiff submits: "Ericsson seeks to impose the limitation that the 'time slot' in the Court's prior construction must be 'bounded by particular beginning and end times.' At best, Ericsson's addition is redundant. * * * Further, Ericsson's construction omits this Court's explanation that such 'particular' beginning and end times are 'potentially "variable."'" (*Id.* (citations omitted).)

Defendants respond that Plaintiff is "reargu[ing] the position it lost in the *Samsung* case—that a 'time interval' is satisfied by a back-off timer." (Dkt. No. 65, at 18.) Also, Defendants argue that "the claim already recites that the access deny time interval 'is a variable time interval.'" (*Id.*)

Plaintiff's reply brief does not address this term. (*See* Dkt. No. 66; *see also id.* at 1 (resting on opening brief as to terms not addressed in reply brief).)

(b) Analysis

In *Samsung*, the Court construed "deny access time interval" in United States Patent No. 9,014,667 to mean "time slot during which access to the telecommunications network is denied." *Samsung*, 2016 WL 2610649, at *36–*38.

The Court found that "the proper meaning can best be made clear by referring to a 'time slot,' which is consistent with the above-discussed disclosures in the specification and which will convey that a 'deny access time interval' is bounded by particular (albeit potentially 'variable,' *see* '667 Patent at 4:65) beginning and end times." *Id.*, at *38.

In the present case, Defendants propose referring to particular beginning and end times. Plaintiff argues that Defendants' proposal is an effort to avoid the Court's explanation in *Samsung* that the beginning and end times are potentially variable. (Dkt. No. 58, at 19.)

For clarity, the Court here adopts the *Samsung* construction and also incorporates the above-noted explanation set forth by the Court in *Samsung* that the time slot "is bounded by particular (albeit potentially variable) beginning and end times." *Samsung*, 2016 WL 2610649, at *38. This also amounts to adopting the Court's *rejection* of Plaintiff's proposal in *Samsung* of encompassing a "back-off timer." *See id.*, at *36–*38.

Finally, although surrounding claim language refers to the "access deny time interval" being "a variable time interval x-y" ('637 Patent, Cls. 16 & 58), referring to "variable" in the Court's construction will assist the finder of fact in understanding the meaning of this disputed term. *See 01 Communique Lab., Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1296 (Fed. Cir. 2012).

The Court accordingly hereby construes **"access deny time interval"** to mean **"time slot, bounded by particular (albeit potentially variable) beginning and end times, during which access to the telecommunications network is denied."**

18. "in accordance with the access deny time interval in the message"

"in accordance with the access deny time interval in the message" ('637 Patent, Claims 58, 59)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed.	"only outside the access deny time interval in the message"

(Dkt. No. 55, Ex. A, at 30; Dkt. No. 68-1, at 32.)

(a) The Parties' Positions

Plaintiff argues:

> The meaning of this term is plain. To transmit an access request to a telecommunications network "in accordance with the access deny time interval in the message" means to transmit such request in the manner the message[] specifies or permits. As such, no construction is necessary.
>
> Ericsson suggests that the access request in the claims may be transmitted "*only outside* the access deny time interval in the message." But when the claims require that meaning, they say so explicitly.

(Dkt. No. 58, at 19.)

Defendants respond: "KPN's reliance on claim differentiation arguments between two independent claims lacks merit. Where, as here, independent claims recite different elements and are worded differently, the doctrine of claim differentiation carries 'little, if any, weight.'" (Dkt. No. 65, at 19 (citation omitted).) Defendants also argue that "the fact that a grant access time interval could *further restrict* the times in which an access request could be transmitted does not change the fact that the request must still be outside the claimed access deny time interval." (*Id.*, at 19.)

Plaintiff replies that "the '637 Patent teaches that a terminal can be assigned both an access deny time interval *and* a grant access time interval, *i.e.*, an interval when access to the network is permitted," and "[s]uch intervals may operate concurrently or hierarchically such that, depending on the intervals assigned, a terminal could transmit an access request during a previously provided access deny time interval." (Dkt. No. 66, at 6 (citations omitted).)

(b) Analysis

On one hand, the specification refers to denying access during "deny access time intervals" and allowing access only within a "grant access time interval":

> It should be appreciated that an equivalent of the grant access time interval includes a deny access time interval identifying a time interval during which an access request for access to the telecommunications network is to be denied.
>
> * * *
>
> The terminal A further has an access request module 71. The access request module is configured for receiving information regarding the grant access time interval from the telecommunications network 1 via the transceiver module 70 and to transmit an access request to the telecommunications network *only at a time within the grant access time interval*.

'637 Patent at 2:22–25 & 7:28–34 (emphasis added).

