

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

**INTERDIGITAL COMMUNICATIONS,
INC., et al.,**

Plaintiffs and
Counterclaim
Defendants;

v.

ZTE CORP., et al.,

Defendants and
Counterclaim
Plaintiffs.

Civil Action No. 1:13-cv-00009-RGA

**INTERDIGITAL COMMUNICATIONS,
INC., et al.,**

Plaintiffs and
Counterclaim
Defendants;

v.

NOKIA CORP., et al.

Defendants and
Counterclaim
Plaintiffs.

Civil Action No. 1:13-cv-00010-RGA

MEMORANDUM OPINION

Neal C. Belgam, Esq., Smith, Katzenstein & Jenkins, Wilmington, DE; Maximilian A. Grant, Esq. (argued), Latham & Watkins LLP, Washington D.C.; Ron E. Schulman, Esq., Latham & Watkins LLP, Menlo Park, CA; Julie M. Holloway, Esq. (argued), Latham & Watkins LLP, San Francisco, CA; Thomas W. Yeh, Esq., Latham & Watkins LLP, Washington D.C.; attorneys for the Plaintiff.

Kelly E. Farnan, Esq., Richards, Layton & Finger, Wilmington, DE; Charles M. McMahon, Esq. (argued), Brinks, Gilson, & Lione, Chicago, IL; Jay Reiziss, Esq., Brinks, Gilson, & Lione, Washington D.C.; Hersh H. Mehta, Esq., Brinks, Gilson, & Lione, Chicago, IL; Mircea A. Tipescu, Esq., Brinks, Gilson, & Lione, Chicago, IL, attorneys for the Defendant Nokia.

Rodger D. Smith, II, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Jack B. Blumenfeld, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Patrick J. Flinn, Esq., (argued), Alston & Bird LLP, Atlanta, GA; John D. Haynes, Esq. (argued), Alston & Bird LLP, Atlanta, GA; David S. Frist, Esq., Alston & Bird LLP, Atlanta, GA, attorneys for the Defendant ZTE.

April , 2014


ANDREWS, UNITED STATES DISTRICT JUDGE:

Pending before this Court is the issue of claim construction of various disputed terms found in U.S. Patent Nos. 7,190,966 (“966 Patent”), 7,286,847 (“847 Patent”), 7,941,151 (“151 Patent”), and 8,380,244 (“244 Patent”).

BACKGROUND

On January 2, 2013, InterDigital Communications Inc., InterDigital Technology Corporation, IPR Licensing, Inc., and InterDigital Holdings, Inc. (“Plaintiffs”) filed four patent infringement actions. (1:13-cv-00008 D.I. 1; 1:13-cv-00009 D.I. 1; 1:13-cv-00010 D.I. 1; 1:13-cv-00011 D.I. 1)¹. The remaining defendants are ZTE Corporation, ZTE (USA) Inc., Samsung Electronics Co. Ltd., Samsung Electronics America Inc., Samsung Telecommunications America LLC, Nokia Corporation, and Nokia Inc.² (“Defendants”) The Court has considered the Parties’ Amended Joint Claim Construction Brief. (D.I. 140). The Court held oral argument on March 12, 2014. (D.I. 225).

LEGAL STANDARD

“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) (internal quotation marks omitted). “[T]here is no magic formula or catechism for conducting claim construction.’ Instead, the court is free to attach the appropriate weight to appropriate sources ‘in light of the statutes and policies that inform patent law.’”

¹ Unless otherwise noted, all subsequent citations to the Docket will be for case 1:13-cv-00009.

² Samsung Electronics Co. Ltd., Samsung Electronics America Inc., and Samsung Telecommunications America LLC were not parties to the present motion.

SoftView LLC v. Apple Inc., 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324). When construing patent claims, a matter of law, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Of these sources, “the 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.” *Phillips*, 415 F.3d at 1315 (internal quotations and citations omitted).

Furthermore, “the words of a claim are generally given their 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 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314 (internal citations omitted).

A court may consider extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises,” in order to assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art and how the invention works. *Id.* at 1317-19 (internal quotation

marks and citations omitted). However, extrinsic evidence is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

“A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent.” *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (internal quotation marks and citation omitted).

`966 AND `847 PATENTS

The Court will first take up the claim construction issues that relate to the `966 and the `847 Patents. Claim 1 of the `966 Patent is representative and reads:

A wireless code division multiple access (CDMA) subscriber unit comprising:

a transmitter configured such that, when the subscriber unit is first accessing a CDMA network and wants to establish communications with a base station associated with the network over a communication channel to be indicated by the base station, the transmitter *successively transmits signals* until the subscriber unit receives from the base station an indication that a transmitted one of the signals has been detected by the base station, wherein each transmission of one of the signals by the transmitter is at an increased power level with respect to a prior transmission of one of the signals;

the transmitter further configured such that the transmitter transmits to the base station a message indicating to the base station that the subscriber unit wants to establish the communications with the base station over the communication channel to be indicated by the base station, the message being transmitted only subsequent to the subscriber unit receiving the indication,

wherein each of the *successively transmitted signals* and the message are *generated using a same code*; and

wherein each of the *successively transmitted signals* is shorter than the message.

(emphasis added).

The Court construed the three relevant terms for this patent during the Markman Hearing. (D.I. 225 at 61, 62). The Court's constructions are as follows.

A. "code"

Court's Construction: "sequence of chips or bits"

B. "generated using [a same / a portion of a / a remainder of the] code"

Court's Construction: "produced from [a same / a portion of a / a remainder of the] code"

C. "successively transmits signals; successively transmitted signals"

Court's Construction: "successively [transmits / transmitted] sequences of chips or bits"

`151 PATENT

Claim 1 of the `151 Patent is representative and reads:

A method for utilizing *channel assignment information* for an uplink shared channel or a downlink shared channel, the method comprising:

a wireless transmit/receive unit (WTRU) receiving downlink control information including downlink or uplink *channel assignment information* via a *same physical downlink control channel*, both downlink *channel assignment information* and uplink *channel assignment information* being received via the *same physical downlink control channel*;

the WTRU determining whether the downlink control information is intended for the WTRU based on WTRU identity (ID)-masked cyclic redundancy check (CRC) parity bits, and if so determining whether the *channel assignment information* is for assigning *radio resources* for the uplink shared channel or the downlink shared channel; and

the WTRU *utilizing the radio resources for the uplink shared channel or the downlink shared channel.*

(emphasis added).

A. “*radio resources*”

1. *Plaintiffs’ construction*: “resources for uplink or downlink transmissions from or to the WTRU”
2. *Defendants’ construction*: plain and ordinary meaning or “physical resources for uplink or downlink transmissions [from or to a WTRU]”
3. *Court’s construction*: “physical resources for uplink or downlink transmissions [from or to a WTRU]”

The Defendants argue that the only dispute is whether the term “physical” should be incorporated into the claim construction. (D.I. 140 at 66). The Plaintiffs state that, “There appears to be no genuine dispute among the parties with regard to the construction of this term standing alone.” *Id.* Furthermore, at oral argument both parties agreed that a “radio resource” must be “physical.” (D.I. 225 at 75, 76). The Court agrees with the parties that a “radio resource” must be a “physical resource” and therefore adopts the Defendants’ proposed claim construction as it properly captures the “physical” requirement of the disputed term.

B. “[*a/the*] *same physical downlink control channel*”

1. *Plaintiffs’ construction*: “a radio resource used to transmit uplink and/or downlink channel assignment information”
2. *Defendants’ construction*: “[*a/the*] channel used for transfer of downlink control information only that occupies a same radio resource defined by a channelization code”

3. *Court's construction*: “[a/the] channel used only for transfer of downlink control information that occupies a same radio resource”

The Defendants argue that their construction is necessary as it highlights the requirement “that the channel at issue be the ‘same physical’ channel in that it occupies the same radio resource.” (D.I. 140 at 52). To support this argument, the Defendants cite to the `151 Patent’s prosecution history and the Patent’s specification. *Id.* at 52, 53. Furthermore, the Defendants argue that the construction should require that the channel be “defined by a channelization code.” *Id.* at 53. The Defendants argue that the `191 Patent’s specification requires this construction because it ties the “present invention . . . to the WCDMA standard” *Id.*

The Plaintiffs argue that it is not necessary to construe this claim to require a “physical” component, as this is encompassed within the construction of the term “radio resource.” Further, the Plaintiffs argue that it is inappropriate to limit the claim to “channelization code[s]” as the `151 Patent states that “[t]he present invention is applicable to any type of wireless communication system such as . . . CDMA in general or any other type of wireless communication system.” *Id.* at 55 (quoting the `151 Patent at 3:4-9) (emphasis omitted, ellipsis in original).

The Court agrees with the Plaintiffs that including the phrase “channelization code” adds a limitation to the claim that is found in neither the claim nor the specification. Thus, its inclusion in the claim construction would be inappropriate. However, the Court does find that the Plaintiffs’ proposed construction broadens the scope of the claim to include uplink channel assignment information, which is absent from the claim language. Therefore, the Court finds

that the proper construction of the disputed phrase is the Defendants' construction, without the reference to channelization codes.

C. *“utilizing the radio resources for the uplink shared channel or the downlink shared channel”*

1. *Plaintiffs' construction:*

As used in claim 1: “using the assigned radio resources for the uplink or downlink shared channel”

As used in claim 16: “the controller is configured to use the assigned radio resources for the uplink or downlink shared channel”

2. *Defendants' construction:* “either transmitting data on the uplink shared channel or receiving data on the downlink shared channel depending on whether the assigned radio resources are for the uplink shared channel or downlink shared channel”

3. *Court's construction:*

As used in claim 1: “either transmitting data on the uplink shared channel or receiving data on the downlink shared channel”

As used in claim 16: invalid as indefinite

The Court will first address the construction of the phrase as found in claim 1 of the '151 Patent. The Plaintiffs argue that their proposed construction of the claim terms are consistent with the plain meaning. (D.I. 140 at 57). However, the Plaintiffs agreed during the Markman Hearing that the Defendants' proposed construction would be unobjectionable if the portion after, and including the word, “depending” was not adopted. (D.I. 225 at 103). Therefore, the

only remaining dispute for the Court is whether the phrase should be construed to contain the “depending” clause.

The Defendants argue that the “depending” clause is necessary as it properly reflects the order in which the action must be accomplished. (D.I. 140 at 58). In support of this argument, the Defendants cite to both the Patent’s abstract and to Fig. 3. (D.I. 140 at 58). The `151 Patent’s abstract states, “The WTRU takes an appropriate action based on whether the message is for assigning radio resources to the UL channel or the DL channel.” The Plaintiffs argue that there is no timing requirement in the claims, and it would be inappropriate to read such a limitation into them. The Court agrees. There is no requirement in the claim that data may not be received until after a channel assignment has been made. Furthermore, it would be inappropriate to read such a requirement into the claim, as there was no clear disclaimer of this claim scope. Therefore the Court construes the phrase, in the context of claim 1 of the `151 Patent, to be “either transmitting data on the uplink shared channel or receiving data on the downlink shared channel.”

Turning to claim 16 of the `151 Patent, the Defendants argue that the claim is indefinite “because a person of ordinary skill in the art at the time of the purported invention would not have understood whether claim 16, an apparatus claim, requires utilizing the radio resources (a method step) or having a controller configured to utilize the radio resources (a device capability).” (D.I. 140 at 58). The Plaintiffs argue that a person of ordinary skill in the art would understand that the term “utilizing” meant “to utilize” in the context of the claim. *Id.* at 60. The Plaintiffs further argue that “[u]tilizing’ in claim 16 is essentially a typographical error which the Court may correct.” *Id.*

A claim is “not sufficiently precise” under section 112 when the claim is drafted as both an apparatus and a method claim. *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). Furthermore, a Court “may not redraft claims, whether to make them operable or to sustain their validity.” *Rembrandt Data Technologies, LP v. AOL, LLC*, 641 F.3d 1331, 1339 (Fed. Cir. 2011). The Federal Circuit has held that a district court may only correct a claim if “(1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.” *Rembrandt Data Technologies*, 641 F.3d at 1339. While the Federal Circuit has found it appropriate to correct a missing comma in a claimed chemical formula, because the party had proven that without the comma the formula did not represent any known mineral, *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1353 (Fed. Cir. 2009), the Federal Circuit has also indicated that correcting an apparatus claim that includes an improper method step is not permissible. *Rembrandt Data Technologies*, 641 F.3d at 1339. Here, the Plaintiffs ask the Court to rewrite a method step in an apparatus claim to preserve its validity. The Court finds that this correction is subject to reasonable debate and therefore will not redraft the claim. Therefore, claim 16 of the ‘151 Patent is indefinite.

D. “*channel assignment information*”

1. *Plaintiffs’ construction*: “information regarding radio resource assignment for the uplink or downlink channel”
2. *Defendants’ construction*: This term should be given its plain and ordinary meaning, but, to the extent a construction is necessary, Defendants propose “information identifying a channel assigned to the WTRU”

3. *Court's construction*: “information identifying a channel assigned to the WTRU”

The Plaintiffs argue that their proposed construction is consistent with the claim language and the specification. (D.I. 140 at 61). The Plaintiffs cite to a portion of the specification that states, “[T]he present invention is related to a method and system for providing channel assignment information to support uplink and downlink transmissions.” *Id.* The Plaintiffs argue that this passage “signals that this disclosure applies to the invention as a whole, and not merely to an embodiment.” *Id.* The Defendants respond that during the prosecution of the parent patent of the ‘151 Patent, “the applicants argued that [the prior art reference] did not disclose channel assignment information because [the prior art reference] disclosed dedicated channels, which have static channel assignments. The applicants explained that the claims required shared data channels, which are ‘dynamically adjusted.’” *Id.* at 62. Furthermore, the Defendants argue that the Plaintiffs’ proposal improperly expands the scope of the claim as it allows for any information to be transmitted, not only information that identifies the assigned channel.

The Court agrees with the Defendants. The Plaintiffs’ proposed construction improperly expands the scope of the patent. Furthermore, the Defendants’ proposed construction is consistent with the plain reading of the claim and the prosecution history of the ‘151 Patent. Therefore, the Court will adopt the Defendants’ proposed construction.

‘244 PATENT

Claim 1 of the ‘244 Patent is representative and reads:

A subscriber unit comprising:

a cellular transceiver configured to communicate with a cellular wireless network via a plurality of *assigned physical channels*;

an IEEE 802.11 transceiver *configured to communicate with an IEEE 802.11 wireless local area network*; and

a processor configured to *maintain a communication session with the cellular wireless network in an absence of the plurality of assigned physical channels* while the IEEE 802.11 transceiver communicates packet data with the IEEE 802.11 wireless local area network.

(emphasis added).

A. “*configured to communicate with an IEEE 802.11 wireless local area network*”

1. *Plaintiffs’ construction*: This phrase does not require construction, but if construed it should be construed to mean “[operable/arranged to] transmit data to and/or receive data from an IEEE 802.11 wireless local area network.”
2. *Defendants’ construction*: “set up to always connect directly to an IEEE 802.11 wireless local area network when such a connection is possible”
3. *Court’s construction*: “set up to always connect automatically to an IEEE 802.11 wireless local area network when such a connection is possible”

The Plaintiffs argue that their proposed construction comports with the plain reading of the claims. (D.I. 140 at 74). The Plaintiffs also cite to Hargrave’s Communications Dictionary to support their proposed construction. *Id.* The Defendants argue that the intrinsic record requires that the communication with the IEEE 802.11 wireless local area network happen directly. *Id.* at 75. As support for that construction, the Defendants cite the Summary of the Invention, which indicates that the invention solves the problem of manual selection. *Id.* The Defendants stated at the Markman Hearing that their proposed construction would have the same meaning if the term “directly” was substituted with the word “automatically.” (D.I. 225 at 161).

The Court finds that the inventor's description of the '244 Patent, as solving the problem of manual selection, limits the scope of the patent. Further, the Court finds that the term "directly" may lead to further confusion, as the term may confusingly imply the proximity, in time or space, of the events. Instead, the Court finds that term "automatically" appropriately captures the claim scope by emphasizing only that the action does not require manual selection. Therefore, the Court adopts the Defendants' proposed construction, with the substitution of the word "automatically" for "directly."

B. *"maintain a communication session with the cellular wireless network in an absence of the plurality of assigned physical channels"*

1. *Plaintiffs' construction:* "maintain a logical connection with the cellular wireless network when none of the [two or more physical layer channels allocable by the subscriber unit as needed to transfer data] are in use by the subscriber unit"
2. *Defendants' construction:* "spoof the subscriber unit to make it appear that a cellular wireless communication link continuously available in an absence of the plurality of assigned physical channels"
3. *Court's construction:* "maintain a logical connection with the cellular wireless network when none of the plurality of assigned physical channels are in use by the subscriber unit"

The Plaintiffs argue that the claim language "suggests that the 'communication session' is a 'logical connection' as opposed to a physical connection because, under the plain claim language, the communication session is maintained even when the physical channels have been released (or unassigned)." (D.I. 140 at 78 (footnote omitted)). The Plaintiffs maintain that their

proposed construction is further supported by the specification and the prosecution history. *Id.* at 78, 79. The Defendants argue that the issue is whether any logical connection can satisfy the claim phrase, or just spoofing. *Id.* at 79. The Defendants point the court to the prosecution history of the patent as evidence that spoofing is a required limitation. *Id.*

