UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION

MITSUBISHI HEAVY INDUSTRIES, LTD.,

Plaintiff,

-vs- **Case No. 6:10-cv-812-Orl-28KRS**

GENERAL ELECTRIC CO.,

Defendant.

ORDER

In this patent infringement suit, Plaintiff, Mitsubishi Heavy Industries, Ltd. ("Mitsubishi"), and Defendant, General Electric Co. ("GE"), disagree as to how several terms of the subject patent's claims should be interpreted. Thus, both have requested pretrial claim construction by the Court.[1] After reviewing the parties' filings and hearing argument of counsel,[2] the Court construes the disputed claim terms as set forth herein.

I. Background

The technology at issue pertains to systems for controlling the pitch angles of blades on wind turbines. The patent at issue—U.S. Patent No. 7,452,185 ("the '185 Patent")—is titled "Blade-Pitch-Angle Control Device and Wind Power Generator" and is assigned to

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[1]The pertinent filings are: (1) GE's *Markman* Motion (Doc. 109) and Mitsubishi's Opposition (Doc. 128) thereto; and (2) Mitsubishi's *Markman* Motion (Doc. 113) and GE's Opposition (Doc. 127) thereto.

[2]The Court heard oral argument on these motions on May 16, 2012. (See Mins., Doc. 168; Hr'g Tr., Doc. 172).

Mitsubishi.

The United States national stage application that ultimately became the '185 Patent was filed on September 9, 2004, and the '185 Patent claims priority based on two Japanese patent applications—JP 2003-318312 ("the '312 Japanese Application"), filed on September 10, 2003, and JP 2004-143642 ("the '642 Japanese Application"), filed on May 13, 2004. (See '185 Patent cover page & col.1 ll.7-14). In May 2008, the applicants submitted to the United States Patent and Trademark Office ("USPTO") a request for participation in the Patent Prosecution Highway ("PPH") program, pursuant to which an applicant receiving a ruling from either the USPTO or the Japan patent office that at least one claim in an application is patentable may ask the other country's patent office to fast-track examination of corresponding claims in corresponding applications.

In their PPH request, the applicants noted: "In the present application, initially, two Japanese priorities, No. 2003-318312 (corresponding US claims are claims 1-5) . . . and No. 2004-143642 (corresponding US claims are claims 6-10) . . . were claimed. Japanese patent application No. 2003-318312 was granted without rejections on December 4, 2007, and Japanese patent application No. 2004-143642 was withdrawn because the applicant did not make a request for the examination within three years of the filing of the application." (PPH Program Request, Ex. 3 to Doc. 109). The applicant further explained that in the preliminary amendment to the application, "claims 6-10 have been canceled to be consistent with the allowed claims in Japanese patent application No. 2003-318312." (Id.).

Thus, while the initial application included ten claims—five from each of the two Japanese applications—the amended application contained only five claims, corresponding

to the claims of the '312 Japanese Application. As noted by Mitsubishi, "[i]n the '185 Patent application Mitsubishi 'retained the disclosure' of both Japanese priority patents[] and prepared a U.S. specification that describes all of the embodiments" of both Japanese applications. (Doc. 128 at 26 (emphasis removed)). This is apparent from comparison of the '185 Patent to the '312 Japanese Application (Ex. 4 to Doc. 109) and the '642 Japanese Application (Ex. 5 to Doc. 109); the '185 Patent includes the specifications, drawings, and embodiments[3] of both Japanese applications but includes only the five claims of the former. All five of these claims were allowed by the USPTO, and the '185 Patent issued on November 18, 2008. The '185 Patent incorporates by reference the two Japanese applications in their entirety. ('185 Patent col.1 ll.7-14).

Mitsubishi filed this lawsuit on May 20, 2010, alleging that GE, via the control systems in its wind turbines, has infringed the '185 Patent. (Compl., Doc. 1). GE denies infringement and has filed a counterclaim seeking a declaratory judgment of non-infringement, invalidity, and unenforceability of the '185 Patent. (Second Am. Answer & Countercl., Doc. 149). The parties' Markman[4] motions are currently before the Court.

II. Claim Construction Principles

Claim construction is an issue of law for the Court to decide. Markman, 52 F.3d at

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[3]The '312 Japanese application included three embodiments, (see Ex. 4 to Doc. 109 at 4-9); these three embodiments are in the First Embodiment of the '185 Patent. The '642 Japanese application set forth one embodiment, (see Ex. 5 to Doc. 109 at 3-6); that embodiment was included as the Second Embodiment of the '185 Patent.

[4]Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996).

970-71. In construing claims, courts must first examine the intrinsic evidence, which includes the claims themselves, the patent's specification, and the prosecution history. Phillips v. AWH Corp., 415 F.3d 1303, 1313-14 (Fed. Cir. 2005); C.R. Bard, Inc., v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed. Cir. 2004). Courts may also rely on extrinsic evidence, which "consists of all evidence external to the patent and prosecution history," Markman, 52 F.3d at 980 (internal citation omitted); however, extrinsic evidence is "'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" Phillips, 415 F.3d at 1317 (quoting C.R. Bard, 388 F.3d at 862) (further internal quotation omitted).

A. Intrinsic Evidence

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips, 415 F.3d at 1312 (internal citation and quotation omitted). "Because the patentee is required to 'define precisely what his invention is,' . . . it is 'unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.'" Id. (quoting White v. Dunbar, 119 U.S. 47, 52 (1886)).

Claim terms "'are generally given their ordinary and customary meaning,'" and such meaning is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Id. at 1312-13 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). "[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms." Id. at 1314. A term's context within the asserted claim can be very instructive, and other claims of the patent—both asserted an unasserted—"can also be valuable sources of enlightenment as

to the meaning of a claim term." Id. Differences between claims of a patent can provide guidance in determining meaning of terms; for instance, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. Id. at 1314-15.

However, the claims "do not stand alone"; instead, "they are a part of 'a fully integrated written instrument' consisting principally of a specification that concludes with the claims." Id. at 1315 (quoting Markman, 52 F.3d at 978). Thus, "claims 'must be read in view of the specification, of which they are a part.'" Id. (quoting Markman, 52 F.3d at 979). "[T]he specification 'is always highly relevant to the claim construction analysis'" and "[u]sually . . . is dispositive; it is the single best guide to the meaning of the disputed term.'" Id. (quoting Vitronics, 90 F.3d at 1582). While "'the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" Comark Commc'ns, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed Cir. 1998) (quoting Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1998)).

The prosecution history is another component of the intrinsic evidence used to supply the proper context for claim construction. Home Diagnostics, Inc. v. Lifescan Inc., 381 F.3d 1352, 1356 (Fed. Cir. 2004). This history "consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." Phillips, 415 F.3d at 1317. Although the prosecution history "provides evidence of how the PTO and the inventor understood the patent, . . . it often lacks the clarity of the specification and thus is less useful for claim construction purposes." Id. The history can,

however, indicate the inventor's understanding of the invention and "whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Id. In the instant case, the prosecution history consists of the request for consideration in the PPH program and the accompanying Japanese patent applications, though there were no rejections or amendments after the U.S. application was submitted to the USPTO.

B. Extrinsic Evidence

As earlier noted, extrinsic evidence may also be considered in claim construction. Such evidence typically includes dictionaries, treatises, and testimony of the inventor or experts. Markman, 52 F.3d at 980. Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one of skill in the art might use the claim terms, but technical dictionaries and treatises may provide definitions that are too broad or that may not be indicative of how the term is used in the patent. Phillips, 415 F.3d at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are entirely unhelpful to a court. Id. Therefore, "a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description and the prosecution history, in other words, with the written record of the patent." Id. (internal citation and quotation omitted).

Overall, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms," and it is "unlikely to result in a reliable interpretation

of patent claim scope unless considered in the context of the intrinsic evidence." Id. at 1319. In this case, the parties have submitted extrinsic evidence in the form of dictionary definitions, opinions of their experts, and some technical materials.

III. Analysis

The '185 Patent contains five claims, and Mitsubishi alleges that GE infringes Claims 1 and 5. These two claims are very similar and contain the same disputed terms; discussion of the terms of Claim 1 in this Order shall be understood to apply to the terms of Claim 5 as well.[5] Claim 1, with disputed term language in boldface type, recites:

> The invention claimed is:
>
> 1. A blade-pitch-angle control device used for a wind power generator having a plurality of blades, the blade-pitch-angle control device comprising:
>
> a memory device in which predetermined parameters that affect the load fluctuation of the blades, azimuth angles, and pitch-angle command values are **stored in association with each other**;
>
> an azimuth-angle detecting device that detects the azimuth angle of each of the blades;
>
> a parameter-detecting device that detects the predetermined parameters;
>
> a command-value receiving device that receives the **pitch-angle command values** for each of the blades from the memory device, the pitch-angle command values being **selected on the basis of** the azimuth angle of each blade detected by the azimuth-angle detecting device and

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[5]Claim 5 begins:

> 5. A wind power generator having a plurality of blades, comprising:
> a blade pitch angle control device including
> a memory device . . . .

(Id. col.19 ll.5-8). It then is identical to Claim 1 from "memory device" on. (Id. col.19 l.8-col.20 l.15).

> the predetermined parameters detected by the parameter-detecting device; and
>
> a pitch-angle-control command-value generating device that generates pitch-angle-control command values for individually controlling the pitch-angle of each blade on the basis of the pitch-angle command values received by the command-value receiving device and a **common-pitch-angle command value** that is common to each blade, the common-pitch-angle command value being determined by output information of the wind power generator.

('185 Patent col.18 ll.17-43).

A. "Stored in association with each other"

The parties first dispute the correct construction of the phrase "stored in association with each other" in the "memory device" element—"a memory device in which predetermined parameters that affect the load fluctuation of the blades, azimuth angles, and pitch-angle command values are **stored in association with each other**."

1. The Parties' Proposed Constructions

Mitsubishi asserts that this phrase should be given its plain meaning and that the plain language does "not require . . . that the storage reflects any specific connections or relationships between values." (Doc. 113 at 10). Mitsubishi suggests that if the Court believes a formal construction of this language is necessary, the phrase should be defined as "stored in a non-transient form in association with each other," noting that the parties' experts agree that "stored" does not include mere transient use of information during calculation.

GE, on the other hand, proposes that this term should be construed as "stored in advance in memory in a manner that reflects a relationship with each other." GE objects to

Mitsubishi's proposal of "non-transient form" because addition of that terminology would serve only to confuse the jury. GE also challenges Mitsubishi's argument that the storage need not reflect relationships between the stored values, arguing that Mitsubishi's position would convert "stored in association with each other" to "associated values are stored," which, says GE, is not the same thing. Additionally, GE contends that "stored" should be construed as "stored in advance" because the specification explains that the values are "stored in advance."

Mitsubishi objects to GE's "in advance" language, arguing that GE is attempting to limit the claims to pre-calculating values by computer simulation and storing them in memory in characteristic tables. Mitsubishi also opposes substitution of "in a manner that reflects a relationship with" for "in association with" because "association" is intelligible to jurors and GE has not explained the difference.

2. The Court's Construction

The Court is not persuaded by Mitsubishi's argument that "in non-transient form" should be included in the construction of this claim term. As noted by GE, this terminology would not assist the jury, and Mitsubishi's expert was unable to explain the timeframe that would be required to satisfy such a limitation. Additionally, the Court rejects Mitsubishi's argument that "stored in association with" does not require that the storage of the values reflect a relationship or association between them. The claim term is "stored in association with"—not "associated values that are stored," and GE correctly faults Mitsubishi for separating "stored" from "association" in construing this term. In order to clarify that the values must be "stored in association with each other" rather than merely associated and

stored, this language will be construed as "in a manner that reflects an association with each other."

GE's "stored in advance" argument is persuasive. The specification, after describing the invention in essentially the terms of Claim 1, explains the functioning of the invention as follows:

> According to the present invention, the optimum pitch-angle command values which are related to various parameters affecting the load fluctuation of the blades are **stored in advance in the memory device**. Accordingly, during control, the command-value receiving device just reads out from the memory device the optimum pitch-angle command values selected based on the various parameters, thereby performing pitch-angle control that is optimum for the operational state of the windmill.

('185 Patent col.2 l.62-col.3 l.3). Mitsubishi argues that in relying on this language, GE is attempting to import "one example from the specification" into the claim and that only "[o]ne embodiment in the patent" says "stored in advance." (Doc. 113 at 12-13 (citing '185 Patent col.2 ll.62-65)). This specification language is not, however, from a single embodiment or example; instead, it is from the general "Disclosure of the Invention" section of the specification and, when considered with other intrinsic evidence, it is properly read as explaining Claim 1 rather than providing a single example.

In the corresponding place that the '185 Patent uses the term "the present invention" in the above-quoted language, the '312 Japanese Application—upon which the '185 Patent claimed priority, which is incorporated by reference in the '185 Patent, and which is part of the prosecution history—uses the language "the invention described by Claim 1 is . . . ." In expressly describing Claim 1, the '312 Japanese Application states that "an optimal pitch

angle command value that considers all parameters that affect the blade load changes is **stored in advance** in the memory means." ('312 Japanese Application, Ex. 4 to Doc. 109, at 2) (emphasis added). In light of the incorporation by reference of the '312 Japanese Application, and especially considering that the PPH requirements provide that applied-for claims are limited in scope by the claims upon which they are based, the '312 Japanese application confirms that the applicant was describing the features of Claim 1 in the quoted language rather than giving an example of how the invention operates.[6] See Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1290 (Fed. Cir. 2009) (noting that district court properly considered counterpart Japanese patent application in construing claims of U.S. patent where U.S. patent claimed priority from that application and application was part of the prosecution history). "Stored in advance" is therefore an appropriate construction of "stored" here. See Seachange Int'l, Inc. v. C-COR, Inc., 413 F.3d 1361, 1372 (Fed. Cir. 2005) ("'The prosecution history constitutes a public record of the patentee's representations concerning the scope and meaning of the claims, and competitors are entitled to rely on those

[6]When an inventor uses the term "the present invention" in the specification, that description can be a limitation on the entire invention, see Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295, 1308 (Fed. Cir. 2007) ("When a patent thus describes the features of the 'present invention' as a whole, this description limits the scope of the invention."), though this is not always the case, see Absolute Software, Inc. v. Stealth Signal, Inc., 659 F.3d 1121, 1136 (Fed. Cir. 2011) (noting that "use of the phrase 'present invention' or 'this invention' is not always so limiting, such as where the references to a certain limitation as being the 'invention' are not uniform, or where other portions of the intrinsic evidence do not support applying the limitation to the entire patent"). Thus, although "the present invention" is not used uniformly in the '185 Patent, consideration of the '312 Japanese Application along with the '185 Patent demonstrates that the term "the present invention" is used at least on a claim-by-claim basis and supports interpreting "stored" in Claim 1 as "stored in advance."

representations when ascertaining the degree of lawful conduct, such as designing around the claimed invention.'" (quoting Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l, Inc., 222 F.3d 951, 957 (Fed. Cir. 2000))).

Mitsubishi urges that part of the First Embodiment "teaches that, 'alternatively,' where the needed information is not stored in memory it can be calculated during operation 'to determine the pitch-angle command values' in the invention," (Doc. 113 at 13 (emphasis removed)), citing the following language:

> When the memory unit does not store a characteristic table that completely corresponds with parameter values input from the parameter-detecting unit, a characteristic table that most closely approximates the parameter values may be selected. Alternatively, a plurality of approximate characteristic tables may be read out and these characteristic tables may be interpolated to determine the pitch-angle command values.

('185 Patent col.12 ll.57-64) (figure numbers omitted)).[7] However, this language does not support Mitsubishi's argument against "stored in advance." Even if the alternative method of obtaining pitch-angle command values described in this paragraph from the First Embodiment is used, the characteristic tables that are "interpolated" are characteristic tables that have already been stored in the memory device.[8]

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[7]This portion of the patent will be discussed in more depth infra in connection with construction of the disputed term "selected on the basis of."

[8]Mitsubishi also asserts—albeit in connection with its "non-transient" storage argument—that the '185 patent "explains that the stored values may be detected during the operation of the turbine," (Doc. 113 at 12), citing the following language from the First Embodiment:

> Furthermore, the parameters are not limited to those that are synchronously detected. For example, the wind speed and the azimuth angle

As earlier noted, "the specification 'is always highly relevant to the claim construction analysis'" and "[u]sually . . . is dispositive; it is the single best guide to the meaning of the disputed term.'" Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582). While "[t]here is a fine line between construing the claims in light of the specification and improperly importing a limitation from the specification into the claims, . . [i]n reviewing the intrinsic record to construe the claims, [courts] strive to capture the scope of the actual invention, rather than . . . allow the claim language to become divorced from what the specification conveys is the invention." Retractable Techs., Inc. v. Becton, Dickinson & Co., 653 F.3d 1296, 1305 (Fed Cir. 2011). With these principles in mind, the Court concludes that "stored in advance" is a description of Claim 1 and not merely an example.

In sum, the Court construes "stored in association with each other" to mean "stored in advance in memory in a manner that reflects an association with each other."

B. "Selected on the basis of"

The next claim language disputed by the parties is "selected on the basis of," which appears in that part of Claim 1 that recites a "command-value receiving device." (See '185

> may be detected at predetermined intervals, and the air density and the like, whose temporal change is small, may be detected at time intervals longer than those used for the wind speed and the azimuth angle.

('185 Patent col. 14 ll.49-54). However, this language does not support Mitsubishi's assertion of detection of stored values during turbine operation. The '185 Patent plainly refers to both stored values and detected values; azimuth angles and predetermined parameters are both stored and detected. The paragraph quoted above explains that the detected values need not be "synchronously detected"—that is, they need not be measured at the same time intervals. In sum, this paragraph does not suggest that values need not be stored in advance.

Patent col.18 ll.28-34 (providing "a command-value receiving device that receives the pitch-angle command values for each of the blades from the memory device, the pitch-angle command values being **selected on the basis of** the azimuth angle of each blade detected by the azimuth-angle detecting device and the predetermined parameters detected by the parameter-detecting device") (emphasis added).

1. The Parties' Proposed Constructions

Mitsubishi asserts that this claim limitation uses plain language, "requires no construction beyond its full ordinary and customary meaning," (Doc. 113 at 17), and that the ordinary meaning of "selected" includes "choosing in a limited range" "by either reading out a value from memory or by calculating a value based on other values stored in memory, (id. at 18, 20). The "limited range" here, according to Mitsubishi, is the finite set of pitch-angle values that is mathematically possible as a matter of geometry. Mitsubishi insists that to the extent formal construction is required, the phrase should be interpreted as "chosen from the range of possible pitch-angles based at least in part on." (Id. at 18).

GE urges that "selected on the basis of" be construed as "read from memory based on" and argues that Mitsubishi's proposed construction—like its proposed construction of "stored in association with"—purports to be "plain meaning" but actually would extend the claim terms far beyond their plain meaning. GE does not disagree with the notion of choosing in a limited range but contends that the range from which the pitch values must be chosen is "those pitch values that were previously stored in the memory device in association with azimuth angles and predetermined parameters that affect load." (Doc. 127 at 14-15).

2. The Court's Construction

The Court rejects Mitsubishi's argument that the range of possible pitch-angle command values from which a selection can be made is limited to those mathematically available. Moreover, Mitsubishi's suggestion that the plain meaning of "selected" includes "calculating" also misses the mark. Examination of the claim language, the specification, the prosecution history, and the dictionary definitions submitted by the parties all support contrary conclusions on these points.

First, the language of the limitation in which the subject language appears, as well as other parts of Claim 1, confirm that the pitch-angle command values are "selected" from the memory device. In the "memory device" element, predetermined parameters, azimuth angles, and pitch-angle command values are stored in association with each other, and then in the "command-value receiving device" element—without any intervening mention of "pitch-angle command values"—the command-value receiving device "receives the pitch-angle command values for each of the blades from the memory device, the pitch-angle command values being selected on the basis of the azimuth angle . . . and the predetermined parameters." Thus, the pitch-angle command values that are "selected" and "received" from the memory device are pitch-angle command values that are stored in the memory device, and "the range" of available pitch-angle command values that can be received and selected is limited to those stored values—not the finite set of values that are possible as a matter of geometry as urged by Mitsubishi. Selection of pitch-angle command values other than those stored in the memory device is not contemplated by this language.

Next, in asserting that "selected" must be broader than "read out" as proposed by GE,

Mitsubishi points to unasserted Claim 3 of the '185 Patent, which is dependent on Claim 1 and describes the use of a characteristic table as part of the parameter-detecting device for wind speed, which "estimates the wind speed by reading out a wind speed corresponding to the output of the wind power generator from the characteristic table."[9] ('185 Patent col.18 ll.54-56). Mitsubishi argues that the use of the terminology "reading out" in Claim 3 means that "selected" in Claim 1 is broader than "reading out" and that by suggesting "read from memory" as a construction of "select," GE is asking the Court to read a limitation from a dependent claim into an independent claim. However, GE's construction of "selected" does not require a characteristic table, and GE is not trying to read a limitation from Claim 3 into Claim 1.[10] Claim 3 still requires "selection" of pitch-angle command values; this dispute essentially is whether "reading out" necessarily means something narrower than "selecting" as a general matter or whether the two are synonyms. The '185 Patent sometimes seems to use them as such but in other places does not.[11]

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[9]Claim 3 reads in full: "The blade-pitch-angle control device according to claim 1, wherein the predetermined parameters comprise the wind speed, and the parameter-detecting device is a wind-speed estimating device that includes a characteristic table relating the wind speed and an output of the wind power generator and that estimates the wind speed by **reading out** a wind speed corresponding to the output of the wind power generator from the characteristic table." ('185 Patent col.18 ll.49-56 (emphasis added)).

[10]In comparing Claim 1 to other claims, GE also notes that in unasserted Claim 4 of the '185 Patent, a "calculation device that calculates a pitch-angle" is specifically provided for, indicating that the drafters knew how to say "calculate" when they meant to.

[11] For instance, the portion of the written description discussed earlier uses the term "read out" in describing how Claim 1 works, explaining that "during control, the command-value receiving device just **reads out** from the memory device the optimum pitch-angle command values **selected.**" ('185 Patent col.2 l.65-col.3 l.1).

Mitsubishi contends that the specification describes several ways—not just via reading from memory—to "select" a pitch-angle command value based on other values, asserting that two kinds of embodiments are described—one where pitch-angle command values are "just read[] out from the memory device," citing the language in column 2 discussed earlier, and one where the required "information" is not stored in memory and the controller interpolates, citing the interpolation portion of the First Embodiment. (See Doc. 113 at 21). As discussed earlier, however, the column 2 language is not from an embodiment or example but from the general description portion of the specification.

On the other hand, the interpolation language upon which Mitsubishi relies is included in one alternative of the First Embodiment. The First Embodiment[12] explains:

> The operation of the blade-pitch-angle control device according to the above-described embodiment will now be described.
>
> First, when the command-value receiving unit receives an azimuth angle from the azimuth-angle detecting unit and receives the wind speed, air density, and power generator output from the parameter-detecting unit, the command-value receiving unit then receives a characteristic table from the memory unit, the characteristic table being selected based on the wind speed, the air density, and the power generator output.
>
> Subsequently, in the characteristic table received, pitch-angle command values corresponding to the azimuth angle of each blade input from the azimuth-angle detecting unit are received.
>
> . . . .
>
> When the memory unit does not store a characteristic table that completely corresponds with parameter values input from the parameter-detecting unit, a characteristic table that

[12]This language appears at the end of the first of the three embodiments in the '312 Japanese Application, which have been combined into a single First Embodiment in the '185 Patent.

> most closely approximates the parameter values may be selected. **Alternatively, a plurality of approximate characteristic tables may be read out and these characteristic tables may be interpolated to determine the pitch-angle command values**.

('185 Patent col. 12 ll.22-36, 57-64 (emphasis added) (figure element numbers omitted)). Mitsubishi argues that this description of interpolation means that selection is not restricted solely to reading out specific values and that the patent teaches that pitch-angle command values may be calculated—for example, by this interpolation—and not just "read out" of memory.

As GE correctly notes, however, before interpolation is performed in the interpolation alternative of the First Embodiment, the characteristic tables themselves are "read out" and thus reading from memory does occur—regardless of what might happen after that. While Mitsubishi asserts that GE is trying to limit the scope of Claim 1 by not including interpolation and calculation in the meaning of "selected," in fact Mitsubishi is attempting to expand the claim language through a very narrow alternative example in a single embodiment. In other words, GE is not asserting an alternative part of an embodiment as a shield; Mitsubishi is trying to use it as a sword.[13] And, despite the reference to interpolation in an alternative of the first embodiment, "a claim need not cover all embodiments" in any event. Intamin Ltd. v. Magnetar Techs. Corp., 483 F.3d 1328, 1337 (Fed. Cir. 2007). The fact that part of an embodiment discloses this way of using the invention does not mean that "selected" in the

[13]Mitsubishi asserts that GE is attempting to limit the claim scope to the use of characteristic tables. GE has not , however, proposed limiting the definition to characteristic tables, and GE's expert has explained that use of characteristic tables is not required under GE's proposed interpretation of "selected."

claim limitation means or includes "calculated."[14]

Mitsubishi additionally relies on dictionary definitions of "selected"—"singled out in preference," "chosen," and "picked"—and GE relies on those same definitions. These definitions do not support the inclusion of "calculating" within the meaning of "selected," and the parties' arguments regarding what is the appropriate range from which to choose have already been addressed.

In sum, GE is correct that the term "selected" "does not exist in a vacuum" but instead appears in the context of other claim limitations—including the "memory device" and the "command-value receiving device"—and that construing "selected" as "selecting from among the stored pitch-angle command values" matches up with these other limitations. Interpreting "selected" as not including "calculated from other stored values" is not inconsistent with the patent's mention of optimal values being obtained by interpolation from stored values in one iteration. To construe the interpolation language from one alternative

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[14]Mitsubishi also argues that "the specification uses 'on the basis of' to refer to embodiments where calculation is used" and that this indicates that "selecting is not "restricted solely to reading out specific memorized values." (Doc. 113 at 23). Mitsubishi then cites several places in the patent where the phrase "on the basis of" is used in sentences with other verbs—such as "determining on the basis of," "calculated on the basis of," and "measuring on the basis of." However, the fact that the phrase "on the basis of" is used in the patent with other verbs does not bear on the meaning of any of those verbs, including "selected."

Additionally, Mitsubishi cites Column 10, Lines 20-28, to support its argument that "select" indicates "choosing from a limited set or range of, for example, pitch angles." (Doc. 113 at 22). Those lines are part of the First Embodiment and are describing the content stored in the memory unit and how characteristic tables relating optimal pitch angles and azimuth angles are prepared prior to being stored. The use of "select" in this passage does not support Mitsubishi's argument that the appropriate range is beyond the range of stored pitch-angle command values; it merely is another instance of "select" being used to mean to choose the best pitch-angle.

embodiment to require expansion of claim language to include calculation without any other evidence supporting such a construction would be improper. On the other hand, because the intrinsic evidence does not consistently use "read out" synonymously with "selected," the word "selected" will be retained in construction of this term.

The Court construes "selected on the basis of" to mean "selected from among the stored pitch-angle command values in memory based on."

C. "Pitch-angle command values" and "common-pitch-angle command value"

Finally, the parties dispute the terms "pitch-angle command values" and "common-pitch-angle command value." The former term appears several times in the asserted claims; the later appears only in the final, "pitch-angle-command value generating device" element.

1. The Parties' Proposed Constructions

Mitsubishi asserts that these terms should not be construed by the Court. Acknowledging that the specialized term of art "pitch angle" requires some explanation to the jury, Mitsubishi maintains that such an explanation could be supplied by the parties' experts rather than through a jury instruction. Mitsubishi proposes that, at most, "pitch angle command value" should be defined as "a value of blade pitch angle."

GE maintains that these terms are not within the ken of ordinary jurors, are confusingly similar, and should be construed by the Court. GE proposes that "pitch-angle command values" be construed as "individual pitch values for each of the blades" and that "common pitch-angle command value" be construed as "a pitch value that applies equally to all of the blades."

2. The Court's Construction

In arguing for constructions of these two terms, GE notes that the terms are similar but have different meanings, especially in the context of the '185 Patent. GE notes that pitch-angle command values are stored in the memory device and selected from the memory unit based on azimuth angles and predetermined parameters, whereas the "common-pitch-angle command values" are determined from generator output, with a single value being used by all of the blades.

GE's proposed constructions of these terms are problematic, however, because they do not allow for ready substitution into the patent without some odd results. In the "command-value receiving device element, if GE's proposed construction of "individual pitch values for each of the blades" is substituted for "pitch-angle command values," the result would be that this element would read: "a command-value receiving device that receives the **individual pitch values for each of the blades** for each of the blades from the memory device, the **individual pitch values for each of the blades** being selected on the basis of the azimuth angle of each blade detected by the azimuth-angle detecting device and the predetermined parameters detected by the parameter-detecting device." Thus, "for each of the blades" would be repeated the first time the element appears. Additionally, if the proposed substitutions were made in the "pitch-angle-control command-value generating device" element, it would read "a pitch-angle-control command-value generating device that generates pitch-angle-control command values for individually controlling the pitch-angle of each blade on the basis of the **individual pitch values for each of the blades** received by the command-value receiving device and **a pitch value that applies equally to all of the blades that is common to each blade**, the **pitch value that applies equally to all of the**

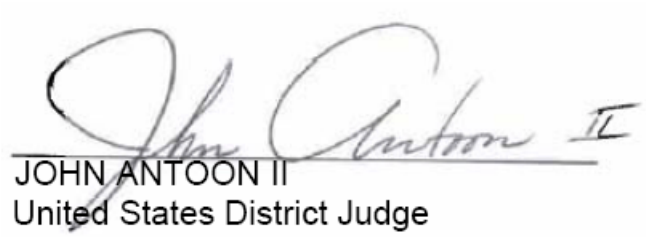
blades being determined by output information of the wind power generator." These results are nonsensical.

Thus, GE's proposed construction is not workable, and Mitsubishi objects to the addition of the word "individual" to "pitch-angle command values." Although these terms are terms of art, the meanings of them and other concepts pertaining to individual pitch control and collective pitch can be explained to a jury through witness testimony rather than through claim construction. The Court will not recast these terms.

IV. Conclusion

In accordance with the foregoing, it is **ORDERED** and **ADJUDGED** that GE's Markman Motion (Doc. 109) and Mitsubishi's Markman Motion (Doc. 113) are **GRANTED in part** and **DENIED in part** as set forth herein.

DONE and **ORDERED** in Orlando, Florida this 5th day of July, 2012.



JOHN ANTOON II
United States District Judge

Copies furnished to:
Counsel of Record