On the other hand, Claims 58 and 59 of the '637 Patent recite (emphasis added):

> 58. A terminal configured for use in a telecommunications network, wherein the telecommunications network is configured for providing access to a plurality of terminals that each have a unique identifier for accessing the telecommunications network,
>
> and wherein the terminal comprises:
>
> a message receiver configured for receiving a message from the telecommunications network, the message including information indicative of an access deny time interval for the terminal retrieved from a register of the telecommunications network based on a unique identifier of the terminal; and
>
> one or more processors and memory storing processor instructions that, when executed by the one or more processors, cause the one or more processors to carry out operations including:
>
> an access request operation for transmitting an access request to the telecommunications network *in accordance with the access deny time interval in the message*, and
>
> a class of applications that do not require immediate transfer of data,
>
> wherein the access deny time interval for each terminal is a variable time interval x-y that is scheduled depending on network load experienced by, or expected for, the telecommunications network, access to the telecommunications network being denied to the each terminal if the network load is above, or is expected to be above, a particular threshold.
>
> 59. The terminal of claim 58, *wherein applications that do not require immediate transfer of data are denied access to the network during peak load periods by having access deny time intervals that are within the peak load periods*.

The claims thus contemplate that an "access deny time interval" may be *application-specific*, as recited in above-reproduced dependent Claim 59.

Thus, instead of including only a time interval, the "message" may also set forth restrictions for particular applications. Defendants' proposed construction, by referring to only the "time interval in the message," would appear to exclude using anything other than a time interval, such as application-specific restrictions.

Also of note, Claim 16 of the '637 Patent expressly recites the "only outside" limitation proposed by Defendants as to Claims 58 and 59, Claim 16 reciting that "the at least one terminal transmits an access request to the telecommunications network *only outside* the access deny time interval." Claims 41 and 54 likewise recite "denying access . . . if the access request is received *within* the access deny time interval." Although Defendants urged at the March 4, 2022 hearing that their proposal of "only outside" is appropriate to explain the phrase "in accordance with," the phrase "in accordance with" is readily understandable, and the Court is already construing the constituent term "access deny time interval," above. The Court hereby expressly rejects Defendants' proposal of "only outside."

The Court therefore hereby expressly rejects Defendants' proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **"in accordance with the access deny time interval in the message"** to have its **plain meaning**.

VII. DISPUTED TERMS IN U.S. PATENT NO. 9,549,426

The '426 Patent, titled "Method and Telecommunications Node for Controlling an Attach State of a User Equipment," issued on January 17, 2017, and bears an earliest priority date of July 15, 2013. Plaintiff submits that "[t]he re-examined claims of the '426 Patent are directed to an

improved method and various apparatuses for enabling the establishment of a communication session between user equipment and a telecommunication system." (Dkt. No. 58, at 20.) The Abstract of the '426 Patent states:

> The invention relates to a method and telecommunications node for controlling an attach state of a user equipment in an attach control node of a telecommunications system further comprising a subscriber database containing subscription data of the user equipment. The method comprises receiving authentication data in the attach control node if an authentication step is required. Following the authentication step, if any, receiving in a first transfer stage a first set of subscription data from the subscriber database and storing the first set of subscription data in the attach control node, wherein the first set of subscription data is insufficient for enabling establishing a communication session between the user equipment and the telecommunications system. If establishing a communication session is required between the user equipment and the telecommunications network, receiving in a second transfer stage following the first transfer stage a second set of subscription data from the subscriber database in the attach control node, and storing the second set of subscription data in the attach control node, wherein the combination of the first set of subscription data and the second set of subscription data is sufficient for enabling establishing a communication session between the user equipment and the telecommunications network.

19. "enabling establishing a communication session between the user equipment and the telecommunications system"

"enabling establishing a communication session between the user equipment and the telecommunications system" ('426 Patent, Claims 9–10, 14, 16–17)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed. Alternatively, "enabling the full attach of the user equipment to the telecommunications system and, if desired, establishment of a user data plane communication session"	"fully attaching the user equipment to the telecommunications system"

(Dkt. No. 55, Ex. A, at 31; Dkt. No. 68-1, at 35.)

(a) The Parties' Positions

Plaintiff argues that Defendants' proposal "reads the word 'enabling' out of the claim." (Dkt. No. 58, at 21.) Plaintiff also argues that "[t]he claims do not require that the subscription data actually establish a session—much less a 'full[] attach[]' as Ericsson's construction would require." (*Id.*, at 21–22 (citation omitted).) Further, Plaintiff submits that "Ericsson's construction also is wrong because it would exclude expressly disclosed embodiments . . . ." (*Id.*)

Defendants respond that "[t]his claim term focuses on the process of *enabling* establishment of a communication session, as opposed to the *subsequent* process of *actually* establishing that session." (Dkt. No. 65, at 20.) More specifically, Defendants argue: "*Enabling* establishment of a communication session refers to fully attaching the UE. This puts the UE in a state where it has the *ability to subsequently* request actual establishment of the session." (*Id.*, at 21.) Defendants urge that Plaintiff's proposal "contradicts the intrinsic evidence by wrongly conflating attachment of a UE with establishing a communication session." (*Id.*)

Plaintiff replies that Defendants' argument "directly contradicts the specification" and "the specification discloses an embodiment in which the focus of the data is whether it enables the establishment of a 'user data plane communication session'—not a full attach." (Dkt. No. 66, at 7.)

