

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

HANSHOW TECHNOLOGY CO., LTD.,

Plaintiff,

V.

SES-IMAGOTAG SA et al,

Defendants.

§ § § § § § § § § § § § § § § §

Case No. 2:23-CV-00174-RWS-RSP

CLAIM CONSTRUCTION ORDER

On December 13, 2024, the Court held a hearing to determine the proper construction of the disputed claim terms in U.S. Patent Nos. 11,540,216 (the “’216 Patent”), 8,346,210 (the “’210 Patent”), and 9,641,994 (the “’994 Patent”). Having reviewed the arguments made by the parties at the hearing and in their claim construction briefing (Dkt. Nos. 116, 121, 122)¹, having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc); *see also Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

¹ Citations to the parties' filings are to the filing's number in the docket (Dkt. No.) and pin cites are to the page numbers assigned through ECF.

TABLE OF CONTENTS

I. BACKGROUND 3

II. APPLICABLE LAW 6

III. LEVEL OF ORDINARY SKILL IN THE ART 12

IV. CONSTRUCTION OF AGREED TERMS 13

V. CONSTRUCTION OF DISPUTED TERMS 14

 A. “normal monitoring mode” and “fast monitoring mode” 14

 B. “the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode” 19

 C. “fast wake-up instruction” 22

 D. “external device” 24

 E. “bearer tag” 26

 F. “service management request” 28

 G. “initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag” 30

 H. The “services platform” terms 32

 I. “A non-transitory computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to at least perform the following” 37

 J. “wherein managing the one or more services comprises activating, modifying, discovering, accessing, or setting up the one or more services, and the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one or more services” 39

 K. “predetermined billing arrangement” 42

 L. “mobile communication service provider that has a billing arrangement with a user account associated with the user equipment” 45

VI. CONCLUSION 49

I. BACKGROUND

Plaintiff Hanshow Technology Co., Ltd. (“Hanshow”) alleges that Defendants VusionGroup SA and VusionGroup GmbH (“VusionGroup”) infringes the asserted patents. Shortly before the start of the December 13, 2024 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties’ arguments and facilitating discussion.

The ’216 Patent, titled “Interactive Electronic Tag Device Communication System and Method,” was filed on January 4, 2019 as a Patent Cooperation Treaty (“PCT”) application, and issued on December 27, 2022. The ’216 Patent relates “to the technical field of data communication, and in particular to an interactive electronic tag device communication system and method.” ’216 Patent at 1:17–19.

The Abstract of the ’216 Patent states:

This disclosure provides an interactive electronic tag device communication system and method, including: a background server, a base station, an electronic tag device and an external device; the external device transmits first data to an electronic tag device through a second communication path; the electronic tag device receives the first data and transmits the same to a base station through a first communication path, and enters a fast monitoring mode; the base station receives the first data and transmits the same to background server; the background server generates a control instruction and second data, and transmits the same to the base station; the base station receives a fast wake-up instruction, the control instruction and the second data and transmits the same to electronic tag device through first communication path; the electronic tag device receives fast wake-up instruction, control instruction and second data, and switches to the normal monitoring mode after completing communication.

Claim 1 of the ’216 Patent is an illustrative claim and recites the following elements:

1. An interactive electronic tag device communication system, comprising: a background server, a base station, an electronic tag device and an *external device*;

wherein the electronic tag device comprises two communication paths: a first communication path and a second communication path; the first communication path supports two monitoring modes: a *normal monitoring mode* and a *fast monitoring mode*; and the base station comprises two wake-up modes: a *normal wake-up mode* and a *fast wake-up mode*;

the *external device* is configured to transmit first data to the electronic tag device through the second communication path;

the electronic tag device is configured to receive the first data, transmit the first data to the base station through the first communication path, and enter the *fast monitoring mode*;

the base station is configured to receive the first data and transmit the first data to the background server;

the background server is configured to generate a control instruction and second data according to the first data, and transmit the control instruction and the second data to the base station;

the base station is further configured to receive the control instruction and the second data, communicate with the electronic tag device in the *fast wake-up mode*, and transmit a *fast wake-up instruction*, the control instruction and the second data to the electronic tag device through the first communication path; and

the electronic tag device is further configured to receive the *fast wake-up instruction*, the control instruction and the second data, and switch to the *normal monitoring mode* after completing the communication.

The '210 and '994 Patents share a common specification, and relate to a “software product and apparatus for managing one or more services using bearer tags.” '210 Patent at 2:63–64. The '210 and '994 Patents are titled “Method and Apparatus for Managing Services Using Bearer Tags.” The '210 Patent was filed on February 27, 2009, and issued on January 1, 2013. The '994 Patent was filed on November 26, 2012, and issued on May 2, 2017.

The Abstract of the '210 and '994 Patents states:

An approach is provided for managing one or more services corresponding to a bearer tag (e.g., near field communication (NFC) tag, radio frequency identification (RFID) tag, contactless card, or barcode). A request to manage a service is initiated by reading service information from a bearer tag corresponding to the one or more services. A services platform initiates management of the one or more services based on the service information according to a

predetermined or recurring billing arrangement.

Claim 1 of the '210 Patent is an illustrative claim and recites the following elements (disputed terms in italics):

1. *A non-transitory computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to at least perform the following:*
detecting a tap of a equipment on or near a *bearer tag*;
initiating determination of service information, related to one or more services, from the bearer tag;
generating one or more *service management requests* to manage the one or more services according to the service information; and
initiating transmission of the one or more *service management requests* to a *services platform for management of the one or more services according to a billing arrangement, wherein managing the one or more services comprises activating, modifying, discovering, accessing, or setting up the one or more services, and the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one or more services.*

Claim 1 of the '994 Patent is an illustrative claim and recites the following elements (disputed terms in italics):

1. A method comprising:
detecting, by a user equipment, a tap of the user equipment on or near a *bearer tag*, wherein the user equipment is a mobile communication device;
in response to the tap, *initiating*, by the user equipment, a *determination of service information, related to one or more services* offered by one or more service providers independent from a *mobile communication service provider that has a billing arrangement with a user account associated with the user equipment, from the bearer tag*, wherein the service information includes one or more costs related to the one or more services;
generating, by the user equipment, one or more *service management requests* to manage the one or more services according to the service information; and
initiating, by the user equipment, a transmission of the one or more *service management requests* via a mobile communication network to a *services platform communicating with the mobile communication service provider for managing the one or more*

services and the one or more costs according to the billing arrangement,
wherein the one or more *service management requests* of the one or more services comprises a validation of the one or more *service management requests* based, at least in part, on:
a location restriction associated with geographic locations of the one or more services and the user equipment, and
at least one validity date associated with the one or more services indicating the effective date or dates for the location restriction.

II. APPLICABLE LAW

A. Claim Construction

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (quotation marks omitted) (“There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.”) *cert. granted, judgment vacated*, 135 S. Ct. 1846 (2015).

“The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). “[I]n all aspects of claim construction, ‘the name of the game is the claim.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)) *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). First, a term’s context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim’s meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor’s lexicography governs. *Id.*

The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at 1325. But,

“‘[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.’” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office (“PTO”) and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1318; *see also Athletic Alts., Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be “unhelpful as an interpretive resource”).

Although extrinsic evidence can also be useful, it is “‘less significant than the intrinsic record in determining the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the

particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are not helpful to a court. *Id.* Extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.* The Supreme Court has explained the role of extrinsic evidence in claim construction:

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. *See, e.g., Seymour v. Osborne*, 11 Wall. 516, 546 (1871) (a patent may be "so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning"). 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.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 331–32 (2015).

B. Departing from the Ordinary Meaning of a Claim Term

There are "only two exceptions to [the] general rule" that claim terms are construed according to their plain and ordinary meaning: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution."² *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) ("[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal."). The standards for finding lexicography or disavowal are "exacting." *GE Lighting Sols.*, 750 F.3d at 1309.

² Some cases have characterized other principles of claim construction as "exceptions" to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

To act as his own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* (quoting *Thorner*, 669 F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee’s lexicography must appear “with reasonable clarity, deliberateness, and precision.” *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee’s statements in the specification or prosecution history must amount to a “clear and unmistakable” surrender. *Cordis Corp. v. Bos. Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 (“The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”). “Where an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

C. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “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 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 911. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). “[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, “a court must determine whether the patent’s specification supplies some standard for measuring the scope of the [term].” *Ernie Ball, Inc. v. Earvana, LLC*, 502 F. App’x 971, 980 (Fed. Cir. 2013) (citations omitted). The standard “must provide objective boundaries for those of skill in the art.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014).

