

United States District Court,
N.D. California.

IMMERSION CORPORATION,
Plaintiff.

v.

**SONY COMPUTER ENTERTAINMENT AMERICA, INC.; Sony Computer Entertainment, Inc.;
and Microsoft Corporation,**
Defendants.

No. C 02-0710 CW

Oct. 2, 2003.

CLAIM CONSTRUCTION ORDER

CLAUDIA WILKEN, District Judge.

Plaintiff Immersion and Defendants Sony Computer Entertainment America, Inc. and Sony Computer Entertainment, Inc. (collectively, Sony) FN1 dispute the meaning of several terms and phrases used in U.S. Patent No. 6,275,213 ('213 patent) and U.S. Patent No. 6,424,333 ('333 patent). Immersion and Sony each ask the Court to adopt its proposed construction of the disputed terms and phrases. The matter was heard on April 25, 2003. Having considered the parties' papers, the evidence cited therein and oral argument, the Court construes the disputed terms and phrases as set forth below.

FN1. Immersion settled its claims against Defendant Microsoft Corporation after the claim construction hearing.

BACKGROUND

Immersion is the assignee of the '213 patent and the '333 patent. According to their respective abstracts, the patents each disclose a "man-machine interface which provides tactile feedback to various sensing body parts." More specifically, also according to the respective abstracts, "[t]he device employs one or more vibrotactile units, where each unit comprises a mass and a mass-moving actuator. As the mass is accelerated by the mass-moving actuator, the entire vibrotactile unit vibrates. Thus, the vibrotactile unit transmits a vibratory stimulus to the sensing body part to which it is affixed." Immersion alleges that Sony's PlayStation game console infringes the patents-in-suit. Now before the Court are the parties' respective positions on claim construction.

LEGAL STANDARD

The interpretation of patent claims is a question of law to be decided by the Court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 371-73 (1996). In construing a claim, the Court must look first to the

specific words of the claim. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). "[T]he claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." *Renishaw PLC v. Marposso Societa per Azioni*, 158 F.3d 1243, 1248 (Fed.Cir.1998).

Words in the claim are generally given their ordinary meaning. *Id.*; *see also* *Texas Digital Sys., Inc. v. Telegenix Inc.*, 308 F.3d 1193, 1202 (Fed.Cir.2002) ("The terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art."). "The ordinary meaning of a claim term may be determined by reviewing a variety of sources, including the claims themselves, other intrinsic evidence including the written description and the prosecution history, and dictionaries and treatises." *Teleflex, Inc. v. Ficoso N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed.Cir.2002) (internal citations omitted).

While words in the claim are generally given their ordinary meaning, the specification or prosecution history may indicate otherwise. *Vitronics Corp.*, 90 F.3d at 1582. "[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition is clearly stated in the patent specification or file history." *Id.* However, claims are not limited to the preferred embodiment described in the specification. *See SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed.Cir.1985) (*en banc*, plurality opinion).

DISCUSSION

I. Fastened to a Sensing Body Part

Sony argues that all of the asserted claims of the patents-in-suit should be construed to require that a device be fastened to a sensing body part. However, while the patent specification and drawings do contain a significant number of references to a fastening means, none of the asserted claims recites a fastening means as an element. Undaunted by the claims' failure to explicitly recite a fastening means, Sony argues that a fastening means limitation should be read into the claims through the preambles of the claims. More specifically, Sony argues that the term "vibrotactile unit," as used in the preambles of all the independent claims of the '213 patent other than claim 7, should be construed to be a device that is fastened to a sensing body part. Further, Sony argues that claim 7, which does not include a "vibrotactile unit" in its preamble, recites a generic means for delivering vibrations to a sensing body part, and so should be limited pursuant to 35 U.S.C. s. 112(6) FN2 to the corresponding structures in the specification for performing the function of delivering vibrations to a sensing body part, namely fastening a vibrotactile unit to a sensing body part. Similarly, Sony argues that the phrase "to provide tactile feedback to the user" used in the preambles of all the independent claims of the '333 patent should be construed to require that a vibrotactile unit be fastened to the sensing body part to provide such tactile feedback. Alternatively, Sony argues that the claims of the '333 patent should be construed as step-plus-function claims pursuant to 35 U.S.C. s. 112(6).

FN2. 35 U.S.C. s. 112(6) allows patentees to express their claims in functional, rather than structural, language. If a patentee expresses its claim in functional language, the Court construes the claim by first identifying the function explicitly recited in the claim and then consulting the specification to determine the structures that correspond to this function.