At the March 4, 2022 hearing, Plaintiff argued that a "full attach" is an example of a communication session. Defendants responded that a "full attach" is *not* an example of a communication session but rather a "full attach" is *necessary to be able to have* a communication session. Defendants argued that the claimed invention introduces the concept of a "partial attach," which provides *some* information about a device *without* enabling establishment of a communication session.

(b) Analysis

Claim 9 of the '426 Patent, for example, recites as follows as set forth in the November 10, 2020 *ex parte* reexamination certificate (with Claim 9 reproduced here in amended form and with emphasis added):

> 9. A subscriber database system configured for use in a telecommunications system, wherein the telecommunications system comprises an attach control node, the subscriber database system comprising:
>
> a subscriber database containing subscription data of a user equipment;
>
> a processor having access to instructions that when executed cause the database system to carry out operations including:
>
> in a first transfer stage, providing to the attach control node a first set of subscription data from the subscriber database, wherein, as provided, the first set of subscription data, being configured as a partial subset of a complete set of subscription data that are required for *enabling establishing a communication session between the user equipment and the telecommunications system*, is insufficient for *enabling establishing a communication session between the user equipment and the telecommunications system*,
>
> if establishing a communication session is required between the user equipment and the telecommunications system, subsequent to providing the first set of subscription data, then in a second transfer stage following the first transfer stage, providing to the attach control node a second set of subscription data from the subscriber database, wherein, as provided, the second set of subscription data is configured to be an additional partial subset of the complete set of subscription data that in combination with the first set of subscription data is the complete set of subscription data that is sufficient for *enabling establishing a communication session between the user equipment and the telecommunications system*, and
>
> wherein, if the attach control node has received authentication data in an authentication step, the first transfer stage is carried out following the authentication step.

This claim thus recites a first set of subscription data that is "insufficient for enabling establishing a communication session between the user equipment and the telecommunications system" and a second set of subscription data that, "in combination with the first set of subscription data," "is sufficient for enabling establishing a communication session between the user equipment and the telecommunications system." *See LifeNet Health v. LifeCell Corp.*, 837 F.3d 1316, 1326 (Fed. Cir. 2016) ("Functional limitations recited in the negative may describe a capability or

structural element."). These functional recitals, regarding what is sufficient and what is not sufficient, are permissible. *See id.*

The specification likewise discloses a first set of subscription data and a second set of subscription data, which in combination are sufficient:

> A first set I of subscription data may be defined that as such is insufficient for enabling establishment of a communication session between the UE 3 and the telecommunications system 1. A first set only containing the NAM [(network access mode)] is mentioned above is [*sic*, as] an example. In other words, the first set I of subscription data would *not allow establishment* of a PDP context, e.g. the messages (ix)-(xi) of FIG. 2B would not be transmitted if only the first set of subscription data would be available at the SGSN.
>
> A second set II of subscription data is defined that, in combination with the first set I of subscription data would be *sufficient for enabling activation* of a communication session between the UE 3 and the telecommunications system 1. In other words, if the attach control node 10 would have available the first and second set of subscription data, a PDP context activation *would be successful* in the same manner as depicted in FIG. 2B.

'426 Patent at 10:28–44 (emphasis added); *see id.* at 4:64–67 ("The establishment of a communication session between the user equipment and the telecommunications session may comprise establishing a user data plane communication session, e.g. a PDP context or an EPS bearer."); *see also id.* at 4:16–22.

This disclosure in the specification, as well as above-reproduced Claim 9, demonstrate that "enabling establishing" in the disputed term refers to what is *sufficient for* establishing a communication session, not actually establishing a communication session. *See Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204 (Fed. Cir. 2010) ("[W]e have held that, to infringe a claim that recites capability and not actual operation, an accused device 'need only be capable of operating' in the described mode.").

Also, the Summary section of the '426 Patent refers to a first set of subscription data being sufficient for a "partial attach," with additional data required to enable a "full attach":

> By only storing in the attach control node the first set of subscription data and omitting storing at least part of the set of subscription data required for establishing a communication session, a *partial attach state* is obtained for the user equipment in the telecommunications network. The partial attach state is defined by the content of the first set of subscription data. The storage of the first set of subscriber data in the attach node provides information about the cells where the user devices are positioned, viz. those cells for which the particular attach node is responsible. However, since the first set of subscriber data is not the complete set of subscriber data required for enabling the *full attach* of the user equipment to the telecommunications system, resources are saved in the attach control node. This disclosed solution provides for a good balance between a better awareness in the network of the cell location of the user equipment and the saving of resources in the attach node.
>
> * * *
>
> Another advantageous effect of the disclosed method and telecommunications node is that the network operator is in control whether or not to allow a communication session with the user equipment. Only when the at least one second set of subscriber data is available at the attach control node, a request by the user equipment for a communication session can be allowed. By informing the user equipment of the *partial attach state*, the user equipment may even be instructed not to send such a request during the partial attach state.

