

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

HANSHOW TECHNOLOGY CO., LTD.,

Plaintiff,

v.

SES-IMAGOTAG SA AND SES-IMAGOTAG
GMBH,

Defendants.

Civil Action No. 2:23-cv-174-RWS-RSP

Jury Trial Demanded

VUSIONGROUP'S CLAIM CONSTRUCTION BRIEF

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Exhibit	Abbreviation	Reference
	Op. Br.	Hanshow's Opening Claim Construction Brief, Dkt. No. 116
1	'216 patent	U.S. Patent No. 11,540,216
2	'210 patent	U.S. Patent No. 8,346,210
3	'994 patent	U.S. Patent No. 9,641,994
4	Annex to Communication - Opposition	Annex to Communication – Opposition for EP3820203
5	'216 File History	November 26, 2012 Office Action Response for U.S. Patent No. 11,540,216
6	Shamos Decl.	Declaration of Michael Shamos, Ph.D.
7	Shamos Reb. Decl.	Rebuttal Markman Declaration of Michael Shamos, Ph.D.
8	Shamos Dep.	Excerpts of Transcript of 10/28/24 Deposition of Dr. Michael Shamos.
9	Souri Dep.	Excerpts of Transcript of 10/31/2024 Deposition of Dr. Shukri Souri
10	Souri Decl.	Declaration of Dr. Shukri Souri
11	Infringement Contentions	Excerpt of Plaintiff's Infringement Contentions, Claim Chart of the '994 Patent
12	Webster's Dictionary	Excerpt of Webster's New College Dictionary, Third Edition (SES-EDTX_00084603)
13	American Heritage Dictionary	Excerpt of The American Heritage Dictionary of the English Language, Fourth Edition (SES-EDTX_00084607)

TABLE OF DISPUTED TERMS

Section	Term	VusionGroup	Hanshow
III.A	“Normal monitoring mode” [’216 patent, Cls. 1, 7, 14]	Plain and ordinary meaning, which is “a default mode in which incoming communications are monitored at intervals of a specified time period”	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.”
III.B	“fast monitoring mode” [’216 patent, Cls. 1, 7, 14]	Indefinite.	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.”
III.C	“the base station comprises two wake-up modes: a normal wake-up mode and a[/the] fast wake-up mode” [’216 patent, Cls. 1, 7, 14]	Indefinite	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 wake-up 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.”

Section	Term	VusionGroup	Hanshow
III.D	“fast wake-up instruction” [’216 patent, Cls. 1, 7, 14]	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”	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “an instruction sent from the base station to a certain electronic tag device to wake up the electronic tag device while the base station is in its fast wake-up mode.”
III.E	“external device” [’216 patent, Cls. 1, 7, 14]	Indefinite.	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.”
IV.A(1)	“bearer tag” [’210 patent, Cls. 1, 2, 6, 7, 12, 14, 15, 16; ’994 patent, Cls. 1, 2, 6, 7, 12]	Plain and ordinary meaning which is “tag containing information related to one or more corresponding services available to the bearer of the 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.”

Section	Term	VusionGroup	Hanshow
IV.A(2)	“initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag” [’210 patent, Cls. 3, 8; ’994 patent, Cls. 1, 6]	Plain and ordinary meaning, which is “initiating a process of determining information about one or more services from information contained by 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.”
IV.A(3)	“service management request” [’210 patent, Cls. 1, 6; ’994 patent, Cls. 1, 2, 6, 7, 15, 18]	“a request that identifies a service and contains information for managing that service.”	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.”
IV.A(4)	“services platform for management of the one or more services according to a billing arrangement” [’210 patent, Cls. 1, 5, 6, 10,14]	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.	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.”

Section	Term	VusionGroup	Hanshow
IV.A(4)	“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” [’994 patent, Cls. 1, 6]	Governed by 35 U.S.C. 112 ¶ 6 Function: Managing the one or more services and one or more costs 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.	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.”
IV.B(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” [’210 patent, Cls. 1, 15]	The preamble is limiting.	Plain and ordinary meaning applies and no construction is necessary. If the Court decides that a construction is required, Hanshow proposes “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 actions listed in the remaining limitations of this claim.”
IV.B(2)	“predetermined billing arrangement” [’994 patent, Cls. 3, 8]	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.”	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.”

Section	Term	VusionGroup	Hanshow
IV.B(3)	“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.” [’210 patent, Cls. 1, 6]	“and” is conjunctive, i.e. “management” requires 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.”
IV.C(1)	“mobile communication service provider that has a billing arrangement with a user account associated with the user equipment” [’994 patent, Cls. 1, 6]	Plain and ordinary meaning which is “the billing arrangement is with the mobile communication service provider.”	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.”

I. Introduction

The parties have a number of disputes over the proper scope of the claims. Yet, Hanshow insists that the Court should not construe any of the claim terms presented below. But declining to construe terms where, as here, there are clear disputes over claim scope would be plain error.¹ Surely, Hanshow knows that. So, why does Hanshow ask the Court to commit legal error? The answer is that Hanshow wants to pretend that it is offering a plain and ordinary construction of the claim terms, while offering instead a radical re-write of the claims intended to fit its strained infringement theory. The Court should not be fooled: Hanshow's attempt to re-write the patents should be rejected, and the Court should construe the claims, where possible, in view of the actual meaning of the claim terms as proposed by VusionGroup.

II. Level of Ordinary Skill In the Art

The parties have formulated slightly different proposed levels of ordinary skill. Any differences between these proposals would not affect claim construction. Thus, for the purposes of claim construction (and reserving the right to later identify VusionGroup's different level of skill in a different context), VusionGroup does not object to the Court applying Hanshow's proposed level of skill.

III. U.S. Pat. No. 11,540,216

Electronic shelf labels ("tags") are small electronic devices that are used, for example, in retail stores. They have screens that can display price and other information and may communicate with other devices so they can be easily updated—e.g., in case of a price change—or to provide additional information to customers. Both parties make and sell such devices.

