

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

EVOLVED WIRELESS, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 15-cv-542-SLR-SRF
	)	
APPLE INC.,	)	
	)	
Defendant.	)	
EVOLVED WIRELESS, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 15-cv-543-SLR-SRF
	)	
HTC CORPORATION and	)	
HTC AMERICA, INC.,	)	
	)	
Defendants.	)	
EVOLVED WIRELESS, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 15-cv-544-SLR-SRF
	)	
LENOVO GROUP LTD.,	)	
LENOVO (UNITED STATES) INC., and	)	
MOTOROLA MOBILITY,	)	
	)	
Defendants.	)	
EVOLVED WIRELESS, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 15-cv-545-SLR-SRF
	)	
SAMSUNG ELECTRONICS CO., LTD.	)	
and SAMSUNG ELECTRONICS	)	
AMERICA, INC.,	)	
	)	
Defendants.	)	
	)	

EVOLVED WIRELESS, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No.15–cv-546–SLR-SRF
	)	
ZTE CORPORATION, ZTE (USA) INC.,	)	
and ZTE SOLUTIONS INC.,	)	
	)	
Defendants.	)	
	)	

EVOLVED WIRELESS’S SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Evolved Wireless submits this supplemental claim construction brief regarding eleven claim terms Defendants contend are indefinite. Specifically, Defendants contend that these eleven terms from five asserted patents¹ are subject to 35 U.S.C. § 112 ¶ 6, and are indefinite for a lack of disclosure of corresponding structure in the patents' specification. Even after the Federal Circuit's decision in *Williamson v. Citrix*, a presumption remains that claim terms are not governed by § 112 ¶ 6 absent the word "means." Here, "means" does not appear in *any* of the eleven terms at issue, and Defendants have not rebutted this presumption, nor can they. Even if § 112 ¶ 6 applied, the patents' specifications identify the structure performing the function. In the end, a person of ordinary skill would recognize that all these terms and phrases are definite because the terms connote structure and describe, in sufficient detail, their operation.

II. ARGUMENT

A. Relevant Principles of Claim Construction

As the Federal Circuit confirmed in *Williamson v. Citrix Online LLC*, there is a presumption that § 112 ¶ 6 does not apply to claim terms that lack the word "means." 792 F.3d 1339, 1349 (Fed. Cir. 2015) (en banc). Thus, "when a claim term lacks the word 'means,' . . . § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Id.* at 1349. None of the eleven claim terms identified by the Defendants as being allegedly governed by § 112 ¶ 6 utilize the word "means." Accordingly, there is a presumption that these terms are not governed by the requirements of § 112 ¶ 6.

¹ U.S. Patent Nos. 7,746,916, 7,768,965, 7,881,236, 7,809,373, and 8,218,481. On June 16, 2016, Evolved Wireless filed its opening claim construction brief proposing constructions for three terms in the '373 Patent. See Case no. 1:15-cv-00542-SLR, D.I. 60.

B. Level of Ordinary Skill in the Art

With respect to the asserted patents, a person of ordinary skill in the art would have had a bachelor's degree in electrical engineering with 2-3 years of experience in cellular communication systems and would have been aware of the Third Generation Partnership Project ("3GPP") and its work on the LTE standard. Alternatively, the person would have had a master's degree in electrical engineering and would have been aware of the 3GPP LTE project.

C. Construction of Disputed Terms in the Asserted Claims

Because none of the terms identified by Defendants contain the term "means," Defendants bear the burden to rebut the presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 at 1349. They cannot. As discussed below, each term connotes structure to remove the purview of § 112 ¶ 6. Should the Court find, however, that § 112 ¶ 6 applies, the intrinsic record provides corresponding structure such that the claims are not indefinite.

