UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte RAMON GARCIA CADARSO, ANA GARCIA ROBLES,
MIGUEL ANGEL CAMUNAS JURADO,
GUILLERMO LOPEZ SERRANO, and JOSE LOPEZ SERRANO

_____

Appeal 2010-008797
Application 10/911,393
Technology Center 2400

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Before ALLEN R. MacDONALD, ROBERT E. NAPPI,
MICHAEL W. KIM, BARBARA A. BENOIT, and
LYNNE E. PETTIGREW, *Administrative Patent Judges*.

MacDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

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[1] This Decision is being re-mailed in a corrected form to correct minor
typographical and/or formatting errors. These corrections do not affect the
outcome of the Decision or the analysis relied upon by the Board, and thus
do not affect Appellants' ability to respond to the Decision. The re-mailing
of this corrected Decision does not change Appellants' time period for
responding, which time period shall run from the date of mailing of the
original Decision.

STATEMENT OF CASE

Introduction

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 12-16 and 18-22. We have jurisdiction under 35 U.S.C. § 6(b).

Exemplary Claim

Exemplary claim 12 under appeal reads as follows (emphasis and formatting added):

> 12.   An apparatus to obtain value-added services in real-time, on the basis of a general packet radio service (GPRS) network, where interposed between a SGSN node (Server GPRS Support Node), which controls radio access and localization of a mobile station, and a GGSN node (Gateway GPRS Support Node), which allow connection between an internal network of a mobile network operator and other external networks, the apparatus using a GTP protocol (GPRS Tunneling Protocol) for communicating with the SGSN and with the GGSN, and comprising:
>
> [(a)] *capturing means for establishing* a first GTP tunnel with the SGSN node and a second GTP tunnel with the GGSN node for each PDP Context, *for capturing* GTP protocol data packets submitted from the SGSN or the GGSN, and *for sending* a resulting GTP data packet to its original destination; and
>
> [(b)] *execution means for activating* local or remote applications corresponding to a required service as a function of the data packets captured and data configured in *a data configuration module* of the execution means,
>
> [(c)] wherein the *capturing means further comprises an access module for accessing* the execution means to provide decoded information and to receive a response from the activated application, and *for modifying* the GTP data packets originally captured *before sending* the resulting GTP data packets to the GGSN or SGSN.

Appeal 2010-008797
Application 10/911,393

Rejection on Appeal

The Examiner rejected claims 12-16 and 18-22 as being unpatentable under 35 U.S.C. § 103(a) over the combination of Haumont (US 6,654,589 B1), Forslow (US 2003/0039237 A1), and Gilchrist (US 7,042,855 B1). [2]

Appellants' Contention [3]

Appellants contend that the Examiner erred in rejecting claim 12 under 35 U.S.C. § 103(a), because (emphasis added):

> One distinguishing feature of claim 12 is an apparatus with ***capturing means*** comprising an ***access module*** for accessing the ***execution means*** to provide decoded information and to receive a response from the activated application, and for modifying the GTP data packets originally captured, the ***capturing means*** arranged for submitting the resulting GTP data packet to its original destination.
>
> Another distinguishing feature of claim 12 is an apparatus wherein the ***execution means*** activates local or remote applications corresponding to a required service as a function of the data packets captured and data configured in ***a data configuration module*** of the ***execution means***.
>
> Nothing in the cited references, whether considered either separately or in any permissible combination (if any), would teach or suggest at least those two distinguishing features of claim 12.

(App. Br. 14).

Issue on Appeal

Did the Examiner err in rejecting claims 12-16 and 18-22 as being obvious?

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[2] Claims 13-16 and 18-22 depend from claim 12.
[3] We do not reproduce Appellants' remaining contentions herein.

ANALYSIS

Claims 12-16 and 18-22

As to Appellants' arguments as to why the Examiner has erred in rejecting claims 12-16 and 18-22 based on the prior art references, we do not reach the merits of the Examiner's rejections or the merits of the references at this time. Rather, we reverse *pro forma* the outstanding rejections of claims 12-16 and 18-22 under 35 U.S.C. § 103(a) because appealed claims 12-16 and 18-22 fail to satisfy the requirements of the second paragraph of 35 U.S.C. § 112. Before a proper review of the prior art rejection can be performed, the subject matter encompassed by the claims on appeal must be reasonably understood without resort to speculation.

Presently, we would be forced to engage in speculation and conjecture to determine the scope of the claimed invention because the claims are indefinite under 35 U.S.C. § 112, second paragraph. This we decline to do. *See In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.); *see also In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970) ("If no reasonably definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious- the claim becomes indefinite.").

NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claims 12-16 and 18-22 under 35 U.S.C. § 112,

second paragraph, for indefiniteness. Claims 13-16 and 18-22 inherit their indefiniteness based on their dependence from claim 12.

Specifically, we construe the "capturing means," "execution means," and "access module" recited in independent claim 12, each as a "means-plus-function" limitation subject to 35 U.S.C. § 112, sixth paragraph, and conclude that claim 12 and its dependent claims are rendered indefinite under 35 U.S.C. § 112, second paragraph, due to the Specification's failure to disclose corresponding structure for performing any of the recited functions.

FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

Appellants' Invention

FF1.   The Specification as originally filed states that:

between the SGSN node 2 and the GGSN node 3 a ***block 1*** has been provided that captures the GTP protocol data packets and sends them to a ***block 4*** for the execution of local or remote applications, which comprises ***a data configuration module 5*** and which is also connected to an application management block 6, so that, by means of block 4, and starting from the captured data packet and the data configured in the data configuration module 5, the application corresponding to the service required is obtained, and the information is delivered to block 6 . . . .

(Spec. ¶ [0031])(emphasis added).

5

FF2. On February 29, 2008, the Specification was amended to state that "between the SGSN node 2 and the GGSN node 3 a *packet capture block 1* has been provided that captures the GTP protocol data packets and sends them to an *application execution block 4* for the execution of local or remote applications, . . .". (Spec. ¶ [0031])(emphasis added).

FF3. The Specification as originally filed further states that block 1 "is fitted with a GGSN module 10 which captures and interprets GTP messages" and "this module is capable of establishing a GTP tunnel." (Spec. ¶ [0032]).

FF4. The Specification as originally filed further states that "block 1 has an SGSN module 11 which captures messages from a GGSN node 3 as if it was an SGSN node 2. In particular, this module is capable of establishing a GTP tunnel with a GGSN node 3." (Spec. ¶ [0033]).

FF5. The Specification as originally filed further states that "Block 1 also has *an access module 9* to block 4, which extracts the information provided by modules 10 and 11 and transfers it to said block 4 for its process, and it also receives commands to modify the GTP message captured in any of the two directions." (Spec. ¶ [0035]) (emphasis added).

FF6. The Specification as originally filed further states that:

> Regarding block 4, said block *has a process module 12* which *collects information* from access module 9 which accesses data configuration module 5 and from which, according to the configuration programmed and the data obtained, obtains the specific application to be invoked. Therefore, *process module 12*, once the specific application to be invoked is obtained, *transfers the information* to *an application module 13* which *calls* and *activates* the management application module 6.

