United States District Court, E.D. Texas, Marshall Division.

GOLDEN BRIDGE TECHNOLOGY, INC,

Plaintiff.

v.

NOKIA, INC., and Lucent Technologies, Inc,

Defendant.

Civil Action No. 2:05cv151

July 20, 2006.

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ORDER

JOHN D. LOVE, United States Magistrate Judge.

This claim construction opinion construes terms in U.S. Patent No. 6,574,267 ("the '267 patent"). Plaintiff, Golden Bridge Technology, Inc. ("GBT"), asserts Claims 13, and 23-29 against Nokia, Inc. and Lucent Technologies Inc. (collectively "Defendants").

The '267 patent relates generally to mobile telecommunications systems, and more specifically describes a method for establishing a communication link between a mobile station, such as a cellular telephone, and a base station, which allows for communication to, and between, mobile stations. Base stations and mobile stations communicate over channels. The particular channel contemplated in the '267 patent allows multiple signals to be sent over the same channel rather than devoting a channel to each mobile station. A mobile station seeking to establish a connection with a base station will transmit a preamble to the base station over the shared channel until the base station recognizes the preamble and responds with a signal called an acknowledgement. Once the acknowledgement is received, the mobile station may begin transmission of data or voice communications.

Using a single channel to transmit multiple signals simultaneously presents two problems that are relevant to the '267 patent. First, the base station must be able to, in the midst of multiple signals, correctly correlate the received preamble with its transmitting mobile station. Therefore, the mobile station provides a unique identifier with each preamble it transmits to allow the base station to properly correlate the preamble with the transmitting mobile station. Using a shared channel also presents the risk that signals traveling on the same channel may interfere with one another. That risk increases as the signal's power level increases. The process of "power ramping" is meant to reduce this risk by ensuring that the lowest possible power level is used to transmit the preamble to the base station. In "power ramping," the mobile station transmits a preamble to the base station at a relatively low power level, and gradually increases the power level until the base station receives the preamble and responds with an acknowledgement.

Applicable Law

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed.Cir.2005) (en banc) (quoting Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed.Cir.2004)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.*; C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed.Cir.2004); Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1267 (Fed.Cir.2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See* Phillips, 415 F.3d at 1314; C.R. Bard, Inc., 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. Phillips, 415 F.3d at 1312-13; Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1368 (Fed.Cir.2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. Phillips, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id*. Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id*. Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314-15.

Claims "must be read in view of the specification, of which they are a part." *Id.* (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 978 (Fed.Cir.1995)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' " *Id.* (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)); Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed.Cir.2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. Phillips, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* Also, the specification may resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." Teleflex, Inc., 299 F.3d at 1325. But, "although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998); *see also* Phillips, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. Home Diagnostics, Inc., v.

Lifescan, Inc., 381 F.3d 1352, 1356 (Fed.Cir.2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent.").

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.' "Phillips, 415 F.3d at 1317 (quoting C.R. Bard, Inc., 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition is entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

The Terms

The parties have agreed on the construction of several previously disputed terms, and the Court will construe the four remaining disputed terms: "access preamble," "acknowledgement," "packet data," and "packet a packet formatter."

Access Preamble

The parties have agreed to construe "preamble," appearing in Claims 13, 23, and 24, to mean "a signal used for communication with the base station that is spread before transmission." However, they disagree about the proper construction of "access preamble," which appears in Claims 27, 28, and 29. GBT advocates "a preamble selected for transmission from a set of predefined preambles" while Defendants argue that an "access preamble" is "an un-spread preamble." FN1

Defendants argue that the surrounding claim language implies that the "access preamble" must be "unspread," but the Court finds that the surrounding claim language indicates that the patentee has used "access preamble" and "preamble" interchangeably. Claim 27 provides for "spreading an access preamble selected from a set of predefined preambles; transmitting from the MS transmitter the spread access preamble." 17:28-31.FN2 Thus, the "access preamble" is spread before it is transmitted, which is consistent with the notion that a "preamble" is "spread before transmission" as the agreed construction provides. As it appears that the patentee has used "access preamble" and "preamble" interchangeably, the Court is inclined to adopt the same construction for both terms.

Defendants advocate a slightly different approach, and characterize the "access preamble" as "un-spread," before it is spread and transmitted. That approach rests on the assumption that before a preamble is "spread," it is necessarily "un-spread," which is not an unreasonable position. However, the Court finds that the approach reflected in the agreed construction of "preamble" to be more consistent with the claim language and specification, which emphasize that the preamble is spread before transmission, but do not explicitly differentiate between "spread" and "un-spread" signals.

Defendants also argue that "access preamble" and "preamble" are presumed to have different meanings under the doctrine of claim differentiation, but the Court finds that the patentee's use of "access preamble" and "preamble" overcomes the presumption that the two terms cover different claim scope. The doctrine of claim differentiation provides that "different words or phrases used in separate claims are *presumed* to indicate that the claims have different meaning and scope (emphasis added)." Seachange Inter., Inc. v. C-

COR, Inc., 413 F.3d 1361, 1368 (Fed.Cir.2005) *citing* Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971-72 (Fed.Cir.1999). However, the doctrine "only creates a *presumption* that each claim in a patent has a different scope; it is not a hard and fast rule of construction (emphasis added)." Seachange Inter. 413 F.3d at 1369 *quoting* Kraft Foods, Inc. v. Int'l Trading Co., 203 F.3d 1362, 1368 (Fed.Cir.2000). "[C]laims that are written in different words may ultimately cover substantially the same subject matter." Seachange Inter. 413 F.3d at 1369 *quoting* Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1480 (Fed.Cir.1998).

As discussed above, "access preamble" and "preamble" cover the same subject matter, which overcomes the presumption that these terms have different meanings and cover different claim scope.FN3 Accordingly, the Court construes "access preamble" to mean "a signal used for communication with the base station that is spread before transmission."

Acknowledgement

The parties generally agree that an "acknowledgement" is transmitted from the base station to the mobile station in response to a successfully received preamble.FN4 However, the parties disagree whether the "acknowledgement" must be sent as a "layer 1 acknowledgment."

Although the claim language does not require that an "acknowledgment" be a layer 1 acknowledgement,FN5 GBT contends that the specification clarifies that every "acknowledgement" in the asserted claims is a layer 1 acknowledgement. Defendants disagree, and point out that the base station may also send a layer 2 acknowledgement. 10:14-17 ("The L2 acknowledgement (L2 ACK) mechanism, which is different than the L1 ACK, is used by the base station to notify the remote station for the correctness of an uplink packet reception."). FN6 GBT counters that Defendants' excerpt is irrelevant because, as the parties agree, an "acknowledgement" is sent in response to a *preamble*, whereas this excerpt describes a layer 2 acknowledgement being sent in response to data or a message sent by the mobile station. The Court agrees with GBT that the specification excerpt Defendants cite does not bear on the meaning of "acknowledgement" as that term is used in the asserted claims. However, the Court cannot find that the remainder of the specification clearly requires that the "acknowledgement" must necessarily be a layer 1 acknowledgement.

As noted above, the claims do not require that the acknowledgement take on any particular form. In arguing for its narrower construction, GBT relies primarily on a passage of the specification describing a base station indicating successful receipt of a preamble with a layer 1 acknowledgement. 7:58-66. FN7 While this passage indicates that the "acknowledgement" is a layer 1 acknowledgement, almost all of the other references to "acknowledgement" in the specification are more general. *See* 1:57; 6:15, 30-47; FN8 8:51, 56-7, 58, 60; 10:62-3, 64, 65, 67. Those specification excerpts, like the claim language itself, do not require that the acknowledgement take on any particular form, rather, they tend to emphasize the role of the acknowledgement by referring to an "acknowledgment" as a signal sent in response to a successfully received preamble.

As the claims refer more generally to "acknowledgement" and the specification offers conflicting guidance as to whether the "acknowledgement" must be a layer 1 acknowledgement, the Court declines to read GBT's limitation into its construction. Accordingly, the Court construes "acknowledgement" to mean "a response signifying the detection of a preamble."

