IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

WI-LAN INC., Plaintiff, v. ALCATEL-LUCENT USA INC.; TELEFONAKTIEBOLAGET LM ERICSSON; ERICSSON INC.; SONY MOBILE COMMUNICATIONS AB; SONY MOBILE COMMUNICATIONS (USA) INC.; HTC CORPORATION; HTC AMERICA, INC.; EXEDEA INC.; LG ELECTRONICS, INC.; LG ELECTRONICS MOBILECOMM U.S.A., INC.; LG ELECTRONICS U.S.A., INC. Defendants.	§ § § § § § § § § § § § § § § §	Civil Action No. 6:10-cv-521-LED JURY TRIAL DEMANDED

PLAINTIFF WI-LAN INC.'S RESPONSE IN OPPOSITION TO ALCATEL-LUCENT USA INC. AND THE ERICSSON DEFENDANTS' MOTION FOR PARTIAL SUMMARY JUDGMENT THAT PATENT CLAIMS ARE INDEFINITE

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

I. INTRODUCTION

Alcatel-Lucent USA Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson (collectively "Defendants") have the burden to prove that claims 6–8 of U.S. Patent No. 6,088,326 ("the '326 Patent") and claim 10 of U.S. Patent No. 6,222,819 ("the '819 Patent") are invalid by clear and convincing evidence. They have failed to do so. Defendants' "single structure" argument blatantly misconstrues precedent. And their suggestion that the structure recited in the specification, *i.e.*, a modem shelf and demand assignment engine ("DA engine") therein, is not linked to the recited functions ignores the specification. Finally, Defendants wholly fail to appreciate what the Federal Circuit's precedent actually requires for a "step-by-step" algorithm. That precedent holds that the algorithm need not be detailed to meet the low bar for claim definiteness, particularly where one of skill in the art could provide a software program to implement such from the patent's disclosure.

That is precisely the case here. The terms Defendants contend lack algorithms are means "for determining."[1] The algorithms disclosed in the specification specify the type of information to be considered in making those determinations. Defendants offer no evidence that one of ordinary skill in the art could not program a controller to make the recited determinations based on the specification's disclosure of the type of information to consider. Indeed, the only evidence on this point is directly to the contrary. *See* Declaration of Jonathan Wells, Ph.D., Concerning Structure Supporting Means Plus Function Clauses ("Wells Decl."), attached hereto as Exhibit A. Defendants' Motion for Partial Summary Judgment that Patent Claims Are Indefinite, Dkt. 174 ("Defs.' Mot."), must therefore be denied.

[1] The means terms at issue are: "channelisation means for determining which of the orthogonal channels will be subject to TDM techniques, and for transmitting that information to a plurality of subscriber terminals within the wireless telecommunications system" from claim 6 of the '326 Patent; "channelisation means [for] determin[ing], for those orthogonal channels subject to TDM techniques, how many time slots will be provided within each orthogonal channel" from claim 7 of the '326 Patent; and "channelisation means for determining which of the orthogonal channels will be subject to overlay codes, and for transmitting that information to a plurality of subscriber terminals within the wireless telecommunications system" from claim 10 of the '819 Patent.

II. APPLICABLE LEGAL STANDARDS

Defendants bear the burden to prove indefiniteness by clear and convincing evidence. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376–77 (Fed. Cir. 2001). "[C]lose questions of indefiniteness in litigation involving issued patents are properly resolved in favor of the patentee." *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1380 (Fed. Cir. 2001).

After first defining the function of the term, "the next step [in construing a means-plus-function claim term] is to look to the specification and identify the corresponding structure for that function." *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1333–34 (Fed. Cir. 2004).

This structure requirement "does not impose a lofty standard." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1341 (Fed. Cir. 2008); *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007) (explaining that the requirement is "not a high bar"). "If the claims when read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more." *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1384 (Fed. Cir. 2011) (quoting *S3 Inc. v. nVIDIA Corp.*, 259 F.3d 1364, 1367 (Fed.Cir.2001)). "[T]he specification need only disclose adequate defining structure to render the bounds of the claim understandable to an ordinary artisan." *Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1377 (Fed. Cir. 2010).

III. CLAIM TERMS AT ISSUE

The means-plus-function terms at issue in Defendants' Motion are:

- "channelisation means for ***determining which of the orthogonal channels will be subject to TDM techniques***, and for transmitting that information to a plurality of subscriber terminals within the wireless telecommunications system" ('326 Patent claim 6);

- "wherein the channelisation means ***also determines***, for those orthogonal channels subject to TDM techniques, ***how many time slots will be provided within each orthogonal channel***" ('326 Patent claim 7); and

- "channelisation means for ***determining which of the orthogonal channels will be subject to overlay codes***, and for transmitting that information to a plurality of subscriber terminals within the wireless telecommunications system" ('819 Patent claim 10).

Each term recites a function, shown with emphasis above, for making a different determination (collectively "the determining functions"). The means terms in claims 6 and 10 recite a second function "for transmitting that information . . ." ("the transmitting function").

IV. DEFENDANTS' "SINGLE STRUCTURE" ARGUMENT FAILS

A. Precedent Does Not Require a Single Structure for Dual Functions

Defendants' argument that a means term reciting two functions joined by the conjunction "and" must perform both functions using a ***single*** structure is based on a misreading of the Federal Circuit's decision in *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106 (Fed. Cir. 2002). *See* Defs.' Mot. 6. In *Cardiac Pacemakers*, the term at issue was a "third monitoring means for monitoring the ECG signal produced by said detecting means for activating said charging means in the presence of abnormal cardiac rhythm in need of correction." 296 F.3d at 1114. The functions recited in that term, *i.e.*, "monitoring" and "activating," *see id* at 1115, were not joined by the conjunction "and." This is important because the Federal Circuit expressly distinguished the claim language in *Cardiac Pacemakers* from means-plus-function terms that recite dual functions joined by the conjunction "and," such as the "channelisation means for determining . . . and for transmitting" at issue in this case:

> The language of the limitation at issue ***does not refer to "a means for doing x and y." In such a case***, the claim could potentially be ambiguous about whether the limitation required one means for performing both functions x and y, ***or simply one means for performing function x and one (potentially different) means for performing function y***. *Cf. Medtronic*, [*Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1313 (Fed. Cir. 2001)] (noting that a structure may perform two functions, and a single function may be performed by two structures, but that there must be a clear link between the claimed function and the corresponding structure). ***Here, however***, the language of the claim compels the conclusion that the same means must perform both functions.

Id. (emphases added).

Indeed, where the claim recites a means for doing *x* ***and*** for doing *y*, as do the claims here, the Federal Circuit has consistently construed the claims to allow separate structures to perform those functions. For instance, in *Asyst Technologies, Inc. v. Empak, Inc.*, 268 F.3d 1364 (Fed. Cir. 2001), the Federal Circuit construed the term "means . . . for controlling . . . ***and*** for transmitting." *See id.* at 1372 (emphasis added). The court explained that these two separate functions were performed by separate structures: "The written description makes clear that the first function is performed by the local process controller 20 and the second function is performed by the communication means 50." *Id.* Accordingly, the overall structure for performing the recited functions "consist[ed] of the ***entire complex*** comprising local process controller 20 ***and*** communication means 50."[2] *Id.* (emphases added). This is consistent with the structures Wi-LAN has identified here, which consist of a modem shelf and related components clearly linked to the transmitting function and a DA engine within that modem shelf running an algorithm clearly linked to the determining functions.[3]

None of this creates the indefiniteness problem that Defendants claim exists here, nor should it. Essentially every structure is composed of smaller parts. If it really were true, as Defendants argue, that a "means for doing *x* and for doing *y*" had to be performed by only a single, indivisible structure, then such means would always be susceptible to the indefiniteness attack Defendants advance here. But even a cursory review of precedent reveals that Defendants'

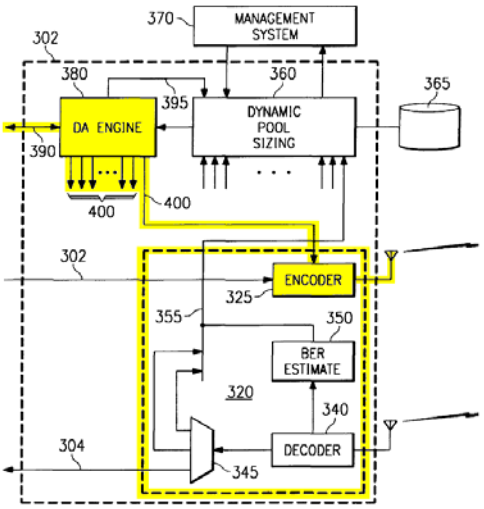
[2] The "entire complex" referred to in the Federal Circuit's construction in *Asyst* also included a communication line connecting the local process controller 20 and communication means 50. 268 F.3d at 1372. Accordingly, the structure approved by the Federal Circuit there was composed of at least three distinct structures.

[3] *Arbitron, Inc. v. International Demographics Inc.*, No. 2:06-CV-434 (TJW), 2009 WL 68875 (E.D. Tex. Jan. 8, 2009), which required that a means term with two functions joined by "and" have a single corresponding structure, is distinguishable because there the specification-at-issue clearly linked both functions to only a single structure. *See id.* at *15 (citing *Medtronic*, 248 F.3d at 1313, for the proposition that there must be a clear link between structure and function). Nothing in that case suggests there is a *per se* prohibition barring a specification from linking more than one structure to the functions recited for a means-plus-function term.

argument is premised on a fundamental misunderstanding of the law. *See, e.g.*, *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1431 (Fed. Cir. 2000) (holding that the structure for the claimed "means for transferring . . . and for recording" comprised multiple structures); *Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1015 (Fed. Cir. 1998) (finding no error in the identification of "rotatable shaft 52, pin 54, and slot 72" as the corresponding structure for "means for locking . . . and for selectively releasing"); *Mediatek, Inc. v. Sanyo Elec. Co.*, 513 F. Supp. 2d 778, 781–82 (E.D. Tex. 2007) (construing a "video encoding means" with three functions to have a corresponding structure of a "video signal encoder" comprised of three circuits, each circuit associated with a different function). There is nothing that bars the identification of more than one structure in the specification, which collectively act as the "means for determining . . . and for transmitting."[4]

B. Even If a Single Structure Were Required, the Specification Clearly Links a Single Structure, and Components Therein, to Each of the Recited Functions

The specification teaches that each of the recited functions is performed by the modem shelf and the DA engine therein. As explained in Plaintiff Wi-LAN Inc.'s Opening Claim Construction Brief, Dkt. 167 ("Wi-LAN's Brief") at 25–26, this is shown in Figure 17 (reproduced in part here). The modem shelf is the structure identified as item 302 in Figure 17. The DA engine, item 380, is



[4] In Wi-LAN's Brief, the dual functions of the "channelisation means for determining which of the orthogonal channels will be subject to TDM techniques, and for transmitting that information to a plurality of subscriber terminals" in claim 6 of the '326 Patent, and "channelisation means for determining which of the orthogonal channels will be subject to overlay codes, and for transmitting that information to a plurality of subscriber terminals" in claim 10 of the '819 Patent were briefed separately to make clear that structure was identified for both the determining and transmitting functions. *Cf. Noah Sys., Inc. v. Intuit Inc.*, --- F.3d ----, 2012 WL 1150216, at *9–12 (Fed. Cir. Apr. 9, 2012) (separately analyzing whether there was a structure identified for each of the functions recited in a single means-plus-function claim term).

located within the modem shelf and is connected to an encoder 325 on a modem 320 where the information is encoded using, *inter alia*, TDM techniques and overlay codes, and then transmitted to various subscriber terminals in the system.

Contrary to Defendants' suggestion, the DA engine within the modem shelf is clearly linked to each of the determining functions. The specification states that the "DA engine 380 includes a call control function . . . for each of the modems on the modem shelf." '326 Patent col. 23 ll. 62–65. These call control functions include control of whether TDM techniques or overlay codes are applied:

> [I]n preferred embodiments, overlay codes, rather than TDM, are used to implement downlink control channels, and data relating to such channels is passed from a ***demand assignment engine*** . . . . The overlay code generator will be controlled so as to produce the desired overlay code, in preferred embodiments, ***this control coming from the DA engine*** . . . .

See id col. 13 l. 60–col. 14 l. 5 (emphases added). The specification further states that "the DA engine is also responsible . . . for providing the encoders 325 with instructions on which set of overlay codes or how many TDM slots to be used for signals to be transmitted to the [subscriber terminals]." *Id* col. 24 ll. 27–30; *see also id* col. 3 ll. 44-59 (linking the same function ascribed to the DA engine in col. 24 ll. 27–30, as well as function of determining what orthogonal channels will be subject to TDM techniques, to the "channelisation means").

Moreover, Defendants do not dispute that the modem shelf is clearly linked to the transmitting function. For example, the specification explains that "[t]he modem cards perform the baseband signal processing of the transmit and receive signals to/from the subscriber terminals 20." *Id.* col. 8 ll. 32–34; s*ee also id* col. 23 ll. 18–21 ("When incoming call data arrives at a central terminal modem 320, encoder 325 encodes the data for transmission over the wireless link 300 to

the subscriber terminal 20.").[5] Because the specification clearly links the modem shelf and the DA engine therein to the performance of the recited functions, this is not a case where a claim term is indefinite because the specification fails to link a structure to the recited function. *Cf.* Defs.' Mot. 4 (citing *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1219 (Fed. Cir. 2003)).

V. THE SPECIFICATION DISCLOSES ALGORITHMS FOR EACH OF THE DETERMINING FUNCTIONS

A. Only a High-Level Algorithm Sufficient for a Person of Skill to Understand What the Claim Term Means and Provide an Operative Software Program Is Required

The parties agree that an algorithm is part of the structure for the channelisation means' determining functions, but Defendants are wrong as to the level of detail required for that algorithm to be definite. The Federal Circuit has made clear that "the patent need only disclose sufficient structure for a person of skill in the field to provide an operative software program for the specified function."[6] *Typhoon Touch*, 659 F.3d at 1385 (citing *Finisar*, 523 F.3d at 1340). A "highly detailed description of the algorithm to be used" is "***not*** required." *Id.* at 1385–86 (quoting *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1338 (Fed. Cir. 2008)) (quotation omitted) (emphasis added). Rather, the amount of detail required "depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention." *Id.* at 1385. And the "knowledge of one of skill in the art can be called upon to flesh out a particular structural reference in the specification for the purpose of satisfying the statutory requirement of definiteness." *Creo Prods., Inc. v. Presstek, Inc.*, 305 F.3d 1337, 1347 (Fed. Cir. 2002).

[5] The RF combiner and power supply support the modem shelf by amplifying the signal and powering the modem, although they do not themselves perform the transmitting function. *See* '326 Patent col. 7 ll. 41–50.

[6] Moreover, that algorithm may be expressed "in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Typhoon Touch*, 659 F.3d at 1385 (quoting *Finisar*, 523 F.3d at 1340).

B. The Specification Describes Algorithms in Sufficient Detail for a Person of Ordinary Skill in the Art to Understand the Claim and Provide an Operative Program for Each of the Determining Functions

The algorithms described in the specification, and identified in Wi-LAN's proposed constructions, are sufficient to meet the low bar of the definiteness requirement. *See Finisar*, 523 F.3d. at 1341; *Biomedino*, 490 F.3d at 950. As explained by Wi-LAN's expert, Dr. Wells, the DA engine is not the "black box" Defendants contend,[7] but rather a programmable controller—a structure well known in the art. *See* Wells Decl. ¶¶ 14, 22, 31. The specification describes the information the DA engine considers to make each of the recited determinations and provides specific examples of determinations that could be made based on that information. *Id.* ¶¶ 15, 23–24, 32. The algorithms are the identification of the information the DA engine considers to make the claimed determinations; alternatively they can be articulated as a series of steps. *Id.* ¶¶ 16–19, 25–26, 34–36. Based on this disclosure and the knowledge existing in the field at the time, one of skill could readily program a DA engine to perform the recited determining functions. *Id.* ¶¶ 14, 22, 31. These algorithms are sufficient for one of skill in the art to understand what the claims mean. *Id.* ¶¶ 20, 27, 37. The channelisation means encompass those algorithms that use the information identified in the specification to make the claimed determinations and structural "equivalents thereof." *See* 35 USC § 112 ¶ 6. The portions of the specification supporting Dr. Wells's testimony with respect to each claim term are explained in detail below.

1. "Determining which of the orthogonal channels will be subject to TDM techniques" ('326 Patent claim 6)

The specification teaches that the DA engine considers two pieces of information to make this determination: (1) whether the subscriber terminal supports TDM, and (2) the type of data that is to be transmitted. *Id.* ¶ 15. As to the first piece of information, the specification states that TDM

[7] *See* Defs.' Mot. 12.

techniques may not be used on certain orthogonal channels "reserved for communications with [subscriber terminals] that do not incorporate the features necessary to support TDM techniques, and which hence require the full orthogonal channel for the whole frame period." '326 Patent col. 3 ll. 50–55. The specification teaches that this is important for ensuring backward "compatibility with current hardware and software equipment which use the set of orthogonal codes, but which do not support the use of TDM techniques." *Id.* col. 2 ll. 61–64. Thus, the channelisation means may "utilize an entire RW channel," as opposed to a time slot within that channel, for signals sent "to products which do not support the CDMA enhancements [*i.e.*, TDM techniques] provided by systems in accordance with preferred embodiments of the present invention." *Id.* col. 18 ll. 58–64. Accordingly, whether the subscriber terminal supports TDM is one piece of information the algorithm considers to determine which orthogonal channels will be subject to TDM.

The specification further teaches that the channelisation means considers the type of data to be sent in order to determine whether to apply TDM techniques. For example, in the preferred embodiments, if the type of data to be sent relates to the "control of calls," it is sent in orthogonal channels that are not subject to TDM techniques. *See id.* col. 4 ll. 29–35 ("[A] second of the orthogonal channels is preferably reserved for the transmission of signals relating to the control of calls, and the second encoder is used instead of the TDM encoder to enable overlay codes to be applied to data items to be sent within said second orthogonal channel . . . ."), col. 13 ll. 60–62 ("[I]n preferred embodiments, overlay codes, rather than TDM, are used to implement downlink control channels . . . ."); *see also* Wells Decl. ¶ 15. Additionally, the specification teaches that if the data to be sent is particularly large, such as a fax, TDM techniques may not be applied in order to avoid slowing the rate at which that data is sent to point where it is unacceptable to the user. *See* '326 Patent col. 3 l. 56–col. 4 l. 12 (explaining how the invention accounts for different data items

requiring different size time slots, and noting, "[t]his gives a great deal of flexibility in how channels are used, since some can be subdivided in the time dimension whilst others are not"), col. 18 ll. 65–67 ("[A] user may have authority to utilize a whole RW channel [*i.e.*, orthogonal channel], for example when sending a fax, as illustrated by RW12 in FIG. 15A.").

2. "Determining, for those orthogonal channels subject to TDM techniques, how many time slots will be provided within each orthogonal channel" ('326 Patent claim 7)

The specification teaches that the DA engine determines how many time slots to provide in an orthogonal channel based on the type of data to be transmitted. Specifically, the specification describes a trade-off between the number of time slots and the data rate in each of those slots:

> [I]f an orthogonal channel operates at 160 kb/s, and four time slots are provided within that orthogonal channel in order to carry data items pertaining to four different wireless links during one frame period, then each ST receiving data from said orthogonal channel will receive data at a rate of 40 kb/s (since each ST will only read a quarter of the data transmitted on the orthogonal channel during each frame period). If, alternatively, two time slots are provided within the orthogonal channel, then data items pertaining to only two different wireless links will be transmitted per frame period, and the two STs receiving data will do so at a rate of 80 kb/s (since each ST will read half of the data transmitted on the orthogonal channel during one frame period).

Id. col. 3 l. 63–col. 4 l. 9; *see also* Wells Decl. ¶ 23. The specification teaches that this trade-off drives the determination of how many time slots to provide because for some types of data, such as a fax, the reduced data rate associated with a larger number of time slots may not be acceptable: "This flexibility is useful, since ***for some communications***, *e.g.*, fax, a rate of 40 kb/s may not be acceptable, and hence ***the use of four time slots would not be suitable***." '326 Patent col. 4 ll. 9–12 (emphases added). To implement this "flexibility," the specification describes a variety of "TDM mappings," that is, different ways to divide an orthogonal channel in time slots and the varying data rates associated with each. Wells Decl. ¶ 24 (citing '326 Patent col. 18 tbl.4, fig.15A). As before, one of skill would understand that the specific logic for determining how many time slots

will be provided within each orthogonal channel could be tailored for the needs of the system such that the channelisation means makes the determination based on the type of information to be sent. *Id.* (citing '326 Patent col. 3 ll. 58–61, col. 4 ll. 8–11).

3. "Determining which of the orthogonal channels will be subject to overlay codes" ('819 Patent claim 10)

The specification teaches that the DA engine considers two pieces of information to determine which of the orthogonal channels will be subject to overlay codes: (1) whether the subscriber terminal supports overlay codes, and (2) the type of data that is to be transmitted.[8] Wells Decl. ¶ 32. First, the specification teaches that the channelisation means considers whether the subscriber terminals support the use of overlay codes:

> [T]he central terminal preferably includes channelisation means for determining which of the orthogonal channels will be subject to overlay codes, and for transmitting that information to a plurality of subscriber terminals within the telecommunications system. This is useful since, for example, ***certain orthogonal channels can hence be designated as being reserved for communications with STs that do not incorporate the features necessary to support overlay codes***, and which hence require a full 160 kb/s orthogonal channel.

'819 Patent col. 4 ll. 2–11 (emphasis added).[9] If a subscriber terminal does not support overlay codes, then the "full" orthogonal channel is provided. *See id.* col. 4 ll. 7–11.

The second part of the algorithm for determining which of the orthogonal channels will be subject to overlay codes is the consideration of the type of data to be transmitted. For example, in the preferred embodiments, if the type of data to be sent relates to the "control of calls," it is sent in orthogonal channels using overlay codes. *See id.* col. 3 ll. 45–50 ("[A] second of the orthogonal channels is preferably reserved for the transmission of signals relating to the control of calls, and the transmission controller in the central terminal also enables overlay codes to be applied to data

[8] Wi-LAN's Brief mistakenly misstated the first piece of information the channelisation means uses to make this determination. A table of Wi-LAN's amended proposed constructions is attached hereto as Exhibit B.

[9] This check ensures easy backward compatibility with older subscriber terminals: "By designating certain orthogonal channels as channels for which overlay codes are not used, the current equipment can communicate over those channels without any changes being required to the equipment." '819 Patent col. 3 ll. 2–6.

items to be sent within said second orthogonal channel . . . ."); col. 13 ll. 38–40 ("[I]n preferred embodiments, overlay codes, rather than TDM, are used to implement downlink control channels . . . ."); *see also* Wells Decl. ¶ 32. Additionally, the specification teaches that if the data to be sent is particularly large, such as a fax, TDM techniques may not be applied in order to avoid slowing the rate at which that data is sent to point where it is unacceptable to the user. *See* '819 Patent col. 18 ll. 14–17 ("[A] user may have authority to utilize a whole RW channel [*i.e.*, orthogonal channel], for example when sending a fax, as illustrated by RW12 in FIG. 15A.").

For all the determining functions, the specification emphasizes that the exact thresholds and mathematical logic for making the determinations based on the identified types of information is purposefully "flexible." '326 Patent col. 3 ll. 59–63, col. 11 ll. 28–32, col. 12 ll. 14–20; col. 18 ll. 43–44. One of skill in the art would understand that they could tailor the precise thresholds and logic to meet their needs. Wells Decl. ¶¶ 15, 24, 33. Such details are not required for the algorithm to be definite. *Typhoon Touch*, 659 F.3d at 1385–86 (explaining that a "highly detailed description of the algorithm" is "not required" (quotation omitted)); *see also Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1254 (Fed. Cir. 2005) ("Aspects of this algorithm can vary based on implementation, as the specification implies.").

C. These Algorithms Are the "Step-by-Step" Algorithms Required by Precedent

In *Typhoon Touch Technologies, Inc. v. Dell, Inc.*, 659 F.3d 1376 (Fed. Cir. 2011), the Federal Circuit explained that a "step-by-step" algorithm need only be a very high-level description of process. *See id.* at 1385–86. There, the Federal Circuit reversed this Court's decision that the claim term, "means for cross-referencing said responses with one of said libraries of said possible responses," was indefinite, holding that the specification disclosed an algorithm with the following steps: "data entry, then storage of data in memory, then the search in a library of responses, then the determination if a match exists, and then reporting action if a match is found."

Id. at 1386. That algorithm was based on a terse, high-level description drawn from three brief passages (~12 lines total) in the patent specification. *See id.* The algorithm approved by the Federal Circuit in *Typhoon Touch* did not dictate, *e.g.*, the type of data to enter, how to search it, how similar something needed to be in order to constitute a "match," or even the particular action to take if there was a match.[10] Such detail was not required because, like the present case, the steps of the disclosed algorithm "are readily implemented by persons of skill in computer programming." *Id.*

Similarly, in *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241 (Fed. Cir. 2005), the Federal Circuit held that a "time domain processing means" was performed by a microprocessor programmed to perform an algorithm consisting of only two high-level steps: "calculat[ing] generally nondiscrete estimates and then select[ing] the discrete value closest to each estimate." *Id.* at 1254. The court drew this algorithm from passages scattered throughout the patent. *See id.* The algorithm—or "decision process," as the court also called it, *see id.*—did not require additional specificity as to how the calculating or selecting steps were performed. In fact, the court noted that "[a]spects of this algorithm can vary based on implementation, as the specification implies." *Id.*

The algorithms Wi-LAN identifies for the determining functions are consistent with this precedent. They specify the steps the DA engine follows to make the claimed determinations, *i.e.*, consider particular information and decide based on the same. Each of these algorithms can be articulated as a series of steps. For example, the algorithm "for determining which of the orthogonal codes will be subject to TDM techniques" is a three-step process: (1) consider whether

[10] Similar to the examples of different types of determinations described in the patents here, the patent in *Typhoon Touch* disclosed an example of the actions that might be taken in the final step of the disclosed algorithm: "For instance, the associated action can involve an overlay window that alerts the user of the fact of the match with the library entry, or displays the contents of an information field stored in association with that entry in the memory." *Typhoon Touch*, 659 F.3d at 1385 (quoting U.S. Patent No. 5,379,057).

the subscriber terminal to which data will be transmitted incorporates the features necessary to support TDM techniques; (2) consider the type of data that is to be transmitted in an orthogonal channel; and (3) if the subscriber terminal supports TDM techniques and the data type is one for which TDM techniques should be applied, then apply TDM techniques (otherwise do not). Wells Decl. ¶ 19. The algorithm for "determin[ing], for those orthogonal channels subject to TDM techniques, how many time slots will be provided within each orthogonal channel" is a two-step process: (1) consider the type of data that is to be transmitted in an orthogonal channel, and (2) choose a suitable number of time slots to provide within the orthogonal channel to achieve an acceptable data rate.[11] Wells Decl. ¶ 26. To the extent the Court prefers the algorithms to be expressed as a series of steps, Wi-LAN proposes these as alternate constructions of the structure.[12]

Regardless, the Court must make every effort to discern the structure and construe the claims accordingly. The claims cannot be found invalid on indefiniteness grounds so long as "the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree." *Exxon*, 265 F.3d at 1375. Here, the specification is replete with references to how the recited determinations are made and the ***only evidence of record*** is that the specification discloses enough structure for one of skill in the art to understand the claim and provide an operative program for carrying out the recited function. *See* Wells Decl. ¶¶ 20, 27, 37. Defendants cannot carry their burden to prove invalidity by clear and convincing evidence merely by sniping at Wi-LAN's proposals and superficially asserting that precedent somehow requires more.

[11] Similarly, the algorithm "for determining which of the orthogonal channels will be subject to overlay codes" can be expressed as a three-step process: (1) consider whether the subscriber terminal to which data will be transmitted incorporates the features necessary to support overlay codes; (2) consider the type of data that is to be transmitted in an orthogonal channel; and (3) if the subscriber terminal supports overlay codes and the data type is one for which overlay codes should be applied, then apply overlay codes (otherwise do not). Wells Decl. ¶ 36.

[12] A complete list of these alternate constructions as appears in Exhibit B.

D. Defendants' Reliance on *Ergo* Is Misplaced Because This Is Not a Case Where the Specification Discloses No Structure Whatsoever

The *Ergo* case, cited in Defendants' Motion, is distinguishable from this case because there the patentee failed to identify ***any*** algorithm whatsoever. *See* Defs.' Mot. 5, 10 (citing *Ergo Licensing, LLC v. Carefusion 303, Inc.*, --- F.3d ----. 2012 WL 987833 (Fed. Cir. Mar. 26, 2012)). The disputed term in *Ergo* was a "programmable control means," and the patentee argued that the corresponding structure was a "control device." *Id.* at *2. Instead of trying to identify an algorithm, the patentee simply urged that "disclosure of an algorithm was not required." *Id.* The Federal Circuit rejected that argument, holding that an algorithm was required and the claim was indefinite because "there [wa]s no algorithm described in any form for the function." *Id.* at *4.

The Federal Circuit's decision in *Noah Systems* is similarly distinguishable, because like *Ergo*, the patent there failed to disclose any algorithm whatsoever for one of the functions recited for the disputed means term. 2012 WL 1150216, at *12. Indeed, the Federal Circuit in *Noah Systems* recognized its precedent falls into distinct categories: (1) those where no algorithm is disclosed, and (2) those addressing whether the disclosed algorithm is sufficient to meet the low bar for definiteness. *Id.* at *8. *Ergo* and *Noah* fall into the former category and are distinguishable on that basis. The facts of this case, however, align with those of *Typhoon Touch*, *Harris Corp.*, and others where the issue was the sufficiency of the algorithm disclosed in the specification. *See supra* at 12–13 (discussing same).

VI. CONCLUSION

For the reasons discussed above, Wi-LAN respectfully requests that the Court deny Defendants' motion for partial summary judgment that claims 6–8 of the '326 Patent and claim 10 of the '819 Patent are invalid for indefiniteness. Wi-LAN further requests that the Court construe the "channelisation means" terms consistent with the constructions proposed herein.

Dated: April 13, 2012

Respectfully submitted,

By: /s/ *David B. Weaver*

Johnny Ward
Texas State Bar No. 00794818
Wesley Hill
Texas State Bar No. 24032294
WARD & SMITH LAW FIRM
111 W. Tyler Street
Longview, TX 75601
Tel: (903) 757-6400
Fax: (903-757-2323
jw@jwfirm.com
wh@jwfirm.com

David B. Weaver – LEAD ATTORNEY
Texas State Bar No. 00798576
Michael A. Valek
Texas State Bar No. 24044028
Avelyn M. Ross
Texas State Bar No. 24027817
John A. Fedock
Texas State Bar No. 24059737
Syed K. Fareed
Texas State Bar No. 24065216
Jeffrey T. Han
Texas State Bar No. 24069870
Ajeet P. Pai
Texas State Bar No. 24060376
Seth A. Lindner
Texas State Bar No. 24078862
VINSON & ELKINS LLP
2801 Via Fortuna, Suite 100
Austin, TX 78746
Tel: (512) 542-8400
dweaver@velaw.com
mvalek@velaw.com
aross@velaw.com
jfedock@velaw.com
sfareed@velaw.com
jhan@velaw.com
apai@velaw.com
slindner@velaw.com

Charles P. Ebertin
VINSON & ELKINS LLP
525 University Avenue, Suite 410
Palo Alto, CA 94301-1918
Tel: (650) 617-8400
cebertin@velaw.com

Attorneys for Plaintiff, Wi-LAN Inc.

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). All other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by email and/or fax, on this the 13th day of March, 2012.

/s/ *David B. Weaver*
David B. Weaver