'426 Patent at 3:46–52 & 4:16–25 (emphasis added).

The '426 Patent sets forth this distinction between "partial attach" and "full attach" not merely with reference to particular embodiments but rather as part of a general discussion in the Summary section of the patent. *See id.* On balance, a fair reading of the disputed term in the context of the '426 Patent as a whole is that the patentee used "enabling establishing a communication session" to refer to a "full attach" as described in the Summary section of the '426 Patent and elsewhere (sometimes referred to as a "complete attach"). *See id.*; *see also id.* at 8:5–20, 8:30–36, 9:42–48 & 13:11–20. Plaintiff does not persuasively support its contention that "the first set of subscription data plainly was *sufficient* to enable a full attach, but *insufficient* to enable the desired communication session." (Dkt. No. 66, at 7 (discussing '426 Patent at 8:30–33 & 10:28–44).)

Further, the Court rejects Plaintiff's alternative proposal of referring to a "user data plane communication session" because the disputed term refers more generally to "a communication session." Also of note, the specification discloses that "[i]t should be appreciated that the communication session may be either a data session *or* a session involving establishment of a voice channel." *Id.* at 4:43–45 (emphasis added). Finally, Plaintiff's alternative proposal of the phrase "if desired" would tend to confuse rather than clarify the scope of the claims.

The Court therefore hereby construes **"enabling establishing a communication session between the user equipment and the telecommunications system"** to mean **"fully attaching the user equipment to the telecommunications system."**

20. "if the telecommunications system is a Long Term Evolution (LTE) telecommunications system, removing a default bearer for the user equipment"

"if the telecommunications system is a Long Term Evolution (LTE) telecommunications system, removing a default bearer for the user equipment" ('426 Patent, Claim 14)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; limiting only if the telecommunications system is a Long Term Evolution (LTE) telecommunications system.	This limitation is limiting.

(Dkt. No. 55, Ex. A, at 32; Dkt. No. 68-1, at 40–41.)

(a) The Parties' Positions

Plaintiff argues that "[t]he fact that the term is limiting *only* if the telecommunications system is an LTE system is clear from the language of the term itself." (Dkt. No. 58, at 23.) Plaintiff also argues that the conditional nature of this limitation is apparent from the prosecution history. (*See id.*, at 24–25.)

Defendants respond that ". . . Claim 14 is met only by a telecommunications node that actually contains instructions that remove a default bearer for the user equipment if the telecommunications system is an LTE system. Those instructions must be present, regardless of whether the condition (being in an LTE system) does or does not occur." (Dkt. No. 65, at 23 (citation omitted).) Defendants also argue that "KPN relied on the limiting nature of Claim 14's conditional 'if' limitation during reexamination." (*Id.*)

Plaintiff replies that this language requires a *capability*, not that the condition is actually met and practiced. (Dkt. No. 66, at 8.)

(b) Analysis

The parties appear to have reached substantial agreement that the claim language here at issue requires a capability but is conditional. (*See id.*) That is, the parties agree that the language here at issue does not require the condition to be satisfied (and thus does not require that the capability is utilized). *See Hytera Commc'ns Co. Ltd. v. Motorola Solutions, Inc.*, 841 F. App'x 210, 215 (Fed. Cir. Jan. 19, 2021); *see also Interdigital Tech. Corp. v. Lenovo Holding Co., Inc.*, No. CV 19-1590-LPS, 2021 WL 1856937, at *5–*6 (D. Del. May 10, 2021) ("in order to infringe a system must be capable of addressing each alternative, regardless of which alternative occurs at any particular point").

Plaintiff's reply brief purports to agree with Defendants "in part." (*See* Dkt. No. 66, at 8.) To whatever extent Defendants maintain that satisfaction of the condition is required, any such interpretation is hereby expressly rejected.

There being no remaining dispute for construction in this regard, the Court hereby construes **"if the telecommunications system is a Long Term Evolution (LTE)**

telecommunications system, removing a default bearer for the user equipment" to have its **plain meaning**.

VIII. DISPUTED TERMS IN U.S. PATENT NO. 9,667,669

The '669 Patent, titled "Managing Associated Sessions in a Network," issued on May 30, 2017, and bears an earliest priority date of January 19, 2009. Plaintiff submits that the '669 Patent is "directed to methods and various apparatuses for managing sessions in a network using what the patent refers to as [a] composition session . . . ." (Dkt. No. 58, at 25.) The Abstract of the '669 Patent states:

> A method and a system for managing associated sessions in a network is described, wherein the network comprises a network element configured for managing associated sessions between the network and user equipment. The method comprises the steps of providing a composition session identifier for associating sessions in a network; exchanging the composition session identifier between a user equipment and the network element; and associating two or more sessions with the composition session identifier by exchanging the composition session identifier.