Packet data

The dispute over this term revolves around Defendants' requirement that "packet data" include "a collision detection signal." FN9 GBT offers the broader construction, "data organized into a packet," and argues that Defendants' construction improperly reads a limitation from the preferred embodiment into the claim. For the reasons that follow, the Court elects to adopt GBT's broader construction.

The term "packet data" appears in asserted claims 27, 28, and 29.FN10 These claims do not require that "packet data" include a collision detection signal, nor is collision detection otherwise discussed in the claims. In arguing for their limitation, Defendants look to the specification and argue that Figure 11 clarifies that "packet data" must include a collision detection signal. Figure 11 depicts the structure of "packet data," and admittedly includes a collision detection signal abbreviated "CD" on the diagram. However, in Figure 11, "packet data" also includes several items that do not appear in Defendants' construction including Service, Length, and Signal portions. Therefore, Figure 11 provides mixed support for Defendants position because on the one hand it shows a collision signal as a part of "packet data," but on the other hand it shows the "packet data" includes several other items, which Defendants elected not to include in their construction.

Defendants also argue that the patent as originally filed supports the understanding that "packet data" necessarily includes a collision detection signal. Defendants contend that collision detection was at the heart of the original patent,FN11 but GBT attempted to divert that focus in the current version by recasting the collision detection signal as merely a part of a preferred embodiment. However, in the face of the more general claim language that does not reflect such a focus on collision detection, the Court is not convinced Defendants' limitation is appropriate.

Claims 27 though 29 refer only to "data packet" without reference to collision detection, and Claim 13 reinforces the more general understanding of the term by stating that the base-band processor processes, "a packet, comprising data, from a second received spread-spectrum signal." 14:66-7. Accordingly, the Court construes "packet data" to mean "data organized into a packet."

Packet a packet formatter

Defendants argue that the term "packet a packet formatter" is indefinite under 35 U.S.C. s. 112 because the patent never describes what a "packet a packet formatter" actually is. GBT counters that the first "packet" in "packet a packet formatter" is merely a typographical error and the term is not indefinite when read in conjunction with the specification and the surrounding claim language. The Court agrees that the phrase is not indefinite, and adopts the parties' agreed construction "a device that formats data into packets." FN12

Paragraph 2 of 35 U.S.C. s. 112 sets forth the definiteness standard, and provides that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Claims that fail to satisfy this requirement are indefinite, and therefore, invalid. Bancorp Servs., LLC v. Hartford Life Ins. Co., 359 F.3d 1367, 1371 (Fed.Cir.2004). A claim is not indefinite if a person skilled in the art could understand what is claimed when reading the claim in light of the specification. *Id.* Both the claim language and the specification suggest that the first "packet" in "packet a packet formatter" is a typographical error, and despite this error, one skilled in the art reading this patent would understand what is claimed.FN13 Claim 13 provides:

A base-band processor, for use in a code-division-multiple-access (CDM) wireless base station having a modulator and a demodulator, the base-band processor comprising:

a preamble processor, coupled to the demodulator, for detecting a preamble in a received spread-spectrum signal;

a data processor, coupled to the demodulator, for detecting and processing any data contained in the received spread-spectrum signal;

an encoder, for encoding data;

an interleaver, coupled to the encoder, for interleaving encoded data

packet a packet formatter, coupled to the interleaver, for formatting the interleaved data into a packet; and

a controller coupled to the preamble processor and coupled for controlling the modulator, the data processor and the packet formatter." 14:39-55.

Aside from "packet a packet formatter," each of the component descriptions begins with "a" or "an," and follows a fairly mechanical format. First, the component is identified, next, the component is described as "coupled" to another component,FN14 and finally, the component's function is briefly described. If the first "packet" in "packet a packet formatter" is disregarded, the disputed claim language follows this basic structure, and is described as a component "for formatting the interleaved data into a packet." Further, if the phrase is read as "a packet formatter," it provides proper antecedent basis for "the packet formatter" in Claim 13 and in dependent Claims 16 and 17.

The specification also supports the interpretation that the phrase was intended to read "a packet formatter." It refers consistently to "a packet formatter" and then "the packet formatter." 3:29, 42; 4:2-6. In the context of the claims and specification, the Court cannot find that the phrase is indefinite. Having found the phrase is not indefinite, the Court adopts the parties' agreed construction "a device that formats data into packets."

Conclusion

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table attached to this opinion.

So ORDERED

	Proposed Claim Term(s) for Construction	, ,		Construction	Current Status (agreed upon terms shown in bold italics)
1.	detecting a preamble	13	See Plaintiff's	Detecting the preamble	No longer in need of
	in a received		construction of	portion of a spread-	construction given
	spreadspectrum		"preamble" herein and	spectrum signal See	agreed preamble
	signal		the parties' agreed	Defendants' construction	definition
			construction of	of "preamble" and the	
			"spread spectrum." No	parties' agreed	
			construction necessary	construction of "spread	
			for the remainder of	spectrum" herein.	

			the phrase.		
2.	sequence of coded preamble signals	13	See Plaintiff's construction of "preamble" herein. No construction necessary	A continuous burst of coded preambles that are treated as a unit <i>See</i> Defendants' construction of "preamble" herein.	interrupted if an
3.	detecting a first one of a sequence of coded preamble signals	13	See Plaintiff's construction of "preamble" herein. No construction necessary for the remainder of the phrase.		detecting a first preamble signal from multiple preamble signals that may be interrupted if an acknowledgment is received
4.	upon detection of the first coded preamble signal at the adequate power level	13	See Plaintiff's construction of "preamble" herein. No construction necessary for the remainder of the phrase.	Upon detecting a first preamble at the adequate power level from a continuous burst of preambles that are treated as a unit	No additional construction necessary in light of the agreed upon definitions above
				See Defendants' construction of "preamble" herein.	
5.	[first] [second] preamble	13, 23, 24	A code used to access a communications channel	"preamble": A portion of a spread- spectrum signal used for communicating with the base station "[first/second] preamble": A distinct preamble from a continuous burst of preambles that are	a signal used for communicating with the base station that is spread before transmission
6.	[transmitted] access preamble	27, 29	A preamble selected for transmission from a set of predefined preambles	treated as a unit "access preamble": An unspread preamble	a signal used for communicating with the base station that is spread before transmission
				"spread access preamble": Preamble See Defendants' construction of "preamble" herein.	
	transmitting a	23	See Plaintiff's	Transmitting a	Transmitting multiple

first preamble at a first discrete power level; if no acknowledgment corresponding to the previously transmitted preamble is received construction of
"preamble," "access
preamble,"
"discrete," and
"acknowledgement"
herein. No
construction
necessary for the
remainder of the
phrases.

continuous burst comprising a first preamble at a discrete power level and a second preamble at a higher discrete power level; interrupting the transmission of the continuous burst of preambles if an acknowledgement is received from the base station preamble signals wherein such transmission is interrupted if an acknowledgment is received, the multiple preamble signals comprising a first preamble signal being transmitted at a first discrete power level and a second preamble signal being transmitted at a second discrete power level that is higher than the first discrete power level.

... transmitting ... a second preamble at a second discrete power level that is higher than the first discrete power level ... transmitting a preamble at a discrete power level ...; if an acknowledgment is not received ... increasing power level to a new discrete power level, and repeating the transmitting step

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transmitting ... the 27 spread access preamble, at a first discrete power level

if NO acknowledgement corresponding to

See Defendants' proposed constructions of "preamble," "acknowledgement," "access preamble," and "discrete power level" herein.

	the access preamble is detected, transmitting a spread access preamble at a second discrete power level higher than the first discrete power level transmitting the spread access preamble, at a first discrete power level to a base station; if NO acknowledgement corresponding to the access preamble is detected, transmitting a spread access preamble at a second discrete power level higher than the first discrete power level higher than the first discrete power level by a time following the transmission of the first preamble	29	See Plaintiff's construction of "preamble" herein. No construction necessary for the	A fixed time period between the transmission of a first preamble and the transmission of a	Predetermined interval: an interval that is determined, decided or established in advance
	a predetermined	24	necessary for the remainder of the phrases.	transmission of a second preamble See Defendants'	"by a time" is no
	interval			construction of "preamble" herein.	longer in need of construction
7.	packet data	27, 29	Data organized into a packet		Data organized into a packet
				0 1	

			•		applies.	
					a device that formats data into packets.	
9.	acknowledgement	13, 23- 29	A response at layer 1 signifying the detection of a preamble	A signal transmitted from the base station to the remote station informing the remote station that the base station has received a signal transmitted from	a response signifying the detection of a preamble	
				the remote station.		

112 para. 2, and

following construction

packets

FN1. GBT's construction is essentially transplanted from the claim language itself, and would not offer any meaningful guidance to a juror. Therefore, the Court declines to adopt GBT's construction as unhelpful, and will focus on Defendants' proposed construction.

FN2. Claim 28 depends from Claim 27, and the relevant language from Claim 29 tracks the language of Claim 27 with a few minor modifications. That language provides, "spreading an access preamble selected from a set of predefined preambles; transmitting the spread access preamble, at a first discrete power level to a base station." 18:22-25.

FN3. The presumption is at its strongest "where the limitation sought to be 'read into' an independent claim already appears in a dependent claim." Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004). Here the presumption is not quite so strong because the differing language appears in two independent claims. *See* Kraft Foods, 203 F.3d 1362 at 1365-69.

FN4. Compare Defendants' construction "a signal transmitted from the base station to the remote station informing the remote station that the base station has received a signal transmitted from the remote station," with GBT's construction "a response at layer 1 signifying the detection of a preamble." In their hearing presentation, Defendants additionally proposed "a response signifying the detection of a preamble."

FN5. See 14:63-64; 16:26, 36, 38, 43; 16:60, 63; 17:9, 11, 15;17:17-18, 32; 18:1, 7-8, 24, 29.

FN6. The specification abbreviates "acknowledgement" as "ACK," "layer 1" as "L1," and "layer 2" as "L2."

FN7. The passage reads, "[t]he transmission of the preambles ceases if the preamble has been picked up detected by the base station and the base station has responded to the remote station with a layer one acknowledgement L1 ACK, which the remote station has also successfully received. Alternatively, transmission of the preamble ceases if the remote station has transmitted the maximum allowed number of

preambles Mp without acknowledgement. Upon receiving an L1 ACK the remote station starts transmission of its data."

FN8. 6:33-36 states, "[t]he ACK signal is shown in FIG. 6, in response to the fourth preamble having sufficient power for detection by the BS spread-spectrum receiver." Although the specification language refers generally to an acknowledgement, "ACK," the referenced figure, Figure 6, shows a layer 1 acknowledgement sent in response to the received preamble. This lack of consistency appears throughout the specification and prevents the Court from concluding that the acknowledgement must only be understood as a layer 1 acknowledgement.

FN9. Defendants' full construction: a bundle of information that includes a collision detection signal and a message portion.

GBT's construction: data organized into a packet.

FN10. Claim 28 depends from Claim 27 which states, "upon detecting an acknowledgement corresponding to a transmitted access preamble, ceasing preamble transmission and transmitting the packet data from the MS transmitter." Claim 29 contains the same language.

FN11. The patent was originally titled "Collision Detection" rather than "Rach ramp-up acknowledgement." Defendants also point out that a portion of the specification originally read "[t]he data includes a collision detection portion" but was altered to read "[t]he data may include a collision detection portion."

FN12. The parties agreed to this construction in the event that the Court found the phrase was not indefinite.

FN13. Even under Defendants' standard where the Court may only correct claim language if "the correction is not subject to reasonable debate based on consideration of the claim language and the specification," the Court cannot find the claim is indefinite. Novo. Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1357 (Fed.Cir.2003). In light of the claims and specification, a fair reading of the patent forecloses reasonable argument over whether the first "packet" in the phrase "packet a packet formatter" was included in error.

FN14. The "encoder" is not described as coupling with any other component.

E.D.Tex.,2006.

Golden Bridge Technology, Inc. v. Nokia, Inc.

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