The '244 Patent prosecution history shows that initially the examiner rejected the relevant claim on the basis that the phrase “maintain a communication session . . . in the absence of the plurality of the assigned physical layer channels” was not supported by the specification. (D.I. 129-5 at 8). The inventor responded to this rejection by pointing the examiner to portions of the patent specification that discuss logical connections. *Id.* at 31. Specifically, the inventor stated, “[T]he communication session may be maintained via the logical connection (for example, a higher layer protocol) even as one or more physical wireless channels are released.” *Id.* In support of this argument the inventor pointed to portions of the application that discuss the use of spoofing. *Id.* The examiner responded to this argument in the Final Office Action by stating:

The examiner notes that Applicants have defined “a processor configured to maintain a communication session, with the first wireless network in the absence of the plurality of assigned physical layer channels while communicating packet data with the IEEE 802.11 wireless local area network via the second transceiver.” For example, Applicants generally point to paragraphs 0023 and 0078 (see paper dated 1/28/2011 at page 9[.],) which basically indicates some sort of spoofing (i.e. spoof the terminal into believing that a sufficient wide wireless communication link is continuously available).

(D.I. 148-1 at 5).

The Court finds that the prosecution history does not support the Defendants' argument to add a limitation to the construction of the claim. The examiner's statement provides only a possible example for the definition of the disputed phrase. This is not sufficient to put the

inventor on notice that the invention had been limited to only spoofing, nor is it specific enough to restrict the claim. Therefore, the Court adopts the broader claim construction provided by the Plaintiffs as it reflects the proper scope of the disputed claim term.

C. *“assigned physical channels,” “release,” “allocate,” and “deallocate”*

The parties’ arguments regarding “assigned physical channels,” “release,” “allocate,” and “deallocate” are similar and therefore will be addressed together.

1. *Plaintiffs’ constructions:*

Assigned physical channels: “physical layer channels allocable by the subscriber unit as needed to transfer data”

Release: “stop the subscriber unit from using”

Allocate: “assign”

Deallocate: “stop the subscriber unit from using”

2. *Defendants’ constructions:*

Assigned physical channels: “physical channels available for the subscriber unit to select for use”

Release: “make no longer assigned”

Allocate: “select for use”

Deallocate: “select to stop using”

3. *Court’s constructions:*

Assigned physical channels: “physical channels available for the subscriber unit to select for use”

Release: “make no longer assigned”

Allocate: “select for use”

Deallocate: “select to stop using”

The dispute about these claim terms largely is based upon whether the '244 Patent uses “allocate” and “assign” interchangeably, and “deallocate” and “release” interchangeably. The Plaintiffs argue that the patent does use the terms interchangeably, and cites as evidence various points in the patent’s specification and claims. (D.I. 140 at 83). The Defendants argue that the specification teaches that “a bandwidth management function that *makes channels available for use* [assigns channels], and that a subset of those available channels are *selected for use* [allocated] to send data.” *Id.* at 84 (emphasis and brackets in original).

“In the absence of any evidence to the contrary, . . . the use of . . . different terms in the claims connotes different meanings.” *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000). Here, the '244 Patent uses the terms at issue to connote different meanings. For example, the '244 Patent’s specification states, “[T]he network layer need not *allocate* the *assigned* wireless bandwidth for the entirety of the communications session.” '244 Patent, col 10: 36-38 (emphasis added). Furthermore, claims 5 and 15 both depend on claim 1 and yet each adds a similar limitation, one based on the word “release” and the other on the word “deallocate.”

The Plaintiffs argue that this case is similar to *AIA Eng'g Ltd. v. Magotteaux Int'l S/A*. (D.I. 140 at 89, 90). In *AIA Eng'g Ltd. v. Magotteaux Int'l S/A* the Federal Circuit found that while the terms being construed in the case were not the same, they could be construed to have the same definition. 657 F.3d 1264, 1276 (Fed. Cir. 2011). However, in *AIA Eng'g Ltd. v. Magotteaux Int'l S/A* the Court determined that the claims were the same because “the intrinsic

evidence reveal[ed] that the patentee acted as his own lexicographer and used ‘homogeneous solid solution’ as a synonym for ‘homogeneous ceramic composite.’” *Id.* at 1276. Conversely, here the claim terms were not defined within the specification to have synonymous definitions, and do not appear to be used interchangeably. Therefore the Court finds that the Defendants’ constructions accurately capture the proper scope of the various claim terms.

CONCLUSION

Within five days the parties should submit a proposed order consistent with this opinion and suitable for submission to the jury. The parties are additionally ordered to confer with each other regarding which terms remain in dispute in light of this Opinion. The parties should then submit a joint letter to the Court outlining the disputed terms. This letter should be submitted within ten days.