D. Means-Plus-Function Limitations

Where a claim limitation is expressed in “means plus function” language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112, ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112, ¶ 6 mandates that “such a claim limitation ‘be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.’” *Id.* (citing 35 U.S.C. § 112, ¶ 6). Accordingly, when faced with means-plus-function limitations, courts “must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations].” *Id.*

Construing a means-plus-function limitation involves multiple steps. “The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation’s function, “the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* Moreover, the focus of the “corresponding structure” inquiry is not merely whether a structure

is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.*

III. LEVEL OF ORDINARY SKILL IN THE ART

It is well established that patents are interpreted from the perspective of one of ordinary skill in the art (“POSITA”). *See Phillips*, 415 F.3d at 1313 (“[T]he 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.”). The Federal Circuit has advised that the “[f]actors that may be considered in determining the level of skill in the art include: (1) the educational level of the inventors; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) sophistication of the technology; and (6) education level of active workers in the field.” *Env’tl Designs, Ltd. v. Union Oil Co. of California*, 713 F.2d 693, 696 (Fed. Cir. 1983). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Daiichi Sankyo Co. Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

Plaintiff contends a POSITA would have “a Master of Science Degree in an academic area emphasizing in electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field (or a similar technical Master’s Degree, or higher degree),” or “a Bachelor’s Degree (or higher degree) in an academic area emphasizing electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field with two or more years of work experience in electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field.” (Dkt. No. 116 at 7-8) (citing Dkt. No. 116-1 at ¶ 47).

Defendants note that the parties have formulated slightly different proposed levels of ordinary skill. (Dkt. No. 121 at 12). Defendants contend that any differences between the parties' proposals would not affect claim construction, and therefore do not object to the Court applying Plaintiff's proposed level of skill. *Id.*

Having considered the parties' proposals, and the factors that may be considered in determining the level of skill in the art, the Court agrees with Plaintiff's proposed level of skill in the art. Specifically, a POSITA would have a Master of Science Degree in an academic area emphasizing in electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field (or a similar technical Master's Degree, or higher degree), or a Bachelor's Degree (or higher degree) in an academic area emphasizing electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field with two or more years of work experience in electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field. The Court further agrees with Defendants that any differences in the parties' proposals do not appear to be significant for the purpose of claim construction.

IV. CONSTRUCTION OF AGREED TERMS

The parties agreed to the construction of the following claim terms:

Claim Term/Phrase	Agreed Construction
"a background server, a base station, an electronic tag device and an external device;" '216 Patent, Claim 1	These are limitations that are not part of the preamble.
"generat[e/ing, by the background server] a control instruction and second data according to the first data" '216 Patent, Claims 1, 7, 14	Plain and ordinary meaning, which is "generat[e/ing, by the background server]: (1) a control instruction based, at least in part, on the first data; and (2) second data based, at least in part, on the first data."

“service information” ’210 Patent, Claims 1, 4, 6, 9, 12, 14 ’994 Patent, Claims 1, 4, 6, 9, 12	Plain and ordinary meaning.
“a location restriction associated with geographic locations of the one or more services and the user equipment” ’994 Patent, Claims 1, 6	Plain and ordinary meaning.
“at least one validity date associated with the one or more services indicating the effective data or dates for the location restriction” ’994 Patent, Claims 1, 6	Plain and ordinary meaning.

Dkt. No. 123 at 2-3 (P.R. 4-5(d) Joint Claim Construction Chart). In view of the parties’ agreement on the proper construction of the identified terms, the Court hereby **ADOPTS** the parties’ agreed constructions.

V. CONSTRUCTION OF DISPUTED TERMS

The parties dispute the meaning and scope of fourteen terms or phrases in the Asserted Patents. Each dispute is addressed below.

A. “normal monitoring mode” and “fast monitoring mode”

Disputed Term	Plaintiff’s Proposal	Defendants’ Proposal
“normal monitoring mode”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “a monitoring mode of the electronic tag device in which the monitoring period is longer than that of the fast monitoring mode.”	Plain and ordinary meaning, which is “a default mode in which incoming communications are monitored at intervals of a specified time period”

“fast monitoring mode”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “a monitoring mode of the electronic tag device in which the monitoring period is shorter than that of the normal monitoring mode.”	Indefinite.
------------------------	---	-------------

1. Analysis

The term “normal monitoring mode” appears in Asserted Claims 1, 7, and 14 of the ’216 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The term “fast monitoring mode” also appears in Asserted Claims 1, 7, and 14 of the ’216 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the term “normal monitoring mode” requires construction. The parties also dispute whether the term “fast monitoring mode” is indefinite.³

The specification discloses that an electronic tag device (“tag”) supports a data transmission mode, a normal monitoring mode, and a fast monitoring mode. ’216 Patent at 1:29–32, 3:22–29. The independent claims recite that the tag switches between the normal monitoring mode and the fast monitoring mode. The specification discloses that the difference between these two monitoring modes is the duration that the tag is actively monitoring. Specifically, an electronic tag device may employ different monitoring periods (*e.g.*, 30s, 20s, or 1s) in connection with different monitoring modes. ’216 Patent at 1:23–2:3; Dkt. No. 116-2 at 112:25-115:4. The specification further indicates that increasing the duration of the wake-up period of the electronic

³ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 10-15); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 14-18); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 3-5).

tag will increase response speed, but does so at the cost of higher battery power consumption. '216 Patent at 1:55–63. This is undesirable because higher battery consumption requires “more frequent replacements and increase[s] labor costs.” '216 Patent at 2:2–3.

In one exemplary embodiment, the normal monitoring mode is the default, or normal state of the tag. '216 Patent at 4:51–54. In the normal monitoring mode, the duration of the wake-up period is shorter than the duration of the wake-up period of the fast monitoring mode. Thus, in the fast monitoring mode the tag has an improved response speed. However, this also means that the power consumption of the tag will increase. The specification provides an example where the power consumption in the fast monitoring mode increased 20 times when compared to the power consumption in the normal monitoring mode. '216 Patent at 1:61–67.⁴ Thus, a POSITA “would understand that the distinction between a ‘normal monitoring mode’ and any other monitoring mode has to do with the ‘monitoring period’ during which the electronic tag device is monitoring.” Dkt. No. 116-3 at ¶ 69. Accordingly, the Court construes “normal monitoring mode” to mean “a normal mode that is configured to wake-up the tag for a duration that is shorter than the duration of the wake-up period of the fast monitoring mode.” Likewise, the Court construes “fast monitoring mode” to mean “a mode configured to wake-up the tag for a duration that is longer than the duration of the wake-up period of the normal monitoring mode, which increases power consumption when compared to the normal monitoring mode.”

Turning to the parties’ arguments, Defendants’ construction requires the “normal

⁴ The specification refers to a “monitoring period,” which the parties’ experts “largely agree” includes a non-monitoring interval (when the tag is asleep) plus a monitoring interval (when the tag is awake). (Dkt. No. 121 at 14) (citing Dkt. No. 121-7 at ¶ 23; Dkt. No. 121 at 118:21-119:1). The Court’s construction is directed to the portion of the monitoring period when the tag is awake (*i.e.*, “the wake-up period”), because this is the portion that will result in “an increase of power consumption.” '216 Patent at 1:45–47.

monitoring mode” to be the “default mode.” The specification indicates that in one embodiment, the “normal monitoring mode” is the “default.” ’216 Patent at 4:51–54. However, this is only one embodiment, and Defendants have not provided a persuasive reason to limit the claims to this embodiment. *Phillips*, 415 F.3d at 1323 (“[W]e have expressly rejected the contention that if a patent describes only a single embodiment the claims of the patent must be construed as being limited to that embodiment.”).

