

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Richmond Division**

ORBCOMM, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No.: 3:16CV208-HEH
	)	
CALAMP CORP.,	)	
	)	
Defendant.	)	

**MEMORANDUM OPINION  
(Claim Construction)**

This is a patent infringement action filed by Plaintiff ORBCOMM, Inc. against Defendant CalAmp Corp. It is before the Court for the construction of the disputed claim terms in the patent-in-suit. Both parties have filed memoranda of law in support of their respective positions, and the Court conducted a claim construction hearing on January 5, 2017. Upon careful consideration of the entire record, the Court’s construction of the disputed terms follows.

**I. BACKGROUND**

There is one patent in suit: *United States Patent No. 6,611,686* (filed May 24, 1999) (“the ‘686 Patent” or “the Patent”).<sup>1</sup> The ‘686 Patent is titled “Tracking Control and Logistics System and Method.” It relates to remote tracking, monitoring, and controlling of a variety of targets such as cars, trucks, ships, and cargo. ORBCOMM

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<sup>1</sup> The Complaint alleges that CalAmp infringed five of ORBCOMM’s patents. However, voluntary dismissals and a Motion to Dismiss have disposed of all claims except the one relating to the ‘686 Patent.

alleges that CalAmp has been and is engaged in making, using, selling, offering for sale, and/or importing into the United States, a combination of products that incorporate ORBCOMM's patented system.

The parties contend that there are five terms contained in the Patent that require construction by the Court.

## II. STAMMENT OF THE LAW

Claim construction is a question of law for the Court to decide. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). Generally, claim terms are given their “ordinary and customary meaning.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotations omitted). “[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.” *Id.* at 1313. The Court may “depart from the plain and ordinary meaning in only two instances”: when the patentee acts as his own lexicographer or when the patentee disavows the full scope of the claim term in the specification or during prosecution. *Poly-America, L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1136 (Fed. Cir. 2016) (citing *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014)).

Construing the disputed terms begins with a review of the intrinsic evidence, including the language of the disputed claim, the other claims, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1312; *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005). The specification has been characterized as

the “single best guide to the meaning of a disputed term” and is usually “dispositive.” *Phillips*, 415 F.3d at 1315; *see also United States v. Adams*, 383 U.S. 39, 49 (1966) (“It is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.”). Thus, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). “A claim construction that excludes a preferred embodiment, moreover, ‘is rarely, if ever, correct.’” *Sandisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1285 (Fed. Cir. 2005) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996)).

Although considered less reliable than intrinsic evidence, extrinsic evidence, including dictionaries, learned treatises, and expert testimony, can help the Court determine what a person of ordinary skill in the art would understand claim terms to mean, but it should not be used to support a construction that contradicts the intrinsic evidence. *Phillips*, 415 F.3d at 1317–19, 1322–23.

### III. DISCUSSION

With the above principles in mind, the Court will now turn to the terms in dispute.

#### 1. Wireless Network

“[W]ireless network” is one of the central terms at issue in this case, as it is used in every asserted claim of the ‘686 Patent. ORBCOMM contends that “wireless network” has an ordinary meaning and thus no further construction is required by the

Court. CalAmp, however, submits that the Court should construe “wireless network” to mean “wireless *pager* network.” Put simply, this dispute is about whether the patent encompasses all forms of wireless communication networks or is constrained to pager networks alone. Because the patent specification disavows other types of wireless networks, the Court will adopt CalAmp’s position that the term “wireless network” means “wireless pager network.”

To disavow the full scope of a claim term, the specification must contain “clear and unequivocal evidence that the claimed invention includes or does not include a particular feature.” *Poly-America*, 839 F.3d at 1136. While this is an “exacting” standard, the disavowal “need not be explicit.” *Id.* Here, the specification contains clear and unequivocal evidence that the invention is limited to pager networks.