21. "composition session"

"composition session" ('669 Patent, Claims 1–3, 6, 8, 10–12, 21, 22, 24, 25)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
"signaling session separate from the associated sessions"	"a separate signaling session for managing the associated sessions that is initiated using a different signaling session than the associated sessions"

(Dkt. No. 55, Ex. A, at 32; Dkt. No. 68-1, at 45.)

(a) The Parties' Positions

Plaintiff argues that Defendants' construction is based on a purported prosecution disclaimer that should be rejected because "KPN never stated that a composition session always

must be 'for managing the associated sessions' or must be 'initiated using a different signaling session than the associated sessions' as Ericsson's construction would require." (Dkt. No. 58, at 26.)

Defendants respond that "[t]he term 'composition session' is a coined term whose meaning can only be ascertained by examining the intrinsic record, including the prosecution history." (Dkt. No. 65, at 24 (citations omitted).) Defendants submit that, during prosecution, KPN specifically relied on and emphasized the separate initiation of the composition session to distinguish [a cited] reference." (*Id.*, at 25; *see id.*, at 25–26.)

Plaintiff replies that "KPN does not dispute that a composition session must be 'different from the two or more sessions,'" "[b]ut Ericsson identifies nothing that supports its attempt to further require that the composition session be '*initiated using a different signaling session* than the associated sessions.'" (Dkt. No. 66, at 8.)

At the March 4, 2022 hearing, the parties reiterated the arguments set forth in their briefing and discussed the prosecution history at length.

(b) Analysis

Claim 1 of the '669 Patent, for example, recites (emphasis added):

> 1. A method for managing associated sessions in a network, the network having a network element configured for managing associated sessions between the network and at least one user equipment, the method comprising:
>
> providing a *composition session identifier* for associating sessions in the network;
>
> after providing the *composition session identifier*, exchanging the *composition session* identifier between a user equipment and the network element a first time;
>
> *associating two or more sessions with the composition session identifier* by exchanging the *composition session identifier* at least a second time, wherein exchanging the *composition session identifier* at least a second time comprises the network element exchanging the *composition session identifier* with the user equipment;

> initiating establishment of a *composition session*, *the composition session being a signaling session for facilitating management of the two or more sessions* and exchanging the *composition session identifier* between the user equipment and the network element as part of said establishment, the *composition session* being different from the two or more sessions; and
>
> modifying the *composition session*, wherein modifying the *composition session* comprises using signaling in the *composition session* to terminate all of the two or more sessions.

As a threshold matter, Defendants persuasively argue that "composition session" is a coined term in the '669 Patent. *See Indacon*, 824 F.3d at 1357; *see also Intervet*, 617 F.3d at 1287 ("Idiosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification.") (citing *Phillips*, 415 F.3d at 1315).

Also, Plaintiff agrees that a composition session must be "different from the two or more sessions." Indeed, Claim 1 already expressly recites that the composition session is different from the "two or more sessions" and facilitates management of the "two or more sessions."

The parties dispute whether a composition session must be "initiated using a different signaling session than the associated sessions," as Defendants propose.

The specification discloses that an example of a "composition session" is "a personalized stream or service composition (PSC) session," and the specification further discloses that a PSC session "may be empty or contain 1 or more BC [(broadcast)] sessions and/or 1 or more CoD [(content-on-demand)] sessions." '669 Patent at 8:59–9:2. Thus, for example, "a PSC session is created containing one BC multimedia session and 2 CoD multimedia sessions," and "one PSC session may be empty or contain 1 or more BC sessions and/or 1 or more CoD sessions." *Id.* at 11:59–65; *see id.* at 11:65–67 ("Of course BC and CoD sessions are just examples of sessions that may be associated, using the invention."); *see also id.* at Fig. 3.

Such disclosures in the specification do not compel Defendants' interpretation that a "composition session" must be initiated using a different signaling session. The parties also

discuss Example 1 and Example 2 in the specification (*see* Dkt. No. 58, at 27–28; *see also* Dkt. No. 65, at 28; Dkt. No. 66, at 9), but the evidence and arguments in this regard do not significantly affect the Court's analysis because no usage or meaning for "composition session" is sufficiently apparent from these specific implementation examples. *See* '669 Patent at 9:39–10:35; *see also Phillips*, 415 F.3d at 1323.

Defendants cite the prosecution history and argue that because the term "composition session" has no well-established meaning in the relevant art, the prosecution history can inform the meaning of the term even without setting forth any clear disclaimer. *See Aptalis Pharmatech, Inc. v. Apotex Inc.*, 718 F. App'x 965, 971 (Fed. Cir. Jan. 4, 2018) ("even in the absence of a clear and unmistakable disavowal, we conclude that the prosecution history can be evaluated to determine how a person of ordinary skill would understand a given claim term"); *cf. Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1353 ("[W]here there is no clear ordinary and customary meaning of a coined term of degree, we may look to the prosecution history for guidance without having to first find a clear and unmistakable disavowal.").

During prosecution, the patentee distinguished the "Jansson" reference (United States Patent Application Publication No. 2008/0089344), and the patentee stated that "[a]n example composition session, which is a signaling session separate from the associated sessions, is depicted and described in the present application with respect to Figure 2." (Dkt. No. 65, Ex. E, Oct. 21, 2016 Reply to Non-Final Office Action, at 12.) The prosecution history includes an annotated version of Figure 2, which the Court reproduces here:[8]

[8] The version of this figure contained in the prosecution history is barely legible, so the Court here reproduces the enhanced version of this figure that Defendants set forth in their responsive claim construction brief (which is substantively identical to the annotated figure set forth in the prosecution history). (*See id.*, at 13; Dkt. No. 65, at 26.)

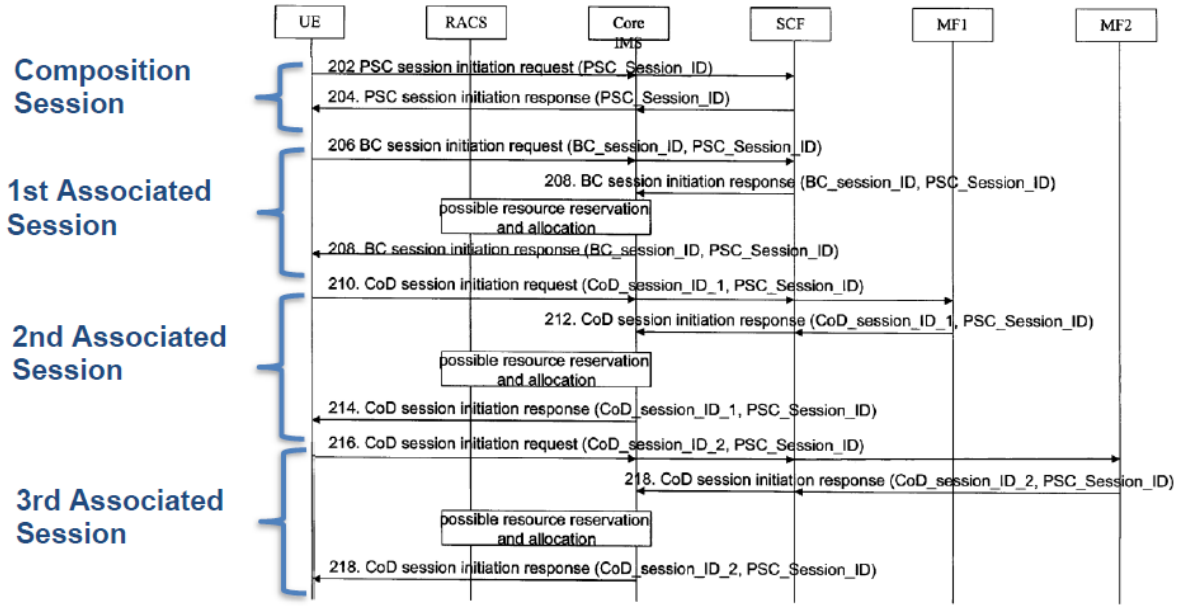

Figure 2

(*Id.*, at 13; Dkt. No. 65, at 26.) The patentee also stated (emphasis in original):

> Unlike Jansson, however, the present application discloses that "[a]though in principle it may be sufficient to just generate a composition session identifier and store this in a place in the network under control of a network element, which is in charge of managing the associated sessions, there may be advantages in *initiating a separate signaling session (composition session) as well*.
>
> * * *
>
> As shown in Figure 2, the composition session is established separately from the three associated multimedia sessions. . . . .
>
> Notably, Jansson does not disclose or suggest initiating a separate signaling session in addition to the multimedia sessions correlated with the correlation identifier.

(Dkt. No. 65, Ex. E, Oct. 21, 2016 Reply to Non-Final Office Action, at 11–12, 13 & 14.)

> [T]he specification of the present application explicitly differentiates the recited composition session (i.e., a different signaling session) from individual SIP signaling of each associated multimedia session.

(*Id.*, at 15 (citing '669 Patent at 3:62–4:1).)

The patentee distinguished the Jansson reference because, the patentee argued, Jansson "does not initiate a signaling session that is different from the associate multimedia sessions, as recited for the composition session in claim 1," and "there is no separate signaling session, which can be considered a composition session as shown above in Figure 2 of the present application and recited in claim 1." (*Id.*, at 14.)