More importantly, a monitoring mode is “normal” when the tag is not operating in the fast monitoring mode. This understanding is captured in the claim language, which requires the tag to “enter the fast monitoring mode,” and then switch back to the normal monitoring mode. *See, e.g.*, ’216 Patent at 7:50–51, 7:66–77. Defendants’ “default” proposal appears to require an additional limitation that goes beyond the plain and ordinary meaning of normal. Specifically, it appears to require a mode that is fixed in time and would not allow for normal operating variations. This would contradict the evidence before the Court, which indicates that the “normal” operating mode may vary based on environmental conditions or inaccuracies in the electronics. (Dkt. No. 121-9 at 129:6-20). Therefore, Defendants’ construction would go beyond what a POSITA would understand the term “normal” to mean. Accordingly, the Court rejects Defendants’ construction.⁵

Turning to the “fast monitoring mode” term, Defendants argue that the term is indefinite, because there is not an objective way to measure whether the tag’s monitoring mode is “fast” or

⁵ Defendants’ construction also requires monitoring “incoming communications.” Plaintiff argues that in one embodiment the tag is configured to at least monitor incoming communication *requests* once every monitoring period and switch to a data transmission mode when an incoming communication request is received. (Dkt. No. 116 at 12) (citing ’216 Patent at 1:23–32) (emphasis in original). According to Plaintiff, Defendants’ construction is inconsistent with this embodiment, because it limits the electronic tag device to monitoring “incoming communications,” excluding incoming requests. (Dkt. No. 116 at 12). Defendants did not provide a persuasive reason to read “incoming communications” into the claims. Accordingly, the Court rejects this portion of Defendants’ construction.

“faster” than its normal mode. (Dkt. No. 121 at 16). Defendants contend that defining “fast” as “faster than normal” is not enough to distinguish “normal monitoring mode” from “fast monitoring mode.” *Id.* at 17. Defendants also contend that “improved battery life” and “improved response speed” do not provide an objective measure. *Id.*

The Court agrees that defining “fast” as “faster than normal” is not enough to distinguish “normal monitoring mode” from “fast monitoring mode.” First, the Court finds that the tag must be “configured to” enter one mode from the other. In other words, a passive change in the duration of a wake-up period due to environmental conditions or inaccuracies in the electronics would not be considered “entering” or “switching to” one mode from the other. *See, e.g.*, Dkt. No. 121-9 at 129:6-20. Indeed, both parties’ experts agree that a change in a monitoring period alone would not necessarily indicate a change from a “normal monitoring mode” to a “fast monitoring mode.” *See, e.g.*, Dkt. No. 121-9 at 123:18–23, 128:6-17, 130:3-9; Dkt. No. 121-8 at 64:10-16. Accordingly, the Court rejects Plaintiff’s constructions for these terms, because they focus only on the relative length of the monitoring period without considering power consumption.

Moreover, the intrinsic and extrinsic evidence indicates that the wake-up duration of the tag is what drives power consumption and distinguishes between the two modes. *See, e.g.*, ’216 Patent at 1:42–2:3; 3:22–29; Dkt. No. 121-9 at 120:2-122:18, 128:6-17, 130:10-21, 131:7-14; Dkt. No. 116-1 at ¶ 72. Thus, a POSITA would understand that a “fast monitoring mode” is the mode “configured to wake-up the tag for a duration that is longer than the duration of the wake-up period of the normal monitoring mode, which increases power consumption when compared to the normal monitoring mode.” Accordingly, the Court finds that Defendants failed to prove by clear and convincing evidence that the term is indefinite. *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“[A]fter the court has defined the claim with whatever

specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact.”).

2. Court’s Construction

For the reasons set forth above, the Court construes the term **“normal monitoring mode”** to mean **“a normal mode that is configured to wake-up the tag for a duration that is shorter than the duration of the wake-up period of the fast monitoring mode;”** and the term **“fast monitoring mode”** to mean **“a mode configured to wake-up the tag for a duration that is longer than the duration of the wake-up period of the normal monitoring mode, which increases power consumption when compared to the normal monitoring mode.”**

B. “the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “the base station comprises two wake-up modes for waking up a certain electronic tag device, a normal wakeup mode wherein the base station may assume that the electronic tag device is in its normal monitoring mode, and a[/the] fast wake-up mode wherein the base station may assume that the electronic tag device is in its fast monitoring mode.”	Indefinite.

1. Analysis

The phrase “the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode” appears in Asserted Claims 1, 7, and 14 of the ’216 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general

meaning in each claim. The parties dispute whether the phrase “the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode” is indefinite.⁶

Defendants argue that a “wake-up mode” has no understood meaning in the art, and that the specification never describes anything about the “normal” and “fast wake-up modes.” (Dkt. No. 121 at 18-19). Defendants also contend that the European Patent Office (“EPO”) rejected the European equivalent. (Dkt. No. 121 at 19) (citing Dkt. No. 121-4). Defendants further argue that Plaintiff’s expert cannot clearly define what a “wake-up mode” does. (Dkt. No. 121 at 19) (citing Dkt. No. 121-9 at 146:22-147:3, 147:13-18). According to Defendants, the intrinsic evidence does not describe that a base station communicates with a tag any differently in “normal” or “fast” wake-up mode. (Dkt. No. 121 at 19). Defendants argue that the intrinsic evidence does not provide a basis to know whether a base station is in one mode or the other. (Dkt. No. 121 at 20).

The Court finds that the disputed phrase, when read in light of the specification delineating the patent informs, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus*, 134 S. Ct. at 2124. The intrinsic and extrinsic evidence first indicates that the two wake-up modes are modes of the base station. ’216 Patent at 3:24-25; Dkt. No. 121-9 at 145:11-16, 147:13-18. The specification further indicates that the distinction between the two modes is related to the wake-up duration of the tag device. The specification states the following:

If a base station device which communicates with the radio frequency module intends to communicate with a certain electronic tag device, the electronic tag device needs to be waked up at first for a period (hereinafter referred to as a “wake-up duration” of the base station device, such as 35 s) longer than the monitoring period of the electronic tag device, and then instructions and data can be transmitted. In this case, it requires *at least a duration longer than* the “wake-up duration” to transmit an instruction to an electronic

⁶ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 15-18); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 18-21); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 5-6).

tag device, so as to complete the communication with the electronic tag device.

'216 Patent at 1:32–42 (emphasis added). As discussed above, the independent claims recite that the tag switches between the normal monitoring mode and the fast monitoring mode, which have different wake-up durations. Thus, the base station must have a wake-up duration that is *at least longer than a wake-up duration of the monitoring mode of the tag. Id.*

For example, if the tag is in normal monitoring mode, then the base station is configured to have a normal wake-up mode that has a wake-up duration that is at least longer than a wake-up duration of the normal monitoring mode of the tag. Likewise, if the tag is in fast monitoring mode, then the base station is configured to have a fast wake-up mode that has a wake-up duration that is at least longer than a wake-up duration of the fast monitoring mode of the tag. Otherwise, the base station would not be able to complete the communication with the tag. '216 Patent at 1:39–42 (“In this case, it requires at least a duration longer than the ‘wake-up duration’ to transmit an instruction to an electronic tag device, so as to complete the communication with the electronic tag device.”). In summary, the intrinsic evidence indicates that a POSITA would be able to determine the scope of the disputed phrase with reasonable certainty. Accordingly, Defendants failed to show by clear and convincing evidence that the claim language is indefinite.

2. Court’s Construction

For the reasons set forth above, the Court construes the phrase **“the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode”** to mean **“the base station comprises two wake-up modes, a normal wake-up mode wherein the base station is configured to have a wake-up duration that is at least longer than a wake-up duration of the normal monitoring mode of the electronic tag device, and a[/the] fast wake-up mode wherein the base station is configured to have a wake-up duration that is at least longer than**

a wake-up duration of the fast monitoring mode of the electronic tag device.”

C. “fast wake-up instruction”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“fast wake-up instruction”	Plain and ordinary meaning applies and no construction is necessary.	Plain and ordinary meaning, which is “instruction from the base station to the electronic tag device requiring the tag to remain in fast monitoring mode such that data can be received by the electronic tag device”

1. Analysis

The term “fast wake-up instruction” appears in Asserted Claims 1, 7, and 14 of the ’216 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The parties agree that the term should be given its plain and ordinary meaning, but disagree on the plain and ordinary meaning.⁷

Starting with the claim language, the independent claims recite that the base station is configured to transmit a fast wake-up instruction to the tag when in the fast wake-up mode. As discussed above, the specification states that “*the electronic tag device needs to be waked up at first for a period . . . longer than the monitoring period of the electronic tag device.*” ’216 Patent at 1:34–38 (emphasis added). Thus, a POSITA would understand that when the tag is in fast monitoring mode, the base station sends an instruction to the tag requiring it to wake-up for a period that is longer than the wake-up period of the fast monitoring mode. If this was not the case, then the base station would not be able to complete the communication with the tag. *Id.* at 1:39–42. Accordingly, a “fast wake-up instruction” is an “instruction from the base station to the electronic tag device requiring the electronic tag device to wake-up for a period that is longer than

⁷ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 18-20); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 21-22); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 6).

the wake-up period of the fast monitoring mode.”

Defendants argue that the “fast wake-up instruction” requires the tag to remain in fast monitoring mode. According to Defendants, the “fast wake-up instruction” does not “wake up” the tags, because the specification says that tags cannot receive communications *unless* they are awake. (Dkt. No. 121 at 21) (citing ’216 Patent at 1:32–39) (emphasis in original). Notwithstanding, the intrinsic evidence indicates that the “fast wake-up instruction” ensures that the tag remains awake for a duration that is longer than the wake-up period of the fast monitoring mode.

Defendants’ construction improperly requires the tag “to remain in fast monitoring mode such that data can be received by the electronic tag device.” This could require the electronic tag device to remain in the fast monitoring mode for an unlimited time period, or at least until the completion of the receipt of the control instruction and the second data. However, the intrinsic evidence indicates that the electronic tag device is not required to stay in a fast monitoring mode indefinitely, and may switch modes if the instruction and data is not received within a preset time range. ’216 Patent at 5:11–19. Indeed, dependent Claims 6, 12, and 19 recite that electronic tag may “switch to the normal monitoring mode when the fast wake-up instruction is received but the control instruction and the second data are not received within a preset time range.” ’216 Patent at Claims 6, 12, 19. Accordingly, the Court rejects the portion of Defendants’ construction that requires the tag to remain in fast monitoring mode.

2. Court’s Construction

For the reasons set forth above, the Court construes the term **“fast wake-up instruction”** to mean **“instruction from the base station to the electronic tag device requiring the electronic tag device to wake-up for a period that is longer than the wake-up period of the fast**

monitoring mode.”

D. “external device”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“external device”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “a device external to the electronic tag device, the device is capable of communication with the electronic tag device directly or indirectly, or otherwise exchanging information with or reading information from the electronic tag device.”	Indefinite.

1. Analysis

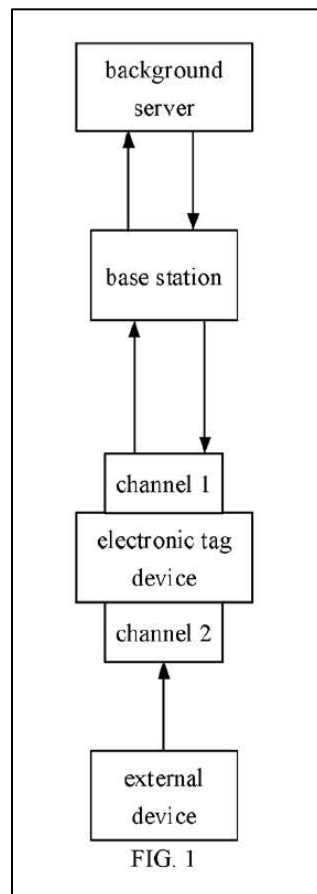
The term “external device” appears in Asserted Claims 1, 7, and 14 of the ’216 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the term “external device” is indefinite.⁸

Defendants argue that the term “external device” is indefinite because the claims and specification are ambiguous as to what qualifies as an external device. (Dkt. No. 121 at 22). Defendants contend that if “external” is referring to the device’s physical position relative to “a background server, a base station, [and/or] an electronic tag device,” then “external” is a superfluous term that adds nothing to the scope of the claim. *Id.* Defendants further contend that a POSITA would not know when they are in possession of an “external device” as opposed to simply a “device.” *Id.* at 22-23. According to Defendants, the specification does not explain why an “external device” is different than a “device,” to what it must be external, or even whether the

⁸ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 20-21); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 22-23); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 6).

device must be physically external. *Id.* at 23. Defendants argue that there is not any explicit support in the specification to determine the system components to which the device is external. *Id.*

The Court finds that the disputed term, when read in light of the specification delineating the patent informs, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus*, 134 S. Ct. at 2124. The claim language recites four elements: (1) a background server, (2) a base station, (3) an electronic tag device and (4) an external device. Figure 1 of the specification illustrates that the “external device” is physically separate from the other three elements. The claims further recite that “the external device is configured to transmit first data to the electronic tag device through the second communication path [channel 2].”



'216 Patent at Figure 1. The specification states that “[t]he second communication path (channel 2) is other wireless communication modules, such as a magnetic switch, an NFC switch, an

infrared switch, etc.” ’216 Patent at 4:41–44. Plaintiff’s expert, Dr. Sourì, opines “that a POSITA would understand that a device matching the above description that is capable of transmitting data to an electronic tag device through, for instance, an NFC coil, could take the form of a mobile phone, PDA, or other electronic handheld device.” (Dkt. No. 116-1 at ¶ 79). Thus, a POSITA would understand the term “external device,” and the scope of the invention without further clarification or construction.

2. Court’s Construction

The Court finds that the term “**external device**” is not indefinite, and is given its **plain and ordinary meaning**.

E. “bearer tag”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“bearer tag”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “an information bearing tag, such as a near field communication (NFC) tag, a radio frequency identification (RFID) tag, a contactless card, a barcode, or other tag capable of bearing information, or any combination thereof.”	Plain and ordinary meaning which is “tag containing information related to one or more corresponding services available to the bearer of the tag.”

1. Analysis

The term “bearer tag” appears in Asserted Claims 1, 2, 6, 7, 12, 14, 15, and 16 of the ’210 Patent; and Asserted Claims 1, 2, 6, 7, and 12 of the ’994 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim.⁹

⁹ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 22-24); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 24-25); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 7).

The Court further finds that the intrinsic evidence indicates that the “bearer tag” is a “tag containing information related to one or more corresponding services.” For example, Claim 1 of the ’210 Patent recites “detecting a tap of a user equipment on or near a bearer tag,” and then further recites “initiating determination of service information, related to one or more services, from the bearer tag.” This claim language requiring determining service information from the bearer tag indicates that the bearer tag must contain information related to one or more corresponding services. Indeed, the specification repeatedly states that the bearer tag contains information related to one or more corresponding services. For example, the specification states the following:

The system 100 also includes bearer tags 105 a-105 n with each bearer tag 105 corresponding, for example, to one or more services. In exemplary embodiments, *the bearer tag 105* is a near field communication (NFC) tag, radio frequency identification (RFID) tag, contactless card, barcode, or any combination thereof that *contains information related to the one or more corresponding services*. The service information contained in the bearer tag 105 may include, for instance, one or more service codes to identify the one or more services represented by the bearer tag 105.

’210 Patent at 3:50–59 (emphasis added); *see also*, ’210 Patent at 4:43–47, 5:13–20, 6:33–40, 8:11–20, 9:36–38. The specification further states that the term “‘services’ . . . refers collectively to services, applications, and content in a network and/or user equipment.” ’210 Patent at 2:65–67. In other words, the reading of a bearer tag through the use of user equipment (*e.g.*, an NFC-enabled mobile phone brought into a short-range communication with an NFC-enabled bearer tag) enables the management of one or more services (*i.e.*, services, applications, and content in a network and/or user equipment). Thus, the tag bears or contains the information related to one or more corresponding services. Based on this context, a POSITA would understand that “bearer tag” means “tag containing information related to one or more corresponding services.”

Defendants argue that it is irrelevant that its proposal “bearer of the tag” does not appear

in the specification. (Dkt. No. 121 at 24). Instead, Defendants’ argument revolves around its analogy to “bearer bond,” “bearer note,” “bearer instrument,” and “bearer security,” which are terms in the field of finance and banking. However, Defendants do “not cite any reliable source for that usage being the ordinary meaning in the relevant field.” *Frans Nooren Afdichtingssystemen B. V. v. Stopaq Amco, Inc.*, 744 F.3d 715, 723 (Fed. Cir. 2014).

Specifically, Defendants do not provide any evidence to support its position that the term “bearer,” as used in financial terms, should be read into the field of cellphones and mobile services. On the contrary, a review of the specification indicates that each time the word “bearer” appears, it is always part of the phrase “bearer tag,” which indicates that the tag “bears” information. Defendants’ construction would create unnecessary confusion and ambiguity on what it means to be a “bearer of a tag” (*e.g.*, “the person who opened the box and now possesses the card”). (Dkt. No. 121 at 25). Accordingly, the Court rejects this portion of Defendants’ construction.

2. Court’s Construction

For the reasons set forth above, the Court construes the term **“bearer tag”** to mean **“tag containing information related to one or more corresponding services.”**

F. “service management request”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“service management request”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “request to manage service.”	“a request that identifies a service and contains information for managing that service.”

1. Analysis

The term “service management request” appears in Asserted Claims 1 and 6 of the ’210 Patent; and Asserted Claims 1, 2, 6, 7, 15, and 18 of the ’994 Patent. The Court finds that the term

is used consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the term “service management request” requires construction.¹⁰

Defendants argue that the dispute is whether the “service management request” limitation can be met, even if the request includes no information about the service at all. (Dkt. No. 121 at 28-29). The parties agree that a key disclosure describing the “service management request” is the following:

The service selection module 201 then uses the service information to generate a service management request for transmission to the services platform 107. The service management request, for instance, includes information such as the requested service and identification of the user. It is contemplated that the request may include other information needed to process to specific requests (e.g., quantity of product, duration of subscription, etc.).

’210 Patent at 6:46–53 (cited at Dkt. No. 116 at 25; Dkt. No. 121 at 29). As indicated, the service management request includes the requested service and identification of the user equipment. The service management request *may* also “include other information needed to process to specific requests (e.g., quantity of product, duration of subscription, etc.),” but it would be improper to read this optional information into this term. ’210 Patent at 6:51–53 (emphasis added). Indeed, the claim language recites that the “service management requests” are generated to “manage the one or more services according to the service information.” *See, e.g.*, ’210 Patent at Claim 1, 6; ’994 Patent at Claims 1, 6. Therefore, Defendants’ proposed inclusion of “contains information for managing that service” is potentially confusing and unnecessary. Accordingly, the Court rejects this portion of Defendants’ construction.

2. Court’s Construction

¹⁰ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 24-25); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 28-30); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 7).

For the reasons set forth above, the Court construes the term “**service management request**” to mean “**a request that identifies a service and identification of the user.**”

G. “initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “initiat[e/ing] determination of service information, related to [the] one or more services, through a use of the bearer tag.”	Plain and ordinary meaning, which is “initiating a process of determining information about one or more services from information contained by the bearer tag.”

1. Analysis

The phrase “initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag” appears in Asserted Claims 1 and 6 of the ’210 Patent; and Asserted Claims 1 and 6 of the ’994 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The parties appear to dispute whether determining information “from the bearer tag” requires the information to be contained within the bearer tag.¹¹

The specification indicates that the plain and ordinary meaning of “from the bearer tag” requires the service information to be contained within the bearer tag. For example, the Abstract states “[a] request to manage a service is initiated by *reading service information from a bearer tag* corresponding to the one or more services.” ’210 Patent at Abstract (emphasis added). The specification further states “[i]n exemplary embodiments, reading the service information from

¹¹ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 25-27); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 25-28); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 8).

the bearer tag 105 quickly identifies the requested service.” *Id.* at 5:13–15. That the services information is contained in the tag is also shown as step 403 of Figure 4 and is described in the corresponding text: “The UE 101a *then reads service information contained in the bearer tag 105* using, for instance, an NFC reader, RFID reader, contactless card reader, a barcode reader, or any combination thereof (at 403).” *Id.* at 8:57–59 (emphasis added).

Similarly, the specification states that “[t]he module 111 then initiates a determination of the service information *contained within the bearer tag 105* by signaling the bearer tag reader 205 to read the bearer tag 105 (at 303).” *Id.* at 8:11–14; *see also, id.* at 6:36–38 (“More specifically, the module 203 . . . initiates the reader 205 to determine the service information *contained in the bearer tag 105 . . .*”) (emphasis added). Accordingly, the Court construes the phrase “initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag” to mean “initat[e/ing] determination of the service information contained within the bearer tag related to [the] one or more services.”

Turning to the parties’ constructions, the actual dispute is unclear, because both parties argue that the specification states that the information must be “contained in the bearer tag 105.” (Dkt. No. 116 at 26; Dkt. No. 121 at 27). Yet, neither party proposes the “contained within the bearer tag” language. Instead, Plaintiff argues that there must be a “use of the bearer tag.” To the extent that Plaintiff contends that this means the initiating of determination of service information could occur without reading any information *from* the bearer tag, the Court rejects that argument. The specification offers no support for a system that does not obtain information from the bearer tag, and does not describe any system that could function without obtaining that information from the bearer tag.

Defendants propose “information contained by the bearer tag.” Plaintiff argues that this

construction would require the module 203 of the '210 Patent, and module 111 of the '994 Patent, to determine (or initiating a process of determining) the service information from the service information itself. (Dkt. No. 116 at 26). Defendants respond that their construction requires initiating determination about the services “from information [not ‘service information’] contained by the bearer tag.” (Dkt. No. 121 at 28). Notwithstanding, there is no reason to redraft the phrase as Defendants propose.

2. Court’s Construction

For the reasons set forth above, the Court construes the phrase **“initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag”** to mean **“initat[e/ing] determination of the service information contained within the bearer tag related to [the] one or more services.”**

H. The “services platform” terms

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“services platform for management of the one or more services according to a billing arrangement”	Plain and ordinary meaning applies and no construction is necessary. In addition, this element is not a means-plus-function element. If the Court decides that a construction is required, Hanshow proposes “an online system through which the one or more services are managed according to a billing arrangement.”	Governed by 35 U.S.C. 112 ¶ 6 Function: The management of one or more services according to a billing arrangement. Structure: all of a services portal, a services catalog, a billing server, a service activation server, and a payment gateway as depicted Fig. 2B, and as described in '210 Patent at 6:66-7:65.

“services platform communicating with the mobile communication service provider for managing the one or more services and the one or more costs according to the billing arrangement”	Plain and ordinary meaning applies and no construction is necessary. In addition, this element is not a means-plus-function element. If the Court decides that a construction is required, Hanshow proposes “a system hosted on one or more computing devices that communicates with the mobile communication service provider and allows, through such communication, the one or more services and the one or more costs to be managed according to the billing arrangement.”	Governed by 35 U.S.C. 112 ¶ 6 Function: The management of one or more services according to a billing arrangement. Structure: all of a services portal, a services catalog, a billing server, a service activation server, and a payment gateway as depicted Fig. 2B, and as described in ’994 Patent at 7:13-8:13.
--	--	--

1. Analysis

The phrase “services platform for management of the one or more services according to a billing arrangement” appears in Asserted Claims 1, 5, 6, 10, and 14 of the ’210 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The phrase “services platform communicating with the mobile communication service provider for managing the one or more services and the one or more costs according to the billing arrangement” appears in Asserted Claims 1 and 6 of the ’994 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the term “services platform” is subject to 35 U.S.C. § 112(6).¹²

There is a rebuttable presumption that section 112(6), does not apply to this limitation, because the reference to the services platform does not contain the words “means for.” *Williamson*,

¹² The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 27-30); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 30-34); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 8-9).

792 F.3d at 1348. That presumption can be overcome, but only “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. Thus, whether the term “services platform” invokes Section 112(6) “depends on whether persons skilled in the art would understand the claim language to refer to structure, assessed in light of the presumption that flows from the drafter’s choice not to employ the word ‘means.’” *Samsung Elecs. Am., Inc. v. Prisia Eng’g Corp.*, 948 F.3d 1342, 1354 (Fed. Cir. 2020).

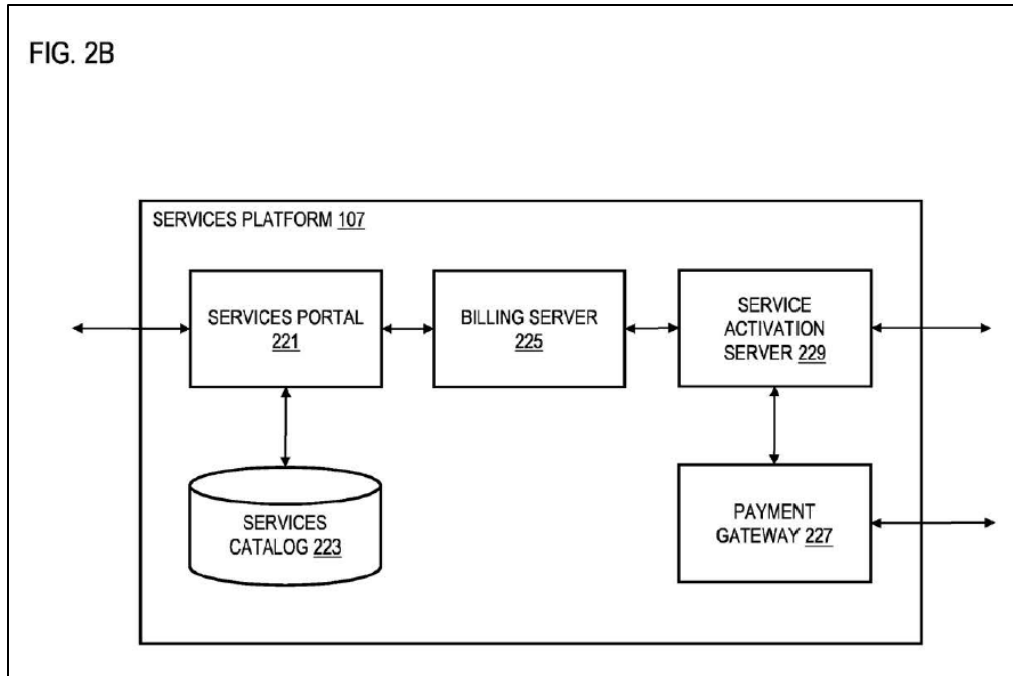
Here, the Court finds that a POSITA would understand that “services platform” fails to recite sufficiently definite structure, but instead refers to any device that can perform the recited function, and therefore does not identify a class of structures. Plaintiff does not point to anything in any of the claims that describe the structure for the “services platform.” More importantly, Plaintiff’s expert, Dr. Shukri Souri, confirmed that the term “services platform” refers to “any device, component, or some combination of hardware and software for managing service corresponding to bearer tags.” Dkt. No. 121-9 at 87:19-23. In fact, Dr. Souri could not identify a combination of computer hardware and software that could perform the function of managing one or more services according to a billing arrangement that would not be a “services platform.” *Id.* at 88:1–7 (Q: “Are you aware of any combination of hardware and software that can manage one or more services according to a billing arrangement that is not a services platform? A. I can’t think of something right now, but I would have to look into it.”). Dr. Souri further confirmed that “services platform” is not limited to a particular arrangement of hardware and software, and that any arrangement that can manage one or more services according to a billing arrangement would fall within the scope of the term. *Id.* at 89:1–11 (Q: “Is a services platform defined by any particular arrangement of hardware or software? A: “Defined by a particular arrangement? I don’t know if

it needs to be limited to a particular arrangement.”).

Accordingly, Dr. Sourì confirmed that a POSITA would understand that the recited “services platform” is simply a generic black box description for any computer hardware or software that can perform the function of managing one or more services according to a billing arrangement. *Ibormeith IP, LLC v. Mercedes-Benz USA, LLC*, 732 F.3d 1376, 1381 (Fed. Cir. 2013) (“[W]e take [Plaintiff] and its expert at their word in insisting on the breadth, rather than specificity.”). Thus, Defendants have overcome the presumption that § 112 ¶ 6, does not apply.

“The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation.” *Medtronic*, 248 F.3d at 1311. The Court finds that the recited function for the “service platform” in Claims 1, 5, 6, 10, and 14 of the ’210 Patent is “management of the one or more services according to a billing arrangement.” The Court finds that the recited function for the “service platform” in Claims 1 and 6 of the ’994 Patent is “managing the one or more services and the one or more costs according to the billing arrangement.” These are the functions expressly recited in the claims, and therefore, are the functions that must be performed by corresponding structure found in the specification. *Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1369–70 (Fed. Cir. 2001) (“The first step in construing a means-plus-function limitation is to identify the function explicitly recited in the claim.”) (citing *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed. Cir. 2001)). Having determined the function, “the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Medtronic*, 248 F.3d at 1311.

The Court finds that the corresponding structure for the services platform is the services portal 221, services catalog 223, billing server 225, service activation server 229, and payment gateway 227 depicted in Fig. 2B:



'210 Patent at Figure 2B. The specification further describes the structure disclosed in Figure 2B and the required configuration at column 6 line 66 to column 7 line 65.

2. Court's Construction

.In light of the intrinsic evidence, the Court finds that the “service platform” phrase is governed by 35 U.S.C. § 112, ¶ 6, and construes the phrase as follows:

Function:

Claims 1, 5, 6, 10, and 14 of the '210 Patent: Management of one or more services according to a billing arrangement.

Claims 1 and 6 of the '994 Patent: Managing one or more services and one or more costs according to a billing arrangement.

Corresponding Structure:

(1) services portal 221 as depicted in Figure 2B configured to:

- a. receive service management requests and deliver services to a User Equipment (UE);

- b. use billing information to generate a message requesting confirmation of the service management request from a user;
 - c. direct payment gateway 227 to collect fees associated with a request; and
 - d. interact with service activation system 229 to initiate activation or modification of a service according to the service management request;
 - (2) services catalog database 223 as depicted in Figure 2B configured to contain information to identify services of a received request using service information from a corresponding bearer tag 105;
 - (3) billing system 225 as depicted in Figure 2B configured to determine user information and/or billing information associated with a received service management request;
 - (4) payment gateway 227 as depicted in Figure 2B configured to:
 - a. collect fees associated with a request, and
 - b. send a payment or verification of the payment to the services portal 221; and
 - (5) service activation system 229 as depicted in Figure 2B configured to initiate activation or modification of a service according to the service management request.
- I. “A non-transitory computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to at least perform the following”

<u>Disputed Term</u>	<u>Plaintiff's Proposal</u>	<u>Defendants' Proposal</u>
"A non-transitory computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to at least perform the following"	Plain and ordinary meaning applies and no construction is necessary.	The preamble is limiting.

1. Analysis

The parties dispute whether the preamble of independent Claims 1 and 15 of the '210 Patent is limiting.¹³ The Federal Circuit has stressed that there is no "litmus test" for determining whether a preamble is limiting. *See Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006) (citing *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002)). Therefore, "[w]hether to treat a preamble as a claim limitation is determined on the facts of each case in light of the claim as a whole and the invention described in the patent." *Storage Tech. Corp. v. Cisco Sys., Inc.*, 329 F.3d 823, 831 (Fed. Cir. 2003). The Court finds that based on the facts in this case, the preambles of Claims 1 and 15 of the '210 Patent are limiting. First, the preamble provides antecedent basis for an element in a dependent claim. Specifically, the preamble of Claims 1 and 15 recites one or more processors" that perform particular steps. Claim 4, which depends from Claim 1, recites: "wherein the tap causes *the one or more processors* to initiate the determination of the service information." Thus, the preamble of independent Claim 1 provides antecedent basis for dependent Claim 4.

More importantly, the preamble is "necessary to give life, meaning, and vitality" to the claim. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999). As discussed, the preamble recites "one or more processors." The preamble further recites that the

¹³ The parties' arguments for this disputed term can be found in Plaintiff's Opening Claim Construction Brief (Dkt. No. 116 at 30-31); Defendants' Responsive Claim Construction Brief (Dkt. No. 121 at 34); and Plaintiff's Reply Claim Construction Brief (Dkt. No. 122 at 10).

processors execute “a non-transitory computer-readable storage medium carrying one or more sequences of one or more instructions.” The body of the claims then recite a number of steps that are performed when the instructions are executed. Accordingly, the Court finds that the preamble is limiting, because it is necessary to give life, meaning, and vitality to the claim.

2. Court’s Construction

For the reasons set forth above, the preamble of Claims 1 and 15 of the ’210 Patent is limiting and is given its plain and ordinary meaning.

J. “wherein managing the one or more services comprises activating, modifying, discovering, accessing, or setting up the one or more services, and the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one or more services”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“wherein managing the one or more services comprises activating, modifying, discovering, accessing, or setting up the one or more services, and the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one or more services”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “wherein managing the one or more services comprises performing one or more of activating, modifying, discovering, accessing, or setting up for the one or more services, and the management of the one or more services comprises the performance of one or more of activation, modification, discovery, accessing, and setting up for the one or more services.”	“and” is conjunctive, i.e. “management” requires activation, modification, discovery, accessing, and setting up of the one or more services.

1. Analysis

The phrase “wherein managing the one or more services comprises activating, modifying, discovering, accessing, or setting up the one or more services, and the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one

or more services” appears in Asserted Claims 1 and 6 of the ’210 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the word “and” in the phrase “the management of the one or more services comprises activation, modification, discovery, accessing, *and* setting up of the one or more services,” is conjunctive. (emphasis added).¹⁴

The Court rejects Plaintiff’s attempt to rewrite “and” as “or” in the disputed phrase. It is clear that the patentees understood how to draft the claims using the disjunctive “or” if that was their intent. The patentees used “or” in the preceding clause of the disputed phrase (*i.e.*, “wherein managing the one or more services comprises activating, modifying, discovering, accessing, *or* setting up the one or more services”). Plaintiff argues that a conjunctive reading of “and” “would require the simultaneous management of ‘setting up’ a service and ‘discovering’ a service, which Plaintiff claims is nonsensical.” (Dkt. No. 116 at 32). Plaintiff, however, is misreading the claims.

The claims recite that there are two different actions taking place. The first action is by the person seeking the service, and the second action is by the entity responsible for the management of the service. The person seeking the service is the one “managing the one or more services compris[ing] activating, modifying, discovering, accessing, or setting up” the services. *See, e.g.*, ’210 Patent at 5:10–13 (a mechanism, *e.g.*, services management module, is introduced to detect input from a user for managing (*e.g.*, activating or modifying) a service corresponding to a bearer tag 105”), 9:33–36 (“In this example, the services platform 107 receives a request to manage (*e.g.*, activate or modify) a service corresponding to a bearer tag 105 from the UE 101, at 501.”), 12:50–54 (“The user of device 703 initiates a request to activate the E-mail service by tapping the device

¹⁴ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 31-33); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 36-38); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 10-11).

703 on or near the bearer tag 701. The device 703 reads the NFC tag and requests activation of the service via, for example, the services platform 107.”).

The Court agrees with Defendants that a POSITA would understand that this first action should be interpreted as disjunctive, because the person seeking the service is not necessarily seeking to do *all* of the listed things as indicated in the specification. By contrast, the entity responsible for the management of the services must be able to manage all of the potentially requested services. As a result, the claim intentionally recites that “*management*” of the services comprises “activation, modification, discovery, accessing, *and* setting up of the one or more services.” This ensures that the management of the services covers all of the potential services selected by the user. Contrary to Plaintiff’s contention, nothing requires the management of these actions at the same time. Instead, the recited “management” only requires the ability to do all of them, which indicates why the patentees intentionally selected “and” instead of “or.”

Plaintiff cites to cases and argues that there is no “per se rule” that when “and” follows “at least one of” it is always conjunctive. (Dkt. No. 116 at 31-32) (citing *3rd Eye Surveillance, LLC v. United States*, 140 Fed. Cl. 39, 69 (2018); *Shotkam LLC v. Tachyon, Inc.*, No. CV H-20-1070, 2021 WL 23311, at *5-6 (S.D. Tex. Jan. 4, 2021)). The cases cited by Plaintiff are inapplicable to the claim language at issue here. Those cases turned on the use of “at least one of,” *See e.g.*, *3rd Eye Surveillance*, 140 Fed. Cl. at 68–69 (construing “based on at least one of the additional information and the imagery data”), and *Skotkam*, 2021 WL 23311, at *2–3 (construing “at least one of ...”). The phrase “at least one of” is not in the disputed phrase. Instead, the disputed phrase recites “the one or more services.”

Plaintiff argues that this “one or more” language is an “equivalent phrase” to “at least one of.” (Dkt. No. 122 at 10). Again, Plaintiff is misreading the claims. The “one or more services” is

referring to the actual service and not the management of the services. A review of the actual claim language finds that there is not “one or more” language for the management of the service or services. Indeed, Plaintiff’s misreading and proposed redrafting of the claim is illustrated in its alternative construction where it proposes to add “the performance of one or more of,” in addition to “the one or more services” language. This would be improper given the intrinsic evidence. Thus, the cases cited by Plaintiff are inapplicable. Accordingly, the Court rejects Plaintiff’s attempt to redraft the conjunctive “and,” to mean the disjunctive “or.”

2. Court’s Construction

For the reasons set forth above, the **“and”** in the phrase **“wherein managing the one or more services comprises activating, modifying, discovering, accessing, or setting up the one or more services, and the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one or more services”** is conjunctive, and requires **“the management of the one or more services”** to include the ability to do activation, modification, discovery, accessing, and setting up of the one or more services.

K. “predetermined billing arrangement”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“predetermined billing arrangement”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “a billing arrangement that has been predetermined.”	Indefinite. Alternatively, “an existing arrangement for invoicing the service managed by the service management request that is between one receiving the service and the service manager.”

1. Analysis

The term “predetermined billing arrangement” appears in Asserted Claims 3 and 8 of the ’210 Patent; and Asserted Claims 3 and 8 of the ’994 Patent. The Court finds that the term is used

consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the term “predetermined billing arrangement” is indefinite.¹⁵ In the alternative, Defendants argue that a “predetermined billing arrangement” is an arrangement for invoicing (the “billing arrangement”) for the service (what is being billed for) existing between the one seeking the service and the one providing the service (preexisting arrangement between the parties with the arrangement). (Dkt. No. 121 at 35-36).

Defendants contend that the fundamental problem with the claim term is that all billing arrangements can be described as “predetermined.” (*Id.* at 35). Defendants argue that Claim 3 depends from and purports to be narrower than Claim 1, because it recites a “predetermined billing arrangement,” whereas Claim 1 recites only a “billing arrangement.” *Id.* According to Defendants, the scope of Claim 3 is indefinite, because every billing arrangement can be simultaneously described as both a billing arrangement and a predetermined billing arrangement. *Id.*

The Court finds that the term is not indefinite. The specification provides a description of interacting with a bearer tag to initiate a service request according to a predetermined billing arrangement. ’994 Patent at 5:40–43 (“It is noted that a service that can be initiated quickly and billed through a single tap is likely to be more attractive to users, which can drive more users to the service.”), 6:55–57 (“the bearer tag reader is a component of the UE 101 (e.g., a handset with a built-in reader) in which the services management module 111 resides.”). This process may “involve a customer tapping a bearer tag with their mobile phone to purchase an item or to allow a similar commercial event to occur.” Dkt. No. 116-1 at ¶ 88. Moreover, a POSITA would understand that “a services catalog database and billing system” enable the determination of the

¹⁵ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 33-35); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 34-36); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 11).

user and related billing information based on identification information present in both the bearer tag and the user device. *Id.* (citing '994 Patent at 7:14–34).

With this background, the '994 Patent discloses the following:

A request is generated to manage the service according to the service information from the bearer tag 105, and is forwarded to the services platform 107 for processing according to a billing arrangement or a predetermined billing arrangement with, for instance, the carrier. For example, the billing arrangement is effected using mechanisms such as premium short message service (PSMS), wireless application protocol (WAP) billing service. The billing arrangement also may be configured to bill the user periodically (e.g., one a month) without additional action from the user.

'994 Patent at 5:26–36. The specification further discloses:

The device 703 reads the NFC tag and requests activation of the service via, for example, the services platform 107. If this is a first tap 705 by the device 703 on the bearer tag 701, the services platform 107 processes the request and activates the service according to a predetermined billing arrangement (e.g., bill the service directly to the user's phone bill).

Id. at 13:2–8. Thus, a “predetermined billing arrangement” is a billing arrangement that is determined before the transmission of the service management requests. In contrast, a “billing arrangement” may be determined either before or after the transmission of the service management requests. If the “billing arrangement” is determined after the service management requests is transmitted, then it would not be “predetermined.” Therefore, the dependent claims further narrow the independent claims in this manner. Accordingly, the Court finds that Defendants failed to prove by clear and convincing evidence that the term is indefinite, and the term should be given its plain and ordinary meaning.

