

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

G+ COMMUNICATIONS, LLC	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No. 2:22-cv-00078-JRG
	)	
SAMSUNG ELECTRONICS CO., LTD. and	)	JURY TRIAL DEMANDED
SAMSUNG ELECTRONICS AMERICA,	)	
INC.	)	
	)	
Defendants.	)	
	)	
	)	
	)	

**PLAINTIFF G+ COMMUNICATIONS, LLC'S
REPLY CLAIM CONSTRUCTION BRIEF**

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I. G+ REPLY ARGUMENTS FOR DISPUTED CLAIM CONSTRUCTIONS

A. U.S. Patent No. 8,761,776

1. “offset-based reselection principle” (claims 1-3)

Defendants incorrectly assert that the '776 Patent provides “an express definition” of an offset-based cell reselection principle. Dkt. 101 at 1. The specification describes one example of a cell reselection method and then says this method is “also called” an “offset-based cell reselection method.” This passage simply describes how to make the claimed invention, as opposed to stating, with clear intention to limit the term, what the offset-based cell reselection principle is. *See Phillips*, 415 F.3d at 1323. Defendants also ignore the patentees’ additional teachings that explain the method. '776 Patent, 1:55-57 (“Qoffset stands for a level offset of a neighbouring cell”); 1:55-57 (explaining that an offset-based cell reselection method is one in which both the radio quality of neighboring cells and the value of Qoffset are used ('776 Patent, 1:60-65) and providing one example of a technique that includes a calculation followed by a ranking of cells to determine the “best cell” for performing reselection (1:47-58); 1:60-65 (clarifying that the offset-based reselection principle requires only that the ranking R values are calculated using Qoffset given the “difficulty of reselection among neighbouring cells.”). Given the lack of clear disavowal of claim scope, there is no reason to replace this term with a construction that is more than 80 words.

2. “same-priority cells” (claims 1-3)

Not only is the phrase “same-priority cells” readily understood by a POSITA, but Defendants’ construction unnecessarily introduces additional claim construction issues, such as who or what is “assigning” the cells a priority. This is even more confusing, given that the '776 patent does not use the word “assign.” And Defendants’ suggestion that “assigned” and “setting” are synonymous and that “the patent repeatedly teaches ‘setting’ cells to a same priority” only adds

to the confusion. Inserting Defendants' proposed construction into the claim, as shown below, exemplifies the problem.

setting the cells on multiple frequencies with the second priority as [*cells assigned a same cell priority*].

The claim would disclose "setting" and "assigned" in close proximity, words that Defendants assert are synonymous, without any reconciliation of "setting the cells" or "cells assigned." This is not the plain and ordinary meaning. Instead, the '776 specification provides a simple explanation that "the cells on multiple frequencies with the same priority are *same-priority cells*." 4:46-47.

3. "wherein the priority of the same-priority cells is equal to the absolute priority of corresponding frequencies" (claims 1-3)

Defendants incorrectly assert that a "POSITA reading the claims and specification would not understand how the priority of a cell relates to priority of the frequency, which are two distinct concepts." Dkt. 101 at 4. This is incorrect. A POSITA would understand, based on the intrinsic evidence, that "[t]he terminal firstly ranks the frequencies based on their absolute priority and finds out the frequency with top priority, and then selects a cell on this frequency by the offset-based cell reselection method." '776 Patent, 2:5-9. A POSITA would understand with reasonable certainty that the same-priority cells on multiple frequencies have a priority of their corresponding frequencies (Akl Decl., ¶¶ 48 – 49) and that by using the absolute priority of the frequency that the same-priority cells are on allows the method to account for same-priority cells on multiple frequencies. The '776 Patent explains, "[a]t present, in related techniques, the priority-based reselection method only defines a cell reselection method for the cells on the same frequency, while it does not define a cell reselection method in the situation that several cells on each of frequencies with the same priority meet the priority-based reselection conditions." '776 Patent,

4:13-18.¹ This is further illustrated in the '776 Patent, Example 1, which explains that the cells C_a1_1 and C_a1_2 are cells on a first frequency (F_a1) and cell C_a2_1 is on a second frequency (F_a2). *Id.*, 5:7-12. Therefore, the priority of cells C_a1_1 and C_a1_2 is equal to the absolute priority of frequency F_a1 and the cell C_a2_1 is equal to the absolute priority of frequency F_a2. Akl Decl., ¶ 49; Ex. 1 (“Akl Suppl. Decl.”)², ¶ 23 – 25. Accordingly, the term is not indefinite, as a POSITA would understand its plain and ordinary meaning with reasonable certainty.

4. “first reselection module . . .” (claims 2-3)

The '776 Patent discloses a specific algorithm for performing the recited function. Faced with the explicit algorithmic disclosures in the specification, Defendants tacitly concede that “the cited portion explains how the first reselection module selects cells when either ‘cells on multiple frequencies with the second priority that is higher than the first priority’ (Example 1) or when ‘cells on multiple frequencies with the second priority that is lower than the first priority’ (Example 2).” Dkt. 101 at 7 (citations omitted). And Defendants are incorrect that the “same priority” situation is not addressed and overlook portions of the specification. As shown below, if cells on multiple frequencies are not reselected under the embodiments of Example 1 or Example 2 described above, the specification provides the following.

if no reselectable cell exist on the serving frequency or on the frequencies having the same priority with the serving frequency, and no cell on the frequencies with higher priority meets the foregoing conditions, moreover, the measured level SServingCell of the serving cell is lower than a threshold Threshserving,low, when SnonServingCell,x of a cell on a measured frequency with lower priority is greater than a threshold Threshx,low within TreselectionRAT, then the terminal will perform reselection and transfer to this cell, wherein x stands for the measured frequency with lower priority, SnonServingCell,x stands for the measured level of the measured cell, TreselectionRAT stands for the measured time of cell reselection, Threshserving,low stands for the low-level threshold of the serving cell, and Threshx,low stands for the threshold of reselection to a frequency with lower

¹ Emphasis added throughout, unless otherwise noted.

² Dr. Akl’s Supplemental Declaration is subject to G+’s Opposed Motion for leave (Dkt. 90).

priority; '776 Patent, 2:27-41.

Given these step-by-step algorithms, Defendants cannot show, by clear and convincing evidence or otherwise, that this claim term is indefinite.

5. “second reselection module . . .” (claims 2-3)

Defendants argue that “[t]he specification does not describe a processor, memory, or the like. Nor does it describe any software, much less an algorithm for performing the function.” Dkt. 101 at 8. As shown below, this is incorrect. The specification states that, in:

“Step S104, the terminal selects a cell as a reselected cell from among the same-priority cells based on a best-cell reselection principle, wherein the best-cell reselection principle is an offset-based cell reselection principle (the offset-based cell reselection principle has been described in details in the background of the present invention, so it will not be described here again).” '776 Patent, 4:61-67.

The background describes, in detail, the process for selecting a cell as a reselected cell as follows:

The terminal firstly ranks the frequencies based on their absolute priority and finds out the frequency with top priority, and then selects a cell on this frequency by the offset-based cell reselection method. This reselection method is called a priority-based reselection method, and the selected cell should meet the following conditions: $S_{\text{nonServingCell},x}$ of a cell on a measured frequency is greater than a threshold value $\text{Thresh}_{x,\text{high}}$ within $\text{Treselection}_{\text{RAT}}$, wherein x stands for the measured frequency, nonServingCell stands for the measured cell, $S_{\text{nonServingCell},x}$ stands for the measured level of the measured cell, $\text{Treselection}_{\text{RAT}}$ stands for the measured time of cell reselection, and $\text{Thresh}_{x,\text{high}}$ stands for the threshold of reselection to a frequency with higher priority. A cell may be chosen as a reselected cell only when it meets the foregoing conditions. '776 Patent, 2:5-21.

Moreover, the applicants also disclosed step-by-step examples of priority based and offset-based cell reselection calculation ($R_s = Q_{\text{meas},s} + Q_{\text{hysts}}$, $R_n = Q_{\text{meas},n} - Q_{\text{offset}}$) and explained how R values were ranked to determine the best cell when performing reselection among cells at higher, lower, and same frequencies. '776 Patent, 1:51-60; 2:5-47; 5:37-60. Given these specific algorithmic disclosures, Defendants fail to show indefiniteness by clear and convincing evidence.

B. U.S. Patent No. 10,448,430

1. “UE group” (claims 1-18)

Defendants' argument hinges on their incorrect contention that construing "UE group" as "a set of one or more UE(s)" is "inconsistent with the stated purpose of the patent." Dkt. 101 at 10. There is no such inconsistency. The claims do not preclude a single UE performing a random access method on behalf of itself and others. It is not *inconsistent* to provide for a method of a single UE performing a random access for multiple UEs while at the same time preserving the ability for the single UE to perform random access for only itself using the method. Rather, Defendants seem to disagree with the Patentee's choice of words in claiming such a method and a UE configured to perform it. But the Patentee is entitled to be its own lexicographer. Apart from any other potential meaning of "group," the '430 Patent's statement that the second UE may include the first UE includes the possibility that a UE group may be a set of one UEs. Defendants' argument that this cannot be allowed based on the term "group" simply short-circuits the analysis and fails to consider how the term "group" would be understood in the '430 Patent.

2. "pre-set UE number" (claims 1-18)

Defendants' arguments about what "pre-set UE number" may include does not explain why any of these possibilities should be excluded or how they could cause confusion as to the scope of the claims. Defendants also fail to cite any authority for relying on their proffered translations to trump the plain and ordinary meaning of the term in English or to establish any uncertainty in the meaning of the term, and fail to even explain how the translations could prove these are the only possible translations of the term. Defendants do not propose a construction or provide any reason for departing from the plain and ordinary meaning, as proposed by G+.

3. "monitoring unit . . ." (claim 18)

Defendants argue the '430 Patent specification does not provide sufficient corresponding structure for the monitoring unit, but Defendants do not substantively address the portions of the

specification identified by G+. *See* Dkt. 101 at 13-14. Defendants state merely that “[t]he disclosure in the specification G+ argues is an algorithm does not comport with their proposed construction, which is generic and not specific to a certain algorithm.” *Id.* at 14, f.n.8. G+’s construction comports with how this issue is evaluated by the Federal Circuit. *See, e.g., Alfred E. Mann Found. For Sci. Research v. Cochlear Corp.*, 841 F.3d 1334, 1345 (Fed. Cir. 2016) (noting “[i]t is undisputed that the structure is the microprocessor” and determining that the specification discloses adequate defining structure to render the bounds of the claim understandable). As G+ showed in its opening brief, the ’430 Patent contains multiple algorithms for the claimed function of the monitoring unit, and Dr. Akl further confirms that one of ordinary skill in the art would understand from the disclosed sequence of steps how to implement the monitoring function in this context. Akl Decl. ¶¶ 66-68; Akl Suppl. Decl. ¶¶ 42-45.

4. “sending unit . . .” (claim 18)

Defendants’ arguments for this term largely mirror those relating to the monitoring unit and fail for the same reasons. Specific to the sending unit, Defendants’ arguments focus on how to obtain the information to be included in message 3, ignoring that the issue is whether one of ordinary skill in the art would understand the specification to disclose sufficient structure for sending the preamble and the information specified by the claim to be included in message 3. Defendants do not appear to dispute that issue, and G+’s position is further supported by Dr. Akl’s testimony that the specification conveys to one of ordinary skill in the art specific methods of packaging and transmitting such information. *See* Akl Decl. ¶¶ 67-68; Akl Suppl. Decl. ¶¶ 46-47.

C. U.S. Patent No. 9,184,881

1. “a number value of the downlink sub-frame” (claims 1-8, 11-14)

The '881 Patent does not use the term “a number value of the downlink sub-frame” in Defendants’ cited embodiment. Dkt. 101 at 18 (citing '881 Patent, 7:24-40). This embodiment is just one example of the type of “signaling” that can be used and there is no clear intention by the patentees to limit the claims’ recitation of “signaling” to this embodiment. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004). Moreover, the claims themselves specify a “number value” and not simply a “number.” Figure 3 of the '881 Patent discloses not only how many downlink sub-frames are in the set, but also identifies which specific downlink sub-frames are included in the set. Akl Decl., ¶ 76; '881 Patent, 9:66-10:2; *see also* '881 Patent, 10:9-11. And during prosecution, the applicants distinguished a prior art reference (Gao) because Gao neither disclosed how many downlink sub-frames are used to transmit the data nor **“the position of the downlink sub-frames which transmit data.”** Wicker Decl., Ex. C (GCOM000222). Defendants criticize this passage in their response (Dkt. 101 at 19), but this is yet another piece of intrinsic evidence that confirms that the “number value” is not limited to “the number of downlink sub-frames” and can also specify which downlink sub-frames are included in the set. Akl Decl., ¶ 76. That claim 1 recites that data is transmitted “on a plurality of downlink sub-frames” does not amount to a “manifest exclusion” of claim scope and is not inconsistent with sending the specific downlink sub-frames that are included in the set (i.e., sending a “number value”).

2. **“the downlink sub-frame” / “this downlink sub-frame” (claims 1-14)**

As G+ explained in its opening brief, the claim language clearly identifies which “downlink sub-frame” is being referenced. Dkt. 98 at 20; *see also* '881 Patent, cl. 1 (“this downlink sub-frame” refers to “the sub-frame which transmits the data”); cl. 1/9 (“the downlink sub-frame[s]” in this passage are the same: “in a situation that the number of the codeword streams of the downlink sub-frame[s] is smaller than the maximum number of codeword streams of the downlink

sub-frame”). Every single instance of the term “downlink-subframe” in the ’881 Patent claims can be ascertained from the context in which it is used. The term is thus not indefinite.

3. “an amount of the confirmation information” (claims 1-14)

Defendants argue that a POSITA would not understand if “an amount” refers to “volume and/or size of confirmation (e.g., number of bits or bytes), or the number of distinct confirmation information (or pieces of confirmation information).” Dkt. 101 at 22. The claims expressly state that “an amount of the confirmation information fed back in each group is equal to a maximum number of codeword streams in this downlink sub-frame.” ’881 Patent, 11:31-34; 13:2-6. Similarly, the specification states that the “amount of the confirmation information fed back in each group is equal to a maximum number of codeword streams in this downlink sub-frame.” *Id.*, 4:52-54; 5:46-49; and 8:63-65; Akl Decl., ¶¶ 80-81. Defendants’ argument that this term is ambiguous because it could mean the number of bits/bytes of information is inconsistent with the surrounding claim language and other intrinsic evidence. A POSITA would understand the term “an amount of the confirmation information” with reasonable certainty.

D. U.S. Patent No. 10,736,130

1. “a processor arranged to execute. . .” (claim 20)

Defendants failed to rebut the presumption and incorrectly assert that *Syncpoint* is distinguishable. Dkt. 101 at 24-25. In *Syncpoint*, this Court held that 112 § 6 does not apply to the term “processor” for three reasons, all of which are analogous here. This Court plainly stated that “processor connotes structure” and relied on extrinsic evidence describing what a “processor” is. *Syncpoint*, at *20; *see also* Ex. P at 4, 6-9 (similarly describing the structure of a processor). Second, this Court stated that the claim itself “recites the objectives and operations of the processor in the ‘processor...for’ limitation.” *Syncpoint*, at *20. The processor in Claim 20 has the objective