The patentee thus distinguished Jansson as lacking a distinct composition session. Indeed, Claim 1 of the '669 Patent itself expressly recites "the composition session being different from the two or more sessions," and Plaintiff agrees that the "composition session" must be different from the "two or more sessions" recited in Claim 1.

This prosecution history thus does not adequately support Defendants' argument that the patentee purportedly distinguished Jansson as lacking disclosure of *initiating* a composition session using a different signaling session than the associated sessions. That is, this prosecution history does not explain or otherwise warrant requiring initiating a composition session using a different signaling session than is used for initiating the associated sessions.

At the March 4, 2022 hearing, Defendants reiterated that the prosecution history can inform the meaning of a disputed term even in the absence of a definition or disclaimer. *See, e.g., Iridescent*, 933 F.3d at 1353. Despite this argument, the prosecution history cited by Defendants does not adequately support Defendants' proposal that a "composition session" must be "initiated using a different signaling session than the associated sessions." This remains true even when considering not only whether the prosecution history sets forth a definition or disclaimer but also when considering whether the prosecution history otherwise provides "guidance" regarding the meaning of the disputed term. *Id.*

Finally, Plaintiff argues that Defendants' proposal of referring to "managing" is already reflected by other claim language that recites "the composition session being a signaling session for *facilitating management* of the two or more sessions" in above-reproduced Claim 1. Although including features that are recited elsewhere in a claim is generally disfavored, this is permissible and in some circumstances can be appropriate to assist the finder of fact. *Compare Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1237 (Fed. Cir. 2016) *with 01 Communique*, 687 F.3d at 1296 ("01 Communique has not cited, and we have not discovered, any authority for the proposition that construction of a particular claim term may not incorporate claim language circumscribing the meaning of the term."). On balance, referring to facilitating management of associated sessions will assist the finder of fact in understanding the disputed term, particularly in light of "composition session" being a coined term as noted above.

The Court therefore hereby construes **"composition session"** to mean **"a signaling session that is separate from the associated sessions and that is for facilitating management of the associated sessions."**

22. "wherein providing the composition session identifier comprises . . . sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier"

"wherein providing the composition session identifier comprises . . . sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier" ('669 Patent, Claim 2)	
Plaintiff's Proposed Construction	**Defendants' Proposed Construction**
Plain and ordinary; no construction needed.	Indefinite

(Dkt. No. 55, Ex. A, at 34; Dkt. No. 68-1, at 47.)

(a) The Parties' Positions

Plaintiff argues that, despite Defendants' argument that this term gives rise to an internal inconsistency in the claim, "Claim 2's identification of an initial exchange occurring during the 'providing the composition session identifier' step is entirely consistent with the Claim 1 requirement that at least two *additional* exchanges occur '*after* [the] providing the composition session identifier' step." (Dkt. No. 58, at 30.)

Defendants respond:

> Claim 1 recites a step of "providing a composition session identifier" and then "*after providing* the composition session identifier, exchanging the composition session identifier between a user equipment and the network element a *first time*." Dependent Claim 2, however, inconsistently requires that part of the "providing" step is *sending the composition session identifier to the network element*. The limitations of Claim 2 are thus defined in a way that makes the step of exchanging the composition session identifier *a first time* (per Claim 1) impossible, because by the time this step takes place, the composition session identifier already would have been provided to the network element (per Claim 2). In light of this irreconcilable inconsistency, the Court should find Claim 2 indefinite.

(Dkt. No. 65, at 29 (citation omitted).) Defendants argue that "KPN's argument that the claim should be rewritten to interpret the claimed 'first time' as a 'second time' should be rejected." (*Id.*) Further, Defendants argue that "KPN's argument is inconsistent with the statements it made to distinguish the Jansson reference during prosecution of the '669 Patent." (*Id.*, at 30.)

Plaintiff replies:

> There is nothing inconsistent about Claim 2. It specifies that the initial "providing the composition identifier" step involves "sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier." And the "first" and "second" exchanges specified in Claim 1 are stated to occur "*after* [the] providing the composition session identifier" step. '669 Patent at 16:44-46 (emphasis added).

(Dkt. No. 66, at 9–10.)

At the March 4, 2022 hearing, Defendants urged that the phrase "first time" has a readily understood meaning, and an identifier cannot be exchanged for the "first" time if it has already been exchanged. Plaintiff responded that Claim 1 recites a "first time" and also a "second time," and Plaintiff argued that "first" and "second" are used in relation to one another and do not preclude additional exchanges.

