United States District Court,
W.D. Texas, Midland-Odessa Division.

OILFIELD EQUIPMENT MARKETING, INC,
Plaintiff.
v.
NEW TECH SYSTEMS, INC,
Defendant.

Civil Action No. MO-02-CA-183

Sept. 2, 2005.

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MEMORANDUM OPINION

RESTANI, District Judge.FN*

FN* The Honorable Jane A. Restani, Chief Judge, United States Court of International Trade, sitting by designation.

This patent case is before the court on the issue of claim construction. On December 23, 2002, Plaintiff Oilfield Equipment Marketing, Inc. ("OEM") filed suit against Defendant, New Tech Systems, Inc. ("NTS"), its competitor in the field of manufacturing and selling oilfield pipe testing equipment, alleging patent infringement. On May 18-19, 2004, the court conducted a claim construction hearing in accordance with Markman v. Westview Instruments. Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Having considered the parties joint claim construction chart, briefs, and other evidence, the court renders the following opinion.

I. Background

Drill pipes and other ferrous goods are used and reused in the oilfield industry. Because of the significant risk of physical, environmental, and economic harm that could result from a break or leak in such pipes, inspection is critically important. Magnetic inspection is a commonly used technique involving magnetizing a pipe and then detecting the fluctuations in the magnetic field caused by irregularities. Different types of irregularities cause well-known patterns that can be detected and identified.

On September 23, 1997, U.S. Patent No. 5,671,155, the Edens et al. ("155 patent"), was issued to OEM. The 155 patent covers an apparatus that detects and classifies irregularities in ferrous pipe according to type. 155

patent, Abstract. Specifically, the apparatus includes a magnetic coil that encircles a pipe and induces a magnetic field. Id., Summary of the Invention, col. 2, 1.30-31. Inside the coil are a number of inspection shoes that measure changes in the induced magnetic field and produce signals representative of those changes. Id., col. 2, 1. 32-33. Those signals are digitized to produce machine readable data and are inputted by a processor. Id., col. 2, 1. 35-39. The processor then processes the signals according to frequency to classify them by type of irregularity. Id., col. 2, 1. 39-41. The processor further scales the signals to eliminate any signals less than a threshold value, and finally displays the analyzed signals according to type of irregularity in the ferrous pipe. Id., col. 2, 1. 41-46.

This apparatus improves over earlier analog signal processing systems as well as prior art digital methods because neither perform frequency analysis. FN1 155 patent, Related Art, col. 1, 1. 40-46; col. 2, 1. 11-13; Detailed Description of the Preferred Embodiment [hereinafter Preferred Embodiment], col. 13, 1. 56-58. Frequency processing eliminates noise from the magnetic field signals and allows a computer to distinguish real irregularities from false indications. Id., Related Art, col. 2, 1. 13-16. Additionally, frequency processing permits the classification of irregularities according to type, and permits ferrous pipe testing in real time. Id., Summary of the Invention, col. 2, 1. 46-52.

FN1. Plaintiff's witness testified that frequency filtering may be done with analog circuitry or by digitizing the signal. *See Markman* Hr'g Tr. (May 18, 2004), Danford Test., at 70. The 155 patent explains, however, why digital methods are superior. *See* 155 patent, Description of the Related Art [hereinafter Related Art], col. 1, 1. 42-46 ("[A]n analog signal processor does not provide frequency information because it cannot determine frequency without continuous user monitoring. Such user monitoring would diminish inspection speed to a point where it would be economically unfeasible."); *see also* Steven W. Smith, THE SCIENTIST AND ENGINEER'S GUIDE TO DIGITAL SIGNAL PROCESSING, Ch. 14, 261 (1997), *available at,* http://www.dspguide.com/ ("Digital filters are used for two general purposes: (1) separation of signals that have been combined, and (2) restoration of signals that have been distorted in some way. Analog (electronic) filters can be used for these same tasks; however, digital filters can achieve far superior results.").

II. Applicable Law

The threshold issue in any patent infringement action is claim construction. The claims of a patent "define the scope of the patented invention." Vitronics Corp. v. Conceptronic. Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). Claim construction is a matter of law for the court to decide. Markman, 517 U.S. at 384. In order to ascertain the meaning of claims, the court must look first to intrinsic evidence. Vitronics Corp., 90 F.3d at 1582. Intrinsic evidence includes the actual words of "the claims, the specification and, if in evidence, the prosecution history." *Id*.

Claim interpretation begins with the actual words of the claims. Bell Commc'ns Research. Inc. v. Vitalink Commc'ns Corp., 55 F.3d 615, 619-20 (Fed.Cir.1995). In general, the words, phrases, and terms in the claims should be given their ordinary and accustomed meaning to one skilled in the art in question at the time of the invention. Innova/Pure Water. Inc. v. Safari Water Filteration Sys., Inc., 381 F.3d 1111, 1116 (Fed.Cir.2004). The context of the surrounding words of the claim must also be considered in determining the ordinary and customary meaning of those terms. ACTV. Inc. v. The Walt Disney Co., 346 F.3d 1082, 1088 (Fed.Cir.2003). Furthermore, similarities with and differences among other claims can be a useful guide in understanding the meaning of particular claim terms. *Phillips v. AWH Corp.,* No. 03-1269, -1286,

2005 U.S.App. LEXIS 13954, at (Fed.Cir. July 12, 2005).

Claims, however, do not stand alone. *Id*. Rather, they are part of a fully integrated written instrument, and "must always be read in light of the specification." In re Fout, 675 F.2d 297, 300 (C.C.P.A.1982). The specification contains "a written description of the invention, and of the manner and process of making and using it." 35 U.S.C. s. 112 (2000). Therefore, it "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." Vitronics Corp., 90 F.3d at 1582. "The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication." *Id*. (citing Markman v. Westview Instruments. Inc., 52 F.3d 967, 979 (Fed.Cir.1995)): *see also* Irdeto Access. Inc. v. Echostar Satellite Corp., 383 F.3d 1295, 1300 (Fed.Cir.2004) ("Even when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.") (citations and quotations omitted). In order to avoid importing limitations into the claims from the specification, however, "it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so." *Phillips,* 2005 U.S.App. LEXIS 13954, at (citation omitted). The manner in which a term is used within the specification and claims will usually indicate whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature. *Id*. *56-*57.

In addition to the specification, a court may also consider the patent's prosecution history to determine the meaning of disputed claim terms. *Id*. at *35. The prosecution history is the complete record of all proceedings before the Patent and Trademark Office ("PTO") and includes the prior art cited during the examination of the patent. *Id*. Because the prosecution history reflects the ongoing negotiation between the PTO and the applicant, rather than the final product, it often lacks the clarity of the specification and may be less useful for claim construction purposes. *Id*. at *36. "Nonetheless, the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood 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*. at *36-*37 (citations omitted).

Although most claims can be construed on the basis of intrinsic evidence, extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises," may also be considered. Markman, 52 F.3d at 980. Extrinsic evidence may assist the court in better understanding the underlying technology and the way in which one skilled in the art might use the terms, but it cannot be used to vary or contradict the claim language. *Phillips,* 2005 U.S.App. LEXIS 13954, at *38; Vitronics Corp., 90 F.3d at 1584, n. 6. A court, however, must keep in mind that extrinsic evidence is not part of the patent, may not be written by or for skilled artisans, and may be generated for the purpose of litigation and suffer from bias not present in intrinsic evidence. *Phillips,* 2005 U.S.App. LEXIS 13954, at *40-*41. Accordingly, a court must exercise "sound discretion" in admitting and using such evidence. *Id*. at *42.

III. Disputed Claim Terms

The 155 patent contains 33 enumerated claims. As an initial matter, the parties dispute the meaning of the phrase "processing said signals according to frequency to classify said signals by type of irregularity in the ferrous pipe," which is set forth in both the third element of claim 1 and the fourth element of claim 20.FN2

FN2. Claim 1 states:

An apparatus for detecting irregularities in a ferrous pipe, comprising:

means for inducing a magnetic field in the ferrous pipe;

means for measuring changes in the induced magnetic field and for producing signals representative of those changes;

means for *processing said signals according to frequency to classify said signals by type of irregularity in the ferrous pipe;* and

means for displaying said frequency processed signals according to type of irregularity in the ferrous pipe.

155 patent, claim 1 (emphasis added).

Claim 20 states:

A method for detecting irregularities in a ferrous pipe, comprising the steps of:

inducing a magnetic field in the ferrous pipe;

measuring changes in the induced magnetic field;

producing signals representative of those changes;

processing said signals according to frequency to classify said signals by type of irregularity in the ferrous

pipe; and

displaying said frequency processed signals according to type of irregularity in the ferrous pipe.

Id., claim 20 (emphasis added).

"Processing Said Signals According to Frequency to Classify Said Signals by Type of Irregularity in the Ferrous Pipe"

OEM asserts that this phrase should be construed as "manipulating-e.g., selectively enhancing or attenuating, such as by filtering-the referred to signals utilizing their constituent frequency content as a basis for sorting the signals into groups of signals that may indicate the presence of flaws or signals that may indicate the presence of wall losses in the ferrous pipe under test." Pl.'s Br. on Claim Construction Issues (Jan. 5, 2005), at 12 [hereinafter PL's Br.]. NTS argues that OEM's construction improperly broadens the scope of the 155 patent, and insists the proper construction is "[d]igital filtering of a broadband signal source by frequency in order to accomplish a classification of that source signal into frequencies known to represent wall loss changes and frequencies known to represent flaws in a ferrous pipe." Def.'s Resp. Br. on Claim Construction Issues (March 7, 2005), at 9 [hereinafter Def.'s Br.].

Before addressing the areas of disagreement over this phrase, the court notes two areas of agreement. First, the parties appear to agree that "processing" denotes a type of "filtering"-OEM refers to "processing" as "manipulating-e.g., selectively enhancing or attenuating, such as by filtering," while NTS defines "processing" as "digital filtering." The language of other claims and the specification support this construction. *See, e.g.,* 155 patent, claims 13, 14 ("processing processes ... by applying a ... filter"); claims 28, 29 ("processing ... comprises the step of applying a ... filter"); Preferred Embodiment, col. 13, l. 19-34 ("In this preferred embodiment, [the] processor implements a ... filter using standard digital processing techniques .... [The processor applies a digital band pass filter ... [and] concurrently applies a digital low pass filter ....").

Second, the parties seem to agree that "type of irregularity" refers to "flaws" and "wall loss." FN3 OEM defines "type of irregularity" as "signals that may indicate the presence of flaws or signals that may indicate the presence of wall losses in the ferrous pipe under test" and NTS proposes that "type of irregularity" means "frequencies known to represent wall loss changes and frequencies known to represent flaws in a ferrous pipe." FN4 Moreover, the intrinsic evidence clearly indicates that the patentee intended the phrase to mean "wall loss" and "flaw." *See, e.g.,* 155 patent, claims 13, 28 ("irregularities classified as flaws"); claims 14, 29 ("irregularities classified as wall losses"); Figure 9 (illustrating isolation of "flaws" and "wall loss"); Figure 11 (depicting display screen of pipe tester, separating wall loss from flaw detection); Preferred Embodiment, col. 4, l. 11-19 ("Typical irregularities include ... flaws .... Irregularities further typically include wall loss .... The linear Hall transducers detect those changes and produce a voltage with the magnitude corresponding to the magnitude of the flaw or wall loss."); PTO Response "A" (Jan. 13, 1997), at 2 ("type of irregularities in a ferrous pipe (i.e., wall loss and flaws)"): *see also N.* Telecom Ltd. v. Samsung

Elecs. Co., 215 F.3d 1281, 1295 (Fed.Cir.2000) ("The plain and ordinary meaning of claim language controls, unless that meaning ... is overcome by a special definition that appears in the intrinsic record with reasonable clarity and precision.").

FN3. The patent explains the difference between flaws and wall loss: Typical irregularities include transversely oriented flaws such as fatigue cracks, pits, and inclusions and longitudinally oriented flaws such as laps, seams, weld line hook cracks, and quench cracks. Irregularities further typically include wall loss which may be localized or full length eccentric such as rod wear, fluid erosion, and mandrel drift." *Id.,* col. 4, l. 11-17.

FN4. Although NTS initially rejected this definition, *see* Brief in Support of Def.'s Claim Construction (Apr. 20, 2004), at 7-9, it now appears to agree that "by type of irregularity" means "wall loss" or flaw," *see* Def.'s Br. at 9.

The parties disagree, however, over (A) the type of filtering to which "processing" refers; (B) the meaning of the term "said signals;" and (C) the meaning of the phrase "according to frequency to classify said signals by type of irregularity."

A. Type of Filtering to Which "Processing" Refers

As discussed above, the parties agree that one skilled in the art would interpret "processing" as "filtering." They disagree, however, over the type of filtering to which "processing" refers.FN5 OEM proposes that "processing" is "manipulating-e.g., selectively enhancing or attenuating, such as by filtering," which would encompass both analog and digital filtering. In contrast, NTS contends that "processing" is limited to "digital filtering."

FN5. As discussed above, signals can be filtered through analog or digital processing techniques. *See supra* at note 1.

The court rejects OEM's proposed definition on several grounds. First, it is unsupported by the patent specification or the prosecution history. *See* Novartis Pharm. Corp. v. Eon Labs Mfg., Inc., 363 F.3d 1306, 1310 (Fed.Cir.2004) (in choosing among multiple definitions, the court must consult the intrinsic record to determine which of the possible meanings is most consistent with the use of words by the inventor). Moreover, OEM's reliance primarily on external evidence such as dictionary definitions "risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is its specification." *Phillips,* 2005 U.S.App. LEXIS 13954, at *49. Finally, OEM's definition, which includes various terms including "manipulating," "selectively enhancing or attenuating," adds nothing to the definition of "filtering." *See* Power Mosfet Techs., L.L.C. v. Siemens AG, 378 F.3d 1396, 1410 (Fed.Cir.2004) (interpretations that render language of the claims superfluous are disfavored).

On the other hand, NTS's proposed definition finds support in the intrinsic evidence. In particular, the specification emphasizes the invention's use of digital signal processing. *See* 155 patent, Related Art, col. 1, l.38-51; col. 2, l. 21-26 (describing the advantages of digital signal processing techniques over previously-known analog systems); Summary of the Invention, col. 2, l. 46-48 ("It is ... an object of the present

invention to provide a pipe tester that employs digital signal processing techniques to accomplish ferrous pipe testing in real time."); Figure 9 (a flow chart illustrating the application of "digital filters" to isolate flaws and wall loss); Preferred Embodiment, col. 13, 1. 20-21 (describing how the preferred embodiment "us[es] standard digital processing techniques" '): *See also Phillips,* 2005 U.S.App. LEXIS 13954, at (explaining that "[i]t is ... entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims").FN6 Moreover, neither analog signal processing nor analog filtering is mentioned in the specification. *See generally,* 155 patent; *see also Markman* Hr'g Tr., Danford Test., at 77 (testifying that analog was never referenced in the 155 patent); *Phillips,* 2005 U.S.App. LEXIS 13954, at ("upon reading the specification ... it will become clear whether the patentee is setting out specific examples of the invention to [teach a person of ordinary skill in the art how to practice the invention in a particular case], or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive").

FN6. In the *Markman* hearing, OEM stipulated that the embodiment shown in the specification is all digital, *see Markman* Hr'g Tr. at 127-28, apparently relying on the principle of claim construction that limitations in the specification cannot be read into claims. The Federal Circuit, however, recently counseled against rigidly applying this rule. *See Phillips,* 2005 U.S.App. LEXIS 13954, at ("attempting to resolve th[e] problem in the context of the particular patent is likely to capture the scope of the actual invention more accurately than either strictly limiting the scope of the claims to the embodiments disclosed in the specification or divorcing the claim language from the specification"). Moreover, in this case, the patentees explicitly recognized that "[i]t is ... an object of the *present invention* to provide a pipe tester that employs digital signal processing techniques." 155 patent, Summary of the Invention, col. 2, 1. 46-48 (emphasis added); *see also* Genzvme Corp. v. Transkarvotic Therapies, Inc., 346 F.3d 1094, 1099 (Fed.Cir.2003) (noting that "the 'Summary of the Invention' explicitly [referred to] the 'present invention,' not merely a preferred embodiment"); SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343 (Fed.Cir.2001) ("[T]he characterization of the coaxial configuration as part of the 'present invention' is strong evidence that the claims should not be read to encompass the opposite structure."); *Ocean Innovations, Inc. v. Archer,* No. 04-1528, -1536, 2005 U.S.App. LEXIS 17775, at *11-*12 (Fed.Cir. Aug. 19, 2005) ("We do not think that to construe the 'floatation units' as hollow is importing a limitation into the claims when the specification makes clear that hollowness is an inherent characteristic of the 'flotation units' in the claimed invention.").

Furthermore, the prosecution history of the 155 patent shows how the inventor overcame s. 102 FN7 rejections of claims 1 and 20 by explaining that the invention covered by the 155 patent, which "utiliz[es] digital signal processing techniques," is not anticipated by the prior Fowler patent, which "simply does not perform any digital signal processing according to frequency." PTO Response "A" at 1-2. Similarly, to overcome a s. 103 FN8 rejection of several claims that are dependent on claims 1 and 20, the patentees stated, "Where in Fowler, et al. is it taught or suggested to digitally signal process according to frequency ... ?" *Id.* at 3. Therefore, the prosecution history also demonstrates that the 155 patent is limited to digital filtering.

FN7. To obtain a patent, an applicant must show that the invention is novel. 35 U.S.C. s. 102.

FN8. An applicant must also show that the intention is non-obvious. 35 U.S.C. s. 103.

In light of the patentee's reliance on digital signal processing to explain the scope of the patent, the court concludes that one skilled in the art would understand that "processing" means "digital filtering." The court construes the word accordingly. *See* Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics. Inc., 976 F.2d 1559, 1566-67 (Fed.Cir.1992) (it is proper to interpret claim terms in light of the "fundamental purpose and significance" of the invention).

B. "Said Signals"

The term "said signals" is set forth twice in the disputed phrase. OEM insists that "said signals" means "the referred to signals" and "the signals" respectively, while NTS contends that "said signals" refers to first, "a broadband signal source" and next, "that source signal." Neither party explains its proposed definition.

Because "the same word appearing in the same claim should be interpreted consistently," Digital Biometrics, Inc. v. Identix. Inc., 149 F.3d 1335, 1345 (Fed.Cir.1998), the parties both mistakenly interpret the term "said signals" in two different ways. The use of the term "signals" in the other claim elements, however, sheds light on the proper interpretation of "said signals" in the disputed element. *See Phillips,* 2005 U.S.App. LEXIS 13954, at (citing Vitronics Corp., 90 F.3d at 1582) ("Other claims of the patent in question ... can also be valuable sources of enlightenment as to the meaning of a claim term."); *see id*. ("the usage of a term in one claim can often illuminate the meaning of the same term in other claims") (citations omitted). Specifically, the third element of claim 1 and the second and third elements of claim 20 state that "signals" are "signals representative of those changes," and that "changes" are "changes in the induced magnetic field." *See supra* note 2. Thus, the court construes "said signals" in the disputed elements as "signals representative of changes in the induced magnetic field."

C. "According To Frequency To Classify Said Signals by Type of Irregularity"

OEM contends that "according to frequency to classify said signals by type of irregularity" means "utilizing [the referred to signals'] constituent frequency content as a basis for sorting the signals into groups of signals that may indicate the presence of flaws or signals that may indicate the presence of wall losses." NTS, on the other hand, contends that the phrase means "by frequency in order to accomplish a classification of that source signal into frequencies known to represent wall loss changes and frequencies known to represent flaws."

1. "According to Frequency"

First, OEM initially defines the term "according to [frequency]" to mean "as determined by [frequency]," PL's Br. at 6, but ultimately construes it as "utilizing [the referred to signals'] constituent frequency content." *Id*. at 12. NTS, however, proposes that "according to frequency" means "by frequency." Def.'s Br. at 9. There is a "heavy presumption" that terms used in claims "mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art." Texas Digital Sys., Inc. v. Telegenix. Inc., 308 F.3d 1193, 1202 (Fed.Cir.2002). The court finds that the term "according to" is sufficiently clear and that the parties' proposed interpretations add no further clarity. Moreover, nothing in the specification or prosecution history rebuts the presumption that "according to frequency" carries anything but its ordinary meaning. *See* Brookhill-Wilk 1, LLC v. Intuitive Surgical. Inc., 334 F.3d 1294, 1298-99 (Fed.Cir.2003); *see also* WEBSTER'S NEW INT'L DICTIONARY 12 (3d ed.1981) (defining "according to" as "in conformity with"). In fact, the phrase is consistently used throughout the patent. *See, e.g.,* 155 patent, claims 13, 14, 28, 29; Abstract; Summary of the Invention, col. 2, l. 39-40; Preferred Embodiment, col. 13, l. 59-60. Thus, the court concludes that "according to frequency" requires no

construction.

2. "To"

Next, the parties appear to dispute whether the second "to" in the disputed phrase, means "as a basis for" (OEM), or whether it means "in order to" (NTS). NTS argues that OEM's interpretation is too broad and would cover not only those devices that perform signal processing in order to classify the signals by type of irregularity, but also any device that performs any type of processing, or filtering of the signal. Def.'s Br. at 6. The court agrees with NTS. The ordinary meaning of "to" is "movement or an action or condition suggestive of movement toward." WEBSTER'S NEW INT'L DICTIONARY 2401. "In order to" has a similar meaning. *See* id. at 1588 (defining "in order to" as "for the purpose of; as a means to"). On the other hand, "as a basis for," implies "a foundation for the parts above." *See* id at 182. Such an interpretation of "to" is not supported by the intrinsic evidence. Instead, the intrinsic evidence supports NTS's interpretation.

First, the terms "processing said signals" and "classify said signals" in the disputed elements are not separated by punctuation, indicating the patentee's intent for the terms to mean processing "in order to," or "for the purpose of" classifying. *See* 155 patent, claims 1, 20. Second, the phrase used in other claims indicates that processing is "in order to" classify. *See* id. claims 13, 14, 28, 29 ("processing ... *to determine* irregularities") (emphasis added). Finally, the Summary of the Invention states that the invention "employ[s] frequency analysis *to permit* the classification of irregularities according to type." Id. at col. 2, l. 49-51 (emphasis added). Therefore, the court adopts NTS's construction and interprets "to" to mean "in order to."

3. "Classify Said Signals By Type of Irregularity"

As discussed above, the parties agree that "type of irregularity" refers to "wall loss" and "flaws." They disagree, however, over the meaning of the larger phrase "classify ... by type of irregularity." OEM interprets the phrase to mean "sorting the signals into groups of signals that may indicate the presence of flaws or signals that may indicate the presence of wall losses" while NTS proposes a definition of "accomplish a classification of that source signal into frequencies known to represent wall loss changes and frequencies known to represent flaws."

The ordinary and clear meaning of "classify" is "to group or segregate in classes ... usually founded on common properties." WEBSTER'S NEW INT'L DICTIONARY 417. The parties appear to agree to such a definition. *See* PL's Br. at 6 ("sort into groups that have common properties"); Def.'s Br. at 12 ("to arrange in classes"). Although the specification uses the term "classify," it also uses the term "isolate." *See* 155 patent, Preferred Embodiment, col. 13, l.26-29 ("digital frequency isolation"); col. 13, l.16-18 ("the digital band pass filter isolates the band pass frequencies from the low frequencies associated with wall loss as well as the ultra high frequency spikes induced by power supply switching and other noise components"); col. 13., l. 43-47 ("the digital low pass filter isolates the low pass frequencies from the high frequencies associated with flaws as well as the ultra high frequency spikes induced by power supply switching and other noise components"); Figure 9 (illustrating how the application of digital band pass filter "isolate[s] flaws," and the application of a digital low pass filter "isolate[s] wall loss"). "Isolate" carries a meaning similar to "classify." *See* WEBSTER'S NEW INT'L DICTIONARY 1199 ("to set apart from others").

Therefore, the court concludes that "classify" should be interpreted according to its ordinary meaning, "classify," or as "isolate." Accordingly, the court construes the phrase "classify said signals by type of irregularity" to mean "classify or isolate signals representative of flaws and signals representative of wall loss." FN9 *See* Vitronics Corp., 90 F.3d at 1582 ("The specification acts as a dictionary ... when it defines

terms by implication.").

FN9. The parties also disagree over whether the "classification" is of "signals that *may indicate the presence of* flaws or wall loss" (OEM), or "frequencies *known to represent* wall loss [or] flaws (NTS). The claim language, however, clearly states that the "classification" is of "said signals." And, as discussed above, "said signals" are defined in the earlier elements as "signals *representative of* changes in the induced magnetic field." *See* discussion *supra* at Part III.B (emphasis added). The court declines to further broaden or limit the claim language according to the parties' suggestions. *See* Texas Instruments. Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1171 (Fed.Cir.1993) ("[C]ourts can neither broaden nor narrow claims to give the patentee something different than what he has set forth.") (citation omitted).

IV. Conclusion

The court construes the disputed phrase "processing said signals according to frequency to classify said signals by type of irregularity in the ferrous pipe," as "digital filtering of signals representative of changes in the induced magnetic field according to frequency in order to classify or isolate signals representative of flaws and signals representative of wall loss in the ferrous pipe." FN10

FN10. The court defers construction of the other disputed claim terms pending a review of the parties' cross-motions for summary judgment.

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Oilfield Equipment Marketing, Inc. v. New Tech Systems, Inc.