According to the '216 Patent, tags communicate by monitoring for communications on a

¹ *O2 Micro Intern. Ltd. v. Beyond Innovation Technology Co., Ltd.*, 521 F.3d 1351, 1360-63 (Fed. Cir. 2008).

schedule. The specification says that the tags “automatically wake[] up every other time period ... to monitor whether there is a communication request.” Ex. 1, ’216 Patent, 1:24–29. The supposed invention is a method for individual tags to dynamically switch between two “modes” to monitor for incoming communications. A tag begins in a default, that is, “normal” monitoring mode, dynamically switches to a temporary “fast” monitoring mode in response to an NFC² interaction, and switches back to its “normal” mode when the interaction is complete. As explained by Hanshow’s claim-construction expert, Dr. Souri, the supposed novelty of the ’216 Patent is that the tags can “use[] different schemes dynamically such that you were able to switch from one to the other, that’s—that’s what the ’216 is about.” Ex. 9, Souri Depo., 65:2–7. According to the ’216 Patent, this dynamic switching avoids the need to configure all tags to monitor more frequently, conserving battery life. Ex. 1, ’216 Patent, at 3:2-29.

The specification explains the supposed invention with reference to Fig. 2. In the first step, an external device—for instance, an NFC-capable device—transmits “first data” to a particular tag. *Id.*, 4:8-10. The tag receives the first data, sends that first data to a “base station” and enters a “fast monitoring mode.” The base station passes the first data to a “background server,” which then generates “second data according to the first data,” and sends the second data and a “control instruction” back to the base station. The base station then receives the second data and control instruction from the server and sends that, along with a “fast wake-up instruction,” to the tag. The base station is supposed to communicate with the tag in a “fast wake-up mode,” but neither the specification nor the claims explain what that is. Finally, in the last step, the tag receives the second data, the control instruction, and the fast wake-up instruction, and when the communication is

² NFC refers to “near field communication” technology, which allows devices to send small communications over short distances with minimal power—like tapping a credit card to a reader to complete a payment transaction.

complete, switches back to its normal monitoring mode. *Id.* at 4:27-30.

A) “normal monitoring mode” (Cl. 1, 7, 14)

There are two disputes over the term “normal monitoring mode”: (1) what is a “monitoring mode?” and (2) when is it “normal?” Both are addressed by VusionGroup’s construction (“a default mode in which incoming communications are monitored at intervals of a specified time period”); neither are addressed by Hanshow’s construction (“a monitoring mode of the electronic tag device in which the monitoring period is longer than that of the fast monitoring mode”).

The specification uses the term “monitoring” in its conventional way to refer to tags that are awake and listening—that is, “monitoring”—for incoming communications. As the specification explains it, tags are either awake and monitoring for communications, ’216 patent, 1:25–27 (the tag “wakes ... to monitor whether there is a communication request”) or asleep and not monitoring for communications, *id.* at 1:33–35 (if the base station “intends to communicate with a certain electronic tag device, the electronic tag device needs to be waked up [sic] at first for a period”). The tags dynamically switch between these states of not monitoring (asleep) and monitoring (awake), and the specification describes this cycle (asleep + awake) as a “monitoring period.” *Id.* at 1:23-29. On this, the parties’ experts largely agree. Ex. 7, Shamos Reb. Decl., ¶ 23 (1) (“The monitoring period (monitoring plus not monitoring) is the same.”); Ex. 9, Sourì Dep. 118:21-119:1 (“Q: How does one define the total [monitoring] period? A: . . . the non-listening interval plus the listening interval.”).

As VusionGroup has proposed, a person of ordinary skill would also understand that “monitoring” is a function that repeats at intervals of a specified time period. Hanshow’s expert, Dr. Sourì, agrees. *Id.* at 113:10-13 (“the term ‘period’ is obviously well understood in the art as something that has a time associated with it that repeats in some regularity.”); 115:7-12 (“Q: As I

understand your testimony, you've got a monitoring interval within this period, right? A: Yes. It's a period during which the electronics are active, when it's listening, and within that same period there is some time when the monitoring electronics are not active."'). Thus, VusionGroup's construction accurately reflects the ordinary meaning of "monitoring mode."

Hanshow argues that the tags are not monitoring for "communications," but rather—as Hanshow explains it—"communication requests." Op. Br., 6. The point of this distinction apparently being that "monitoring" only relates to "requests" for communications, and not the communications themselves.³ *Id.* But the claims never reference a "communication request" and Hanshow has not cited any lexicography in the specification that defines "communication," a term used in the claims, as "communication request." The specification describes that the base station and tag are *constantly* communicating in both the tag's "normal" and "fast" monitoring modes. Ex. 1, '216 Patent at 4:53-54 (in "normal monitoring mode" the "base station communicates with the electronic tag device in a normal wake-up mode"); 6:5-6 & Fig. 3 (tag communicating with base station in its normal monitoring mode). Even Hanshow's expert agrees that tags monitor for communications and not just "communication requests." See Ex. 10, Souri Decl. ¶ 56 ("the default state would be the normal monitoring mode, as opposed to the period where *communications* are monitored more frequently") (emphasis added).

The second dispute is the definition of "normal" in "normal monitoring mode." Hanshow defines "normal" relative only to "fast" and vice versa. According to Hanshow, "normal" is where a "monitoring period" is longer than "fast." This definition deviates from the plain and ordinary meaning of the word "normal," which is "standard," "typical," or "usual." Ex. 12, Webster's

³ Hanshow's argument discusses a "data transmission mode," Op. Br., 6, that doesn't appear in the claims, the method described in reference to Fig 2 and 3 or either party's construction. The phrase, whatever it might relate to, is entirely irrelevant.

Dictionary at 5. None of these common definitions are relative to anything else. The specification also uses “normal” in its ordinary way, explaining that the normal monitoring mode is a tag’s default mode: “[b]y default, the electronic tag device performs monitoring in a *normal monitoring mode* supported by the first communication path.” Ex. 1, ’216 Patent at 4:51-53 (emphasis added). Hanshow’s expert also understands that a “normal monitoring mode” is a “default” mode. Ex. 10, Souri Decl. ¶¶ 31 (“The normal monitoring mode represents the default state . . .”); 56 (“the normal monitoring mode is the default, or normal, state of the electronic tag device . . .”); 57 (“Therefore, it is my opinion that a POSITA would understand that the default state would be the normal monitoring mode . . .”).

B) “fast monitoring mode” (Cl. 1, 7, 14)

This dispute turns on whether “fast” is a term of degree that a person of skill in the art could understand with relative certainty. It is not. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005) (“When a word of degree is used the district court must determine whether the patent’s specification provides some standard for measuring that degree.”) (internal quotation marks omitted). Hanshow proposes that “fast” simply means “faster than normal.” But neither the specification nor Hanshow, Op. Br., 7-9, identify any objective way to measure whether the tag’s monitoring mode is “fast” or “faster” than its normal mode.