(b) Analysis

The disputed term appears in Claim 2 of the '669 Patent, which depends from Claim 1. Claims 1 and 2 of the '669 Patent recite (emphasis added):

> 1. A method for managing associated sessions in a network, the network having a network element configured for managing associated sessions between the network and at least one user equipment, the method comprising:
>
> *providing a composition session identifier for associating sessions in the network;*
>
> *after providing the composition session identifier, exchanging the composition session identifier between a user equipment and the network element a first time;*
>
> associating two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time, wherein exchanging the composition session identifier at least a second time comprises the network element exchanging the composition session identifier with the user equipment;
>
> initiating establishment of a composition session, the composition session being a signaling session for facilitating management of the two or more sessions and exchanging the composition session identifier between the user equipment and the network element as part of said establishment, the composition session being different from the two or more sessions; and
>
> modifying the composition session, wherein modifying the composition session comprises using signaling in the composition session to terminate all of the two or more sessions.
>
> 2. The method according to claim 1, wherein providing the composition identifier comprises:
>
> the user equipment generating the composition session identifier; and
>
> *sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier*.

Defendants argue that Claim 2 is internally inconsistent because the first two limitations recited in Claim 1 (incorporated by reference into dependent Claim 2) require exchanging a composition session identifier "a first time," and Defendants argue that this "first time" limitation is inconsistent with the limitations added by dependent Claim 2.

In some circumstances, contradictory claim language can render claims internally inconsistent and therefore indefinite. *See Competitive Techs., Inc. v. Fujitsu Ltd.*, 185 F. App'x 958, 965–966 (Fed. Cir. 2006).

Read in context, however, this "first time" limitation refers to an exchange that occurs *after* "providing a composition session identifier for associating sessions in the network." That is, exchanges can occur *prior to* the "providing . . ." without conflicting with the "first time" limitation. Plaintiff cites the specification for further support in this regard. '669 Patent at 9:40–11:23 & Fig. 2. Despite Defendants' arguments to the contrary, this would not read the "first time" limitations as having a different meaning when read as part of Claim 2 rather than only in Claim 1.

Defendants also cite prosecution history in which the patentee distinguished the Jansson reference as follows regarding the "providing" limitation in Claim 1 of the '669 Patent (emphasis in original):

> Even if Jansson taught a first exchange of the composition session identifier prior to message 16 (which it does not for the reasons explained above), Jansson would still fail to disclose or suggest providing the composition session identifier as recited in amended claim 1. More particularly, amended independent claim 1 recites, among other features, "providing a composition session identifier for associating sessions in the network; [and] *after providing the composition session identifier*, exchanging the composition session identifier between a user equipment and the network element a first time." (Emphasis added). Accordingly, amended claim 1 involves providing the composition session identifier before exchanging the composition session identifier a first time.

> Jansson fails to disclose or suggest at least this feature. Rather, Jansson discloses that the alleged composition identifier is provided by (1) UE-A populating "the Same-Session header of the INVITE message 12 with two out of three of the correlation ID parameters (i.e., the Call-ID and the From-Tag)" and then (2) the "third parameter (i.e., the To-Tag) is created by UE-B 13 and is included in the 200 OK response message 14." Jansson, para. [0059]. Jansson also discloses that "the Call-ID and From-Tag are derived from the INVITE request [i.e., message 12], and the To-Tag is derived from the 200 OK response [i.e., message 14] to the request." Jansson, para. [0023]. As such, UE-A and UE-B are provided with the alleged composition identifier after exchanging the INVITE message 12 and the 200 OK response message 14. Thus, in contrast to claim 1, the alleged first exchange of the composition identifier in messages 12 and 14 is *not* after providing the alleged composition session identifier in Jansson.

(Dkt. No. 65, Ex. E, Oct. 21, 2016 Reply to Non-Final Office Action, at 19.)

The patentee also, however, urged that the Jansson reference disclosed only *one* exchange and therefore could not meet the claim limitations requiring exchanging the composition session identifier a "first time" and a "second time." (*See id.*, at 18 ("Jansson exchanges the correlation identifier only one time in Figure 1 - in message 16."); *see also id.* ("Applicant respectfully submits that the Office Action has employed flawed logic to reject claim 1. In particular, it is flawed logic to cite a general teaching of an invention at a high-level of abstraction as a first exchange and then cite a specific embodiment of that same general teaching as a second exchange in Jansson. The cited first and second exchanges are the same, single exchange.").

On balance, Defendants do not show any definitive statements in the prosecution history that would undercut the above-discussed understanding that the "first time" limitation refers to an exchange that occurs after "providing a composition session identifier for associating sessions in the network." *See Omega Eng'g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) ("As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on *definitive* statements made during prosecution.") (emphasis added). Moreover, to whatever extent "the[se] statements in the

prosecution history are subject to multiple reasonable interpretations," "they do not constitute a clear and unmistakable departure from the ordinary meaning of the term . . . ." *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed. Cir. 2004). Instead, Claim 1 uses "first time" and "second time" in relation to one another.

The Court therefore hereby expressly rejects Defendants' indefiniteness argument. Defendants present no alternative proposed construction, and no further construction is necessary.

The Court accordingly hereby construes **"wherein providing the composition session identifier comprises . . . sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier"** to have its **plain meaning**.

IX. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit.

The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

So ORDERED and SIGNED this 16th day of March, 2022.

RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE