IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

INNOVATIVE SONIC LIMITED, a Mauritian Corporation,	§	
Plaintiff,	§	
v.	§	
	§	CIVIL ACTION NO. 3:11-CV-0706-K
RESEARCH IN MOTION LTD., a Canadian Corporation, and RESEARCH IN MOTION, CORPORATION, a Delaware Corporation,	§	
Defendants.	§	

MARKMAN MEMORANDUM OPINION AND ORDER

Before the Court are the parties' briefs on the issue of claim construction of the patents-in-suit, U.S. Patent Number 6,925,183 and U.S. Patent Number 7,436,795. The Court conducted a *Markman* hearing and has reviewed the parties' briefs and all related filings and evidence, including the patent-in-suit, the specification, the patent prosecution history to the extent it was submitted by the parties, as well as the parties' proposed claim constructions. The Court hereby construes the disputed claims according to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 360 (1996).

I. Background

A. Procedural

On September 2, 2010 Plaintiff Innovative Sonic Limited filed a *Complaint for Patent Infringement* asserting the Defendants Research In Motion LTD and Research In Motion Corporation infringed upon three patents to which the Plaintiff is the owner by assignment of all right, title, and interest in and to. For two of these patents, the '183 Patent and the '795 Patent, the parties have requested the Court to construe certain key terms. The parties have not requested that the Court construe any terms of the third patent, the '077 patent.

B. The '183 Patent

On August 2, 2005 the United States Patent No. 6,925,183 (the "'183 Patent") entitled "Preventing Shortened Lifetime of Security Keys in a Wireless Communications Security System" issued. Generally, the patent discloses an invention that improves upon prior art, which used a combination of a security key and a security key count to ensure that any communications on wireless devices between users are private and are not able to be intercepted and decoded by unwanted individuals. To ensure the reliability of the security key, the security key must be changed periodically. The security count value is increased incrementally until it reaches a specified value. Upon reaching this value, the wireless communications device changes the old security key to a new key. Specifically, the patent discloses an invention that addresses an improvement that increases the life span of a new security key is issued during the

process of changing security keys. The invention improves upon the prior art by assigning a lower security count value to the new key than would be assigned under the prior art. Therefore extending the time that the new security key can be used by the wireless communication system.

C. The '795 Patent

On October 14, 2008 the United States Patent No. 7,436,795 (the "'795 Patent") entitled "Timer Based Avoidance Mechanism for High Speed Wireless Communication System" issued. Generally, the patent discloses an invention that uses multiple timers to avoid stall of data transmissions to the upper layers of a wireless communications device. In the prior art, as disclosed by the patent, wireless communications devices transmit data in packets, and the inherent nature of a wireless devices makes them prone to loss of data packets. As a result data packets are never received or are received in an unusable state. The device, however, needs to send data packets to higher levels of the device in the proper order. If he device waits for the missing data, which may or may not ever be received, when one packet is not received correctly but other packets in line after the missing ones are received the system may stall. The prior art used a single timer to determine how long to the device should wait for the missing data to arrive before continuing on with the process in order to avoid system stalls. The '795 patent improves on this prior art by using various possible combinations of multiple timers, thereby improving the transmission of data, reducing loss of data, and reduction of the possibility of system stall.

II. Applicable Law

A. Principles of Claim Construction

Claim construction is a matter of law. *See Markman*, 52 F.3d at 979. The Federal Circuit Court has held 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) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Supreme Court has stated that the claims are "'of primary importance, in the effort to ascertain precisely what it is that is patented.'" *Phillips*, 415 F.3d at 1312 (quoting *Merrill v. Yeomans*, 94 U.S. 568, 570 (1876)). A court looks to three primary sources when determining the meaning of claims: (1) the claims, (2) the specification, and (3) the prosecution history. *Markman*, 52 F.3d at 979. The claims of the patent must be read in view of the specification of which they are a part. *Id.* The specification consists of a written description of the invention which allows a person of ordinary skill in the art to make and use the invention. *Id.* This description may act as a dictionary explaining the invention and defining terms used in the claims. *Id.* Although a court should generally give such terms their ordinary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, so long as the special definition of the term is clearly stated in the patent specification or file history. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

The court starts with the claim itself, read in light of the specification. *See Vivid Technologies, Inc. v. American Sci. & Eng'g, Inc.*, 200 F.3d 795, 804 (Fed. Cir. 1999). While the claims themselves provide significant guidance as to the meaning of a claim term, the specification is generally dispositive as "'it is the single best guide to the meaning of a disputed term.'" *Phillips*, 415 F.3d at 1314-1315 (quoting *Vitronics*, 90 F.3d at 1582). In addition to the claim language and specification, the prosecution history is often helpful in understanding the intended meaning, as well as the scope of technical terms in the claims. *See Vivid*, 200 F.3d at 804. In particular, the prosecution history is relevant in determining whether the patentee intends the language of the patent to be understood in its ordinary meaning. Using these tools, the court construes only the claims that are in controversy, and only to the extent necessary to resolve the dispute. *Vivid*, 200 F.3d at 803.

The words of a claim are usually given their ordinary and customary meaning. *See Phillips*, 415 F.3d at 1312. Ordinary and customary meaning is the meaning the claim term would have to a person of ordinary skill in the art (e.g., field of the invention). *See id.* at 1313; *Markman*, 52 F.3d at 979. A person of ordinary skill in the art would read the claim term in the context of the entire patent, including the specification, not just the particular claim where the term appears. *Phillips*, 415 F.3d at 1313. There are instances where the ordinary meaning of claim language, as a person of skill in the art would understand it, "may be readily apparent even to lay judges," thereby requiring "little more than the application of the widely accepted

meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. In these situations, general purpose dictionaries are useful. *Id.*

But, in many cases, the court must determine the ordinary and customary meaning of the claim terms which have a certain meaning in a field of art. *Id.* The court can look to "'those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.'" *Id.* (quoting *Innova*, 381 F.3d at 1116). These sources can include "'the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of the technical terms, and the state of the art.'" *Id.* (quoting *Innova*, 381 F.3d at 1116).

Aside from the written description and the prosecution history, the claims themselves also offer assistance as to the meaning of certain claim terms. *Id.* (citing *Vitronics*, 90 F.3d at 1582).

When the intrinsic evidence, that is the patent specification and prosecution history, unambiguously describes the scope of a patented invention, reliance on extrinsic evidence, which is everything outside the specification and prosecution history, is improper. *See Vitronics*, 90 F.3d at 1583. While the Court may consult extrinsic evidence to educate itself about the invention and relevant technology, it may not rely upon extrinsic evidence to reach a claim construction that is clearly at odds with a construction mandated by the intrinsic evidence. *See Key Pharm. v. Hercon Lab. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998).

B. "Means Plus Function" Language

Several of the primary disputes at issue in this case deal with the use of so-called "means plus function" language. Generally, a court may not read limitations from the specification and prosecution history into the claims, despite the fact that claims often receive their interpretive context from the specification and prosecution history. *See Rambus Inc. v. Infineon Technologies Ag*, 318 F.3d 1081, 1088 (Fed. Cir. 2003). However, there is an exception to the rule that the Court does not import limitations from the specification. When a patentee avails himself of the statutorily authorized "means plus function" claim form, certain structural limitations from the specification are imported into the claim construction process. *See* 35 U.S.C. § 112, ¶ 6. Specifically, the statute provides that an element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and the claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. *See id*.

The intent of § 112, ¶ 6, is to permit use of means expressions without recitation of all the possible means that might be used in a claimed apparatus. *See O.I. Corp v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). However, the use of means plus function language carries a price. Specifically, the price that a patentee must pay for use of that convenience is the limitation of the claim to the means specified in the written description and equivalents thereof. *See id*. As the Court of Appeals for the

Federal Circuit (the "Federal Circuit") has stated, the quid pro quo for the convenience of employing § 112, ¶ 6 is the duty to link or associate structure in the specification to the recited function. *See Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1208 (Fed. Cir. 2002).

Use of the term "means" in a claim followed by a functional statement gives rise to a presumption that the patentee intended § 112, ¶ 6 to govern the claim's construction. *See Personalized Media Communications, LLC v. International Trade Com'n*, 161 F.3d 696, 703 (Fed. Cir. 1998). This presumption can be overcome in two ways: (1) a claim element that uses the word "means" but fails to recite function corresponding to the means does not invoke § 112, ¶ 6; and (2) even if the claim element specifies a function, if it also recites sufficient structure or material for performing that function, § 112, ¶ 6 does not apply. *See Allen Engineering Corp v. Bartell Industries, Inc.*, 299 F.3d 1336, 1347 (Fed. Cir. 2002) (internal citations omitted). In order to recite "sufficient structure," a claim term, as the name for structure, has to have a reasonably well understood meaning in the art. *See id*.

III. Construction of the Patent Claims and Terms

A. '183 Patent

The parties dispute the meaning of certain key terms in Claim 1 and Claim 5 of the '183 patent. Claim 1 of the '183 patent reads as follows:

> "A method for calculating an initial security count value for a new channel in a wireless communications device, the wireless communications device comprising:

a first security key;
a second security key; and
a plurality of established channels, each established channel having a corresponding security count value and utilizing a security key, at least one of the established channels utilizing the first security key;
the method comprising:
assigning the second security key to the new channel;
utilizing a first set to obtain a first value, the first set consisting of corresponding security count values of the established channels that utilize the second key, the first value being at least as great as the x most significant bits (MSB_x) of a value in the first set; and
setting the MSB_x of the initial security count value for the new channel equal to the first value;
wherein if the first set is empty, then the first value is set to a first predetermined value."

Claim 5 of the '183 patent reads as follows:

"A method for providing an initial security count value to a new channel in a wireless communications device, the method comprising:
establishing at least a first channel, each first channel utilizing a first security key and having a corresponding security count value;
performing a security mode reconfiguration to change utilization of each first channel from the first security key to a second security key according to an activation time for each first channel; wherein upon utilization of the second security key, the corresponding security count value for the first channel is changed;
initiating establishment of a second channel that utilizes the second security key;
utilizing a first set to obtain a first value, the first set consisting of corresponding security count values of the established channels that utilize the second key, the first value being at least as great as the x most significant bits (MSB_x) of a value in the first set; and
setting the MSB_X of the initial security count value for the second channel equal to the first value;

wherein if the first set is empty, then the first value is set to a first predetermined value."

The disputed priority terms, as agreed by the parties, of both Claim 1 and Claim 5 are all contained within both Claim 1 and Claim 5. Furthermore, the parties' respective proposed constructions for the agreed disputed priority terms are the same for both Claim 1 and Claim 5. Therefore, the Court addresses below the disputed priority terms of Claim 1 and claim in the same discussion. Such constructions ordered by the Court shall apply to the disputed terms in both Claim 1 and Claim 5.

1. Person of Ordinary Skill in the Art

Preferably, this Court gives the words of a claim their ordinary and customary meaning; in other words, the meaning the claim term would have to a person of ordinary skill in the art. *See Phillips*, 415 F.3d at 1312-13; *Markman*, 52 F.3d at 979. A person of ordinary skill in the art would read the claim term in the context of the entire patent, not just the particular claim where the term appears. *Phillips*, 415 F.3d at 1313.

The Court finds that a person of ordinary skill in the art at the time of the invention the '183 patent is a person with a Bachelor of Science degree in Electrical Engineering, Computer Science, or a closely related field with three to five years of employment experience in the wireless telecommunications industry.

2. Priority Terms Needing Construction

The parties have agreed that the following terms/phrases from Claim 1 of the

‘183 patent need to be construed by the Court: “a second security key”; “assigning the second security key to the new channel”; and “first predetermined value.”

The parties have agreed that the following terms/phrases from Claim 5 of the ‘183 patent need to be construed by the Court: “a second security key”; “initiating establishment of a second channel that utilizes the second security key”; and “first predetermined value.” Furthermore, the parties also disagree whether the preamble of Claim 5 is limiting.

The priority terms “a second security key” and “first predetermined value” are included in the language of both Claim 1 and Claim 5 of the ‘183 patent. The parties’ respective briefing and argument urge the same respective constructions for these key terms for both Claim 1 and Claim 5. Therefore, the Court addresses these terms as applied to Claim 1 and Claim 5 collectively.

a. “a second security key” – Claim 1 and Claim 5 of the ‘183 Patent

Innovative Sonic argues that this term should be construed as meaning “new security key that replaces the first security key.” RIM argues that this term should be construed as “new security key that is different from the first security key.” Therefore, the principle difference between the two proposed constructions, in the parties’ view, is whether the second security key “replaces” the first key or whether the second security key “is different from” the first key. The Court is of the opinion, for the reasons discussed below, that the second security key both replaces the first security key and also is different than the first key.

Innovative Sonic's argument that the second security key "replaces" the first security key focuses on the patent specifications, which according to its argument, repeatedly emphasizes that there is a changing of the security key from the first to the second security key. In support of its argument Innovative Sonic cites multiple passages from the specifications that indicate the change of the first key to the second key. Additionally, Innovative Sonic argues that a construction that includes "replaces" reflects the essence of the '183 patent. 82-10-11.

RIM's argument that the second security key "is different from" the first security key focuses on the lack of anything in the claim itself that indicates that the second key replaces the first key, on principles of claim construction typically used to interpret the words "first" and "second", and on principles of claim construction that attempt to avoid superfluous and redundant language. RIM argues that "first" and "second," as used in patents, merely differentiate that two things are not the same. Furthermore, it argues that Innovative Sonic's construction is incorrect because if this were inserted into the language of Claim 5, this would create a reading of the claim where the claim language specified that there was both a "change" of the security keys and that the second key "replaces" the first key. According to RIM's argument, such language is redundant and superfluous; therefore such a construction would be disfavored under the rules of claim construction.

When construing the terms of patent claims, the Court starts with the language of the claim itself, read in light of the specification. *See Phillips*, 415 F.3d at 1314-1315

(quoting *Vitronics*, 90 F.3d at 1582); *Vivid Technologies, Inc. v. American Science & Engineering, Inc.*, 200 F.3d 795, 804 (Fed. Cir. 1999). The language of Claim 1 of the '183 patent sheds very little light on whether the second security key "replaces" the first key or whether the second security key is merely "different from" the first key. There is no language in Claim 1 that favors one construction over the other.

The language of Claim 5, however, does present some indication that the second security key "replaces" the first security key. As pointed out by RIM in its briefing, the language of Claim 5 indicates that the claim reads "performing a security mode reconfiguration to *change* utilization of each first channel from the first security key to a second security key…." RIM cites this language to support its argument that Innovative Sonic's proposed construction is not correct because it leads to redundancy. Specifically, RIM seems to indicate that use of the phrases "change" and "replaces" in the same claim would cause the claim to be redundant. Based on RIM's own argument "change" and "replaces" are synonymous in that the phrases both indicate that the first key has been removed and the second key has been put in the place of the first key. Innovative Sonic's arguments certainly also indicate, as discussed below, that interpretation of the phrase "changing" or "changed" is synonymous with the phrase "replaces." Therefore, inclusion of the phrase "changed" in Claim 5 supports the construction that the second security key "replaces" the first security key, as proposed by Innovative Sonic.

Furthermore, the '183 patent specifications further support a construction which encompasses the notion that the second security key "replaces" the first security key. As indicated by Innovative Sonic in its briefing, the patent specifications repeatedly indicate that there is a change from the first security key to the second security key. Specifically, the patent states that "it is … a primary objective of this invention to provide a method for obtaining a security count value for a new channel that is established during a changing of a security key." '183 Patent, 5:64-66. Furthermore, the specifications state that "… the present invention discloses a method for obtaining a security count value for a new channel that is established during a *changing* of a security key…" '183 Patent 1:9-12; … the security keys …. should be *changed* after a predetermined interval…" '183 Patent 3:15-18; "… the security keys … should be *changed*…" '183 Patent 4:23-25; "the second station … may initiate the security mode command to *change* the security keys … to new security keys …" '183 Patent 4:26-30; and "… the first security keys … are changed whenever the security count … exceeds a predetermined cross-over value…" '183 Patent 7:48-53.

The Court finds that above quoted passages strongly support a construction which includes the concept of a first security key being changed to a second security key. Additionally, the Court finds that concept indicated by the phrase "replaces," in the context of the '183 patent, is synonymous with the concept of changing from one security key to another.

Furthermore, the essence of the invention of the '183 patent encompasses the concept of changing from one security key to another security key. A reading of the '183 patent as a whole, presents an invention that is focused on the particular situation in which a new channel is established in a wireless communications system while a security mode reconfiguration is ongoing. The purpose of the security key, as it relates to this invention, is to provide a method for encoding and decoding messages sent via wireless communication systems. 183 Patent 2:51-66. Therefore, the user is ensured of a private line of communication that is free from eavesdroppers. Id. In order to ensure that the security key is not decoded by a potential eavesdropper, the security key should be changed periodically. '183 patent, 4:22-25. Therefore, it appears that it is a necessary concept of the invention that the first key be replaced by the second key. Failure to replace the first security key with the second security key would defeat the purpose of changing the security key altogether.

RIM argues that the court should adopt a construction that indicates that the second security key should be "different" than the first security key and excludes the concept that the second security key "replaces" replaces the first security key. In support of this argument, it points to the common claiming practice to use the terms "first" and "second" a mere descriptors that differentiate two instances of multiple structures in a claim. As discussed above, the Court is of the opinion that the use of "first" and "second" as it is used in the '183 patent go beyond this mere differentiation of two instances of multiple structures.

However, like the term "replaces," the essence of the invention of the '183 patent encompasses the concept that the second security key is different from the first security. The purpose, as described by the patent, of replacing the first security key with the second security key is to ensure that one key has not been in use long enough for the key to be compromised. If a first security key was to be replaced by a second security key and the keys were not different, then this would not accomplish the goal of using a security key in the first place. Innovative Sonic acknowledges this in its briefing by stating, "… the first and the second security key are not only different …." Regardless of this acknowledgement, Innovative Sonic does not include this concept in its proposed construction.

For the foregoing reasons, the Court construes the phrase "second security key" to mean "new security key that replaces the first security key and is different from the first security key." The phrase "second security key" is include in both Claim 1 and Claim 5 of the '183 patent. It is used with the same meaning in both claims, and both parties presented argument on the term that does not distinguish between Claim 1 and Claim 5. For the foregoing reasons, the above construction of the term "second security key" is to be applied to both Claim 1 and Claim 5 of the '183 patent.

b. "assigning the second security key to the new channel" of Claim 1 and "initiating the establishment of a second channel that utilizes the second security key" of Claim 5.

Innovative Sonic urges that the Claim 1 phrase "assigning the second security

key to the new channel" should be given its plain and ordinary meaning. RIM proposes that the phrase should be construed as "assigning the second security key to the new channel during the execution of a security mode command and key change."

Innovative Sonic urges that the Claim 5 term "initiating the establishment of a second channel that utilizes the second security key" should be given its plain and ordinary meaning. RIM proposes the phrase should be construed as "initiating the establishment of a second channel that utilizes the second security key during execution of a security mode command and key change."

The Court addresses the construction of both of these phrases in the same discussion because the constructions for both phrases involve the same disputed language. Innovative Sonic request that both phrases be presented to the jury as written. RIM requests that both phrases be presented to the jury with the additional limitation of "during execution of a security mode command and key change" added to the end of each phrase. Therefore, the real dispute at issue for both claims is whether or not RIM's temporal limitation should be included in the construction of these phrases.

Innovative Sonic argues that the inclusion of RIM's temporal limitation would be a "cardinal sin" of claim construction because it is improper to limit the claims in this manner unless it is clear that the claims and the embodiments in the specification are strictly coextensive. RIM argues the temporal limitation should be included in the construction because of multiple references in the patent to initiating new channels and assigning a new security key to those channels during a security mode reconfiguration

and that the essence of the invention of the '183 patent requires a security mode reconfiguration to be ongoing. For the reasons below, the Court finds that both of these phrases should be given their plain and ordinary meanings.

During oral argument, counsel for RIM urged that the essence of the invention of the '183 patent requires that a security mode reconfiguration be ongoing for the invention to function as described by the patent. Counsel for RIM further argued that *all* of the language of the patent described "assigning" and "initializing" as occurring during a security mode reconfiguration. Therefore, according to RIM's argument this limitation should be included in the constructions. Upon direct questioning from the Court, counsel for RIM conceded that if the patent contained any reference to a time before or after a security mode reconfiguration then RIM's argument failed. Counsel for Innovative Sonic promptly pointed out the specifications state, "The present invention method is particularly important for the determination of the hyper-frame numbers … of a new channel … that is established *just after*, or during, a security mode reconfiguration." '183 Patent 9:39-41.

The Court holds RIM's counsel to what was said during oral argument and refuses to add the temporal limitation, "during execution of a security mode command and key change," to either the language of Claim 1 or Claim 5. This is because the specifications clearly state that the invention is not limited solely to occurrences during a security mode reconfiguration. According to the specification of the patent itself, this invention is also important for determination of hyper-frame numbers *just after* a

security mode reconfiguration. Neither party urges that the Court construe either phrase beyond RIM's temporal limitation.

For the foregoing reasons, the Court refuses to construe the phrase "assigning the second security key to the new channel" of Claim 1 and "initiating the establishment of a second channel that utilizes the second security key" of Claim 5 beyond the plain and ordinary meaning of the phrases and holds that both phrases shall be presented to the jury as written in the claims. It is noted that both the Claim 1 phrase and the Claim 5 phrase include the key term "second security key," for which the parties requested construction. The phrase "second security key" when applied to the Claim 1 "assigning" phrase and the Claim 5 "initializing" phrase shall be construed as ordered by the Court in the above discussion about the construction of the phrase "second security key."

c. "first predetermined value" – Claim 1 and Claim 5 of the '183 Patent

Innovative Sonic urges that the phrase "first predetermine value" be given its plain and ordinary meaning without proposing what the plain and ordinary meaning would be. RIM urges that the phrase be construed to mean "a first default value." For the reasons discussed below the Court finds that there is no need to diverge from the plain and ordinary meaning of this term.

Innovative Sonic's argument that this term should be given it plain and ordinary meaning focuses on the assertions that there is nothing about the term that is complex

or confusing to a lay jury and that to adopt RIM's construction would improperly limit the claim when the patent claims and specification do not define or limit this term as proposed by RIM.

RIM's argument that this term should be construed to mean "a first default value" focuses on the assertion that the patent itself provides a definition of the term "first predetermined value." Therefore, RIM urges that the Court should adopt a construction that limits the term to its defined meaning within the context of the '183 patent.

Turning first to the language of the claim itself, the phrase "first predetermined value" does not in and of itself encompass a complex or technical concept that would not be understood by a lay jury. The language itself is readily understandable to a lay jury. If a claim term is readily understood by a lay jury, there is no need for the court to construe the term. *See Cheetah Omni LLC v. Samsung Elecs. Am., Inc.*, No. 6:08 CV 279, 2009 WL 5196721 (E.D. Tex. Dec. 21, 2009). In such a situation, the term should be presented to the jury as written.

If, however, an inventor so chooses, he or she may explicitly or implicitly define a claim term in a patent's specifications. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). In such a case, the inventor has limited the meaning of the term to the definition provided in the specifications as would be interpreted by a person of ordinary skill in the art. *Id.* Even a term that is not complex or confusing to a

lay jury, should not be given its plain and ordinary meaning, if the inventor has provided an alternative definition of the term in the patent itself. *Id.*

RIM argues that the inventor of the '183 patent has specifically defined the term to mean "a first default value." In support of this argument, RIM points to two passages in the patent: "… the first predetermined value … is given a default of zero …" '183 patent 9:11-18 and "… then the hyper-frame numbers … for the new channel … are simply set to a default value, such as zero …." '183 patent 9:64-10:8. Innovative Sonic urges that passages of the patent that RIM references are insufficient to define the term.

The Court agrees with Innovative Sonic in that the passages of the '183 patent are insufficient to define "predetermined" to me "default." The relevant passages of the patent used by RIM to support its position are in the specifications of the patent where the patent is describing one possible implementation of the invention. The claims of a patent define the invention to which the patentee is entitled the right to exclude. Phillips, 415 F.3d at 1312. Furthermore, the objective baseline for construing patent claims is determining how a person of ordinary skill in the art understands a claim term. Phillips, 415 F.3d at 1313. Therefore to construe a claim term in a manner that limits the claim meaning beyond what a person of ordinary skill in the art would understand it to mean would be improper. As applied to the construction of the term "a first predetermined value," the Court finds that a person of ordinary skill in the art would not read into the claim term the limitation proposed by RIM after examining the

specification's description of a single implementation cited by RIM. Therefore, it would be improper for this Court to impose this limitation upon the claim term.

Since the claim term "a first predetermined value" is a lay term that is readily understandable to a jury and the '183 patent does not explicitly or implicitly define the term to have a specialized meaning, the Court refuses to construe the term beyond its plain and ordinary meaning and holds that the term shall be presented to the jury as it is written in the patent claims. The phrase "a first predetermined value" is include in both Claim 1 and Claim 5 of the '183 patent. It is used with the same meaning in both claims, and both parties presented argument on the term that does not distinguish between Claim 1 and Claim 5. For the foregoing reasons, the above construction of the term "a first predetermined value" is to be applied to both Claim 1 and Claim 5 of the '183 patent.

d. Is The Preamble Of Claim 5 Of The '183 Patent Limiting?

The parties dispute whether the preamble of Claim 5 is limiting. Innovative Sonic urges that the preamble is not limiting. RIM urges that the preamble is limiting. The language of the preamble that is in dispute is "a method for providing an initial security count value to a new channel in a wireless communications device …." RIM, however, has failed to adequately brief and argue its basis for limiting the preamble of Claim 5. In its briefing, RIM provided argument that the preamble of Claim 1 is limiting (Prior to the Markman Hearing, the parties agreed that the preamble of Claim 1 is limiting). However, the basis urged by RIM to limit the preamble of Claim 1 is not

applicable to Claim 5 and RIM has only provided cursory briefing regarding how the preamble of Claim 5 is limiting. Therefore the Court refuses to entertain RIM's argument and holds that the preamble of Claim 5 is not limiting.

B. '795 Patent

The parties dispute certain phrases of Claim 1 of the '795 patent. Claim 1 of the '795 patent reads as follows:

> "A timer based method to avoid stall of in-sequence delivery of reordering buffers at a receiver in a high speed downlink packet access (HSDPA) of a wireless communication system, where a transmission sequence number (TSN) is assigned to each new data blocks, while the receiver being capable of providing priority in-sequence received data blocks delivery by temporarily storing correctly received data blocks based on their priority class and in order of their TSN at reordering buffers before delivering them to upper layers, the method comprising:
> at the receiver:
> receiving a data block with assigned TSN;
> storing a correctly received data block into one of the reordering buffers based on the data block's priority class and the order of its TSN;
> initializing at least one timer running for a predetermined period of time for a reordering buffer when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed;
> stopping the timer if the data block (TSN=X) can be delivered to the upper layer due to all the data blocks having lower TSN (TSN<X) in the reordering buffer being received; and
> when the timer has expired, removing at least one missing data block from the reordering buffer;
> wherein initializing at least one timer for a reordering buffer is initializing one timer for the reordering buffer and when the timer has expired, removing at least one missing data blocks from the reordering buffer further comprising delivering received data blocks (TSN<=X-1) of the particular reordering

buffer to the upper layer; and removing all missing data blocks (TSN<X) from the reordering buffer."

The parties also dispute the validity of the means plus function claims of Claim 5. Claim 5 reads as follows:

"A receiver having timer based means for avoiding stall of in-sequence delivery of reordering buffers at a receiver in a high speed downlink packet access (HSDPA) of a wireless communication system, a transmission sequence number (TSN) being assigned to each new data block, the receiver having the capacity of providing priority in-sequence received data blocks delivery by temporarily storing correctly received data blocks based on their priority class and in order of the TSN at the reordering buffers before delivering them to upper layers, and the receiver comprising:

means for receiving a data block with assigned TSN;

means for storing a correctly received data block into one of the reordering buffers based on the data block's priority class and the order of its TSN;

Means for initializing at least one timer running for a predetermined period of time for a reordering buffer when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block having a lower TSN (TSN<X) in the reordering buffer being missed; and

means for stopping the timer if the data block (TSN<X) can be delivered to the upper layer due to all the data blocks having a lower TSN (TSN=X) in the reordering buffer being received; and

when a timer has expired, means for removing at least one missing data block from the reordering buffer;

wherein the means for initializing at least one timer for a reordering buffer is initializing one timer for a reordering buffer and when the timer has expired, the means for removing at least one missing data blocks from the reordering buffer further including means for delivering received data blocks (TSN<=X-1) of the particular reordering buffer to the upper layers; and means for removing all missing data blocks (TSN<X) from the reordering buffer."

The parties also dispute the validity of the means plus function claims of Claim 8. Claim 8 reads as follows:

> "The receiver of Claim 5, wherein means for initializing at least one timer running for a predetermined period of time for a reordering buffer further comprising:
> means for receiving a configuration time from the transmitter; and
> means for setting the predetermined period of time equal or greater than the received configuration time."

1. Person of Ordinary Skill In The Art

At the outset, the Court addresses the level of one skilled in the art of the '795 patent. Based on the expert opinions of Dr. Madisetti, Innovative Sonic's expert, and Dr. Min, RIM's expert the Court finds that are person of ordinary skill in the art at the time that the invention the '795 patent is a person with a Bachelor of Science degree in Electrical Engineering, Computer Science, or a closely related field with three to five years of employment experience in the wireless telecommunications industry. Furthermore the Court finds that a person of ordinary skill in the art would be aware of and would have understood the HSDPA protocol as defined in draft 3GPP specifications released at that time, including knowledge that the receiver with support for HSDPA, HARQ entity, and reordering entity had specific meanings, definitions, and functions as described by those specifications.

2. Priority Term/Phrase Needing Construction

The parties have agreed that the following terms/phrases of Claim 1 needs to be

construed by the Court: "initializing at least one timer running for a predetermined period of time for a reordering buffer when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed" and "missing data block." Furthermore, the parties dispute the validity of multiple means plus function claims of Claim 5 and Claim 8, which are presented separately below.

a. **"initializing at least one timer running for a predetermined period of time for a reordering buffer when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed" Of Claim 1 Of The '795 Patent.**

The parties dispute the construction of the above lengthy phrase, which for brevity's sake will be referred to as "initializing at least on timer …." Innovative Sonic proposes that the phrase be given its plain and ordinary meaning, but does not provide the Court with guidance on what the plain and ordinary meaning would be. RIM urges the phrase should be construed as "starting a timer, running for a preset period of time, whenever a received data block cannot be delivered to an upper layer because of a missing data block or group of consecutive missing data blocks." For the reasons discussed below, the Court, at this time, agrees with Innovative Sonic that the claim should be given it plain and ordinary meaning. However, the Court notes that additional construction may be required before this phrase can be submitted to the jury

because the Court is of the opinion that the phrase may be too convoluted for a lay jury to comprehend.

Innovative Sonic argues that the phrase "initializing at least one timer …" should be given it plain and ordinary meaning because RIM's construction improperly limits the claim language to one specific possible embodiment of the invention when the patent specifications clearly consider other possible embodiments that are excluded by RIM's construction. The focus of Innovative Sonic's argument is the inclusion of the word "whenever" in RIM's construction.

RIM urges that the phrase be construed as "starting a time, running for a preset period of time, whenever a received data block cannot be delivered to an upper layer because of a missing data block or group of consecutive missing data blocks." Again, the key dispute is the inclusion of the word "whenever" in the construction proposed by RIM. The basis of RIM's argument is that the patent discloses the use of multiple timers, criticizes the prior art that did not use multiple timers, and discloses an embodiment where a timer is started whenever a missing data block is found.

The Court agrees with Innovative Sonic that the inclusion of the word "whenever" in the claim construction would be an improper limitation upon the claim language. The inclusion of 'whenever" in the construction, as it is proposed by RIM, indicates that a timer must be started each and every a time data block cannot be delivered because the system is waiting on a missed data block or blocks. The claim language itself describes a situation where the invention initializes "at least one timer"

"when" a data block cannot be delivered to an upper layer. The claim uses the word "when," not the word "whenever," which on its own does not indicated whether or not the starting of a timer is required each and every time. Likewise, the claim uses the language "at least one timer." This language standing on its own indicates that more than one timer may be started, but also allows for the circumstance where only one timer is started. The language, however, does not indicate whether or not a second timer must be started whenever a first timer has already been initiated. Therefore the claim language alone provides little guidance into the issue.

The claim language, read in light of the patent as a whole including the specifications, however, provides a much clearer picture that the invention does not require the invention to start a timer each and every time a data block cannot be delivered. The summary of the invention states "… it is feasible to increase system performance by using more than one timer to manage reordering buffers in the receiver. Whether this invention provides the receiver with one timer per reorder buffer, or uses one timer per missing data block, or uses one timer per missing data block but a gap of consecutive TSN missing data blocks can share one timer, …" '795 Patent 3:40-44. This language clearly describes a possibility that an embodiment can have only "one timer per reorder buffer." Such an embodiment would not be covered by the claims if RIM's construction was correct because in this particular embodiment there is only one timer per reordering buffer. If the invention required starting a timer each and every time a block cannot be delivered the one timer per buffer embodiment would not be

possible in the situation when two non-consecutive blocks cannot be delivered due to two missing non-consecutive blocks. In this situation, RIM's construction would require that a first timer was started for the first block that cannot be delivered and then a second timer would be required to be started when the second block cannot be delivered. Clearly RIM's construction is contrary to this possible embodiment.

Likewise, a comparison of the advantages of the invention with the disclosed problems with the prior art support the conclusion that starting a timer is not required by the invention each and every time a block cannot be delivered. RIM argues that a timer must be started every time because the invention discloses the use of "multiple" timers and the advantages of using "multiple" timers over the prior art. RIM, however, mischaracterizes the nature of the prior art. The prior art, as disclosed by the '795 patent, describe the use of a single timer for all reordering buffers. Specifically the patent states that the prior art uses "… only one timer sharing by all reordering at the receiver… " '795 Patent 3:38-39; "… meantime, the receiver, instead of running one timer at a given time for all different priority-class reordering buffers, can use multi timers to manage the reordering buffers …" '795 Patent 4:32-24. The state of the prior art is described as one in which all the reordering entities use one single timer. The invention disclosed by the '795 patent is very different.

The '795 patent describes an invention that is able to use on or more timers per reordering entity. In other words, the reordering entities no longer have to share a single timer. Each reordering entity can have its own timer. The references in the patent to the

use of multiple timers make a distinction between the prior art, which allowed only one timer for all reordering buffers, and the invention, which uses one or more timers per reordering buffer. Since there is more than one reordering entity and each reordering entity in the invention has at least one timer, the patent does disclose the use of multiple timers. For these reasons, RIM's argument that the patent's reference to use of multiple timers requires a timer each and every time a data block cannot be delivered is rejected by the Court.

The Court finds that a person of ordinary skill in the art would understand the claim, in light of the patent as a whole, to be as is described above. Therefore the Court refuses to adopt RIM's construction and, at this time, refuses to construe the phrase "initializing at least one timer running for a predetermined period of time for a reordering buffer when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed" to mean anything beyond its plain and ordinary meaning. The Court, however, is of the opinion that the phrase as written may be too difficult for a lay jury to process. Therefore the Court urges the parties to consider the possibility of submitting alternative constructions that incorporate the above interpretations of the phrase and also state the principles in a manner which will be more helpful to the lay jury than would be submitting the phrase as written.

b. "missing data block" Of Claim 1 And Claim 5 Of The '795 Patent.

Innovative Sonic urges that the Claim 1 and Claim 5 phrase "missing data block"

should be construed to mean "data block that has not yet been correctly received." RIM urges that the phrase should be construed to mean "data block that has not yet been received." For the reasons discussed below the Court agrees with Innovative Sonic's construction and accordingly construes the phrase to mean "data block that has not yet been correctly received."

Innovative Sonic argues that the phrase means "data block that has not yet been correctly received" by asserting that the patent itself defines that missing data blocks are those that have not been correctly received, without a distinction between data blocks that were never received at all and data blocks that were received but are unusable for some reason. In support of its argument, Innovative Sonic refers to specific passages of the patent and asserts that the purpose of the invention encompasses the inherent errors of data transmissions of wireless systems, including the likelihood that an unusable data block will be received.

RIM argues that the phrase means "data block that has not yet been received" by asserting that its construction more naturally aligns with the claimed invention, that the patent fails to make a distinction between a data block that has been received correctly and a data block that has been received but is not correct for some reason, and that the inclusion of "correctly" in the construction leads to unnecessary ambiguity.

The claim's language itself support a construction that requires that a missing data block in one that has not been correctly received. The phrase "missing data block" alone does not indicate why the block is missing, merely that it is missing. There is

nothing in the phrase to suggest that it is missing because it has not been received, it is missing because it was received but unusable, or any other reason that it may be missing. However, the claim language does provide that the method comprises "*receiving* a data block" and "… storing a *correctly received* data block into one of the reordering buffers …." '795 Patent 5:22-24. Furthermore, the method continues such that a "… when the timer is expired, removing at least one *missing data block* from the reordering buffer; …" '795 Patent 5:35-36.

Under the method, as described by the claim language, blocks are received, correctly received blocks are stored in a buffer, and missing data blocks are discarded. If a block is not received correctly, under the method claimed, it is not stored in the reordering buffer. Only correctly received blocks are stored in the buffer. The missing data blocks in question in this construction are later removed from the reordering buffer. Since only correctly received blocks are placed in the reordering buffer the missing data blocks that are removed from the buffer must be those that were not put into the buffer in the first place. Specifically the missing data blocks are the data blocks that have not been correctly received. While the above quoted claim language is from Claim 1 of the '795 patent, the Court notes that Claim 5 contains the same or analogous language as that quoted from Claim 1.

The patent specifications provide further support for a construction that missing data blocks are those that have not been correctly received. The background of the invention discloses that the user equipment "… provides in-sequence delivery to higher

layers by storing the *correctly received* data blocks in reordering buffers …" and that "when a data block with low sequence number in the buffer is *missing (i.e. not yet correctly received)*, all received data blocks with higher TSN are kept in the reordering buffer" '795 Patent 1:55-66. Like the claim language itself, the specifications also contemplate that only correctly received blocks are place into the reordering buffer and that the missing blocks that are removed are those that were not placed in the reordering buffer because they were not correctly received. The Court finds that a person of ordinary skill in the art would read the claims, in light of the specifications and understand that the patentee used the phrase "missing data blocks" to mean data blocks that were not correctly received.

For the foregoing reasons the Court construes the phrase "missing data block" to mean "data block that has not yet been correctly received." Such construction shall be applicable to the phrases in both Claim 1 and Claim 5 since the phrase "missing data block" is included in both Claim 1 and Claim 5 of the '795 patent; both parties, in their briefing, addressed the two claims without distinction between Claim 1 and Claim 5; and the above construction analysis is the same for both claims.

3. Means Plus Function Claims of Claim 5 and Claim 8 of the '795 Patent

When a patentee avails himself of the statutorily authorized "means plus function" claim form, certain structural limitations from the specification are imported into the claim construction process. *See* 35 U.S.C. § 112, ¶ 6. The parties agree the terms listed below must be construed pursuant to 35 U.S.C. § 112, ¶ 6. In interpreting

a means plus function claim, the Court first identifies the function recited in the claim, and then identifies the corresponding structure set forth in the written description that performs the particular function set forth in the claim. *See Asyst Tech.*, 268 F.3d at 1369.

The parties dispute that validity of a number of means plus function claims included in the '795 patent. Primarily the parties are in agreement as to the functions of these claims. For the most part disputes as to the functions are limited to the situation where the phase includes a disputed term or the situation where the parties disagree about the length of the claim language that should be included in the construed phrase. The Court has made adequate note of these situations below, when it is necessary to address these issues. The Court, without specifically addressing them, adopts the agreed functions of the parties as set out in the *Joint Claim Construction Chart* filed by the parties.

The means plus function claims in dispute for Claim 5 and Claim 8 of the '795 Patent are:

1. "timer based means for avoiding stall of in-sequence delivery of reordering buffers at a receiver in a high speed downlink packet access (HSDPA) of wireless communication system"
2. "means for receiving a data block with assigned TSN"

3. "means for storing a correctly received data block into one of the reordering buffers based on the data block's priority class and the order of its TSN"
4. "[means for initializing at least one timer for a predetermined period of time for a reordering buffer][1] when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed"
5. "[means for stopping the timer][1] if the data block (TSN=X) can be delivered to the upper layer due to all the data blocks having lower TSN (TSN<X) in the reordering buffer being received"
6. "means for removing at least one missing data block[2] from the reordering buffer"
7. "means for delivering received data blocks (TSN <=-1) of the particular reordering buffer to the upper layers"
8. "means for removing all missing data blocks[2] (TSN<X) from the reordering buffer"
9. "means for receiving a configuration time from the transmitter," and

1 Innovative Sonic only requests construction of the bracketed portion of this claim. RIM requests construction of the entire phrase as written. To this extent the parties have presented that there are disputed functions for the claim. However, the Court finds that there is no substantive difference between the parties proposed functions because the parties merely recite the claim language as the function.

2 "missing data block" – The parties dispute this phrase as discussed above. The phrase is to be construed as ordered by the Court above

10. "means for setting the predetermined period of time equal or greater than the received configuration time"

While the parties have presented ten means plus function terms to the Court for construction, the real dispute between the parties is whether or not these means plus function claims have a supporting structure disclosed by the patent. As presented to the Court in briefing and argument, RIM asserts that there is no underlying structure for these claims. Innovative Sonic, however, asserts that a person of ordinary skill in the art would understand that the underlying structures for these claims are either 1) a high speed downlink packet access (HSDPA) receiver or 2) the reordering entity of the MAC-hs of an HSDPA receiver.

As RIM points out, the correct inquiry the Court must make in determining whether the specification sufficiently "describes and links structure that corresponds to the claimed function" is whether one skilled in the art "would understand the specification itself to disclose the structure, not simply whether that person would be capable of implementing that structure." *Medical Instrumentation & Diagnostics Corp. v. Elektra AB*, 344 F.3d 1205, 1211-12 (Fed. Cir. 2003); *see also Finisar Corp.*, 523 F.3d at 1340-41(the corresponding structure is sufficiently described if one of skill in the art could "perceive the bounds of the invention."). A patent need not disclose, however, subject matter that is known in the field of the invention and is in the prior art, for patents are written for the person experienced in the field of the invention. *See S3 Inc. v. nVidia Corp.*, 259 F.3d 1364 (Fed. Cir. 2001).

a. Means Plus Function Claims With The Structure Of A "HSDPA Receiver"

Innovative Sonic asserts that the means plus function claims 2, 4, 5, 9, and 10, as listed above have a "HSDPA receiver" as the corresponding structure. RIM asserts that no structure is disclosed for these claims.

Generally, RIM contends that any reference in the specifications to a structure for these claims is limited to black box type figures and cursory references to the underlying structure, neither of which provides disclosure of the actual components that that perform the underlying function. Furthermore, RIM complains of the lack of disclosure as to whether these functions are implemented by software or hardware means or some combination of software and hardware.

In support of its argument, Innovative Sonic points to specific passages of the patent specifications and the prosecution history. Specifically, "… the *receiver receives* data blocks …" '795 Patent 3:10-11; "… [a] timer based method to avoid stall of in-sequence delivery of the reordering buffer *at the receiver* in a *HSDPA of a wireless receiver* …" File History Original Claim 3 of '795 patent; "wherein initializing at least one timer running for a second predetermined period of time for each reordering buffer further comprising the steps of; *receiving* a configuration time from the transmitter …" File History Original Claim 7 of '795 patent; "… *the receiver*, …., can use multiple *timers* to manage reordering buffers …" '795 Patent 4:32-24.

The above passages provide at least minimal disclosure of the link between the structure and the recited functions. The HSDPA receiver performs the recited functions of receiving data blocks, receiving a configuration time, and control of the timer by starting a timer, stopping a timer, and setting the time that the timer is to run.

Taken alone, the language above may not be sufficient to support that the contention that the patent sufficiently discloses the corresponding structure that performs the recited functions. As RIM correctly points out, the structure must be sufficiently described and linked to the claimed function. The Court agrees with RIM that the patent does not itself fully describe the underlying components of the claimed structures, either in the text of the specifications or in the figures of the patent. The extent of disclosure required, however, must be viewed in the eyes of a person of ordinary skill in the art at the time of the invention. Therefore, it is necessary to understand the state of the technology at the time of the invention.

The Court agrees with Innovative Sonic that an understanding of the state of the technology is critical to the analysis because, in this situation in particular, it provides critical guidance into understanding how a person of ordinary skill in the art would understand the '795 patent as read as a whole. Specifically, the Court agrees with Dr. Madisetti's, Innovative Sonic's expert's, description of the state of the technology at the time of the invention. The patent was developed in connection with 3GPP standards. Such standards were established by the 3GPP group, which includes as participants various telecommunication companies, in order to facilitate the method

and systems used to transmit and receive communications between mobile devices. Furthermore, various national and supra-national groups have adopted the 3GPP specifications as proposed by the group with little substantive change. The purpose of promulgating and adopting such standards is to endure uniformity and compatibility between the various communication transmitters and receivers.

In light of this state of the technology, the Court agrees with Dr. Madisetti that a person of the ordinary skill in the art at the time of the invention would be very familiar with the 3GPP groups specifications including the various structures required to perform functions of wireless devices as defined by those specifications. The fact that the 3GPP specifications define the standard for operating wireless communication devices leaves the Court to believe that not only would a person of ordinary skill in the art be aware of the structures necessary to carry out certain functions, but a person of ordinary skill in the art would be operating under those specifications when that person reads the '795 patent.

Considering the state of the technology and the 3GPP specifications, at the time of the invention, the Court finds that the reference to structures, which are known and disclosed in the 3GPP specifications and the wireless communications industry as a whole, are sufficient disclosure of the structure in the means plus function claims 2, 4, 5, 9, and 10, as listed above. Therefore the Court holds that the recited structure of these claims is a "HSDPA receiver." The functions of an HSDPA receiver were known, defined, and understood, at the time of the invention, to include the recited functions

of these claims. Therefore, a person of ordinary skill in the art would understand that it is the HSDPA receiver that performs such functions.

RIM is correct in that a person of ordinary skill in the art would understand that there are multiple ways to implement these functions. The Court, however, agrees with Innovative Sonic in that it is of no moment that different persons having ordinary skill in the art would implement the HSDPA receiver in different ways. What is of importance it that a person of ordinary skill would understand that the corresponding structure for these claimed functions is a HSDPA receiver and that that receiver should be implemented in accordance with the 3GPP specifications, which were already defined as being possible to implement in hardware, software, or a combination of the two.

b. Means Plus Function Claims With The Structure Of The "Reordering Entity Of The MAC-hs Of An HSDPA Receiver"

Innovative Sonic asserts that the means plus function claims 1, 3, 6, 7, and 8, as listed above have the "reordering entity of the MAC-hs of an HSDPA receiver" as the corresponding structure. RIM asserts that no structure is disclosed for these claims.

As in the case of the "HSDPA receiver" claims above, RIM contends that any reference in the specifications to a structure for these claims is limited to black box type figures and cursory references to the underlying structure, neither of which provides disclosure of the actual components that that perform the underlying function. Furthermore, RIM complains of the lack of disclosure as to whether these functions are

implemented by software or hardware means or some combination of software and hardware.

In support of its argument that the recited functions are linked to the reordering entity of the MAC-hs of an HSDPA receiver, Innovative Sonic argues that the Figures 1A and 1C of the patent indicate that a reordering entity is part of the MAC-hs of an HSDPA receiver. Innovative Sonic also references passages of the specifications to show the link between the reordering entity of the MAC-hs and the recited functions of the claims. Specifically: "the MAC-hs …. supports priority handling by allowing different priority classes … and by using transmission sequence number (TSN) to track in-sequence delivery of receiving data blocks within a priority class at the EU. Reordering buffer for each priority classes are used for support in-sequence delivery…." '795 Patent 1:24-29; "… there is one reordering entity for each priority class and transport channel configured at the UE …" '795 Patent 49-51; "… all data blocks with consecutive TSNs up to the first not received data block are *delivered* to higher layer …" '795 Patent 1:53-55; "… when the timer expires, all data blocks up to and including TSN-1 will be *removed* from the reordering buffer …" '795 Patent 2:54-55; "… the missing data block is discarded/*removed* from the reordering buffer …" '795 Patent 4:52-55.

The Court agrees with Innovative Sonic and its expert Dr. Madisetti that the above passages of the '795 Patent sufficiently link the recited functions of delivering, storing, and removing data blocks with the reordering entity of the MAC-hs of an

HSDPA receiver. The language of the patent clearly explains that it is the MAC-hs that contains the reordering entity, and that it is this reordering entity that stores data blocks, delivers data blocks to upper layers, and removes missing data blocks. A person of ordinary skill in the art would understand this to sufficiently link the recited functions to the reordering entity of the MAC-hs of the HSDPA receiver.

RIM further argues that even if these functions are linked to structures in the Patent, there is no specific disclosure of the actual underlying components of the structure. RIM asserts that all that is amount to only a general description of the structure because all that is provided is black box type diagrams and cursory references to the structure.

For the reasons discussed above regarding the "HSDPA receiver" claims, the Court finds that the patent discloses sufficient detail of the structure, the reordering entity of the MAC-hs of an HSDPA receiver. As in the discussion above, the Court agrees with Dr. Madisetti's that the structure of the MAC-hs, including the reordering entity, was well known to a person of ordinary skill in the art at the time of the invention because of the state of the prior art and the 3GPP specifications at the time of the invention. Therefore a person of ordinary skill in the art would necessarily

understand that it is the reordering entity that performs the recited functions.

SO ORDERED.

Signed October 17th, 2012.

Ed Kinkeade

ED KINKEADE
UNITED STATES DISTRICT JUDGE

SUMMARY CHART OF CLAIM CONSTRUCTIONS OF PRIORITY TERMS

Priority Terms of Patent No. 6,925,183

Language of Disputed Priority Term of Claims	RIM's Proposed Construction	Innovative Sonic's Proposed Construction	Judge's Construction
Claim 1 and Claim 5 Priority Term – "**a second security key**"	"new security key that replaces that is different from the first security key"	"new security key that replaces the first security key"	"**new security key that replaces the first security key and is different from the first security key**"
Claim 1 Priority Term – "**assigning the second security key to the new channel**"	"assigning the security key to the new channel during the execution of a security mode command and key change"	Plain and Ordinary Meaning	"**assigning the second security key to the new channel**"
Claim 1 and Claim 5 Priority Term – "**first predetermined value**"	"a first default value"	Plain and Ordinary Meaning	**Plain and Ordinary Meaning**
Claim 5 Preamble	Limits claim	Not a limitation	**The preamble is not limiting.**

Claim 5 Priority Term – "**initiating establishment of a second channel that utilizes the second security key**"	"initiating the establishment of a second channel that utilizes the second security key during the execution of security mode command and key change"	Plain and Ordinary Meaning	**Plain and Ordinary Meaning**

Priority Terms of Patent No. 7,436,795

Language of Disputed Priority Term of Claims	RIM's Proposed Construction	Innovative Sonic's Proposed Construction	Judge's Construction
Claim 1 Priority Term – "**initializing at least one timer running for a predetermined period of time for a reordering buffer when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed**"	"staring a timer, running for a preset period of time, whenever a received data block cannot be delivered to an upper layer because of a missing data block or group of consecutive missing data blocks"	Plain and Ordinary Meaning	**Plain and Ordinary Meaning**, at this time. However, the Court suggests that this phrase as written may need to be construed, in a manner in agreement with the Court's discussion of the phrase, so that it may be more easily understood by the jury.
Claim 1 and Claim 5 Priority Term – "**missing data block**"	"data block that has not yet been received"	"data block that has not yet been correctly received"	"**data block that has not yet been correctly received**"

Construction of Means Plus Form Claims of Patent No. 7,436,795 Having Proposed Structure of "HSDPA receiver"

Language of Disputed Priority Term of Claims – **Means Plus Function Claims Having Proposed Structure of "HSDPA receiver"**	- "means for receiving a data block with assigned TSN" - "[means for initializing at least one timer for a predetermined period of time for a reordering buffer][3] when a received data block (TSN=X) cannot be delivered to an upper layer due to at least one data block with a lower TSN (TSN<X) in the reordering buffer being missed" - "[means for stopping the timer][1] if the data block (TSN=X) can be delivered to the upper layer due to all the data blocks having lower TSN (TSN<X) in the reordering buffer being received" - "means for receiving a configuration time from the transmitter," and - "means for setting the predetermined period of time equal or greater than the received configuration time"
RIM's Proposed Construction	Functions: The parties agree as to the functions of most of the means plus form claims. Structure: None
Innovative Sonic's Proposed Construction	Functions: The parties agree as to the functions of most of the means plus form claims. Structure: "HSDPA receiver"

3 Innovative Sonic only requests construction of the bracketed portion of this claim. RIM requests construction of the entire phrase as written. To this extent the parties have presented that there are disputed functions for the claim. However, the Court finds that there is no substantive difference between the parties proposed functions because the parties merely recite the claim language as the function.

Judge's Construction	**The Court adopts the parties' agreed functions.** Structure: **"HSDPA receiver"**

Construction of Means Plus Form Claims of Patent No. 7,436,795 Having Proposed Structure Of "reordering entity of the MAC-hs of an HSDPA receiver"

Language of Disputed Priority Term of Claims – **Means Plus Function Claims Having Proposed Structure of "reordering entity of an HSDPA receiver"**	- "timer based means for avoiding stall of in-sequence delivery of reordering buffers at a receiver in a high speed downlink packet access (HSDPA) of wireless communication system" - "means for storing a correctly received data block into one of the reordering buffers based on the data block's priority class and the order of its TSN" - "means for removing at least one missing data block[4] from the reordering buffer" - "means for delivering received data blocks (TSN <=-1) of the particular reordering buffer to the upper layers" - "means for removing all missing data blocks[2] (TSN<X) from the reordering buffer"
RIM's Proposed Construction	Functions: The parties agree as to the functions of most of the means plus form claims. Structure: None
Innovative Sonic's Proposed Construction	Functions: The parties agree as to the functions of most of the means plus form claims. Structure: "reordering entity of the MAC-hs of an HSDPA receiver"

4 "missing data block" – The parties dispute this phrase as discussed above. The phrase is to be construed as ordered by the Court above

Judge's Construction	**The Court adopts the parties' agreed functions.** Structure: **"reordering entity of the MAC-hs of an HSDPA receiver"**