The invention claimed in the ‘686 Patent responded to the need for a low-cost asset monitoring system. The specification states that “the present invention provides a device which costs a fraction of presently available devices and also operates at a fraction of the cost of presently available services that allow for monitoring, controlling, and logistics.” ‘686 Patent B1 col. 1 l. 66–col. 2 l. 2. The lowest cost system in the prior art used a “cellular telephone-based modem” which implies the use of a cellular telephone wireless network. *Id.* col. 1 ll. 36–39. But with this invention, “because a pager network is used . . . costs for usage are kept much lower as compared with cellular telephone networks.” *Id.* col. 6 ll. 53–55. Furthermore, the specification is riddled with references to the invention using a pager network, pager modem, and pager antenna. However there is not a single reference in the specification to a generic “wireless network” outside of the

context of pager communication. In the aggregate, the persistent classification of the invention as taking advantage of the cost-savings of a pager network, coupled with the repeated disparagement of more expensive cellular telephone networks, constitutes clear and unequivocal evidence of a disavowal of non-pager networks.

Despite the repeated references to pager networks throughout the specification, ORBCOMM argues that there cannot be a disavowal of all non-pager wireless networks because of a single instance where the specification expressly mentions communications through pocket radio modems and satellite communication transceivers. However, the section of the specification to which ORBCOMM references only states that the patented system is “operable for communication with other types of transmission,” such as radio modems and satellite communications. *Id.* col. 14 ll. 20–28. Merely because the system *may* be compatible with these other types of communications does not change the fact that the system itself *must* make use of a pager network.

Lastly, ORBCOMM cites the doctrine of claim differentiation as another reason why “wireless network” should be construed broadly. This doctrine is “based on the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.” *Starhome GmbH v. AT & T Mobility LLC*, 743 F.3d 849, 857–58 (Fed. Cir. 2014) (quoting *Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971–72 (Fed. Cir. 1999)). ORBCOMM argues that because some claims use the term “wireless network” while others use the term “pager wireless communication network” those terms should be given different meanings.

In support of this assertion, ORBCOMM urges the Court to compare Claim 15 with Claim 29 and claim 48 with claim 50 to find that the inclusion of a pager network is the only meaningful distinction. However, that is simply not the case. And where the contrasted claims differ in more ways than only the disputed term, the claim differentiation argument is “weak at best.” *GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1371 (Fed. Cir. 2016). Here, there are multiple distinctions between the claims indicated by ORBCOMM. While Claim 15 requires the use of GPS for location information, Claim 29 only requires a more generic “position sensor.” *Compare* ‘686 Patent C1 col. 3 ll. 17–18, *with* ‘686 Patent B1 col. 18 l. 24. And Claim 15 requires the computer network to communicate “through an Internet connection,” while Claim 29 does not. *Compare* ‘686 Patent C1 col. 3 ll. 5–7, *with* ‘686 Patent B1 col. 18 ll. 16–17. Similarly, Claim 50 requires location information to be stored in the common database, while Claim 48 does not.<sup>2</sup> *Compare* ‘686 Patent C1 col. 7 ll. 4–7, *with id.* col. 6 ll. 17–61.

Furthermore, “claim differentiation does not serve to broaden claims beyond their meaning in light of the patent as a whole, and it cannot override clear statements of claim scope found in the specification and prosecution history.” *Poly-America*, 839 F.3d at 1137. As previously discussed, the specification in the ‘686 Patent clearly limits its scope to include pager networks only. Claim differentiation cannot be used to broaden the scope of this invention to cover any and all types of wireless networks.

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<sup>2</sup> Interestingly, ORBCOMM highlights this exact distinction when it argues that the term “common database” should not be construed to require the database to store data received from all targets. (ORBCOMM Inc.’s Resp. Claim Const. Br. 9, ECF No. 74 (arguing that this same difference is meaningful in comparing Claim 15 with Claim 48).) ORBCOMM cannot have it both ways, either it is a meaningful difference or it is not.

The Court therefore concludes that, because the specification disavows non-pager wireless networks, the term “wireless network” means a “wireless pager network.”

## **2. Wireless Communication Units**

The next disputed term is “wireless communication units.” ORBCOMM asserts that this term should be given its ordinary meaning. CalAmp, however, argues that the term should be narrowed, proposing the construction: “devices comprising a pager modem, a microcontroller, a global position sensor, and a selectable port wiring interface.” The Court agrees with ORBCOMM that “wireless communication units” should be given its ordinary meaning. There is no need to read in additional limitations as CalAmp proposes.

By CalAmp’s own admission, it seeks to import limitations into the definition of “wireless communication units” that are expressly stated in the claims. (CalAmp’s Resp. Claim Const. Br. 11, ECF No. 75.) However, doing so would render these express limitations superfluous. For example, Claim 15 expressly requires the “wireless communication units” to include a modem, controller, global position sensor, and selectable port wiring interface. *See* ‘686 Patent C1 col. 3 ll. 1–57. If the Court were to construe “wireless communications units” to include all of those components, the language in Claim 15 would be redundant. *See Phillips*, 415 F.3d at 1314 (“[t]he claim in this case refers to ‘steel baffles,’ which strongly implies that the term ‘baffles’ does not inherently mean objects made of steel.”).

Moreover, “wireless communication units” is also used in other claims that do not contain all of those limitations. Claim 48, for instance, indicates that the “wireless

communication units” include global position sensors and a selectable port wiring interface. But that claim does not require that the “wireless communication units” contain a modem or a controller. *See* ‘686 Patent C1 col. 6 ll. 17–61. Thus, adopting CalAmp’s proposed construction would needlessly limit those claims.

CalAmp suggests that its construction would be “helpful to the fact-finder because it crystallizes what is encompassed by the claim term.” (CalAmp’s Resp. Claim Const. Br. 12.) However, absent the patentee acting as his own lexicographer or making a disavowal in the specification or prosecution history, the Court declines to depart from the term’s plain and ordinary meaning. *Poly–America*, 839 F.3d 1136.

Therefore, the term “wireless communication units” will be given its ordinary meaning and no construction is required.

### **3. Common Database**

The term “common database” also appears in all of the asserted claims of the ‘686 Patent. ORBCOMM proposes the construction “a database that stores information about the wireless communication units on a plurality of targets associated with a plurality of clients.” CalAmp, however urges the Court to define the term as “a database within the network server that stores definition data / definition information from all targets.”

These opposing constructions create two distinct issues that the Court must address. First, CalAmp’s construction requires that the common database be located “within the network server” and that it “store[] definition data / definition information.” ORBCOMM’s construction, however, does not include those two limitations. Second, CalAmp’s construction requires a single common database to store “information from all



targets.” This contrasts with ORBCOMM’s construction, under which the system could include multiple common databases in order to accommodate the targets’ data storage requirements.

The Court agrees with ORBCOMM that the definition of “common database” need not include the requirements that it be located within the network server or that it store definition data / definition information. However, the Court agrees with CalAmp that a single common database must store the information from all targets. Therefore, the Court will construe “common database” to mean “a database that stores information about the wireless communication units from all targets.”

The same analysis used to construe “wireless communication units” also controls the Court’s determination that the definition of “common database” does not include the language “within the network server that stores definition data / definition information.” Those limitations are expressly included in both of the asserted dependent claims. *See* ‘686 Patent C1 col. 3 l. 8 (“a common database of said computer network server”); col. 6 l. 24 (same); col. 3 ll. 38–39 (“said common database being configured for storing definition information”); col. 6 ll. 55–56 (same). The Court would be creating unnecessary redundancy by incorporating them into the definition of “common database.” Although CalAmp contends that its construction would be helpful to the factfinder, it would instead be likely to create more confusion. Claims 15 and 48 both speak for themselves by requiring the common database to be located within the network server and to store definition information. The Court declines to adopt the pleonasm created by CalAmp’s proposed construction.

As for the second issue, the Court finds that the '686 Patent requires one database to store information about all targets. Prosecution history disavowal precludes an alternative outcome.

ORBCOMM suggests that where the claims refer to "a" common database, the Court should interpret it to mean "one or more" common databases. (ORBCOMM's Resp. Claim Const. Br. 11–12 (*citing Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342–43 (Fed. Cir. 2008) (“[T]he indefinite article ‘a’ or ‘an’ in patent parlance carries the meaning of ‘one or more’ . . .”).) While ORBCOMM may be correct as a general matter, *Baldwin Graphic Sys.* also highlights an important exception, applicable here: where “the prosecution history necessitate[s] a departure from the rule.” 512 F.3d at 1342–43. In this case, the patentee clearly disavowed multiple common databases during prosecution.

In 2010, an Ex Parte Reexamination amended the '686 Patent claims, for among other reasons, “to clarify that *one common database*, located in a network server, stores all configuration definitions of the . . . targets.” (CalAmp's Open. Claim Const. Br. Ex. 1, at 7, ECF No. 70-1 (emphasis added).) Despite this clear language, ORBCOMM maintains that it is merely a unilateral statement by a patent examiner, insufficient to trigger prosecution history disavowal. (ORBCOMM's Resp. Claim Const. Br. 12.) ORBCOMM is correct that “prosecution history disavowal requires action by the patent owner.” (*Id.* at 13 n.3 (*citing Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1347 (Fed. Cir. 2005).) However, the record in this case clearly shows that the amendments to the '686 Patent claims were not a unilateral action by the patent examiner. Rather, the

“[a]mended claim language was submitted . . . by [the] Patent Owner.” (CalAmp’s Open. Claim Const. Br. Ex. 1, at 6.) Therefore, because the ‘686 Patent’s prosecution history clearly shows that a single common database must store information relating to all targets, the Court will partially adopt CalAmp’s proposed construction.

The Court construes “common database” to mean “a database that stores information about the wireless communication units from all targets.”

#### **4. Outputs to Be Controlled**

Early in the claim construction process, the parties agreed that the terms “outputs . . . are operable to be controlled” / “outputs for said wireless communication unit are operable to be controlled” / “outputs to be controlled” should be construed to mean “items to be physically operated.” However, they have now reached an impasse and disagree about what it means for an item to be physically operated.

CalAmp takes the position that, for an “output to be controlled” in the context of the ‘686 Patent, the claimed monitoring system must *directly* cause that output. So, for example, if a stand-alone device—meaning a device not hardwired into the target vehicle—receives a signal from the monitoring system, and that device then uses its own internal computing power to create an output, that output would not be “controlled” by the monitoring system as contemplated by the ‘686 Patent. Conversely, ORBCOMM contends that the monitoring system need not directly control the output. It argues that, after receiving a signal from the monitoring system, a stand-alone device is being “controlled” even if it uses its own internal computing power to create the output.

The Court agrees with ORBCOMM’s construction. Nothing in the ‘686 Patent suggests that the outputs must be controlled by the monitoring system directly. On the contrary, the Patent language reveals that the term “outputs to be controlled” should be given a broad meaning. *See* ‘686 Patent B1 col. 7 ll. 46–49 (“Monitoring device 10 may be used to produce outputs such as door locks, ignition kill, to produce an audible alarm for the driver, *or to effect* [sic] *any other feature that can be electrically interfaced to the monitoring device 10.*”) (emphasis added).

In light of the specification, CalAmp’s argument that the Patent prohibits the internal processing of another device from assisting in the generation of an output is irrational. The specification expressly includes door locks and ignition kill features as examples of outputs contemplated by the patent. Most automobiles now contain internal computers that govern every aspect of the vehicle’s operation, from anti-lock brakes to zone control for air conditioning. Certainly the door lock and ignition kill features would not be hardwired directly to the monitoring system, but would rather be controlled by the monitoring system via the vehicle’s internal computer. Thus, it would be illogical to conclude that the ‘686 Patent requires the monitoring system to control vehicle functions or other outputs without any intermediaries. As long as the claimed monitoring system initiates the sequence of events resulting in the output, the monitoring system will have controlled that output as contemplated by the ‘686 Patent.

While direct control of an output is not required by the Patent, the Court agrees with CalAmp—and ORBCOMM does not appear to contest—that an “output to be controlled” does not include the mere sending of data. There must be some perceivable

reaction, which could include, among other things, mechanical movement, visual display, or audible sound. However, that output need not be directly caused by the monitoring system.

The Court therefore concludes that “outputs . . . are operable to be controlled” / “outputs for said wireless communication unit are operable to be controlled” / “outputs to be controlled” include any perceivable reaction caused either directly or indirectly by the claimed monitoring system.

#### **5. Selectable Port Wiring Interface. . .**

The final disputed term is “selectable port wiring interface for selective wiring of each of said plurality of wireless communication units to said plurality of targets whereby one or more inputs to said wireless communication unit are operable for monitoring by a respective of said plurality of client computers and one or more outputs for said wireless communication unit are operable to be controlled by said respective of said plurality of client computers.”

The parties had previously agreed to construe this term as “a point of connection that allows for selective, variable connection of inputs to be monitored and outputs to be controlled to the wireless communication unit that allows client computers to monitor the inputs and to control the outputs to be controlled.” However, they now disagree as to what that agreed construction means.

The selectable port wiring interface is a piece of hardware. It is one component of the wireless communication unit, which in turn is one component of the claimed

monitoring system. The selectable port wiring interface is where outputs and inputs physically connect via electrical wires to the wireless communication unit.

At its core, the parties' dispute about this term appears to be tied to the words "selective wiring," "operable for monitoring," and "operable to be controlled." '686 Patent C1 col. 3 ll. 29–36 and col. 6 ll. 46–53. CalAmp contends that the "selective wiring" portion of the term requires that the selectable port wiring interface be physically capable of allowing a user to rewire the wireless communication unit's outputs and inputs during operation of the monitoring system. CalAmp further submits that the language "operable for monitoring" and "operable to be controlled" requires that the system continues to monitor the inputs and control the outputs if they are rewired.

ORBCOMM, on the other hand, suggests that CalAmp's construction reads too much into this term. It contends that this language is merely a limitation on the hardware of the wireless communication units. Thus, according to ORBCOMM, the limitation is satisfied as long as the wireless communication unit is physically capable of connecting various inputs and outputs. Whether the monitoring system would still function if the inputs and outputs were rewired is irrelevant.

The Court finds that the '686 Patent claims, by their plain language, do not require the monitoring system to continue to monitor inputs and control outputs if those inputs and outputs are changed or rewired. CalAmp's contrary argument is not rooted in the claim language, but instead relies on the parties' previously agreed construction that the selectable port wiring interface "allows for selective, *variable* connection of inputs to be monitored and outputs to be controlled." According to CalAmp, "the inputs and outputs

have to be capable of being varied and still have the client computers able to monitor the inputs and control the outputs.” (CalAmp’s Suppl. Claim Const. Br. 4–5, ECF No. 85.) But this is not what the claim language says. The claims require that the wireless communication units have the capability of selectively wiring inputs and outputs. This means that when the monitoring system is initially set up, the user has the option of connecting a number of inputs and outputs in a host of configurations. It does not mean that the system must continue to function if the inputs and outputs are varied at some point after the initial configuration.

As ORBCOMM highlights, there is significant value to having a wireless communication unit with inputs and outputs that can be “selectively” wired, even if those inputs and outputs are not variable during system operation. (ORBCOMM’s Am. Suppl. Claim Const. Br. 6 n.2, ECF No. 84-1.) A manufacturer could produce one universal device and sell it to multiple customers, each connecting their desired inputs and outputs corresponding to their particular needs. Moreover, a single customer with multiple types of vehicles to monitor could purchase a large quantity of the same device but install them in various ways depending on the unique requirements of each vehicle. While the selectivity capability of the selectable port wiring interface requires multiple possible configurations for the initial wiring of inputs and outputs, the ‘686 Patent claims are devoid of any language that would require the monitoring system to continue to work if the inputs and outputs were changed mid-operation.

Therefore, “selectable port wiring interface for selective wiring of each of said plurality of wireless communication units to said plurality of targets whereby one or more

inputs to said wireless communication unit are operable for monitoring by a respective of said plurality of client computers and one or more outputs for said wireless communication unit are operable to be controlled by said respective of said plurality of client computers” requires that the wireless communication units have the physical capability of being initially selectively wired with various inputs and outputs, but does not require that the monitoring system continue to monitor inputs and control outputs if those inputs and outputs are subsequently changed or rewired.


#### IV. CONCLUSION

For the reasons stated above, the disputed terms are construed as follows:

1. “Wireless network” is a “wireless pager network.”
2. “Wireless communication units” has its ordinary meaning.
3. “Common database” is “a database that stores information about the wireless communication units from all targets.”
4. “Outputs to be controlled” include any perceivable reaction caused either directly or indirectly by the claimed monitoring system.
5. “Selectable port wiring interface” requires that the wireless communication units have the physical capability of being initially selectively wired with various inputs and outputs, but does not require that the monitoring system continue to monitor inputs and control outputs if those inputs and outputs are subsequently changed or rewired.



An appropriate Order will accompany this Memorandum Opinion.

 /s/

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Henry E. Hudson  
United States District Judge

Date: January 25, 2017  
Richmond, Virginia