Turning to Defendants’ alternative construction, the Court finds that it is not supported by the intrinsic evidence. There is no disclosure of the predetermined billing arrangement being “between one receiving the service and the service manager.” Specifically, the term “service

manager” does not appear in the claims or the specification. Defendants failed to provide a persuasive reason to read a new and undisclosed term into the claims. Accordingly, the Court rejects Defendants’ alternative construction.

2. Court’s Construction

The Court finds that the term “**predetermined billing arrangement**” is not indefinite, and is given its **plain and ordinary meaning**.

L. “mobile communication service provider that has a billing arrangement with a user account associated with the user equipment”

<u>Disputed Term</u>	<u>Plaintiff’s Proposal</u>	<u>Defendants’ Proposal</u>
“mobile communication service provider that has a billing arrangement with a user account associated with the user equipment”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “a provider of mobile communication service, wherein the provider has a billing arrangement with a user account, and the user account is associated with the user equipment.”	Plain and ordinary meaning which is “the billing arrangement is with the mobile communication service provider.”

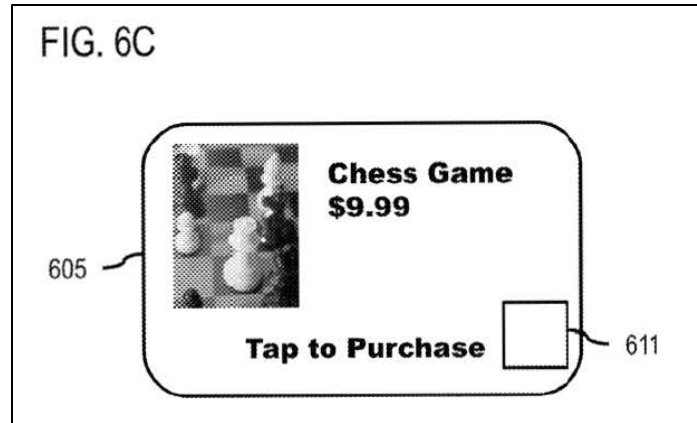
1. Analysis

The phrase “mobile communication service provider that has a billing arrangement with a user account associated with the user equipment” appears in Asserted Claims 1 and 6 of the ’994 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The parties dispute whether the disputed claim language allows the billing arrangement to be with some entity other than the mobile communication service provider, as Plaintiff contends.¹⁶

¹⁶ The parties’ arguments for this disputed term can be found in Plaintiff’s Opening Claim Construction Brief (Dkt. No. 116 at 35-36); Defendants’ Responsive Claim Construction Brief (Dkt. No. 121 at 38-41); and Plaintiff’s Reply Claim Construction Brief (Dkt. No. 122 at 11-12).

Claims 1 and 6 recite “a mobile communication service provider that has a billing arrangement with a user account associated with the user equipment.” The disputed limitation is part of the larger phrase: “one or more services offered by one or more service providers *independent from* a mobile communication service provider that has a billing arrangement with a user account associated with the user equipment.” *See, e.g.*, ’994 Patent at 22:31–34 (emphasis added). Thus, the plain language of the claims requires two entities: (1) “a mobile communication service provider that has a billing arrangement” with the user (*i.e.*, “mobile service provider”), and (2) “one or more service providers independent from” the mobile service provider (*i.e.*, “independent service provider”). In other words, the claims require that the costs for services from the independent service provider (*e.g.*, music provider, game provider, video provider, navigation provider, products provider, etc.) be charged through the billing arrangement between the user and the mobile service provider (*e.g.*, Verizon, AT&T, or T-Mobile).

This understanding of the claim language is found in the intrinsic evidence. Specifically, charging the user for independent services *through their mobile bill* is a focus of the specification. In particular, the specification discloses that the “services platform 107 ... interacts with the network billing system 109 to coordinate payment and billing for the services.” ’994 Patent at 4:52–67. In fact, the entire purpose of the “payment gateway” module of the “services platform” is to provide “direct billing” *to the “user’s phone bill.”* *Id.* at 7:35–8:6. (describing six ways of direct billing to the user’s phone bill). For example, if the user purchases a chess game from an independent service provider to play on their phone (as shown in Figure 6C of the ’994 Patent), the \$9.99 would be billed on the user’s mobile phone bill.



'994 Patent at Figure 6C. In other words, the user would not receive a separate bill from the publisher of the chess game. Instead, the billing for the management of independent services through the user's mobile phone bill would accomplish the goal of the '994 Patent, which is the "efficient and convenient management of services." *Id.* at 1:26–30.

Moreover, the patentees expressly disavowed Plaintiff's reading of the claim to allow a billing arrangement between the independent service provider and the user. The claims were rejected as obvious over a combination that included U.S. Patent Pub. Nos. 2004/0002305 ("Byman-Kivivuori") and 2009/0131025 ("Sharma"). (Dkt. No. 121-5 at 12). In arguing to traverse the rejection, the patentees stated that Byman-Kivivuori only charged its own fees, and "does not bill for other services providers, much less [disclose] *about billing for one or more other service providers as specifically claimed.*" *Id.* at 13 (emphasis added).

The patentees also stated that Sharma "does not bill for other service providers, thus shares the same deficiencies as *Byman-Kivivuori.*" *Id.* at 14. Thus, the patentee clearly and unmistakably argued that the claim language *required* that one provider (*i.e.*, the mobile service provider) bill the user for services provided by another provider (*i.e.*, the independent service provider). Indeed, the claims were amended requiring the "one or more service providers" to be "independent" from the "mobile communication service provider." This amended claim language was the focus of the

patentees' arguments to the examiner. To the extent that a party argues that the claim language allows the billing arrangement to be with some entity other than the mobile communication service provider, the Court rejects that argument.

Turning to the parties' constructions, Defendants' construction eliminates any reference to "a user account associated with the user equipment." Accordingly, the Court does not adopt it. Plaintiff's construction modifies the claim term "mobile communication service provider" to "provider of mobile communication services." This rearrangement of words is unnecessary and yields a construction contrary to the plain meaning of the term. A "mobile communication service provider" is commonly understood as the provider that operates the wireless networks. Indeed, the specification states the following:

The network billing system 109 is owned by, for instance, a service provider (e.g., cellular service provider) through which the users of UEs 101a-101n have their communication (e.g., wireless) service. Accordingly, the user of UEs 101a-101n generally already has a billing relationship with the network billing system 109 and the associated service provider.

'994 Patent at 4:61–67; *see also*, '994 Patent at 1:14–17 ("Wireless (e.g., cellular) service providers and device manufacturers are continually challenged to deliver value and convenience to consumers by, for example, providing compelling services, applications, and content.")). Plaintiff's construction changes the common meaning of the term to include anyone who provides any mobile communication service. Accordingly, the Court rejects Plaintiff's construction.

During the claim construction hearing, Plaintiff objected to excluding "third parties" from being a part of the billing arrangement. The Court finds that the "one or more service providers" are not necessarily excluded from being a part of the billing arrangement. However, the "one or more service providers" are only included to the extent that they collect payment from the "mobile communication service provider," and not from "the user account associated with the user

equipment.” The plain claim language requires the “one or more service providers” to be independent of the “mobile communication service provider.” The prosecution history further requires the “mobile communication service provider” to “bill for other service providers.” (Dkt. No. 121-5 at 13-14). Accordingly, the Court rejects any argument that purports to allow the “one or more service providers” to take the place of the “mobile communication service provider.”

2. Court’s Construction

For the reasons set forth above, the phrase **“mobile communication service provider that has a billing arrangement with a user account associated with the user equipment”** is given its **plain and ordinary meaning**.

VI. CONCLUSION

The Court adopts the constructions above for the disputed terms of the Asserted Patents. Furthermore, the parties should ensure that all testimony that relates to the terms addressed in this Order is constrained by the Court’s reasoning. However, in the presence of the jury the parties should not expressly or implicitly refer to each other’s claim construction positions and should not expressly refer to any portion of this Order that is not an actual construction adopted by the Court. The references to the claim construction process should be limited to informing the jury of the constructions adopted by the Court.

SIGNED this 10th day of January, 2025.


ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE