UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

E.DIGITAL CORPORATION,

Plaintiff,

v.

DROPCAM, INC.,

Defendant.

Case No. 14-cv-04922-JST

CLAIM CONSTRUCTION ORDER

Re: ECF Nos. 50, 51

The parties have requested that the Court construe disputed terms in the claims of United States Patent Nos. 8,306,514 ("the '514 patent"); 8,311,522 ("the '522 patent"); 8,311,523 ("the '523 patent"); 8,311,524 ("the '524 patent"); 8,315,618 ("the '618 patent"); and 8,315,619 (the '619 patent"), which Plaintiff e.Digital Corporation ("e.Digital") refers to collectively as the "Nunchi patents." The Court held a claim construction hearing in this matter on August 3, 2015. Now, after consideration of the arguments and evidence presented by the parties, and the relevant portions of the record, the Court construes the terms as set forth below.

I. Jurisdiction and Legal Standard

A. Jurisdiction

Because this is an action "arising under [an] Act of Congress relating to patents," the Court has jurisdiction pursuant to 28 U.S.C. § 1338(a).

B. Legal Standard

The construction of terms found in patent claims is a question of law to be determined by the Court. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). "[T]he interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim." Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005) (quoting

Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). Consequently, courts construe claims in the manner that "most naturally aligns with the patent's description of the invention." Id.

The first step in claim construction is to look to the language of the claims themselves. "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" Phillips, 415 F.3d at 1312 (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). A disputed claim term should be construed in light of its "ordinary and customary meaning," which 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." Phillips, 415 F.3d at 1312–13. In some cases, the customary meaning of a disputed term to a person of ordinary skill in the art is readily apparent, and claim construction involves "little more than the application of the widely accepted meaning of commonly understood words." Id. at 1314. Claim construction may deviate from the ordinary and customary meaning of a disputed term only if (1) a patentee sets out a definition and acts as his own lexicographer, or (2) "the patentee disavows the full scope of a claim term either in the specification or during prosecution." Thorner v. Sony Computer Entm't Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Ordinary and customary meaning is not the same as a dictionary definition. "Properly viewed, the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification." Phillips, 415 F.3d at 1321. Typically, the specification "is the single best guide to the meaning of a disputed term." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is therefore "entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of claims." Phillips, 415 F.3d at 1317. However, while the specification may describe a preferred embodiment, the claims are not necessarily limited only to that embodiment. Id. at 1323.

Finally, in construing claims, courts may consider extrinsic evidence, such as "expert and inventor testimony, dictionaries, and learned treatises." Markman, 52 F.3d at 980. Expert testimony may be useful to "provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." Phillips, 415 F.3d at 1318. However, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." Id. If intrinsic evidence mandates the definition of a term that is at odds with extrinsic evidence, courts must defer to the definition supplied by the former. Id.

II. ANALYSIS

A. "Social signature"

Disputed Claim Term	e.Digital's Proposed Construction	Dropcam's Proposed Construction
Social signature	"raw or processed data and/or other information based on sensors"	"combination of sensor data indicative of a type of activity"[1]

The parties have several disputes regarding this term.

First, Dropcam argues that the social signature must be constructed from received sensor data, whereas e.Digital contends that the social signature can be constructed to include not just sensor data itself but also information "based on" data retrieved by the sensors or other retrievable information. Dropcam argues that e.Digital's proposed inclusion of the phrase "and/or other

[1] Dropcam's original proposed construction of this term was "combination of optical sensor data and acoustic sensor data indicative of a type of activity." However, a few days before the claim construction hearing, Dropcam removed the phrase "optical sensor data and acoustic" from its proposed definition. ECF No. 70 at 2; ECF No. 76 at 5. e.Digital objected to the last-minute change, id., but also stated that it was prepared to go forward with Dropcam's new proposed construction. ECF No. 76 at 6. The Court considers Dropcam's modified proposal here. This eliminates one of the disputes the parties had regarding this term. See ECF No. 51 at 9–11.

information based on sensors" is ambiguous and renders the claim term meaningless. ECF No. 51 at 9. The Court does not agree with Dropcam that e.Digital's proposed construction would render the term meaningless, as information "based on" sensor data still necessarily originates from sensor data. Moreover, e.Digital points to embodiments in which the social signature is constructed using information "based on sensors" and not exclusively from raw or processed sensor data. For instance, the specification of the '522 patent includes an embodiment wherein location information retrieved from a sensor could be compared with "map data" to determine the "restaurant, store, office, or other like location" at which the sensor is located. ECF No. 53 at 4 (citing ECF No. 50-2 at 1:47-58); ECF No. 50-2 at 13:40-45. Information about the identity of the location where a sensor is activated is not itself "sensor data," but is nonetheless generated "based on" the location data originating from the sensor and would be understood as "information based on sensors."

Second, Dropcam argues (and e.Digital does not seriously dispute) that the social signature must be based on a "combination" of such data. The essence of the invention is to combine information about an individual so that he or she may be appropriately categorized accordingly to a taxonomy set out in the patent. The phrase "creates a detected social signature from the received sensor data" appears three times in the specification, ECF No. 50-2 ('522 Patent) at 1:39-40, 3:34-35, 5:46-47, and all three of the independent claims on which the remaining claims depend affirmatively require the combining of sensor data as part of constructing a social signature. Id. at 23:2-35, cl.1; 24:14-57, cl. 8; 25:50-26:15, cl. 17. Accordingly, the Court will adopt a construction that uses the word "combination."

Third, Dropcam argues that e.Digital's use of the phrase "raw or processed" is not consistent with the language of the patent, which speaks of a "formatted combination of sensor data." ECF No. 51 at 10. e.Digital responds that a social signature "can be comprised of just raw and/or processed data and/or other information based on the sensors of a particular system," citing to Figure 3 and columns 18:63-19:3 of the '522 patent. ECF No. 53 at 6. The cited language, however, does not address this point at all, and Figure 3 shows unambiguously that data is "processed" before it becomes part of a social signature. ECF No. 50-2 at 5. The word "raw"

appears nowhere in the patent. Dropcam's argument here is more convincing.

Fourth, Dropcam argues that the social signature must be indicative of a certain type of activity, while e.Digital argues that the social signature "need not be indicative of anything other than the data derived from the sensors until, if at all, a processor processes the social signature." at 6. e.Digital also notes that, after it is processed, a social signature could merely indicate "non-use" of the sensor, rather than any particular activity. ECF No. 50 at 11 (citing '523 patent at 25:19-23); ECF No. 50-2('522 patent) at 25:31-36, cl. 13 ("another processor detects a status of the communication device according to use or non-use of the input device and includes the detected status in the created social signature"). The Court declines to read the limitation that the social signature must itself be "indicative of a type of activity" into the claim term, as the intrinsic evidence does not compel a conclusion that the social signature must always indicate a type of activity.

Finally, the Court must address the parties' apparent agreement that all of the data contained in the social signature originates from sensors. Although e.Digital's proposed construction does not make this clear, both its briefing and the intrinsic evidence from the specifications compel the Court to conclude that the phrase "raw or processed data" must refer to data originating from sensors. See ECF No. 50 at 8 ("The specifications of each of the patents explain that one of more processor(s) of the invention 'receives sensor data related to an environment of a communication device, creates a detected social signature from the received sensor data, [and] determines which of the social signatures of the social templates has the greatest correspondence with the created social signature.'").

The Court will therefore construe the term "social signature" to mean "a combination of processed sensor data and/or other information based on sensors."