The parties’ experts agree that a monitoring period that is simply “shorter than normal,” as proposed by Hanshow, does not make a monitoring mode “fast.” See Ex. 8, Shamos Depo. 64:13-18 (“any difference [in monitoring period] at all doesn’t count, because no two monitoring periods are going to be identical down to even a microsecond . . . ”); Ex. 9, Souri Dep. 130:3-9 (“Q: . . . But we agree that there are circumstances where a monitoring period might be shorter, but you wouldn’t consider the monitoring period to be a fast monitoring mode? A: Right. Because it depends on the

source of such discrepancy.”); 128:25-129:20 (length of monitoring period insufficient to determine whether “fast”). Thus, simply defining “fast” as “faster than normal” is not enough, by itself, to distinguish “normal monitoring mode” from “fast monitoring mode.”

That is why—supporting the indefiniteness of the term, and contrary to its own construction—Hanshow is forced to introduce additional factors beyond the length of a “monitoring period” that a person of skill *might* consider in making the distinction between fast and normal monitoring modes. For example, Hanshow’s expert ties “fast” to whether battery life is conserved. Ex. 9, Souri Dep. 120:22-121:12 (to determine “fast,” a “person of ordinary skill would understand that [] we’re talking about something where you are making measurements that are-- not going to have an effect on power consumption, you are looking for significant changes in power consumption.”); 123:5-23 (to determine if a monitoring mode was “fast” a POSITA would have to conduct “an analysis to see what appreciable difference in power consumption [] would be”, but “not saying that it has to have some difference” and “a microsecond difference” may or may not be “the determining factor”). Hanshow’s brief takes a different tack, tying “fast” to “improved response speed.” Op. Br., 7-8 (“a fast monitoring mode is a mode whereby the monitoring period—relative to the normal monitoring mode—is *shortened to achieve improved response speed.*”) (emphasis added).

But even if the specification tied “improved battery life” and “improved response speed” to determining whether a monitoring mode was “fast” (it doesn’t), those factors suffer the same lack of objective measure, and thus, do not fix the indefiniteness problem. Indeed, response speed and battery life can vary even when a “monitoring period” stays exactly the same. See Ex. 7, Shamos Reb. Decl. at ¶¶ 23-25 (describing scenarios where a “monitoring period” remains the same, but a tag is monitoring more or less often, effecting battery life in various ways). Courts

routinely find similar terms indefinite. See e.g., *Vstream Techs, LLC v. PLR Holdings, LLC*, No. 6:15cv974-JRG-JDL, 2016 WL 6211550, at *6-8 (E.D. Tex. Sept. 27, 2016) (terms “sufficiently correct” and “not sufficiently correct” indefinite where the specification and intrinsic evidence did not provide sufficiently objective guidance to know when the determination being made in the process was or was not “sufficiently correct”); *Secor View Techs LLC v. Nissan North America, Inc.*, Nos. 12-306 (FSH), 12-3308 (FSH), 12-3310 (FSH), 2013 WL 6147788, at *6-7 (D.N.J. Nov. 21, 2013) (finding the claim limitation “low angle” indefinite since the specification failed to give a standard to know how to measure if an angle was “low” or not).

C) “the base station comprises two wake-up modes: a normal wake-up mode and a[the] fast wake-up mode” (Cl. 1, 7, 14)

This term is indefinite because “normal” and “fast wake-up modes” have no understood definition in the art, and neither the claims nor the specification define what these modes are, what they do—or why they even exist.

A “wake-up mode” has no understood meaning in the art, and Hanshow does not claim that it does. See Ex. 6, Shamos Decl. ¶¶ 51 (“a POSITA would not be able to ascribe any meaning to the term “normal wake-up mode.” Initially, I am not aware of any definite meaning in the art that can be ascribed to the phrase “normal wake-up mode” without some objective basis for determining normality.”), 54, 56-57. Thus, the meaning of the terms must come from the claims and specification.

The claims describe the wake-up modes as modes of the base station—“the base station comprises two wake-up modes: a normal wake-up mode and a fast wake-up mode.” Ex. 1, ’216 Patent, Cl. 1.⁴ But besides that, the specification never describes anything about the “normal” and

⁴ Claims 7 and 14 substitute the definite article “the” for the indefinite article “a.”

“fast wake-up modes.” The specification never suggests that those modes modify the performance of the base stations in some way. Indeed, this is exactly what the European Patent Office found in rejecting the European equivalent of the ’216 Patent, EP3820203. The EPO explained:

However, as objected by the Opponent, the invention does not appear to disclose the specific characteristics of each of the two wake-up modes of the base station (i.e., the “*normal*” and the “*fast*” wake-up modes) and, as the communication tag-base station under two different modes is the most essential aspect of the claimed invention, it seems that a skilled person would not know how to implement the invention of claim 1 without knowing how to implement the normal wake-up mode and the fast wake-up mode in the base station, thereby infringing the requirements of Article 83 EPC.

Ex. 4, Annex to Communication - Opposition at 4 (emphasis in original).

Not even Hanshow’s expert can clearly define what a “wake-up mode” does, besides simply existing in a “fast wake-up mode” when sending a “fast wake-up instruction.” Ex. 9, Souri Depo. 146:22-147:3 (Q: So what does the base station do in normal wake-up mode that it doesn't do in fast wake-up mode? A: Well, in fast wake-up mode, what the base station does -- and I start with fast wake-up, because what it does in fast wake-up mode it doesn't do in normal wake-up mode.”); 147:13-18 (“Well, normal wake-up -- so a wake-up mode is a mode that is characteristic of the base station, and it basically is an ability to communicate with the electronic tag to inform it that, hey, I’m about to send some data that I – I want you to receive.”).

Hanshow argues that the “wake-up modes” are somehow tied to “the relationship between the monitoring periods” of the tags “where a base station needs to communicate with electronic tags differently” Op. Br., 12. But this does not explain how a base station would communicate differently with the tag, and neither the specification nor the claims describe that a base station communicates with a tag any differently in “normal” or “fast” wake-up mode. Just the opposite. The claims specify that the base station is already in its “fast wake-up mode” when communicating a “control instruction,” “fast wake-up instruction,” and “second data.” Ex. 1, ’216 Patent, Cl. 1.