(Spec. ¶ [0036]) (emphasis added).

6

PRINCIPLES OF LAW

35 U.S.C. § 112, Sixth Paragraph

(1)

Special rules of claim construction allow for claim limitations drafted in functional language and are set forth in 35 U.S.C. § 112, sixth paragraph, which provides for:

> [a]n 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 such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, sixth paragraph (emphasis added). While this provision permits a claim limitation to be set forth using solely functional language, it operates to restrict such claim limitations to those structures, materials, or acts disclosed in the specification (or their equivalents) that perform the claimed function. *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 703 (Fed. Cir. 1998).

The Federal Circuit has established that use of the term "means" is central to the analysis of whether a claim limitation should be interpreted in accordance with 35 U.S.C. § 112, sixth paragraph: use of the word "means" creates a rebuttable presumption that the inventor intended to invoke § 112, sixth paragraph, whereas failure to use the word "means" creates a rebuttable presumption that the inventor did not intend the claims to be governed by § 112, sixth paragraph. *Id.* at 703-04; *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1373 (Fed. Cir. 2012).

7

(2)

When a claim uses the term "means" to describe a limitation, a presumption exists that the inventors used the term to invoke 35 U.S.C. § 112, sixth paragraph, and the presumption can be rebutted when the same claim recites sufficient structure to perform the claimed function in its entirety.

> When a claim uses the term "means" to describe a limitation, a presumption inheres that the inventor used the term to invoke § 112, ¶ 6. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed.Cir.2003). "This presumption can be rebutted when the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety." *Id.* Claims 13 and 40 recite no such structure. As the district court noted, the "reference to 'control' is simply an adjective describing 'means:' [sic] it is not a structure or material capable of performing the identified function." *Biomedino*, slip op. at 12. We agree with the district court and hold that Biomedino has not rebutted the presumption that § 112, ¶ 6 applies to "control means."

Biomedino, LLC, v. Waters Tech. Corp., 490 F.3d 946, 950 (Fed. Cir. 2007).

> Once the court has concluded the claim limitation is a means-plus-function limitation, the court must first identify the function of the limitation. *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258, 52 USPQ2d 1258, 1263 (Fed.Cir.1999). The court next ascertains the corresponding structure in the written description that is necessary to perform that function. *Id.* "Structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *B. Braun Med. v. Abbott Labs.*, 124 F.3d 1419, 1424, 43 USPQ2d 1896, 1900 (Fed.Cir.1997).

Altiris, Inc., v. Symantec Corp., 318 F.3d 1363, 1375 (Fed. Cir. 2003).

(3)

When an inventor has not signaled an intent to invoke § 112, sixth paragraph, by using the term "means," the presumption against its invocation is strong but can be overcome if "the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002) (internal quotation marks omitted) (citation omitted)). A claim limitation that "essentially is devoid of anything that can be construed as structure" can overcome the presumption. *Flo Healthcare*, 697 F.3d at 1374. The presumption may be overcome by a claim limitation that uses a non-structural term that is "simply a nonce word or a verbal construct that is not recognized as the name of structure" but is merely a substitute for the term "means for" associated with functional language. *Lighting World*, 382 F.3d at 1360. There are numerous terms which may merely substitute for the term "means for" associated with functional language such that the presumption against invoking § 112, sixth paragraph may be overcome.

> [A] claim element that does not include the phrase "means for" or "step for" will not be presumed to invoke 35 U.S.C. 112, sixth paragraph. When the claim limitation does not use the phrase "means for," examiners should determine whether the presumption that 35 U.S.C. 112, paragraph 6 does not apply is overcome if the claim limitation uses a non-structural term (a term that is simply a substitute for the term "means for"). The following is a list of non-structural terms that may invoke 35 U.S.C. 112, paragraph 6: **"mechanism for," "module for," "device for," "unit for," "component for," "element for," "member for," "apparatus for," "machine for," or "system for."** *Welker Bearing Co., v. PHD, Inc.*, 550 F.3d 1090, 1096

(Fed. Cir. 2008); *Massachusetts Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006); *Personalized Media*, 161 F.3d at 704; *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1214-1215 (Fed. Cir. 1998). This list is not exhaustive, and other non-structural terms may invoke 35 U.S.C. 112, paragraph 6.

(MPEP § 2181 I.A.; Eighth Edition, Revision 9 (August 2012)).

(4)

Claim language that further defines a term that otherwise would be a nonce word can denote sufficient structure to avoid construction under § 112, sixth paragraph, *MIT v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006), as can a claim limitation that contains a term that "is used in common parlance or by persons of skill in the pertinent art to designate structure," *Lighting World*, 382 F.3d at 1359. Nor will claim language invoke a § 112, sixth paragraph, construction if persons of ordinary skill in the art reading the specification understand the term to be the name for a structure that performs the function, even when the term covers a broad class of structures or identifies the structures by their function. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996) ("Many devices take their names from the functions they perform.").

(5)

For a claim limitation interpreted under § 112, sixth paragraph, if there is no corresponding structure disclosed in the specification, then the claim will be found indefinite.

> Once a court concludes that a claim limitation is a means-plus-function limitation, two steps of claim construction remain: 1) the court must first identify the function of the limitation; and 2) the court must then look to the specification and identify the corresponding structure for that function. *Med. Instrumentation*, 344 F.3d at 1210. If there is no structure in the

specification corresponding to the means-plus-function limitation in the claims, the claim will be found invalid as indefinite. *See Atmel*, 198 F.3d at 1378-79 (citing *In re Donaldson*, 16 F.3d at 1195).

Biomedino, 490 F.3d at 950.

> Judge Rich, writing for the en banc court, explained the relationship between the second and sixth paragraphs of section 112:

>> [I]f one employs means-plus-function language [per paragraph 112-6] in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

> *In Re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed.Cir.1994) (en banc). Therefore, if a claim includes a means-plus-function limitation, failure to disclose adequate structure corresponding to the claimed function results in the claim being invalid for indefiniteness. *In re Dossel*, 115 F.3d 942, 946 (Fed.Cir.1997). Whether the written description adequately sets forth structure corresponding to the claimed function must be considered from the perspective of a person skilled in the art. *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1365-66 (Fed.Cir.2003) (citing *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed.Cir.2001)).

Tech. Licensing Corp. v. Videotek, Inc., 545 F.3d 1316, 1338 (Fed. Cir. 2008).

(6)

For a computer-implemented claim limitation interpreted under § 112, sixth paragraph, the corresponding structure must include the algorithm needed to transform the general purpose computer or processor disclosed in the specification into the special purpose computer programmed to perform

the disclosed algorithm. *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008); *see also Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013). Thus, the specification must sufficiently disclose an algorithm to transform the general purpose computer or processor to a special purpose processor programmed to perform the disclosed algorithm. *Aristocrat*, 521 F.3d at 1338. An algorithm is defined, for example, as "a finite sequence of steps for solving a logical or mathematical problem or performing a task." MICROSOFT COMPUTER DICTIONARY 23 (5th ed. 2002). An applicant may express the algorithm in any understandable terms including as a mathematical formula, in prose, in a flow chart, or "in any other manner that provides sufficient structure." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008).

An indefiniteness rejection under § 112, second paragraph, is appropriate if the specification discloses no corresponding algorithm associated with a computer or processor. *Aristocrat*, 521 F.3d at 1337-38. Mere reference to a general purpose computer or processor with appropriate programming without providing an explanation of the appropriate programming or to "software" without providing detail about the means to accomplish the software function is not an adequate disclosure. *Id.* at 1334; *Finisar*, 523 F.3d at 1340-41. In addition, simply reciting the claimed function in the specification, while saying nothing about how the computer or processor ensures that those functions are performed, is not a sufficient disclosure for an algorithm which, by definition, must contain a sequence of steps. *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1384 (Fed. Cir. 2009).

If the specification explicitly discloses an algorithm, the sufficiency of the disclosure must be determined in light of the level of ordinary skill in the art. *Aristocrat*, 521 F.3d at 1337. The specification must sufficiently disclose an algorithm to transform a general purpose processor to a special purpose processor so that a person of ordinary skill in the art can implement the disclosed algorithm to achieve the claimed function. *Id.* at 1338.

ANALYSIS

Introduction

The Background of Appellants' Specification states:

> GPRS is a data transport service used in several cellular mobile telephony systems, and especially in GSM and UMTS systems, in order to allow access from a mobile station to a data packet network (***such as the Internet***) that uses packet switching instead of circuit switching. Just as in the GSM voice service, it is often necessary to add value-added services in real-time in the GPRS data service.

(Spec. ¶ [0004]) (emphasis added). The Background further states:

> These services are based on adding a functional module to the SGSN nodes which is called GPRS SSF, which permits the analysis of each data session at the moment of activation and during its course. It also allows stopping the sessions and querying external nodes, called SCP (Service Control Point), through a standardized protocol. These external nodes, that can have ***a large capacity for data processing and storage***, starting from the queries from the GPRS network, can command the network to send them additional data, to change data of the session in process, to cut the sessions, and to perform many other functions.

(Spec. ¶ [0008]) (emphasis added).

Claim 12 recites an apparatus to obtain value-added services in real-time on the basis of a general packet radio service (GPRS) network, the apparatus comprising:

(a) "capturing means for establishing . . . , for capturing . . . , and for sending . . .";

(b) "execution means for activating . . .," and "a data configuration module [for providing configured data]"; and

(c) "an access module for accessing . . ., and for modifying . . . before sending . . .".

Capturing Means

As to the "capturing means for establishing . . . , for capturing . . . , and for sending . . ." of claim 12, the use of the word "means" creates a rebuttable presumption that the inventor intended to invoke § 112, sixth paragraph for this claim limitation. *Flo Healthcare*, 697 F.3d at 1373.

Although we do not find any contention by Appellants that the term "capturing means" does not invoke § 112, sixth paragraph, as an initial matter, we address whether claim 12 recites sufficient structure to perform the claimed functions of the "capturing means" in their entirety. As part of this analysis, we address whether use of the term "capturing" to describe "means" takes the phrase outside the realm in which § 112, sixth paragraph applies. That is, does "capturing means" recite sufficient structure on its own such that it obviates the need for § 112, sixth paragraph?

From our review of the claim, we conclude that the "capturing means" is not a term that is used in common parlance or by persons of skill in the pertinent art to designate structure. Further, from our review of the record,

we conclude that persons of ordinary skill in the art reading the specification would not understand the term "capturing means" to be the name for a structure that performs the recited functions. We conclude that the reference to "capturing" is simply an adjective describing "means" and is not a structure or material capable of performing the identified functions.

Additionally, we find no structure beyond the "capturing means" for performing the "establishing" and "capturing" functions. However, as to the "sending" function, claim 12 recites that the "capturing means" comprises an "access module" for performing at least a part of this function and we address the "access module" separately *infra*. Therefore, we conclude that the claim does not recite other sufficient structure to perform the claimed "establishing" and "capturing" functions of the "capturing means" in their entirety.

We conclude from our review that nothing in the record rebuts the presumption that § 112, sixth paragraph applies to "capturing means" for at least the functions of "establishing" and "capturing" as set forth in claim 12.

Having concluded that the "capturing means" limitation is drafted in means-plus-function format, we must determine the corresponding structure disclosed in the specification. Appellants' Specification as originally filed disclosed the "capturing means" as "block 1." (Spec. ¶ [0031]; FF1-FF2). This was subsequently amended to read "packet capture block 1." (February 29, 2008 Amendment).

The Specification discloses that "packet capture block 1" comprises "GGSN module 10" and "SGSN module 11" which each perform portions of the "establishing" and "capturing" functions recited in claim 12. (Spec. ¶¶ [0032] - [0033]; FF3-FF4). Further, the Specification discloses that

15

"modules 10 and 11 comprise the corresponding decoder/coder to capture and interpret original messages sent in any of the two directions . . . ." (Spec. ¶ [0034]). The Specification discloses that block 1 "also has an access module 9" (discussed *infra*) which "extracts the information provided by modules 10 and 11 and transfers it to [the execution means] for its process, and it also receives commands to modify the GTP message captured in any of the two directions." (Spec. ¶ [0035]; FF5). Beyond intended function statements such as "[t]his information is collected by the GGSN module 10 decoding the information to transfer it to the access module 9" (Spec. ¶ [0040]) and "the SGSN module 11 composes the message to be sent to the GGSN node to continue the establishment of the data session, according to the specification stated in the signaling 'Create PDP Context Request'," (Spec. ¶ [0047]), we are unable to find any structural details of modules 10 and 11. *See Donaldson*, 16 F.3d at 1195. Nor do Appellants indicate that GGSN module 10 and SGSN module 11 are structures known in the art. Lastly, Appellants' Specification does not disclose an algorithm to provide the necessary structure under § 112, sixth paragraph, if an artisan were to implement the modules using a general purpose computer. *See Blackboard*, 574 F.3d at 1384; *Aristocrat*, 521 F.3d at 1333-34.

Therefore, we conclude that Appellants have not disclosed the corresponding structure to perform the claimed "establishing" and "capturing" functions of the "capturing means" as required for a limitation interpreted under 35 U.S.C. § 112, sixth paragraph. Rather, claim 12 is indefinite as to these aspects of the recited "capturing means."

Access Module

As to the "access module for accessing . . ., for modifying . . . before sending . . ." of claim 12, the failure to use the word "means" creates a rebuttable presumption that the inventor did not intend this claim limitation to be governed by § 112, sixth paragraph. *Flo Healthcare*, 697 F.3d at 1373.

As an initial matter, we address whether the term "access module" of claim 12 is recognized as the name of structure. We conclude that the "access module" is not a term that is used in common parlance or by persons of skill in the pertinent art to designate structure. Further, from our review of the record, we conclude that persons of ordinary skill in the art reading the specification would not understand the term "access module" to be the name for a structure that performs the recited functions. We conclude that the "access module" is not a structure or material capable of performing the identified functions. Rather, we conclude that here "module" is simply a nonce word substitute for the term "means" associated with functional language; and we conclude the reference to "access" is simply an adjective describing "module." We conclude that the presumption against invoking § 112, sixth paragraph has been overcome.

Having concluded that the "access module" limitation is drafted in means-plus-function format, we must determine the corresponding structure disclosed in the specification. Appellants' Specification as originally filed discloses the "access module" as "access module 9." (Spec. ¶ [0035]; FF5). The Specification further discloses that access module 9 "extracts the information provided by modules 10 and 11 and transfers it to [the execution means] for its process, and it also receives commands to modify the GTP message captured in any of the two directions." (Spec. ¶ [0035]; FF5).

Beyond intended function statements such as this, we are unable to find any structural details of access module 9. Nor do Appellants disclose an algorithm to provide the necessary structure under § 112, sixth paragraph, if an artisan were to implement the access module 9 using a general purpose computer. Lastly, Appellants' Specification does not indicate that access module 9 is a structure known in the art.

Therefore, we conclude that Appellants have not disclosed the required corresponding structure to perform the claimed "accessing," "modifying," and "sending" functions of the "access module." Rather, claim 12 is indefinite as to these aspects of the recited "access module."

Execution Means

As to the "execution means for activating . . ." of claim 12, the use of the word "means" creates a rebuttable presumption that the inventor intended to invoke § 112, sixth paragraph for this claim limitation. *Flo Healthcare*, 697 F.3d at 1373.

Although we do not find any contention by Appellants that the term "execution means" does not invoke § 112, sixth paragraph, as an initial matter, we address whether claim 12 recites sufficient structure to perform the claimed functions of the "execution means" in their entirety. As part of this analysis, we address whether use of the term "execution" to describe "means" takes the phrase outside the realm in which § 112, sixth paragraph applies. That is, does "execution means" recite sufficient structure on its own such that it obviates the need for § 112, sixth paragraph?

From our review of the claim, we conclude that the "execution means" is not a term that is used in common parlance or by persons of skill

in the pertinent art to designate structure. Further, from our review of the record, we conclude that persons of ordinary skill in the art reading the specification would not understand the term "execution means" to be the name for a structure that performs the recited functions. We conclude that the reference to "execution" is simply an adjective describing "means" and is not a structure or material capable of performing the identified functions.

Additionally, we find no structure beyond the "execution means" for performing the "activating" function. However, claim 12 recites that the "execution means" comprises a "data configuration module" and we address the "data configuration module" separately *infra*. Therefore, we conclude that the claim does not recite other sufficient structure to perform the claimed "activating" function of the "execution means" in its entirety.

We conclude from our review that nothing in the record rebuts the presumption that § 112, sixth paragraph applies to "execution means" for the function of "activating" as set forth in claim 12.

Having concluded that the "execution means" limitation is drafted in means-plus-function format, we must determine the corresponding structure disclosed in the specification. Appellants' Specification as originally filed disclosed the "execution means" as "block 4." (Spec. ¶ [0031]; FF1-FF2). This was subsequently amended to read "application execution block 4." (February 29, 2008 Amendment).

The Specification discloses that application execution "block 4" has "process module 12" which performs the functions of collecting information from access module 9, obtaining a specific application to be invoked, and transferring the information to an application module 13, and "block 4" comprises the "application module 13" which performs the functions of

calling an application management module 6 and activating the management application module 6. (Spec. ¶ [0036]; FF6). Further, the Specification discloses that block 4 "comprises a data configuration module 5" (Spec. ¶ [0031]; FF1) (discussed *infra*) which contains data which is "preconfigured" (Spec. ¶ [0043]).

Beyond intended function statements such as "[r]egarding block 4, said block has a process module 12 which collects information from access module 9 which accesses data configuration module 5 and from which, according to the configuration programmed and the data obtained, obtains the specific application to be invoked" (Spec. ¶ [0036]), we are unable to find any structural details of modules 12 and 13 which show how functions such as "obtaining," "calling," or "activating" are implemented by Appellants. Nor do Appellants disclose an algorithm to provide the necessary structure under § 112, sixth paragraph, if an artisan were to implement the modules using a general purpose computer. Lastly, Appellants' Specification does not indicate that process module 12 and application module 13 are structures known in the art.

Therefore, we conclude that Appellants have not disclosed the required corresponding structure to perform the claimed "activating" function of the "execution means." Rather, claim 12 is indefinite as to this aspect of the recited "execution means."

Data Configuration Module

As to the "data configuration module [for providing configured data]" of claim 12, the failure to use the word "means" creates a rebuttable

20

presumption that the inventor did not intend this claim limitation to be governed by § 112, sixth paragraph. *Flo Healthcare*, 697 F.3d at 1373.

As an initial matter, we address whether the term "data configuration module" of claim 12 is recognized as the name of structure. We conclude that the "data configuration module" on its face is not a term that is used in common parlance or by persons of skill in the pertinent art to designate structure.

However, as previously stated, the Specification discloses that block 4 "comprises a data configuration module 5" (Spec. ¶ [0031]; FF1) which contains data which is "preconfigured" (Spec. ¶ [0043]). One well-known structure, in the data processing art to which this invention pertains, which contains data, is a memory module.[4]   Further, we take notice that it is conventional to label such memory modules based on the data stored or contained therein, such as the disclosed configuration data. From our review of the record, we conclude that persons of ordinary skill in the art reading the Specification (particularly Spec. ¶¶ [0036] and [0043]) would understand the term "data configuration module" to be the name for a structure, such as a memory module, that performs the function of storing configuration data.

We conclude that that the presumption against invoking § 112, sixth paragraph has not been overcome.

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[4] Memory module: "a magnetic or semi-conductor module providing storage locations . . ." (Rosenberg; Dictionary of Computers, Information Processing, and Telecommunications; 2nd Ed.; Wiley& Sons; 1987; p. 377).

37 C.F.R. § 41.50(b)

This decision contains a new ground of rejection pursuant to 37
C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides "[a] new ground of
rejection pursuant to this paragraph shall not be considered final for judicial
review."

37 C.F.R. § 41.50(b) also provides that Appellants, WITHIN TWO
MONTHS FROM THE DATE OF THE DECISION, must exercise one of
the following two options with respect to the new grounds of rejection to
avoid termination of the appeal as to the rejected claims:

> (1) Reopen prosecution. Submit an appropriate
> amendment of the claims so rejected or new evidence relating
> to the claims so rejected, or both, and have the matter
> reconsidered by the examiner, in which event the proceeding
> will be remanded to the examiner. . . .

> (2) Request rehearing. Request that the proceeding be
> reheard under § 41.52 by the Board upon the same record. . . .

CONCLUSIONS

(1) We reject claims 12-16 and 18-22 as indefinite under 35 U.S.C.
§ 112, second paragraph.

(2) Claims 12-16 and 18-22 are not patentable.

DECISION

The Examiner's rejections of claims 12-16 and 18-22 are reversed.

REVERSED
37 C.F.R. § 41.50(b)

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nymail@ladas.com

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UNITED STATES PATENT AND TRADEMARK OFFICE

———————————

BEFORE THE PATENT TRIAL AND APPEAL BOARD

———————————

Ex parte RAMON GARCIA CADARSO, ANA GARCIA ROBLES,
MIGUEL ANGEL CAMUNAS JURADO,
GUILLERMO LOPEZ SERRANO, and JOSE LOPEZ SERRANO

———————————

Appeal 2010-008797
Application 10/911,393
Technology Center 2400

———————————

Before ALLEN R. MacDONALD, ROBERT E. NAPPI,
MICHAEL W. KIM, BARBARA A. BENOIT, and
LYNNE E. PETTIGREW, *Administrative Patent Judges*.

MacDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Introduction

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 12-16 and 18-22. We have jurisdiction under 35 U.S.C. § 6(b).

Exemplary Claim

Exemplary claim 12 under appeal reads as follows (emphasis and formatting added):

12. An apparatus to obtain value-added services in real-time, on the basis of a general packet radio service (GPRS) network, where interposed between a SGSN node (Server GPRS Support Node), which controls radio access and localization of a mobile station, and a GGSN node (Gateway GPRS Support Node), which allow connection between an internal network of a mobile network operator and other external networks, the apparatus using a GTP protocol (GPRS Tunneling Protocol) for communicating with the SGSN and with the GGSN, and comprising:

[(a)] ***capturing means for establishing*** a first GTP tunnel with the SGSN node and a second GTP tunnel with the GGSN node for each PDP Context, ***for capturing*** GTP protocol data packets submitted from the SGSN or the GGSN, and ***for sending*** a resulting GTP data packet to its original destination; and

[(b)] ***execution means for activating*** local or remote applications corresponding to a required service as a function of the data packets captured and data configured in ***a data configuration module*** of the execution means,

[(c)] wherein the ***capturing means further comprises an access module for accessing*** the execution means to provide decoded information and to receive a response from the activated application, and ***for modifying*** the GTP data packets originally captured ***before sending*** the resulting GTP data packets to the GGSN or SGSN.

Rejections on Appeal

1.   The Examiner rejected claims 12-16 and 18-22 as being unpatentable under 35 U.S.C. § 103(a) over the combination of Haumont (US 6,654,589 B1), Forslow (US 2003/0039237 A1), and Gilchrist (US 7,042,855 B1). [1]

Appellants' Contention [2]

Appellants contend that the Examiner erred in rejecting claim 12 under 35 U.S.C. § 103(a), because (emphasis added):

> One distinguishing feature of claim 12 is an apparatus with **capturing means** comprising an **access module** for accessing the **execution means** to provide decoded information and to receive a response from the activated application, and for modifying the GTP data packets originally captured, the **capturing means** arranged for submitting the resulting GTP data packet to its original destination.
>
> Another distinguishing feature of claim 12 is an apparatus wherein the **execution means** activates local or remote applications corresponding to a required service as a function of the data packets captured and data configured in *a data configuration module* of the **execution means**.
>
> Nothing in the cited references, whether considered either separately or in any permissible combination (if any), would teach or suggest at least those two distinguishing features of claim 12.

(App. Br. 14).

Issue on Appeal

Did the Examiner err in rejecting claims 12-16 and 18-22 as being obvious?

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[1] Claims 13-16 and 18-22 depend from claim 12.
[2] We do not reproduce Appellants' remaining contentions herein.

ANALYSIS

Claims 12-16 and 18-22

As to Appellants' arguments as to why the Examiner has erred in rejecting claims 12-16 and 18-22 based on the prior art references, we do not reach the merits of the Examiner's rejections or the merits of the references at this time. Rather, we reverse *pro forma* the outstanding rejections of claims 12-16 and 18-22 under 35 U.S.C. § 103(a) because appealed claims 12-16 and 18-22 fail to satisfy the requirements of the second paragraph of 35 U.S.C. § 112. Before a proper review of the prior art rejection can be performed, the subject matter encompassed by the claims on appeal must be reasonably understood without resort to speculation.

Presently, we would be forced to engage in speculation and conjecture to determine the scope of the claimed invention because the claims are indefinite under 35 U.S.C. § 112, second paragraph. This we decline to do. *See In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.); *see also In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970) ("If no reasonably definite meaning can be ascribed to certain terms in the claim, the subject matter does not become obvious- the claim becomes indefinite.").

NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claims 12-16 and 18-22 under 35 U.S.C. § 112,

second paragraph, for indefiniteness. Claims 13-16 and 18-22 inherit their indefiniteness based on their dependence from claim 12.

Specifically, we construe the "capturing means," "execution means," and "access module" recited in independent claim 12, each as a "means-plus-function" limitation subject to 35 U.S.C. § 112, sixth paragraph, and conclude that claim 12 and its dependent claims are rendered indefinite under 35 U.S.C. § 112, second paragraph, due to the Specification's failure to disclose corresponding structure for performing any of the recited functions.

FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

Appellants' Invention

FF1. The Specification as originally filed states that:

> between the SGSN node 2 and the GGSN node 3 a ***block 1*** has been provided that captures the GTP protocol data packets and sends them to a ***block 4*** for the execution of local or remote applications, which comprises ***a data configuration module 5*** and which is also connected to an application management block 6, so that, by means of block 4, and starting from the captured data packet and the data configured in the data configuration module 5, the application corresponding to the service required is obtained, and the information is delivered to block 6 . . . .

Spec. ¶ [0031] (emphasis added).

FF2. On February 29, 2008, the Specification was amended to state that "between the SGSN node 2 and the GGSN node 3 a *packet capture block 1* has been provided that captures the GTP protocol data packets and sends them to an *application execution block 4* for the execution of local or remote applications, . . .". Spec. ¶ [0031](emphasis added).

FF3. The Specification as originally filed further states that block 1 "is fitted with a GGSN module 10 which captures and interprets GTP messages" and "this module is capable of establishing a GTP tunnel." Spec. ¶ [0032].

FF4. The Specification as originally filed further states that "block 1 has an SGSN module 11 which captures messages from a GGSN node 3 as if it was an SGSN node 2. In particular, this module is capable of establishing a GTP tunnel with a GGSN node 3." Spec. ¶ [0033].

FF5. The Specification as originally filed further states that "Block 1 also has *an access module 9* to block 4, which extracts the information provided by modules 10 and 11 and transfers it to said block 4 for its process, and it also receives commands to modify the GTP message captured in any of the two directions." Spec. ¶ [0035] (emphasis added).

FF6. The Specification as originally filed further states that:

> Regarding block 4, said block *has a process module 12* which *collects information* from access module 9 which accesses data configuration module 5 and from which, according to the configuration programmed and the data obtained, obtains the specific application to be invoked. Therefore, *process module 12*, once the specific application to be invoked is obtained, *transfers the information* to *an application module 13* which *calls* and *activates* the management application module 6.

Spec. ¶ [0036] (emphasis added).

PRINCIPLES OF LAW

35 U.S.C. § 112, Sixth Paragraph

(1)

Special rules of claim construction allow for claim limitations drafted

in functional language and are set forth in 35 U.S.C. § 112, sixth paragraph,

which provides for:

> [a]n 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
> such claim shall be construed to cover the corresponding
> structure, material, or acts described in the specification and
> equivalents thereof.

35 U.S.C. § 112, sixth paragraph (emphasis added). While this provision

permits a claim limitation to be set forth using solely functional language, it

operates to restrict such claim limitations to those structures, materials, or

acts disclosed in the specification (or their equivalents) that perform the

claimed function. *Personalized Media Commc'ns, LLC v. Int'l Trade

Comm'n*, 161 F.3d 696, 703 (Fed. Cir. 1998).

The Federal Circuit has established that use of the term "means" is

central to the analysis of whether a claim limitation should be interpreted in

accordance with 35 U.S.C. § 112, sixth paragraph: use of the word "means"

creates a rebuttable presumption that the inventor intended to invoke § 112,

sixth paragraph, whereas failure to use the word "means" creates a

rebuttable presumption that the inventor did not intend the claims to be

governed by § 112, sixth paragraph. *Id.* at 703-04; *Flo Healthcare

Solutions, LLC v. Kappos*, 697 F.3d 1367, 1373 (Fed. Cir. 2012).

(2)

When a claim uses the term "means" to describe a limitation, a presumption exists that the inventors used the term to invoke 35 U.S.C. § 112, sixth paragraph, and the presumption can be rebutted when the same claim recites sufficient structure to perform the claimed function in its entirety.

> When a claim uses the term "means" to describe a limitation, a presumption inheres that the inventor used the term to invoke § 112, ¶ 6. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed.Cir.2003). "This presumption can be rebutted when the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety." *Id.* Claims 13 and 40 recite no such structure. As the district court noted, the "reference to 'control' is simply an adjective describing 'means:' [sic] it is not a structure or material capable of performing the identified function." *Biomedino*, slip op. at 12. We agree with the district court and hold that Biomedino has not rebutted the presumption that § 112, ¶ 6 applies to "control means."

Biomedino, LLC, v. Waters Tech. Corp., 490 F.3d 946, 950 (Fed. Cir. 2007).

> Once the court has concluded the claim limitation is a means-plus-function limitation, the court must first identify the function of the limitation. *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258, 52 USPQ2d 1258, 1263 (Fed.Cir.1999). The court next ascertains the corresponding structure in the written description that is necessary to perform that function. Id. "Structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *B. Braun Med. v. Abbott Labs.*, 124 F.3d 1419, 1424, 43 USPQ2d 1896, 1900 (Fed.Cir.1997).

Altiris, Inc., v. Symantec Corp., 318 F.3d 1363, 1375 (Fed. Cir. 2003).

(3)

When an inventor has not signaled an intent to invoke § 112, sixth paragraph, by using the term "means," the presumption against its invocation is strong but can be overcome if "the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002) (internal quotation marks omitted) (citation omitted)). A claim limitation that "essentially is devoid of anything that can be construed as structure" can overcome the presumption. *Flo Healthcare*, 697 F.3d at 1374. The presumption may be overcome by a claim limitation that uses a non-structural term that is "simply a nonce word or a verbal construct that is not recognized as the name of structure" but is merely a substitute for the term "means for" associated with functional language. *Lighting World*, 382 F.3d at 1360. There are numerous terms which may merely substitute for the term "means for" associated with functional language such that the presumption against invoking § 112, sixth paragraph may be overcome.

> [A] claim element that does not include the phrase "means for" or "step for" will not be presumed to invoke 35 U.S.C. 112, sixth paragraph. When the claim limitation does not use the phrase "means for," examiners should determine whether the presumption that 35 U.S.C. 112, paragraph 6 does not apply is overcome if the claim limitation uses a non-structural term (a term that is simply a substitute for the term "means for"). The following is a list of non-structural terms that may invoke 35 U.S.C. 112, paragraph 6: "mechanism for," "module for," "device for," "unit for," "component for," "element for," "member for," "apparatus for," "machine for," or "system for." *Welker Bearing Co., v. PHD, Inc.*, 550 F.3d 1090, 1096 (Fed.

Cir. 2008); *Massachusetts Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006); *Personalized Media*, 161 F.3d at 704; *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1214-1215 (Fed. Cir. 1998). This list is not exhaustive, and other non-structural terms may invoke 35 U.S.C. 112, paragraph 6.

(MPEP § 2181 I.A.; Eighth Edition, Revision 9 (August 2012)).

(4)

Claim language that further defines a term that otherwise would be a nonce word can denote sufficient structure to avoid construction under § 112, sixth paragraph, *MIT v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006), as can a claim limitation that contains a term that "is used in common parlance or by persons of skill in the pertinent art to designate structure," *Lighting World*, 382 F.3d at 1359. Nor will claim language invoke a § 112, sixth paragraph, construction if persons of ordinary skill in the art reading the specification understand the term to be the name for a structure that performs the function, even when the term covers a broad class of structures or identifies the structures by their function. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996) ("Many devices take their names from the functions they perform.").

(5)

For a claim limitation interpreted under § 112, sixth paragraph, if there is no the corresponding structure disclosed in the specification, then the claim will be found indefinite.

> Once a court concludes that a claim limitation is a means-plus-function limitation, two steps of claim construction remain: 1) the court must first identify the function of the limitation; and 2) the court must then look to the specification and identify the corresponding structure for that function. *Med. Instrumentation*, 344 F.3d at 1210. If there is no structure in the

10

specification corresponding to the means-plus-function limitation in the claims, the claim will be found invalid as indefinite. *See Atmel*, 198 F.3d at 1378-79 (citing *In re Donaldson*, 16 F.3d at 1195).

Biomedino, 490 F.3d at 950.

Judge Rich, writing for the en banc court, explained the relationship between the second and sixth paragraphs of section 112:

> [I]f one employs means-plus-function language [per paragraph 112-6] in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

In Re Donaldson Co., 16 F.3d 1189, 1195 (Fed.Cir.1994) (en banc). Therefore, if a claim includes a means-plus-function limitation, failure to disclose adequate structure corresponding to the claimed function results in the claim being invalid for indefiniteness. *In re Dossel*, 115 F.3d 942, 946 (Fed.Cir.1997). Whether the written description adequately sets forth structure corresponding to the claimed function must be considered from the perspective of a person skilled in the art. *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1365-66 (Fed.Cir.2003) (citing *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed.Cir.2001)).

Tech. Licensing Corp. v. Videotek, Inc., 545 F.3d 1316, 1338 (Fed.Cir.2008).

(6)

For a computer-implemented claim limitation interpreted under § 112, sixth paragraph, the corresponding structure must include the algorithm needed to transform the general purpose computer or processor disclosed in

the specification into the special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008); *see also Function Media, L.L.C. v. Google Inc*, 708 F.3d 1310, 1318 (Fed. Cir. 2013). Thus, the specification must sufficiently disclose an algorithm to transform the general purpose computer or processor to a special purpose processor programmed to perform the disclosed algorithm. *Id.* at 1338. An algorithm is defined, for example, as "a finite sequence of steps for solving a logical or mathematical problem or performing a task." MICROSOFT COMPUTER DICTIONARY 23 (5th ed. 2002). An applicant may express the algorithm in any understandable terms including as a mathematical formula, in prose, in a flow chart, or "in any other manner that provides sufficient structure." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008).

An indefiniteness rejection under § 112, second paragraph, is appropriate if the specification discloses no corresponding algorithm associated with a computer or processor. *Aristocrat*, 521 F.3d at 1337-38. Mere reference to a general purpose computer or processor with appropriate programming without providing an explanation of the appropriate programming, or to "software" without providing detail about the means to accomplish the software function, is not an adequate disclosure. *Id.* at 1334; *Finisar*, 523 F.3d at 1340-41. In addition, simply reciting the claimed function in the specification, while saying nothing about how the computer or processor ensures that those functions are performed, is not a sufficient disclosure for an algorithm which, by definition, must contain a sequence of steps. *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1384 (Fed. Cir. 2009).

If the specification explicitly discloses an algorithm, the sufficiency of the disclosure must be determined in light of the level of ordinary skill in the art. *Aristocrat*, 521 F.3d at 1337. The specification must sufficiently disclose an algorithm to transform a general purpose processor to a special purpose processor so that a person of ordinary skill in the art can implement the disclosed algorithm to achieve the claimed function. *Id.* at 1338.

ANALYSIS

Introduction

The Background of Appellants' Specification states:

> GPRS is a data transport service used in several cellular mobile telephony systems, and especially in GSM and UMTS systems, in order to allow access from a mobile station to a data packet network (***such as the Internet***) that uses packet switching instead of circuit switching. Just as in the GSM voice service, it is often necessary to add value-added services in real-time in the GPRS data service.

(Spec. ¶ [0004]) (emphasis added). The Background further states:

> These services are based on adding a functional module to the SGSN nodes which is called GPRS SSF, which permits the analysis of each data session at the moment of activation and during its course. It also allows stopping the sessions and querying external nodes, called SCP (Service Control Point), through a standardized protocol. These external nodes, that can have ***a large capacity for data processing and storage***, starting from the queries from the GPRS network, can command the network to send them additional data, to change data of the session in process, to cut the sessions, and to perform many other functions.

(Spec. ¶ [0008]) (emphasis added).

Claim 12 recites an apparatus to obtain value-added services in real-time on the basis of a general packet radio service (GPRS) network, the apparatus comprising:

(a) "capturing means for establishing . . . , for capturing . . . , and for sending . . .";

(b) "execution means for activating . . .," and "a data configuration module [for providing configured data]"; and

(c) "an access module for accessing . . ., and for modifying . . . before sending . . .".

Capturing Means

As to the "capturing means for establishing . . . , for capturing . . . , and for sending . . ." of claim 12, the use of the word "means" creates a rebuttable presumption that the inventor intended to invoke § 112, sixth paragraph for this claim limitation. *Flo Healthcare*, 697 F.3d at 1373.

Although we do not find any contention by Appellants that the term "capturing means" does not invoke § 112, sixth paragraph, as an initial matter, we address whether claim 12 recites sufficient structure to perform the claimed functions of the "capturing means" in their entirety. As part of this analysis, we address whether use of the term "capturing" to describe "means" takes the phrase outside the realm in which § 112, sixth paragraph applies. That is, does "capturing means" recites sufficient structure on its own such that it obviates the need for § 112, sixth paragraph.

From our review of the claim, we conclude that the "capturing means" is not a term that is used in common parlance or by persons of skill in the pertinent art to designate structure. Further, from our review of the record,

we conclude that persons of ordinary skill in the art reading the specification would not understand the term "capturing means" to be the name for a structure that performs the recited functions. We conclude that the reference to "capturing" is simply an adjective describing "means" and is not a structure or material capable of performing the identified functions.

Additionally, we find no structure beyond the "capturing means" for performing the "establishing" and "capturing" functions. However, as to the "sending" function, claim 12 recites that the "capturing means" comprises an "access module" for performing at least a part of this function and we address the "access module" separately *infra*. Therefore, we conclude that the claim does not recite other sufficient structure to perform the claimed "establishing" and "capturing" functions of the "capturing means" in their entirety.

We conclude from our review that nothing in the record rebuts the presumption that § 112, sixth paragraph applies to "capturing means" for at least the functions of "establishing" and "capturing" as set forth in claim 12.

Having concluded that the "capturing means" limitation is drafted in means-plus-function format, we must determine the corresponding structure disclosed in the specification. Appellants' Specification as originally filed disclosed the "capturing means" as "block 1." (Spec. ¶ [0031]; FF1-FF2). This was subsequently amended to read "packet capture block 1." (February 29, 2008 Amendment).

The Specification discloses that "packet capture block 1" comprises "GCSN module 10" and "SGSN module 11" which each perform portions of the "establishing" and "capturing" functions recited in claim 12. (Spec. ¶¶ [0032] - [0033]; FF3-FF4). Further, the Specification discloses that

15

"modules 10 and 11 comprise the corresponding decoder/coder to capture and interpret original messages sent in any of the two directions . . .". The Specification discloses that block 1 "also has an access module 9" (discussed *infra*) which "extracts the information provided by modules 10 and 11 and transfers it to [the execution means] for its process, and it also receives commands to modify the GTP message captured in any of the two directions." (Spec. ¶ [0035]; FF5). Beyond intended function statements such as "[t]his information is collected by the GGSN module 10 decoding the information to transfer it to the access module 9" (Spec. ¶ [0040]) and "the SGSN module 11 composes the message to be sent to the GGSN node to continue the establishment of the data session, according to the specification stated in the signaling 'Create PDP Context Request'," (Spec. ¶ [0047]), we are unable to find any structural details of modules 10 and 11. *See Donaldson*, 16 F.3d at 1195. Nor do Appellants indicate that GCSN module 10 and SGSN module 11 are structures known in the art. Lastly, Appellants' Specification does not disclose an algorithm to provide the necessary structure under § 112, sixth paragraph, if an artisan were to implement the modules using a general purpose computer. *See Blackboard*, 574 F.3d at 1384; *Aristocrat*, 521 F.3d at 1333-34.

Therefore, we conclude that Appellants have not disclosed the corresponding structure to perform the claimed "establishing" and "capturing" functions of the "capturing means" as required for a limitation interpreted under 35 U.S.C. § 112, sixth paragraph. Rather, claim 12 is indefinite as to these aspects of the recited "capturing means."

Access Module

As to the "access module for accessing . . ., for modifying . . . before sending . . ." of claim 12, the failure to use the word "means" creates a rebuttable presumption that the inventor did not intend this claim limitation to be governed by § 112, sixth paragraph. *Flo Healthcare*, 697 F.3d at 1373.

As an initial matter, we address whether the term "access module" of claim 12 is recognized as the name of structure. We conclude that the "access module" is not a term that is used in common parlance or by persons of skill in the pertinent art to designate structure. Further, from our review of the record, we conclude that persons of ordinary skill in the art reading the specification would not understand the term "access module" to be the name for a structure that performs the recited functions. We conclude that the "access module" is not a structure or material capable of performing the identified functions. Rather, we conclude that here "module" is simply a nonce word substitute for the term "means" associated with functional language; and we conclude the reference to "access" is simply an adjective describing "module." We conclude that that the presumption against invoking § 112, sixth paragraph has been overcome.

Having concluded that the "access module" limitation is drafted in means-plus-function format, we must determine the corresponding structure disclosed in the specification. Appellants' Specification as originally filed discloses the "access module" as "access module 9." (Spec. ¶ [0035]; FF5). The Specification further discloses that access module 9 "extracts the information provided by modules 10 and 11 and transfers it to [the execution means] for its process, and it also receives commands to modify the GTP message captured in any of the two directions." (Spec. ¶ [0035]; FF5).

Beyond intended function statements such as this, we are unable to find any structural details of access module 9. Nor do Appellants disclose an algorithm to provide the necessary structure under § 112, sixth paragraph, if an artisan were to implement the access module 9 using a general purpose computer. Lastly, Appellants' Specification does not indicate that access module 9 is a structure known in the art.

Therefore, we conclude that Appellants have not disclosed the required corresponding structure to perform the claimed "accessing," "modifying," and "sending" functions of the "access module." Rather, claim 12 is indefinite as to these aspects of the recited "access module."

Execution Means

As to the "execution means for activating . . ." of claim 12, the use of the word "means" creates a rebuttable presumption that the inventor intended to invoke § 112, sixth paragraph for this claim limitation. *Flo Healthcare*, 697 F.3d at 1373.

Although we do not find any contention by Appellants that the term "execution means" does not invoke § 112, sixth paragraph, as an initial matter, we address whether claim 12 recites sufficient structure to perform the claimed functions of the "execution means" in their entirety. As part of this analysis, we address whether use of the term "execution" to describe "means" takes the phrase outside the realm in which § 112, sixth paragraph applies. That is, does "execution means" recites sufficient structure on its own such that it obviates the need for § 112, sixth paragraph.

From our review of the claim, we conclude that the "execution means" is not a term that is used in common parlance or by persons of skill

in the pertinent art to designate structure. Further, from our review of the record, we conclude that persons of ordinary skill in the art reading the specification would not understand the term "execution means" to be the name for a structure that performs the recited functions. We conclude that the reference to "execution" is simply an adjective describing "means" and is not a structure or material capable of performing the identified functions.

Additionally, we find no structure beyond the "execution means" for performing the "activating" function. However, claim 12 recites that the "execution means" comprises a "data configuration module" and we address the "data configuration module" separately *infra*. Therefore, we conclude that the claim does not recite other sufficient structure to perform the claimed "activating" function of the "execution means" in its entirety.

We conclude from our review that nothing in the record rebuts the presumption that § 112, sixth paragraph applies to "execution means" for the function of "activating" as set forth in claim 12.

Having concluded that the "execution means" limitation is drafted in means-plus-function format, we must determine the corresponding structure disclosed in the specification. Appellants' Specification as originally filed disclosed the "execution means" as "block 4." (Spec. ¶ [0031]; FF1-FF2). This was subsequently amended to read "application execution block 4." (February 29, 2008 Amendment).

The Specification discloses that "application execution block 4" has "process module 12" which performs the functions of collecting information from access module 9, obtaining a specific application to be invoked, and transferring the information to an application module 13, and "block 4" comprises the "application module 13" which performs the functions of

19

calling an application management module 6 and activating the application management module 6. (Spec. ¶ [0036]; FF6). Further, the Specification discloses that block 4 "comprises a data configuration module 5" (Spec. ¶ [0031]; FF1) (discussed *infra*) which contains data which is "preconfigured" (Spec. ¶ [0043]).

Beyond intended function statements such as "[r]egarding block 4, said block has a process module 12 which collects information from access module 9 which accesses data configuration module 5 and from which, according to the configuration programmed and the data obtained, obtains the specific application to be invoked" (Spec. ¶ [0036]), we are unable to find any structural details of modules 12 and 13 which show how functions such as "obtaining," "calling," or "activating" are implemented by Appellants. Nor do Appellants disclose an algorithm to provide the necessary structure under § 112, sixth paragraph, if an artisan were to implement the modules using a general purpose computer. Lastly, Appellants' Specification does not indicate that process module 12 and application module 13 are structures known in the art.

Therefore, we conclude that Appellants have not disclosed the required corresponding structure to perform the claimed "activating" function of the "execution means." Rather, claim 12 is indefinite as to this aspect of the recited "execution means."

Data Configuration Module

As to the "data configuration module [for providing configured data]" of claim 12, the failure to use the word "means" creates a rebuttable

presumption that the inventor did not intend this claim limitation to be governed by § 112, sixth paragraph. *Flo Healthcare*, 697 F.3d at 1373.

As an initial matter, we address whether the term "data configuration module" of claim 12 is recognized as the name of structure. We conclude that the "data configuration module" on its face is not a term that is used in common parlance or by persons of skill in the pertinent art to designate structure.

However, as previously stated, the Specification discloses that block 4 "comprises a data configuration module 5" (Spec. ¶ [0031]; FF1) which contains data which is "preconfigured" (Spec. ¶ [0043]). One well-known structure, in the data processing art to which this invention pertains, which contains data is a memory module.[3] Further, we take notice that it is conventional to label such memory modules based on the data stored or contained therein, such as the disclosed configuration data. .From our review of the record, we conclude that persons of ordinary skill in the art reading the specification (particularly Spec. ¶¶ [0036] and [0043]) would understand the term "data configuration module" to be the name for a structure, such as a memory module, that performs the function of storing configuration data.

We conclude that that the presumption against invoking § 112, sixth paragraph has not been overcome.

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[3] Memory module: "a magnetic or semi-conductor module providing storage locations . . ." (Rosenberg; Dictionary of Computers, Information Processing, and Telecommunications; 2nd Ed.; Wiley& Sons; 1987; p. 377).

37 C.F.R. § 41.50(b)

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

> (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

> (2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

CONCLUSIONS

(1) We reject claims 12-16 and 18-22 as indefinite under 35 U.S.C. § 112, second paragraph.

(2) Claims 12-16 and 18-22 are not patentable.

DECISION

The Examiner's rejections of claims 12-16 and 18-22 are reversed.

<u>REVERSED</u>
<u>37 C.F.R. § 41.50(b)</u>

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