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B. "Social hierarchy"

Disputed Claim Term	e.Digital's Proposed Construction	Dropcam's Proposed Construction
Social hierarchy	"an arrangement of persons, things, information and/or operations in a series of levels"	"ordered ranking of social groups defined within each social template"

e.Digital relies on The American Heritage Dictionary's definition of a hierarchy as "[a]n arrangement of persons or things in a graded series," ECF No. 50 at 14 (quoting The American Heritage Dictionary, ECF No. 50-10 at 398). e.Digital explains that the specifications also illustrate that, under the claimed inventions, the hierarchy may also include "the quantity, and type of delivery, of information made available to different persons." Id. Therefore, e.Digital rejects Dropcam's limitation of the hierarchy to a ranking of "social groups," as certain embodiments imagine that the social hierarchy could contain "social networking services or microblogs," rather than just people. Id. (citing '522 patent at 21:4-14 ("Such communication could be through text messages, emails, computer read messages sent to a voice line, and, where social networking service and/or microblog are set up, through networking service and microblog updates.")).

The meaning of a word depends on the context in which it appears. E.g., Silvia P. Gennari, et al., "Context-Dependent Interpretation Of Words: Evidence For Interactive Neural Processes," 35 Neuroimage 1278, 1278 (2007). Here, the context is a patent about a "social hierarchy," and e.Digital does not explain how the language of the claims supports the notion that a social hierarchy could contain "things" or "information." The social hierarchy is discussed throughout the claims as containing persons or social networking operations that are to be provided with communication, supporting the use of the modifier "social." Indeed, adoption of e.Digital's construction of "hierarchy" to include "information" or "things" would conflict with the plain and ordinary meaning of the term "social." See Phillips, 415 F.3d at 1312 ("the words of a claim are generally given their ordinary and customary meaning") (citation and quotation omitted). e.Digital does not address this argument in its reply brief, but maintains that the social hierarchy must include "operations, such as email, text, computerized voice message, social network update,

etc." ECF No. 53 at 8. The Court concludes that, while the claims support the inclusion of "persons" and "operations" within the social hierarchy, they do not support a construction of "social hierarchy" that would include "information" or "things."

Dropcam also argues that the organization of the social hierarchy must be an "ordered ranking." ECF No. 51 at 13. e.Digital acknowledges that in some cases "a social hierarchy can be an ordered ranking," but argues that the claims' use of the term is not limited to ordered rankings. ECF No. 53 at 7. e.Digital posits that, in cases where the levels are not an ordered ranking, "[w]hat sets the hierarchy levels apart . . . relates more to what and/or how information is provided to the various hierarchy levels and is not necessarily related to importance of the members of each hierarchy level – each level is simply 'different.'" ECF No. 50 at 15. But e.Digital's own citation to the American Heritage Dictionary shows that hierarchies are typically understood as "graded," consistent with the idea of the levels being ordered or ranked. Nothing in the intrinsic evidence supports abandoning this plain and ordinary meaning of the word hierarchy.

Finally, Dropcam's proposed construction of "social hierarchy" reflects its position that the social template must define within it a social hierarchy. e.Digital responds that the social template does not necessarily define the social hierarchy within it. Rather, e.Digital explains that the social hierarchy is "associated with a social template so that, when a social template is 'selected' by the processor, the processor can make available the amount of information authorized by the user for the various members of the social hierarchy based on the selected social template." Id. at 15 (emphasis omitted). The Court agrees with e.Digital that the claims do not require the social hierarchy to be "defined within each social template."

The Court will therefore adopt a modified version of both parties' proposed constructions, as follows: "an arrangement of persons and/or operations in a series of ordered levels."