and operation of “sending K predefined sequences on M transmission symbols in a Transmission Time Interval (TTI) to send B-bit uplink control information.” ’130 Patent, cl. 20. Third, this Court held that a POSITA would “understand the structural arrangements of the processor from the recited objectives and operations of the processor.” *Syncpoint*, at *20. Plaintiff’s expert is of the same opinion. Ex. A, ¶¶ 86-88; Akl Supp. Decl., ¶¶ 68-74. Moreover, Defendants fail to address Plaintiff’s other cases (Dkt. 98, at 24) that show that post-*Williamson*, the class of structures that include “processor” are not amenable to 112 § 6 treatment. Finally, Defendants’ argument that “claim 20 includes functions that would not and cannot be performed by a general purpose processor” (Dkt. 101 at 25) is incorrect and fails to rise to the required “clear and convincing evidence” standard. ’130 Patent, 22:44-52 (explaining “that an implementation function of each unit in a device for uplink control signal transmission ... may be implemented by operating a program on a processor, and may also be implemented via a specific logic circuit.”).

E. U.S. Patent No. 10,595,443

1. “blind detection” (claims 8-9, 17-18)

Defendants admit that blind detection techniques were known but argue that “such techniques would not work with the specific purported invention of the ’443 patent.” Dkt. 101 at 27 (citing Wicker Decl., ¶¶ 85, 88-89). Nothing in ¶¶ 85, 88-89 of the Wicker Declaration indicates that the prior art blind detection techniques “would not work.” Dr. Wicker’s contention that “blind detection” is a “general term” that is “ambiguous” is directly contradicted by Dr. Akl, who testifies that blind detection is “a well-known, commonly understood form of decoding” that “has been used in telecommunications standards dating back to 3GPP LTE/LTE-Advanced standards.” Akl Decl., ¶¶ 98-100. Defendants do not meaningfully dispute that its proposed construction would render the claims indefinite for the reasons given in G+’s opening brief. Dkt. 101 at 28; *see also*

Dkt. 98 at 26-28. Finally, Defendants' reliance on *Thorner* is misplaced. Nothing in the specification's discussions of blind detection in the context of two (of six) embodiments shows that the patentees "clearly express[ed] an intent" to redefine "blind detection" in all embodiments, *Thorner*, 669 F.3d at 1365, or "use[d] words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope," *Teleflex*, 299 F.3d at 1327. The embodiments are consistent with the invention but do not suggest that they define the outer limit of what is claimed or that it was intended to be the *sole* embodiment. *See, e.g., Gillette*, 405 F.3d at 1374.

2. "a length type of M2 including . . ." (claims 1-20)

G+ already responded to Defendants' argument that the specification "suggests" that "the first and second length types could actually be an 'or' or an 'and,' depending on certain scenarios." Dkt. 101 at 29. It does not. Dkt. 98 at 28-30. Defendants' argument appears to be premised on setting the threshold values (kT1 and kT2) to specific fixed values, for example, setting kT1=0 and kT2=N. Wicker Decl., ¶ 94 (citing '443 Patent, 3:14-18). Defendants ignore that the threshold values can be variable (i.e., either by being notified by RRC or DCI signaling transmitted by the second node or determined by the first node based on a present rule). '443 Patent 3:23-33. Moreover, every embodiment explains that when the length of M2 is determined by the first node based on k, the length of M2 bits is predefined unless k is $\geq$ a first threshold (kT1) and $\leq$ a second threshold (kT2). Ak1 Decl., ¶ 95. In other words, the length type of M2 is either the first length type or the second length type – and *never* both – because k could never meet both conditions simultaneously. *Id.*, ¶ 102. Defendants' assertion that this term is indefinite should be rejected.

II. CONCLUSION

G+ respectfully requests that the Court adopt G+'s proposed constructions.

Date: May 3, 2023

Respectfully Submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that on May 3, 2023, a true and correct copy of the foregoing instrument was electronically filed with the Clerk of the Court by using the CM/ECF system, which shall send notification of such filing to all counsel of record at their email addresses on file with the Court.

/s/Bradley D. Liddle

Bradley D. Liddle