The base station doesn't need to be in a "normal wake-up mode" for anything. And yet, the base station is constantly communicating with the tag regardless of what mode either are in. *Id.* at 4:53-54; 6:5-6 & Fig. 3. Nothing changes, and nothing is different, and thus, neither the claims nor the specification provide a basis to know whether a base station is in one mode or the other, which is textbook indefiniteness. *In re: Taasera Licensing LLC, Patent Litigation*, 2023 WL 8628323, *20 (E.D. Tex. 2023) ("substantially real time" was indefinite when claims also included the term "real time" because use of both terms "suggests some difference in scope between 'real time' and 'substantially real time,' but Taasera points to nothing that explains where one ends and the other begins.").

In addition to not explaining what any "wake-up" mode of a base station is, or does, the specification and claims don't explain the difference between the two modes. Hanshow again argues that "normal" and "fast" wake-up modes are distinguished based on their effect on battery life—but not of the base stations that have the modes—but the battery life of the *tags*. Op. Br., 11 ("the effect of different wake-up modes on the power consumption of the *electronic tag devices*, not of the *base station* ...") (emphasis added). Nothing in the specification, however, describes how either wake-up mode effects power consumption by tags (or the base stations for that matter). And anyway, Hanshow's expert agrees that a base station would not need to conserve battery since it is plugged into power. Ex. 9, Souri Depo. at 169:9-170:11 ("It may, but I think a person of ordinary skill would understand and appreciate that a battery – or rather, a base station is actually plugged into power and so there is no need for mobile power to be supplied to the base station."). Nor does the specification describe that either of the modes alter a tag's battery consumption. The tag is already "awake" and regularly listening for communications in its fast-monitoring mode when the base station sends information in its "fast wake-up mode." Ex. 1, '216 Patent, Cl. 1. The

specification doesn't describe how a "normal" or "fast wake-up mode" effects the tags at all.

Hanshow construes "normal/fast wake-up mode" as modes where a base station "*may assume* that the electronic tag device is in its normal/fast monitoring mode." Yet, nothing in the specification or claims describes any such "assumptions," what form they might take, or why the base station would make those assumptions in the first place. Ex. 6, Shamos Decl. ¶ 59. And since the specification never describes the base station as making "assumptions," the specification provides no guidance as to what effect, if any, the assumptions have on the base station or how a person of skill would design around such "assumptions" to avoid the patent. *See id.* Thus, Hanshow's construction fails to solve the central mystery of *what* the fast and normal wake-up modes *actually do* or *how they differ*, which is precisely why the term is indefinite.

D) "fast wake-up instruction" (Cl. 1, 7, 14)

The parties dispute what a "fast wake-up instruction" instructs a tag to do. VusionGroup's construction ("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") proposes that the instruction tells the tag to remain in "fast monitoring mode," so that data can be received by the tag. Hanshow's construction ("an instruction sent from the base station to a certain electronic tag device to wake up the electronic tag device while the base station is in its fast wake-up mode") suggests the tags do something the specification says they do not do.

The "fast wake-up instruction" does not "wake up" the tags as Hanshow's construction proposes. The specification says that tags cannot receive communications *unless* they are awake. *See* Ex. 1, '216 Patent at 1:32-39. The specification describes a system where tags "*automatically wake[] up every other time period ... to monitor whether there is a communication request.*" *Id.*, 1:25-27 (emphasis added). That a monitoring period would shorten to increase response speed of

the tags further demonstrates that the specification does not describe a tag as “waking-up” upon receipt of an instruction (from the base station or otherwise), but only on a regular schedule. *Id.*, 1:55–57 (“In order to improve the response speed of the electronic tag device, it is required to shorten the monitoring period”).

Hanshow’s construction requires the tags to receive an instruction while asleep, and then wake-up. But this is inconsistent with the supposed invention, claims, and specification, none of which describe a tag that can receive an instruction while asleep and wake-up. It is no surprise, therefore, that Hanshow’s expert agrees with VusionGroup’s proposed construction that the purpose of the fast wake-up instruction is to tell the tag device to remain in the fast monitoring mode, not to cause it to “wake up” in the first place. Ex. 9, Sour Depo. at 168:6-12 (Q: “Okay. So just so I make sure I got what you’re saying, you say that what’s going to happen here is that the base station is going to tell the tag to stay awake with a fast wake-up instruction, right?” A: “To stay awake in fast monitoring mode, yes.”).

E) “external device” (Cl. 1, 7, 14)

The Court should construe the term “external device” as indefinite because the claims and specification are ambiguous as to what qualifies as an *external* device. 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. See *Personalized Media Commc'ns LLC v. Zynga, Inc.*, No. 2:12-CV-68-JRG-RSP, 2013 WL 4630447, at *24 (E.D. Tex. Aug. 28, 2013) (“If the meaning of ‘peripheral’ was merely separate from the CPU then at the time of the invention there would be no need to describe these various devices as a ‘peripheral.’”). The specification does not say whether the device is external to the tag, background server, base station, or some combination of the three. A POSITA would

thus not know when they are in possession of an “external device” as opposed to simply a “device.”

Hanshow construes “external device” as meaning external *to the tag*, but nothing in Hanshow’s brief supports its construction. Hanshow cites part of the specification describing various examples of wireless communication between the “external device” and the tags. Op. Br. at 15 (citing ’216 Patent at 4:31-34, 41-50). This only explains that the tag and device communicate wirelessly through a “second communication path,” and does not explain why an “external device” is different than a “device,” to what it must be external, or even whether the device must be physically external. Dr. Souri’s opinion that the “external device could take the form of a mobile phone, PDA or other handheld device” is similarly unhelpful because it is just a list of examples that doesn’t solve the mystery of what a “device” is external to, and also adds the limitation that the device must be “handheld.” *Id.* (citing Souri Decl. at ¶ 71). There is not any explicit support in the specification to determine, one way or the other, the system components to which the device is external, thus the term is indefinite.

IV. The ’210 and ’994 Patents (“Nokia Patents”)

The ’210 and ’994 Patents—previously owned by Nokia before Hanshow acquired them to assert in this case (the “Nokia Patents”)—are directed to managing services such as games, email, navigation, etc. on pre-smartphone-era cell phones—Nokia’s then bread-and-butter. With pre-smartphone-era cell phones, “a user searches for and discovers services by, for instance, paging through lists of available services....” Ex. 2, ’210 patent, 4:64–67. The specification recognizes this “process can be complex and cumbersome ... particularly when the [phone] ... is a device [with] limited input capabilities (e.g., a handset with numeric keypad),” *id.*, 5:1–3.

The Nokia Patents supposedly solve this problem by managing services through “bearer tags.” A user can tap or scan a bearer tag with their phone to access or otherwise manage services.

According to the specification, bearer tags can be distributed in the box with a new phone to help “[w]ireless (e.g., cellular service providers and device manufacturers ... deliver value and convenience to customers.” *Id.*, 1:6–8. Figure 6B shows a bearer tag distributed in a new-phone box. *Id.*, 10:61–67. By “tapping” a bearer tag, a user’s device (a cell phone, for instance) can read the bearer tag—via conventional technology such as NFC, RFID, or barcode reader. The user device uses information from the bearer tag to communicate with a “services platform,” which in turn, enables or manages the service on the user device and charges fees for the service directly to the user’s phone bill—as opposed to sending a separate bill from the service provider.

A) ’210 and ’994 Patent Shared Terms

(1) “bearer tag” (’210 Cl. 1, 2, 6, 7, 12, 14, 15, 16; ’994 Cl. 1, 2, 6, 7, 12)

The parties agree that the patents do not provide any special meaning for “bearer tag.” Both parties say that the term should be given its plain and ordinary meaning. But contrary to standard English, Hanshow claims that a “bearer tag” is a “tag” that “bears” something, which is akin to saying a “rain check” is a check that rains—it ignores the established meaning of the term in favor of a nonsensical abstraction. By contrast, applying the plain and ordinary meaning of the phrase, VusionGroup contends that the “tag” is a “bearer tag” because the tag is borne by someone.

Hanshow defends rewriting the plain and ordinary meaning of the term by pointing out the obvious: “bearer of the tag” does not appear in the specification. Op. Br., 18. But so what? Hanshow’s irrelevant observation does not change the recognized meaning of the term. The common meaning of “bearer tag”—like “bearer bond,” “bearer note,” “bearer instrument,” or “bearer security”—means an object entitling the individual who physically holds it to its benefits. So, contrary to Hanshow’s position, a “bearer instrument” is not an instrument that bears something—it is an instrument entitling its holder to its benefits. The Federal Circuit recognized

exactly this plain and ordinary meaning when it found, “the term ‘bearer instrument’ is consistent with the usual meaning given to ‘bearer bonds’ or ‘bearer securities’ by financial dictionaries. Proof of ownership for a ‘bearer security’ is ‘possession of the security certificate.’” *Privacash, Inc. v. Am. Exp. Co.*, 435 Fed. App’x 939, 942 (Fed. Cir. 2011) (non-precedential) (citing Oxford University Press, *A Dictionary of Finance and Banking* 42 (Jonathan Law ed., 4th ed. 2008); see also Ex. 12 Webster’s Dictionary at 3-4 (“bearer bond *n.* A bond payable to the holder”); Ex. 13 American Heritage Dictionary (same). Hanshow offers no basis to depart from this established plain and ordinary meaning.

Hanshow’s only other argument for its construction is that “each time the word ‘bearer’ appears, it is always part of the phrase ‘bearer tag’ and indicates that the tag ‘bears’ information.”⁵ Op. Br., 18. The fact that “bearer” is consistently used with “tag” does not help Hanshow; it hurts Hanshow. That the terms are consistently used together demonstrates that, like “bearer bond,” “bearer note,” “bearer instrument,” and “bearer security,” there is a recognized plain and ordinary meaning for “bearer tag,” which is not consistent with Hanshow’s proposed construction. The specification also reflects the plain and ordinary meaning of “bearer tag,” as the figures show “bearer tags” as small cards included in the packaging of newly purchased cell phones. See Ex. 2, ’210 Patent, Fig. 6B. Those cards allow the bearer—that is, the person who opened the box and now possesses the card—to manage services, such as subscribing to an e-mail service or purchasing a game to be played on the phone. *Id.* at 10:36–41.

(2) “initiat[e/ing] determination of service information, related to [the] one or more services, from the bearer tag” (’210 Patent Cl. 3, 8; ’994 Patent Cl. 1, 6)

⁵ Although appearing in quotation marks in Hanshow’s brief, the word “bears” never appears in the specification or claims.

The parties' dispute turns on whether the "determination of services information" is from information contained by the bearer tag (VusionGroup's construction is "initiating a process of determining information about one or more services from information *contained by the bearer tag*"), or merely through the use of the bearer tag (Hanshow's construction is "initiat[e/ing] determination of service information, related to [the] one or more services, *through a use of the bearer tag*"). The plain and ordinary meaning of "from the bearer tag" dictates that the information be contained by the bearer tag, as in VusionGroup's construction.

The claim expressly requires the "initiating determination of service information ... *from the bearer tag.*" *Id.*, Claim 1 (emphasis added). This recitation requires that the information be contained by the bearer tag, as otherwise, the "initiating determination of services information" cannot be "from the bearer tag." Initiating taking a book from a library requires that the library contain the book. That is how we use the preposition "from" in common parlance. Courts understand the word the same way. *SimpleAir, Inc. v. Google, Inc.*, Nos. 2:14-CV-01-JRG, 2:13-CV-0937-JRG, 2015 WL 1906016, at *7–8 (E.D. Tex. Apr. 27, 2015) ("Thus, 'from' is used in context of where the data is transmitted from (transmitting from point A to point B) not what creates the data. In such context, the claim is directed to the point from which data is transmitted, not the particular way or place data is created."); *PrinterOn Inc. v. BreezyPrint Corp.*, 93 F.Supp.3d 658, 683-84(S.D. Tex. Mar. 19, 2015) (construing "from" to mean a starting point of a communication and rejecting patentee's proposed construction of "between" two components). Hanshow asks the Court to ignore this plain English usage and instead accept its idiosyncratic usage of "from." Yet, Hanshow offers no support from the specification for deviating from the plain and ordinary understanding of the word.

The Nokia Patents' specification is clear that the information—on which the determination step relies—is contained by the bearer tag, consistent with the common understanding of the phrase “from the bearer tag.” Indeed, this disclosure starts in the Abstract—“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)—and runs throughout the specification. For instance, the specification states “[i]n exemplary embodiments, reading the service information from the bearer tag 105 quickly identifies the requested service.” Ex. 2, ’210 Patent at 5:13–15. That the services information is contained on 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).

Hanshow agrees that “the explicit disclosures of the [Nokia] Patents [are] that the service information to be determined may be exactly *the service information contained within the bearer tag*.” Op. Br., 20 (emphasis added). So too does Hanshow’s expert, Dr. Souri. Ex. 9, Souri Depo. 77:19-78:7 (a bearer tag must “contain[] information related to one or more corresponding services.”) And yet, Hanshow offers a construction—that the initiating of determination of service information could occur “through the use of the bearer tag” but without reading any information *from* the bearer tag—that eschews this. The specification offers no written-description 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, as suggested by Hanshow’s construction. *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (“The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.”)

Hanshow’s other arguments either misrepresent VusionGroup’s position or fail to address the dispute between the parties (or both).

Hanshow argues that VusionGroup’s proposed construction is ambiguous as to “which action, the ‘initiating’ or the ‘determining’, is ‘from information contained by the bearer tag.’” Op. Br., 20. But the ambiguity Hanshow complains about is the result of the claim language, not VusionGroup’s proposed construction. Indeed, Hanshow’s construction does nothing to address this supposed ambiguity in the claim language since it merely regurgitates the same claim language that Hanshow complains about. *Compare*, Ex. 2, ’210 Patent, Claim 1 (“initiating determination of service information, related to [the] one or more services, from the bearer tag”) *with* Hanshow’s Construction (“initiating ... a determination of service information, related to [the] one or more services, through the use of the bearer tag.”)

Hanshow says that VusionGroup’s proposal requires “determining ... the service information from the service information itself.” Op. Br., 20. That is incorrect. In fact, VusionGroup’s proposed construction requires initiating determination about the services “*from information* [not ‘service information’ as Hanshow deceptively implies] contained by the bearer tag.” All VusionGroup’s proposal requires—in keeping with the plain language of the claim and consistent with the specification—is that initiating determination of service information must be based on some information contained by the bearer tag. Of course, the information contained by the bearer tag *could be* service information, as the Nokia Patents expressly, and repeatedly describe. *See, e.g.*, Ex. 2, ’210 Patent at Abstract, 5:13–15, 8:57–59. Contrary to Hanshow’s position, there is nothing problematic about that.

(3) “service management request” (’210 Patent Cl. 1, 6; ’994 Patent Cl. 1, 2, 6, 7, 15, 18)

The dispute here is whether the “service management request” limitation can be met, even

if the request includes no information about the service at all. VusionGroup’s construction—“a request that identifies a service and contains information for managing that service”—is consistent with the claim language and common sense. Hanshow’s construction—“request to manage service”—by contrast, is not.

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.).

Ex. 2, ’210 Patent at 6:46–53; *see* Op. Br., 19 (citing same).

This excerpt clearly states that a service management request includes information “such as the requested service and identification of the user.” Still, Hanshow argues that the requirement of including information about the service is only a preferred embodiment and should not limit the claim. But a request to manage a service that does not identify the service to be managed is not a request at all. This is clear from the balance of the Nokia Patents’ specification. The specification discloses that particular services are associated with particular bearer tags. Ex. 2, ’210 Patent, 5:26–29, 10:12–16; *see also* Op. Br., 20 (“the explicit disclosures of the ’210 and the ’994 Patents that the service information to be determined may be exactly the service information contained within the bearer tag”). Based on the service information, the service selection module “generates a service management request (e.g., subscribe to an E-mail service, purchase a song, cancel a subscription) (at **305**) and initiates transmission of the request to the services platform **107** for completing the service management request according to a predetermined billing arrangement (at **307**).” Ex. 2, ’210 Patent at 8:14–20. Simply put, everything in the disclosure is geared towards

generating a service management request that contains enough information for the request to be passed to services platform for processing. That cannot happen if the request includes no information about the service at all.

(4) “services platform...” (’210 Patent Cl. 1, 5, 6, 10, 14; ’994 Patent Cl. 1, 6)

Hanshow’s proposed construction—“an online system through which the one or more services are managed according to a billing arrangement”—is plainly wrong. The construction is little more than a reshuffling of the claim terms themselves with the generic appendage of an “online system.” Hanshow’s construction substitutes one generic undefined term—“online system”—for the recited generic undefined term “services platform”—providing no additional clarity. And since “online system” is never used in the specification, the scope of that term is even less clear than “services platform” itself.

The only construction supported by the claims, specification, and evidence is the 35 U.S.C. § 112(6) construction proposed by VusionGroup.

(a) “Services platform” is not the name of a structure or class of structures known in the art.

The first step in determining whether a term is subject to construction under § 112(6) is to consider “whether the claim limitation connotes ‘sufficient definite structure’ to a person of ordinary skill in the art.” *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1344 (Fed. Cir. 2019). While there is a presumption that a term not recited with “means” recites structure, that initial presumption is not strong and is overcome when, as here, the claims recite functions without reciting structure for performing those functions. *Id.* “In each case, a critical question is whether ‘the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure,’ including either a particular structure or a class of structures.” *Id.* at 1341 (quoting *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1019 (Fed. Cir. 2017)).

Hanshow does not point to anything in any of the claims (asserted or otherwise) that describe the structure for the “services platform,” because there is nothing in the claims that elucidates the structure of “services platform.” Instead, the claims merely recite what the “services platform” does—it manages “the one or more services according to a billing arrangement.” Ex. 2, ’210 patent, Claim 1. That functional language says nothing about the structure of the “services platform.”

Nor is the term “services platform” itself a term that denotes structure. Indeed, this much is undisputed. According to Dr. Souri (Hanshow’s claim-construction expert), “services platform” would be “accorded no special meaning.” Ex. 9, Souri Depo., 83:5–13. That testimony is consistent with VusionGroup’s expert, Dr. Shamos, who confirms that “[a] POSITA would not ascribe any particular function or structure to a ‘services platform’ simply from the plain meaning of that term.” Ex. 6, Shamos Dec. ¶ 74. This agreement between experts is enough to find ... 112(6) applicable. *Advanced Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1348 (Fed. Cir. 2016) (Expert’s admission that “symbol generator” was coined for the patents-in-suit failed to “connote sufficient structure to avoid” § 112(6)). But Dr. Souri goes further, admitting that a “services platform” is any—literally *any*—combination of computer hardware and software that can perform the function recited in the claims. Ex. 9, Souri Depo. 88:8–13 (“Q: Is it fair to say that a services platform is any combination of computer hardware and software that can manage one or more services according to a billing arrangement? [Objection] A. It can be.”). 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 admits that “services platform” is not limited to a particular arrangement of hardware and software—any arrangement that can manage one or more services according to a billing arrangement would do the trick. *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.”).

Dr. Souri’s admissions confirm that “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. This is textbook means-plus-function claiming. The Federal Circuit recently put it this way: “What structures will the claim limitation read on? Any that fulfill the function of managing collaborative applications. This is the epitome of functional claiming; a black box that captures any and all structures that fulfill the function, just as if ‘means’ was used.” *WSOU Inv. LLC v. Google LLC*, No. 202-1064, 2023 WL 6531525, at *4 (Fed. Cir. Oct. 6, 2023); *see also Williamson v. Citrix Online, LC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (internal quotation omitted) (“module” “is simply a generic description for software or hardware that performs a specified function”); *Diebold Nixdorf, Inc. v. ITC*, 899 F.3d 1291, 1397 (Fed. Cir. 2018) (“cheque standby unit” “encompasses all structures capable of fulfilling the function”); *Advanced Ground Info. Sys.*, 830 F.3d at 1347 (“symbol generator” “is simply an abstraction that describes the function being performed”).

Hanshow claims that Fig. 2B provides an example of the supposed structure of “services platform,” and asks the Court to find “services platform” to be structural based on this embodiment. Op. Br., 22–23. Hanshow’s argument asks the Court to commit legal error by reading a preferred embodiment into the claim term “services platform.” In *MTD Prods.*, the Federal

Circuit emphasized the limited role of the specification in the first step of the means-plus-function analysis (the determination of whether a challenged claim term is structural). The court made it clear that the specification can be consulted where a patentee is “acting as a lexicographer and providing its own structural definition of a nonce term ... by clearly setting forth a definition of the disputed claim term other than its plain and ordinary meaning.” 933 F.3d at 1342. But the court made it equally clear that it is error to rely on a preferred embodiment to breathe structural life into a claim term that would otherwise have none. *Id.* at 1342–43 (“Just as it is improper to ‘import[] limitations from the specification into the claims,’ however, a preferred embodiment disclosed in the specification *cannot impart structure to a term that otherwise has none.*”) (emphasis added). It is undisputed that Fig 2B is not a lexicographical definition of a “services platform” such that it would structurally define the term. *See*, Ex. 9, Souri Depo. 83:16–19. Figure 2B is, instead, merely a preferred embodiment. *Id.*, 85:20–86:1. So, it would be error to follow Hanshow’s lead and rely on Figure 2B to find that “services platform” connotes structure for purposes of this *first step* of the means-plus-function analysis. *MTD Prods.*, 933 F.3d at 1342–43.

(b) Fig. 2B and corresponding disclosure is the structure for the “services platform.”

The recited function for the “services platform” is the management of one or more services according to a billing arrangement. This is the function expressly recited in the claims, and therefore, is the function 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)). Hanshow does not dispute that this is the proper function should § 112(6) apply.

Nor does Hanshow dispute that the only structure potentially capable of performing the recited function are the services portal, services catalog, billing server, service activation server, and payment gateway as depicted in Fig. 2B, and described in the '210 Patent at 6:66–7:65. Dr. Sourì appears to agree that the structure of Fig. 2B is a structure capable of performing the recited function. Citing Fig. 2B, Dr. Sourì says that based on the disclosure regarding Fig. 2B, “a services platform in this context would have been known to a POSITA.” Thus, Fig. 2B as described in sections 6:66–7:65 of the '210 patent is the structure corresponding to the recited function.

B) U.S. PATENT NO. 8,346,210

(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” (Cl. 1, 15)

The dispute here is simply whether the preamble is limiting. It is.

A preamble is limiting if it is an antecedent for later recitals in the claims. *Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015). Contrary to Hanshow’s contention, Op. Br., 25, the preamble provides antecedent basis for the claims. The preamble recites “one or more processors” that perform particular steps. For instance, 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.” (emphasis added). The antecedent basis for Claim 4’s “the one or more processors” is the preamble of Claim 1. Because the preamble of Claim 1 provides antecedent basis for other claims, it is limiting.

(2) “predetermined billing arrangement” (Cl. 3, 8)

“Predetermined billing arrangement” is indefinite because it is impossible to know where a “billing arrangement” stops and a “*predetermined* billing arrangement” starts. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 909 (2014) (“[A] patent must be precise enough to afford

clear notice of what is claimed[.]”). The principal function of the claims “is to provide notice of the boundaries of the right to exclude and to define limits[.]” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1347 (Fed. Cir. 2010). As judged from the perspective of a POSITA, there is little to define the boundaries of a “predetermined billing arrangement” of Claim 3 from the “billing arrangement” in Claim 1.

The fundamental problem with the claim term—and Hanshow’s proposed construction, which is little more than a pointless reshuffling of the words—is that all billing arrangements can be described as “predetermined.” Take a fast-food restaurant for example. When a customer orders food, she has a billing arrangement with the restaurant—namely, to pay the listed price for her food. But that billing arrangement is also “predetermined” because it is settled in advance before the customer ever walks through the door that if she orders food, she will pay the listed price for her food order. Simply put, the indefiniteness problem is this: 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.” See 35 U.S.C. § 112(d) (dependent claims incorporate further limitations). But because every billing arrangement can be simultaneously described as both a billing arrangement and a predetermined billing arrangement, the scope of Claim 3 is indefinite.

Hanshow’s construction is the unhelpful tautology that a “predetermined billing arrangement” is a “billing arrangement that has been predetermined.” But that does not solve either the construction problem or the indefiniteness problem.

VusionGroup’s alternative proposed construction—does not solve the underlying indefiniteness problem (nothing can)—but at least it would help the jury understand what it is they are supposed to be determining (unlike Hanshow’s tautological construction). VusionGroup’s

construction—“an existing arrangement for invoicing the service managed by the service management request that is between one receiving the service and the service manager”—applies the plain and ordinary meaning of the recited words to explain the claim term: 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). The term should be found indefinite, but if the Court declines to do so, VusionGroup’s alternative construction is the only construction on offer that clarifies the claim language and is consistent with the specification.

(3) “wherein ... the management of the one or more services comprises activation, modification, discovery, accessing, and setting up of the one or more services.” (Cl. 1, 6)

The difference between the parties’ constructions is simply stated: VusionGroup applies the common and ordinary understanding of the plain English word “and” requiring the conjunctive of “activation, modification, discovery, accessing, *and* setting up of the one or more service,” while Hanshow thinks this “and” should be rewritten to be “or” to better support its infringement theory.

It cannot meaningfully be disputed that the word “and”—as in “management of the one or more services comprises activation, modification, discovery, accessing, *and* setting up of the one or more services”—in its plain and ordinary sense is conjunctive. To define “and” differently as Hanshow wants to do, Hanshow bears the burden of demonstrating that the patentee intended ““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.”” *Thorner v. Sony Comput. Ent. Am., LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002)). Hanshow can make no such showing.

Hanshow’s first argument is to cite cases that are irrelevant to the question and pretend that they control. So, Hanshow cites cases like *3rd Eye Surveillance, LLC v. United States*, 140 Fed. Cl. 39, 69 (2018), and *Skotkam LLC v. Tachyon, Inc.*, No. CV H-20-1070, 2021 WL 23311, at *5–6 (S. D. Tex. Jan. 4, 2021) for the proposition that there is no “per se rule” that when “and” follows “at least one of” it is always conjunctive. Op. Br., 26. But these cases have nothing to do with the claim language at issue here. Hanshow’s cases turned on the use of “at least one of,” *see*, *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 ...”), and since that phrase is absent from the limitation, Hanshow’s cases are apropos of nothing.

Next, Hanshow claims that a conjunctive reading of “and” “would require, for example, the simultaneous management of ‘setting up’ a service and ‘discovering’ a service, which is nonsensical.” Op. Br., 26. Intentionally or otherwise, Hanshow is misreading the claims. The claims are clear that there are two different actions taking place—one by the person seeking the service, and one 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. Ex. 2, ’210 Patent, 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.”); *id.*, 12:50–54 (“The user of device 703 initiates a request to activate the E-mail service by tapping the device 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.”). This limitation, thus, makes sense as disjunctive because the person seeking the service is not necessarily seeking to do *all* of the listed things—just one or more of them. 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,” to ensure that the management of the services covers all of the potential services selected by the user. Contrary to Hanshow’s reading, nothing requires the management of these actions at the same time—just that management requires the ability to do all of them, hence why the patentee intentionally selected “and” instead of “or”—“or” simply makes no sense. Indeed, given that the patentee used “or” in the preceding clause, if that is what the patentee intended, he could have easily used the word. But he did not.

C) U.S. PATENT NO. 9,641,994

(1) “mobile communication service provider that has a billing arrangement with a user account associated with the user equipment” (Cl. 1, 6)

The dispute here is which entity the billing arrangement must be with. VusionGroup’s construction (“the billing arrangement is with the mobile communication service provider”) is consistent with the plain and ordinary meaning of the phrase, requiring that the billing arrangement be with the “mobile communication service provider”—precisely what the claim says. Hanshow’s proposed construction (“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”) on the other hand, appears to be agnostic on the key issue of who needs to have the billing arrangement. Yet, Hanshow’s infringement contentions make it clear that Hanshow reads the claim language as allowing the billing arrangement to be with some entity other than the mobile communication service provider, contrary to the plain language of the claim.

Claims 1 and 6 recite “a mobile communication service provider that has a billing arrangement with a user account associated with the user equipment.” That limitation is part of a 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.” “Billing arrangement” is antecedent for “the billing arrangement” later in the claim: “managing the one or more services and the one or more costs according to *the billing arrangement*.” The claims require two entities: (1) “a mobile communication service provider that has a billing arrangement” with the user (a “mobile service provider” for convenience), and (2) “one or more service providers independent from” the mobile service provider (an “independent service provider” for convenience). The claims require that the costs for services from the independent service provider (think email provider or game provider) be charged through the billing arrangement between the user and the mobile service provider (think Verizon, AT&T, or T-Mobile).

Yet, Hanshow asserts a theory of infringement where the billing arrangement is not with the mobile service provider, but rather, with the independent service provider. For example, Hanshow asserts that the retailer using electronic shelf labels is the independent service provider. Ex. 11, Infringement Contentions at 9, 11 (. Hanshow then asserts that the service provider—in Hanshow’s rendering, the retailer—“necessarily has a billing arrangement with a user account associated with the user equipment...” *Id.* Thus, Hanshow’s infringement position attempts to revise the claim language to allow the independent service provider to have the billing arrangement with the user—contrary to the express recitals of the claim.

Charging the user for independent services *through their mobile bill* is a significant focus of the ’994 patent. In particular, the patent discloses that the “services platform **107** ... interacts with the network billing system **109** to coordinate payment and billing for the services.” Ex. 3, ’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 the 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—the user would not receive a separate bill from the publisher of the chess game. Billing for the management of independent services through the user’s mobile phone bill helps accomplish the goal of the ’994 patent “for efficient and convenient management of services.” *Id.* at 1:14–30.

The patentee expressly disavowed Hanshow’s reading of the claim to allow a billing arrangement between the independent service provider and the user. The claims had been rejected as obvious over a combination that included U.S. Patent Pub. Nos. 2004/0002305 (“Byman-Kivivuori”) and 2009/0131025 (“Sharma”). Ex. 5, ’216 File History at 11. In arguing to traverse the rejection, Applicant 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 12. Applicant also stated that Sharma “does not bill for other service providers, thus shares the same deficiencies as *Byman-Kivivuori.*” *Id.* at 13. Therefore, the Applicant for the ’994 Patent recognized 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).

Finally, Hanshow’s proposed 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 a mobile or cellular carrier, such as Nokia, AT&T, or Verizon, that operate proprietary wireless networks. The Nokia Patents’ use of the term is consistent with that meaning. *See, e.g.,* Ex. 3, ’994 Patent 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.”); 4:61–67 (“The network billing system 109 is owned by, for instance, a service provider (e.g., cellular service provider) through which the users of UEs 101 a–101 n have their communication (e.g., wireless) service. Accordingly, the user of UEs 101 a–101 n generally already has a billing relationship with the network billing system 109 and the associated service provider.”). As one might expect when discussing mobile communication service providers and their customer accounts, the patent references a “user’s phone bill” throughout (12:23–60) and “data plans” (*see* Table 2). The supposed novelty of the patent is to allow a wireless customer to order a variety of services on their phone and then be invoiced through their phone bill. But Hanshow’s proposed construction changes the common meaning of the term to include anyone who provides any mobile communication service, including, anyone offering their friends the use of a home wifi network. That is clearly not what the patent is describing.

V. Conclusion

The Court should adopt Defendants’ proposed constructions

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned counsel for Defendants does hereby certify that this pleading was served on all counsel of record on November 18, 2024 via email to all counsel of record.

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