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C. "Sensor value range"

Disputed Claim Term	e.Digital's Proposed Construction	Dropcam's Proposed Construction
Sensor value range	Plain and ordinary meaning or, alternatively, "information representing sensor data above, below or between a value(s)"	"range of measurements between two values"

e.Digital argues that the term "sensor value range" should be given its plain and ordinary meaning or, if necessary, be construed as "information representing sensor data above, below or between a value(s)." Dropcam counters that the term should be limited to measurements from sensors and that the range must constitute a span between two specified values.

e.Digital points to the plain and ordinary meaning of "range," as defined in the Merriam-Webster Dictionary, as "a variation within limits." ECF No. 50-9 at 6. But this definition lends more support for Dropcam's proposed construction, which defines the range as "between two values." e.Digital's proposed construction would allow for the data to be "above, below or between a value(s)," meaning that in some cases there would only be a limit on one side, such as "$< .2\ m/s^2$." ECF No. 50 at 19. e.Digital finds no examples of such a sensor value range in the intrinsic evidence, but speculates that certain ranges found there could be rewritten in this manner. Because the intrinsic evidence does not support e.Digital's construction, and it conflicts with the plain and ordinary meaning of "range" as proffered by e.Digital, the Court agrees with Dropcam that a range should be defined as "between two values."

e.Digital also argues in its reply that the range is not necessarily limited to "measurements," but could consist of, for instance, a "range of places," such as "Starbucks, Peets, Coffee Bean." ECF No. 53 at 13. e.Digital's own proposed construction, however, speaks of the range in terms of sensor data information that can be understood as "above, below, or between" other information. It would not make sense to speak of a "range of places" in this manner. Moreover, e.Digital has not pointed to any intrinsic evidence from the patents suggesting that the "sensor value range" could include limits beyond measurements.

Because it best conforms to the intrinsic evidence and the plain and ordinary meaning of

the term, the Court will therefore adopt Dropcam's construction of the "sensor value range" as the "range of measurements between two values."

D. "Information"

Disputed Claim Term	e.Digital's Proposed Construction	Dropcam's Proposed Construction
Information	Plain and ordinary meaning	"a report about a single event that results from comparison of sensor data with social templates"

e.Digital asks the Court to give the term "information" its plain and ordinary meaning, arguing that the intrinsic evidence does not indicate the inventor "intended to deviate from the plain and ordinary meaning and acted as his own lexicographer." ECF No. 50 at 19 (citing Thorner, 669 F.3d at 1365). Dropcam asks that the Court's construction reflect the "precise manner in which the term 'information' is consistently used in the asserted claims." ECF No. 51 at 23. According to Dropcam, "information" as used throughout the asserted patents "(1) results from comparison of sensor data with stored social templates, and (2) describes a single detected event." Id.

The Court does not agree with Dropcam that the claims consistently use "information" to mean "a report about a single event." As noted by e.Digital, the '522 patent describes an embodiment wherein the only information provided concerns "the desired contact state." See ECF No. 50-2('522 patent) at 4:13-14. A communication that informs that the contacted individual is "busy" fits comfortably within the understanding of the word "information." Such a communication does not, however, report anything about a "single event."

Although it does appear that the "information" described in the patents results from a comparison of the sensor data with the social templates, the Court agrees with e.Digital that "the social template comparison is already a component of the claims and therefore need not be incorporated into the Court's construction." ECF No. 53 at 15. Because the patent does not evince the patentee's intent to deviate from the term's commonly-understood meaning, the Court will adopt e.Digital's proposal that "information" be given its plain and ordinary meaning.

E. "Provide/Provides/Providing differing levels of information"

Disputed Claim Term	e.Digital's Proposed Construction	Dropcam's Proposed Construction
Provide/Provides/ Providing differing levels of information	Plain and ordinary meaning	"send/sends/sending information in varying levels of granularity"

The parties dispute whether the claim term's use of "providing differing levels of information" necessarily requires the "sending" of that information. e.Digital argues that all that "providing" requires within the meaning of the claims is that the information be made available, rather than sent. e.Digital's objection to the restriction of the term to "sending" information stems from the connotation that "sent" information is typically "delivered" or "received." e.Digital suggests that this might not be true of potential embodiments of the claimed inventions wherein information could be placed on a server where a user could later "log in at their option to obtain access to the provided information." ECF No. 50 at 22. In such a case, the information would be "made available," even if never accessed or received. e.Digital acknowledges that such an embodiment is not discussed anywhere in the specifications. Id. Nonetheless, the Court will not import a limitation from the specifications requiring that "provided" information be "sent," as the patentee did not set out his own definition for the term or plainly disavow the term's full scope. See Deere & Co. v. Bush Hog, LLC, 703 F.3d 1349, 1354 (Fed. Cir. 2012) ("While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims."). Moreover, the plain and ordinary meaning of the term "provide" is readily understandable to a lay jury.

Dropcam next argues that "differing levels of information" should be construed to mean "information in varying levels of granularity." ECF No. 51 at 26. Dropcam explains that "[j]ust as the levels of the social hierarchy are ranked in order of information disclosure, the information sent to those levels differs in amount of disclosure, i.e., the granularity of the information provided." ECF No. 51 at 27. But this concept is conveyed by the plain and ordinary meaning of

the word "levels." Moreover, the sole appearance of the word "granularity" in the '522 patent does not support Dropcam's construction because the language in question reads, "each social template can be set up with varying levels of granularity in so far as who is given which information about the user of the mobile device prior to the call being placed." ECF No. 50-2 at 17:12-15 (emphasis added). The quoted language is permissive rather than mandatory. Finally, untethered from the language of the patent, the term "granularity" is more likely to confuse the factfinder than to further illuminate the term's construction.

The Court will therefore adopt e.Digital's proposal that "Provide/Provides/Providing differing levels of information" be given its plain and ordinary meaning.

F. "Provided/Provides/Providing an update"

Disputed Claim Term	e.Digital's Proposed Construction	Dropcam's Proposed Construction
Provided/Provides /Providing an update	Plain and ordinary meaning	"send/sends/sending information indicating a user's status"

For the same reasons discussed in the immediately preceding section, the Court will not adopt Dropcam's proposal that "provide" be construed to mean "send."

Dropcam also argues that the provided update "must describe a user's status." ECF No. 51 at 28. Dropcam argues that many of the embodiments in the specification describe the providing of information regarding a user's status. e.Digital disagrees, noting that the examples listed in the specification include an embodiment wherein the claimed invention provides information concerning a home fire emergency, which would not necessarily concern the user's status. ECF No. 50 at 23 (citing ECF No 50-2 ('522 patent) at 21:25-33). The Court agrees with e.Digital and will again decline Dropcam's request to import an additional limitation from the specification, as the plain and ordinary meaning is consistent with the intrinsic evidence, and the patentee did not set out his own definition for the term or plainly disavow the term's full scope. Thorner, 669 F.3d at 1365.

The Court will therefore adopt e.Digital's proposal that the term "Provided/Provides/Providing an update" be given its plain and ordinary meaning.

K. Agreed Upon Constructions

Finally, the construction of the following terms has been agreed upon by the parties. The Court will therefore adopt the parties' constructions.

Claim Term	Agreed Upon Construction
"being selectable to provide"	"Capable of being selected to provide"
"environment of the communication device"	"surroundings of the communication device within the detectable area of the communication device"
"social template"	"data structure associated with a social hierarchy and one or more social signatures"
"unique social signature"	"social signature associated with a specific social template at the time of processing"
"optical sensor"	Plain and ordinary meaning
"accurate"	"capable of desired processing"

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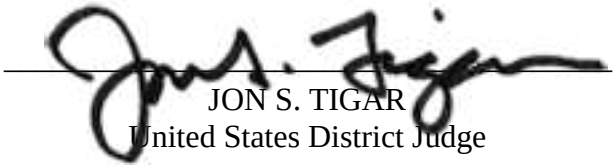
CONCLUSION

The Court, for the foregoing reasons, construes the terms as identified herein.

IT IS SO ORDERED.

Dated: November 30, 2015



JON S. TIGAR
United States District Judge

United States District Court
Northern District of California