All of Sony's arguments depend upon the Court construing the preambles as claim limitations. However, "[g]enerally, the preamble does not limit the claims." *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d

1336, 1346 (Fed.Cir.2002). "If the body of a claim sets out the complete invention, and the preamble is not necessary to give life, meaning and vitality to the claims, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation." *Schumer v. Lab. Computer Sys., Inc.*, 308 F.3d 1034, 1310 (Fed.Cir.2002) (internal quotation marks omitted). Here, Sony argues that the preamble should be construed because it is necessary to give life, meaning, and vitality to the claims, namely because the specification of the '213 patent is replete with references to fastening a vibrotactile unit to a sensing body part in order to deliver tactile sensations to a sensing body part and only the preamble addresses this requirement. However, "the claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." *Renishaw PLC*, 158 F.3d at 1248. The claims themselves do not include the requirement that the tactile sensations be delivered to a sensing body part through a fastening means; it is only the preamble that could be read to include this requirement. However, the preamble cannot be necessary to give meaning to the claims by incorporating a fastening means requirement, because it is only the preamble that could possibly be read to include such a requirement.FN3

FN3. Sony's argument that the preamble to claim 7 is subject to 35 U.S.C. s. 112(6) because it does not recite sufficient structure for providing tactile sensations to a sensing body part is also a circular argument.

Moreover, the inclusion of references to a fastening means in the patent's specification and drawings is explained by the prosecution history of the patents-in-suit. The patents-in-suit are continuations of an earlier patent, U.S. Patent No. 6,088,017 ('017 patent). Therefore, they share a common specification with the '017 patent. The '017 patent does explicitly include a fastening means as an element of the claims, whereas neither of the patents-in-suit include such a limitation in the claims. This difference was noted by the Patent Office Examiner, who stated that the application that became the '213 patent was a "broader version" of the claims of the '017 patent, and then cited the lack of a fastening means element in support of this interpretation. This prosecution history strongly suggests that the fastening means limitation of the '017 patent should not be incorporated into the claims of the '213 and '333 patents by virtue of repeated references to fastening means in their shared specifications. *See Advanced Cardiovascular Sys. v. Medtronic, Inc.*, 265 F.3d 1294, 1305-06 (Fed.Cir.2001) (rejecting the alleged infringer's attempt to read a limitation into the claims of a later-issued patent on the basis of the prosecution history of the earlier-filed application of a related patent because "none of the [later-issued patent's] claims explicitly state [the disputed limitation]" and "[t]he patentee's whole point in filing the application that resulted in the [later-issued] patent was to secure broader claims").

Therefore, the Court declines to construe the preambles to the asserted claims.FN4 Because the Court declines to construe the preambles, the Court concludes that a "fastening means" is not a required element of the asserted claims, because there is no basis in the language of the claims for importing such an element.

FN4. Because the Court has declined to construe the preambles, the Court does not construe the term "vibrotactile unit," which is used only in the preambles.

II. Variable State Signal

The parties dispute the meaning of the phrase "variable state signal" as used in claims 7 and 15 of the '213 patent. Immersion argues that the phrase should be construed to mean "a determination of a physical or

virtual state or condition that may vary," while Sony argues that the phrase should be construed to mean "a signal that measures a physical or virtual state or condition that may vary ." FN5 The Court rejects both proposed definitions, Immersion's because it uses the term "determination" without any support in the specification and Sony's because it uses the term signal to define itself. Instead, the Court construes the phrase "variable state signal" to mean "a machine-readable measurement of a physical or virtual state or condition that may vary." *See* '213 patent 3 :3-4.

FN5. Sony also argues that this phrase as used in claim 7 is indefinite because the claim refers to "said variable state signal" rather than "a variable state signal." However, the Court finds that the reference to "said variable state signal" rather than "a variable state signal" is a simple typographical error. Sony does not adequately explain why such a simple typographical error should render the claim indefinite.

III. Eccentric Mass Mounted on Said Shaft

The parties dispute the meaning of the phrase "eccentric mass mounted on said shaft" as used in claims 7 and 15 of the '213 patent and claims 14, 15, and 17 of the '333 patent. Immersion argues that the phrase should be construed to mean "a mass mounted on a shaft such that its center of mass is offset from the axis of rotation to induce vibrations when rotating." Sony, however, proposes that the phrase be construed to mean "a mass mounted on a shaft such that its center of mass is offset from the axis of rotation." Sony argues the inclusion of a functional result, the creation of vibrations, is not supported by the claim language and is in fact redundant of other claim limitations that address the creation of vibrations. The Court agrees with Sony. There is no support in the claim language for adding a functional limitation to the claim language. Therefore, the Court construes the phrase "eccentric mass mounted on said shaft" to mean "a mass mounted on a shaft such that its center of mass is offset from the axis of rotation."