1. Claim limitations related to radio transmitters

Claims and Claim Term	Evolved Wireless's Proposal
'916 patent, claim 6: "a transmitting unit for transmitting the circular shifted code sequence having the second length"	"hardware and/or software in the apparatus that is capable of transmitting the circular shifted code sequence having the second length" If section 112(6) applies: Function: "transmitting the circular shifted code sequence having the second length" Structure: "hardware and/or software in the apparatus that is capable of transmitting the circular shifted code sequence having the second length"
'965 patent, claim 8: "an access module accessing a random access channel using the specific sequence"	"hardware and/or software in the user equipment that is capable of transmitting the specific selected sequence on the random access channel to the base station" If section 112(6) applies: Function: "accessing a random access channel using the specific sequence selected by the sequence selecting module"

Claims and Claim Term	Evolved Wireless's Proposal
selected by the sequence selecting module"	Structure: "hardware and/or software in the user equipment that is capable of transmitting the specific selected sequence on the random access channel to the base station"
'236 patent, claim 7: "a transmission module adapted to transmit data to the base station using the UL Grant signal received on the specific message"	"hardware and/or software in the user equipment that is capable of transmitting data to the base station using the UL Grant signal received on the specific message" If section 112(6) applies: Function: "transmit data to the base station using the UL Grant signal received on the specific message" Structure: "hardware and/or software in the user equipment that is capable of transmitting data to the base station using the UL Grant signal received on the specific message"
'481 patent, claim 8: "a transmission unit configured to transmit, on a random access channel, said preamble sequence to a receiving side"	"hardware and/or software in the transmitter capable of transmitting the preamble sequence on the random access channel to a receiving side" If section 112(6) applies: Function: "transmitting, on a random access channel, said preamble sequence to a receiving side" Structure: "hardware and/or software in the transmitter capable of transmitting the preamble sequence on the random access channel to a receiving side"

The first four limitations relate to radio transmitters and are not governed by § 112 ¶ 6 because each comprises a structure-connoting term known in the art and, further, includes a description of the structure's operation. Cooklev Decl. at ¶¶ 31-33, 37-39, 43-45, and 50-52.

The Federal Circuit has explained that where a term connotes structure and describes the structure's operation, the term is not governed by § 112 ¶ 6. *See Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004).² In *Linear Tech.*, the district court erred in

² "As a pre-*Lighting World* (which established the 'strong' presumption) case, *Linear* followed

construing certain phrases using the term “circuit” or “circuitry” under § 112 ¶ 6. *Id.* at 1319-21. Under the correct framework, the Court looked to technical dictionaries and found they “plainly indicate[d] that the term ‘circuit’ connotes structure.” *Id.* at 1320. The Court then looked to the claim terms as a whole and found that “when the structure-connoting term ‘circuit’ is coupled with a description of the circuit’s operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112 ¶ 6 presumptively will not apply.” *Id.*

The same is true for the above limitations. First, each includes terms or phrases that connote structure. Cooklev Decl. at ¶¶ 31, 37, 43 and 50. Second, the limitations themselves describe the structure’s operation with respect to each claimed invention. In sum, each of the above claim terms refers to a transmitter configured to perform certain actions. *See id.* at ¶¶ 32-33, 38-39, 44-45, and 51-52.

First, each of the limitations at issue contain terms, “module” and “unit,” that connote structure to a person of skill in the art. *Id.* at ¶¶ 31 and 43. For example, a “module” may be considered “[a]ny assembly of interconnected components that constitutes an identifiable device, instrument, or piece of equipment.” *Id.* at ¶ 43. A “unit” may be considered “[a] major building block for a set or system” or “[a] logically separable part of a program.” *Id.* at ¶ 31. A person of skill in the art would further recognize that a “radio transmitter” is a typical example of a “unit,” *id.* at ¶ 31, and that in view of the asserted patents, “transmitting unit,” “transmission unit,” and “transmission module,” all refer to radio transmitters—a structure-connoting term. *See id.* at ¶¶ 31, 37, and 43. For instance, one definition of transmitter is “[a] device or circuit that generates high-frequency electric energy, controlled or modulated, which can be radiated by an antenna.”

the appropriate standard for overcoming the presumption against § 112 ¶ 6.” *Collaborative Agreements, LLC v. Adobe Sys.*, 15-cv-03853-EMC2015 U.S. Dist. LEXIS 161809, at *15-16 n.1 (N.D. Cal. Dec. 2, 2015).

Id. at ¶ 31. Thus the terms “transmission unit,” “transmitting unit,” and “transmission module” (’481 cl. 8, ’916 cl. 6, and ’236 cl. 7) all connote structure.

Likewise, a person of ordinary skill, reading the limitation “an access module accessing a random access channel using the specific sequence selected by the sequence selecting module,” would recognize structure. Cooklev Decl. at ¶¶ 50-52. In addition to the structure-connoting term “module,” a person of skill in the art would recognize that in the context of the ’965 patent, this term again refers to a radio transmitter. *Id.* at ¶ 50. Accordingly, one of skill in the art would recognize that the claimed access module connotes structure. *Id.* One of skill in the art would also recognize that all four of these limitations generally referring to radio transmitters could be implemented in a combination of hardware and/or software. *See id.* at ¶¶ 33, 40, 46, and 52.

As in *Linear Tech*, the claims here also recite the operation of the transmitters. In the case of the ’916, the transmitter is configured to “transmit the circular shifted code sequence having the second length.” ’916 at 18:7-28. For the ’965, the transmitter is configured to access a random access channel using the specific sequence selected by the sequence selecting module. ’965 at 27:22-28:12. For the ’236, the transmitter is “adapted to transmitting data to the base station using the UL Grant signal received on the specific message.” ’236 at 17:30-18-7. And for the ’481, the transmitter is configured to transmit “said preamble sequence to a receiving side” on “a random access channel.” ’481 at 18:60-19:3. Together, the structure connoting terms and the description of the transmitter’s operation within the claims provide “sufficient detail to suggest structure to persons of ordinary skill in the art,” *Linear Tech.*, 379 F.3d at 1321-22, and thus are not governed by § 112 ¶ 6. *See Optis Wireless Tech. LLC v. ZTE Corp.*, 15-cv-300-JRG, 2016 U.S. Dist. LEXIS 52657, at *79-80, *125-26 (E.D. Tex. Apr. 19, 2016) (finding both “determination unit” and “selecting unit” denote structure).

Even if the terms are governed by § 112 ¶ 6, which they are not, the written description nonetheless provides sufficient structure associated with the alleged function.³ Cooklev Decl. at ¶¶ 34-36, 40-42, 46-49, and 53-56. For example, '916 patent Figs. 1 and 16 and the related description describe the “structure of an apparatus for transmitting data using Orthogonal Frequency Division Multiplexing (OFDM).” '916 at 2:57-59. Written descriptions for the other asserted patents similarly establish that the claim limitations connote structure. '965 at Figs. 1-4, 6-10, 15-16; 1:34-46, 18:54-65, 19:31-34; '236 at Fig. 11, 5:30-6:7, 15:42-16:41; '481 at 7:57-8:4, 11:46-54; *see also* '916 at 2:31-42, 2:57-59, 3:56-59, 4:12-14, 4:17-58, 15:6-11. Section 112 ¶ 6 therefore does not govern these terms, but the specification discloses sufficient structure to render the claims definite even if it did.

2. “a reception module adapted to receive an uplink grant (UL Grant) signal from a base station on a specific message” ('236 patent, claim 7)

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“hardware and/or software in the user equipment that is capable of receiving an uplink grant signal from a base station on a specific message” If section 112(6) applies: Function: “receiving an uplink grant (UL Grant) signal from a base station on a specific message” Structure: “hardware and/or software in the user equipment that is capable of receiving an uplink grant (UL Grant) signal from a base station on a specific message”

The limitation “a reception module adapted to receive an uplink grant (UL Grant) signal from a base station on a specific message” is not governed by § 112 ¶ 6 because it would be understood by one of ordinary skill to have a sufficiently definite meaning as the name for structure. Cooklev Decl. at ¶ 59. As with other claims, “module” is a structure connoting term in this field of art. *Id.* at ¶ 57. In addition, one of skill in the art, in view of the '236 patent, would

³ There is no dispute between the parties on the alleged function of the terms under § 112 ¶ 6.

recognize that a “reception module” refers to a receiver or radio receiver. *Id.* A receiver is a well-known term of art that connotes structure. *Id.* For example, one dictionary definition for “receiver” is “[t]he complete equipment required for receiving modulated radio waves and converting them into the original intelligence, such as into sounds or pictures, or converting to desired useful information as in a radar receiver.” *Id.* One of skill in the art would understand that the reception module could be implemented in a combination of hardware or software. *Id.* at ¶ 59. In addition, the full claim language again identifies the specific operation of the reception module—in this case, “receiving an uplink grant (UL Grant) signal from a base station on a specific message.” ’236 at 17:30-18:7. Because the claim term connotes structure and recites the reception module’s operation in sufficient detail to suggest structure to persons of ordinary skill, the phrase is not governed by § 112 ¶ 6. Cooklev Decl. at ¶¶ 57-59.

Even if the phrase were governed by § 112 ¶ 6, the written description also indicates that the limitation “a reception module adapted to receive an uplink grant (UL Grant) signal from a base station on a specific message” connotes structure. *Id.* at ¶¶ 60-63. For example, the ’236 patent includes Fig. 11 and the related description describes “a reception (Rx) module 1101 for receiving a UL Grant signal from an eNode B on a specific message.” ’236 at 15:64-65; *see also id.* at 5:30-58, 15:42-16:41. Thus even if § 112 ¶ applies, which it does not, the limitation is not indefinite because the specification discloses sufficient structure for the “reception module.”

3. “a multiplexing and assembly entity used for transmission of new data” (’236 patent, claim 7)

Evolved Wireless’s Proposal
“hardware and/or software in the user equipment that is capable of transmitting new data” If section 112(6) applies: Function: “transmitting new data” Structure: “hardware and/or software in the user equipment that is capable of transmitting new

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data”

The term “multiplexing and assembly entity used for transmission of new data” connotes structure and is not governed by § 112 ¶ 6. A person of skill would recognize that the term “entity” connotes structure. Cooklev Decl. at ¶ 64. Such an individual would also recognize that a “multiplexing and assembly entity” includes a “multiplexer” and refers to an “assembly”—also structure connoting terms. *Id.* A multiplexer is a “[a] device that allows the interleaving of two or more signals to a single line or terminal.” *Id.* An “assembly” may be understood as “[a] number of basic parts or subassemblies, or any combination thereof, joined together to perform a specific function.” *Id.* The claim language explains that the structure is “used for transmission of new data.” ’236 at 17:50-51. Thus one of skill would recognize that the “multiplexing and assembly entity” and the description of its operation provide sufficient structure. *See Linear Tech.*, 379 F.3d at 1320-21. This limitation would also be understood by one of skill in the art to connote structure as illustrated by its use within the LTE standard itself. Cooklev Decl. at ¶¶ 64-66.

Even if § 112 ¶ 6 governed the claim term, the specification of the ’236 connotes sufficient structure. *Id.* at ¶ 68-71. The ’236 patent includes Figs. 10 and 11, and the related description explains that “the HARQ entity 1104 according to the present embodiment may transfer the data acquired from the multiplexing and assembly entity 1105[.]” ’236 at 16:9-11; *see also id.* at 5:48-67, 13:66-14:17, 15:42-16:41. Thus the limitation is not indefinite because the specification discloses sufficient structure for the “multiplexing and assembly entity.”

Each of the claim terms above relate to the transmitters or receivers of the claimed inventions and thus connote sufficient structure to one of ordinary skill in the art. The remaining claim terms also connote sufficient structure such that the presumption against means-plus-function claiming is not overcome. These remaining terms are computer-implemented

limitations, for which the structure “is understood through, for example, an outline of an algorithm, a flowchart, or a specific set of instructions or rules.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014). The remaining limitations provide such structure here “by describing the claim limitation’s operation, such as its input, output, or connections.” *Id.* at 1299.

4. “a code sequence generator for generating a code sequence having a second length by cyclic extension of a code sequence having a first length, and performing a circular shift to the code sequence having the second length” (’916 patent, claim 6)

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“hardware and/or software in the apparatus that is capable of generating a code sequence having a second length by cyclic extension of a code sequence having a first length, and performing a circular shift to the code sequence having the second length” If section 112(6) applies: Function: “generating a code sequence having a second length by cyclic extension of a code sequence having a first length, and performing a circular shift to the code sequence having the second length” Structure: “hardware and/or software in the apparatus that is capable of generating a code sequence having a second length by cyclic extension of a code sequence having a first length, and performing a circular shift to the code sequence having the second length”

This term is not governed by § 112 ¶ 6 because it would connote sufficient structure to one of ordinary skill. Here, “the term [‘code sequence generator’] itself connotes structure and the contextual language that describes the objective and operation of the claimed [‘generator’] conveys the structural arrangement of the [generator’s algorithm] and provides additional limiting structure.” *Inventio AG v. Thyssenkrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1358 (Fed. Cir. 2011). One of ordinary skill would understand a “code sequence generator” as hardware and/or software capable of generating a code sequence, the operation of which here consists of a cyclic extension to the sequence and a circular shift. Cooklev Decl. at ¶¶ 72-74.

The written description also indicates that the “code sequence generator” connotes structure. Fig. 13 and its accompanying discussion disclose an algorithm for generating a code

sequence involving cyclic extension of a first sequence and a circular shift. '916 at 13:3-13, Fig.

13. Accordingly, even if § 112 ¶ 6 applies (it does not), the limitation is not indefinite because the specification discloses the algorithm depicted in Fig. 13 for generating a code sequence. '916 at 13:3-13, Fig. 13; *see also id.*, 10:2-11:42, Figs. 9, 13; Cooklev Decl. at ¶¶ 75-77.

5. **“a sequence selecting module acquiring information about predetermined two or more random access preamble sequence sets, selecting one random access preamble sequence set from among the predetermined random access preamble sequence sets considering at least one of a size of information to be transmitted by the apparatus and a degree of a path loss, and randomly selecting a specific sequence within the selected random access sequence set” ('965 patent, claim 8)**

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“hardware and/or software in the user equipment that is capable of performing the following algorithm: acquire information about predetermined two or more random access preamble sequence sets, select one random access preamble sequence set from among the predetermined random access preamble sequence sets considering at least one of a size of information to be transmitted by the apparatus and a degree of a path loss, and randomly select a specific sequence within the selected random access sequence set” If section 112(6) applies: Function: “acquiring information about predetermined two or more random access preamble sequence sets, selecting one random access preamble sequence set from among the predetermined random access preamble sequence sets considering at least one of a size of information to be transmitted by the apparatus and a degree of a path loss, and randomly selecting a specific sequence within the selected random access sequence set” Structure: “hardware and/or software in the user equipment that is capable of performing the following algorithm: acquire information about predetermined two or more random access preamble sequence sets, select one random access preamble sequence set from among the predetermined random access preamble sequence sets considering at least one of a size of information to be transmitted by the apparatus and a degree of a path loss, and randomly select a specific sequence within the selected random access sequence set”

The claimed “sequence selecting module” is not governed by § 112 ¶ 6 because it would be understood by one of ordinary skill to have a sufficiently definite meaning as the name for structure. One of ordinary skill would understand a “sequence selecting module” as hardware and/or software capable of selecting a sequence, the operation of which here consists of acquiring information that defines two or more sequence sets, selecting one of those sets based

on a size of information to be transmitted and a degree of path loss, and then randomly selecting a specific sequence from within the selected set. Cooklev Decl. at ¶¶ 78-81. The claim language describes the operation of the “sequence selecting module,” including its inputs and outputs, which conveys the structural arrangement of the selection algorithm and provides sufficient structure to one of ordinary skill. *Apple*, 757 F.3d at 1299-1300.

The written description also indicates that the “sequence selecting module” connotes structure. Fig. 13 and its accompanying discussion disclose an algorithm for selecting a sequence by consideration of location and a cause for accessing the network. ’965 at 16:63-17:8, Fig. 13. The specification also explains that “the UEs know path loss . . . in accordance with a distance from the base station,” such that Fig. 13’s consideration of location discloses the use of path loss. *Id.* at 17:10-12; *see also* Cooklev Decl. at ¶ 83. The causes to connect to the network depicted in Fig. 13 include “hand-off,” “power-up,” “resource request,” and “synchronization.” Because “the resource request indicates a requirement for a user equipment to transmit data traffic in the uplink,” selecting a sequence based on the causes disclosed in Fig. 13 involves a consideration of the size of information to be sent. *Id.* at 13:53-54; *see also* Cooklev Decl. at ¶ 84.

Figs. 15 and 16 also indicate that the “sequence selecting module” connotes structure. In particular, Fig. 15 includes a “Sequence selecting module” that receives as inputs “Intra-cell location” (a consideration of path loss) and “Cause” (a consideration of size of information to be sent). The ’965 patent’s specification therefore discloses sufficient structure in the form of algorithms for the claimed “sequence selecting module,” and § 112 ¶ 6 does not apply. Cooklev Decl. at ¶¶ 82-87. Even if it did, the disclosed algorithms disclose the required structure for this limitation. ’965 at 16:63-17:8, 17:46-55, 18:54-65, 19:15-24, Figs. 11-13, 15-16.

6. “a radio protocol adapted to receive access information from a source base station after a handover request is accepted by the target base station” (’373 patent, claim 24)

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“hardware and/or software in the mobile terminal adapted to receive access information from a source base station after a handover request is accepted by the target base station and to perform a random access procedure with the target base station using the received access information, such that the access information is configured to permit the terminal to access the target base station, wherein the access information includes preamble information for the random access procedure, wherein the preamble information is a dedicated preamble used only for a specific terminal, and wherein the dedicated preamble is determined by the target base station”

If section 112(6) applies:

Function: “(1) to receive access information from a source base station after a handover request is accepted by the target base station, and (2) to perform a random access procedure with the target base station using the received access information, such that the access information is configured to permit the terminal to access the target base station, wherein the access information includes preamble information for the random access procedure, wherein the preamble information is a dedicated preamble used only for a specific terminal, and wherein the dedicated preamble is determined by the target base station”

Structure: “hardware and/or software in the mobile terminal adapted to receive access information from a source base station and to perform a random access procedure with the target base station using the received access information”

The claimed “radio protocol” is not governed by § 112 ¶ 6 because it would be understood by one of ordinary skill as the name for structure. A “radio protocol” is an algorithm that specifies interactions between entities in a radio network. Cooklev Decl. at ¶ 88. Here, the claim language also provides an algorithm that connotes structure: the mobile terminal receives a dedicated preamble from the source base station and uses that preamble to access the target base station. ’373 at 12:10-25. The “radio protocol” is therefore the hardware or software that is adapted to execute this algorithm. Cooklev Decl. at ¶¶ 88-91.

The written description also indicates that the claimed “radio protocol” connotes structure. Fig. 9 and its description describe the algorithm executed by the “radio protocol”: the user equipment receives a Handover Command message that includes “information of the signature

and the preamble which is to be used in the access procedure to the target eNB.” ’373 at 6:66-7:7. The user equipment then accesses the random access channel through a preamble transmission “based upon information in the handover command message received from the source eNB.” *Id.* at 7:8-13. The specification further explains that claimed apparatuses may be implemented using standard programming and/or engineering techniques to produce software, firmware, hardware, or any combination thereof.” *Id.* at 9:25-28; *see also* 9:28-50.

The “radio protocol” limitations, read in the context of the specification and figures, connote structure to one of ordinary skill and § 112 ¶ 6 does not apply. Even if it did, the specification discloses structure to render the claims definite. Cooklev Decl. ¶¶ 92-95.

7. **“a Hybrid Automatic Repeat Request (HARQ) entity adapted to determine whether there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is a random access response message, acquiring the data stored in the Msg3 buffer if there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is the random access response message, and controlling the transmission module to transmit the data stored in the Msg3 buffer to the base station using the UL Grant signal received by the reception module on the specific message” (’236 patent, claim 8)**

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“hardware and/or software in the user equipment that is capable of determining whether there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is a random access response message, acquiring the data stored in the Msg3 buffer if there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is the random access response message, and controlling the transmission module to transmit the data stored in the Msg3 buffer to the base station using the UL Grant signal received by the reception module on the specific message” If section 112(6) applies: Function: “determining whether there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is a random access response message, acquiring the data stored in the Msg3 buffer if there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is the random access response message, and controlling the transmission module to transmit the data stored in the Msg3 buffer to the base station using the UL Grant signal received by the reception module on the specific message” Structure: “hardware and/or software in the user equipment that is capable of determining

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whether there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is a random access response message, acquiring the data stored in the Msg3 buffer if there is data stored in the Msg3 buffer when the reception module receives the UL Grant signal and the specific message is the random access response message, and controlling the transmission module to transmit the data stored in the Msg3 buffer to the base station using the UL Grant signal received by the reception module on the specific message”
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The claimed “Hybrid Automatic Repeat Request (HARQ) entity” is not governed by § 112 ¶ 6. First, the term “HARQ entity” connotes structure to one of ordinary skill, including being used in the LTE standard. Cooklev Decl. at ¶¶ 96-98. Second, the claim itself sets forth an algorithm to be performed by the “HARQ entity” and therefore connotes structure by defining the limitation’s operation. ’236 at 17:38-48. One of ordinary skill would therefore understand the claimed “HARQ entity” as a hardware and/or software in the user equipment that is capable of performing the claimed algorithm. Cooklev Decl. at ¶¶ 96-100. The written description also indicates the claimed “HARQ entity” connotes structure. Fig. 9 provides “a flowchart illustrating a method of transmitting uplink data by a UE” and depicts the algorithm to be performed by the HARQ entity. ’236 at 6:65-67, Fig. 9; *see also* 13:35-14:17. Additional structure is found in Fig. 11, “a schematic view showing the configuration of a UE,” which includes a box labeled “HARQ Entity.” *Id.* at 7:5-6, Fig. 11; *see also* 15:42-16:41. The “HARQ Entity” limitations, read in the context of the specification and figures, therefore connote sufficient structure to one of ordinary skill and § 112 ¶ 6 does not apply. But even if it did, the specification discloses sufficient structure to render the claims definite. Cooklev Decl. at ¶¶ 101-105.

8. **“a preamble generation unit configured to generate said preamble sequence by repeating a specific sequence, having a length (L), N times to generate a consecutive sequence having a length (N*L) and concatenating a single cyclic prefix (CP) to a front end of said consecutive sequence”** (’481 patent, claim 7)

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“hardware and/or software in the transmitter that is capable of performing the following algorithm: repeat a specific sequence, having a length (L), N times to generate a consecutive
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sequence having a length ($N*L$) and concatenate a single cyclic prefix (CP) to a front end of said consecutive sequence” If section 112(6) applies: Function: “generating said preamble sequence by repeating a specific sequence, having a length (L), N times to generate a consecutive sequence having a length ($N*L$) and concatenating a single cyclic prefix (CP) to a front end of said consecutive sequence” Structure: “hardware and/or software in the transmitter that is capable of performing the following algorithm: repeat a specific sequence, having a length (L), N times to generate a consecutive sequence having a length ($N*L$) and concatenate a single cyclic prefix (CP) to a front end of said consecutive sequence”

The claimed “preamble generation unit” is not governed by § 112 ¶ 6. The limitation recites sufficient description of its operation. Cooklev Decl. at ¶¶ 106-109. The claim therefore provides structure that the presumption against means-plus-function claiming remains intact. *Apple*, 757 F.3d at 1299-1300. The written description also indicates that the claimed “preamble generation unit” connotes structure. Fig. 11 and its description disclose the algorithm performed by the “preamble generation unit” of claim 1. ’481 at 11:55-67, Fig. 11; *see also* 3:19-27; 11:46-12:10. This limitation, read in the context of the specification and figures, therefore connotes structure to one of ordinary skill and § 112 ¶ 6 does not apply. Even if it did, the specification discloses structure to render the claims definite. *Id.*; *see also* Cooklev Decl. at ¶¶ 110-112.

III. CONCLUSION

For the reasons set forth above, Evolved Wireless respectfully requests that the Court decline to construe the above eleven terms according to § 112 ¶ 6 and find that a person of ordinary skill in the art would understand them each to recite sufficient structure. If the Court determines that § 112 ¶ 6 applies, the respective written descriptions provide sufficient disclosure of the structure performing the function.

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Respectfully submitted,

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