IV. Vibration

The parties dispute the meaning of the term "vibration" as used in claims 7, 15, 19, 41, 43, 44, and 45 of the '213 patent and claims 14 and 17 of the '333 patent. Immersion argues that vibration should be defined according to its ordinary meaning as "a periodic change in force vector, i.e., an oscillating force." In propounding this definition, Immersion relies on Federal Circuit precedent that focuses on determining the ordinary meaning of claim terms by consulting treatises and dictionaries. *See, e.g., Texas Digital Sys.*, 308 F.3d at 1204 ("Consulting the written description and prosecution history as a threshold step in the claim construction process, before any effort is made to discern the ordinary and customary meanings attributed to the words themselves, invites a violation of our precedent counseling against importing limitations into the claims."). Sony, however, argues that vibration should be defined as a "change in force vector," according to the definition of vibration given in the specification. Sony relies on Federal Circuit precedent that emphasizes the primacy of the specification and the patentee's role as lexicographer. *See Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989-91 (Fed.Cir.1999). Immersion's attempt to rely on a dictionary definition of vibration in light of the patent's explicit definition of the term flies in the face of Federal Circuit precedent. Even the *Texas Digital* court, which emphasized the importance of determining the ordinary meaning of claims terms through reference to dictionaries and treaties, acknowledged that "the presumption in favor of a dictionary definition will be overcome where the patentee, acting as his or her lexicographer, has clearly set forth an explicit definition of the term different from its ordinary meaning." *Id.* Here, Immersion acted as its own lexicographer. The patent's specification contains an explicit definition of vibration, and that definition must be followed.

Although Sony is correct that the specification's definition of "vibration" controls, Sony's proffered definition does not accurately reflect the specification's definition of the term. The specification defines vibration as "a change in [the] force vector (i.e., direction or magnitude)," '213 patent 2 :27-28, of a "rotating mass," '213 patent 2 :21, that "feels to the user as a vibration," '213 patent 2 :22-23, i.e. an oscillating force. Thus, the patents-in-suit use vibration to refer both to the change in force vector of the rotating mass that causes a recipient to perceive an oscillating force and the oscillating force actually perceived by the recipient. Therefore, in order to accurately reflect the specification's definition of the term "vibration," the Court construes the term vibration to mean "a change in the force vector (i.e., direction or magnitude) of a rotating mass that the recipient perceives as a vibration, i.e. an oscillating force."

V. A Signal Processor for Receiving and Interpreting Said State Signal to Produce Multiple Activating Signals and Transmitting Said Activating Signals to Said Mass-Moving Actuators

The parties dispute the meaning of this phrase, used in claim 7 of the '213 patent, as well as the meaning of an equivalent phrase used in claim 15 of the '213 patent.FN6 Immersion argues that "a signal processor" is a "hardware and/or software element." Sony argues that "a signal processor" is not a defined structure, and so this element is a means-plus-function claim governed by 35 U.S.C. s. 112(6). As the parties agree, because the claim language does not use a "means for" construction, s. 112(6) is presumed not to apply. Sony argues that this presumption is overcome because "a signal processor" does not recite sufficient structure. However, Sony does not offer any case law suggesting that a signal processor or any similar term does not recite sufficient structure. Instead, Sony argues that Immersion's broad definition of the term demonstrates that it is not a structure. In contrast, Immersion points to cases holding that similar terms recite sufficient structure. *See Personalized Media Communications v. Int'l Trade Comm'n*, 161 F.3d 696, 704-05 (Fed.Cir.1999).FN7 The Court agrees with Immersion that "a signal processor" is a structure and so s. 112(6) does not apply to this element. Therefore, the Court construes the phrase "a signal processor for receiving and interpreting said state signal to produce multiple activating signals and transmitting said activating signals" to mean "hardware and/or software that receives the variable state signal, determines how and when to activate the actuators, and produces and transmits activating signals, or signals that cause the mass-moving actuators to turn." *See* '213 patent 2 :41-45, 3 :33-37.

FN6. Claim 15 employs the following language: "a signal processor for interpreting said state signal to produce an activating signal and transmitting said activating signal to said mass-moving actuator ." '213 patent, 19:62-66.

FN7. The *Personalized Media Communications* court held:

" 'Detector' is not a generic structural term such as 'means,' 'element,' or 'device'; nor is it a coined term lacking a clear meaning.... Instead, ... 'detector' had a well-known meaning to those of skill in the electrical arts connotative of structure, including a rectifier or demodulator.... Moreover, neither does the fact that a 'detector' is defined in terms of its function, nor the fact that the term 'detector' does not connote a precise physical structure in the minds of those skilled in the art detract from the definiteness of the structure.... [Further,] an adjectival qualification ('digital') placed upon otherwise sufficiently definite structure ('detector') does not make the sufficiency of that structure any less sufficient for purposes of s. 112(6). Instead, it further narrows the scope of those structures covered by the claim and makes the term more definite."

Id.

VI. Transmitting Said Activating Signals to Said Mass-Moving Actuators for Individually Activating Each of Said Mass-Moving Actuators to Produce a Complex Tactile Sensation as a Result of Varying the Frequency and Amplitude of Said Vibration

The parties dispute the meaning of the phrase "transmitting said activating signals to said mass-moving actuators for individually activating each of said mass-moving actuators to produce a complex tactile sensation as a result of varying the frequency and amplitude of said vibration" as used in claim 7 of the '213 patent. In order to resolve this dispute, the Court must first define "tactile sensation" and "complex tactile sensation." The Court concludes that "tactile sensation" refers to "the feeling perceived by a user when their sensing body part experiences vibrations." '213 patent 2 :30-32. The Court further concludes that "complex tactile sensation" refers to a tactile sensation that is more complex than that caused by a simple, on/off, binary control of an actuator. *See* '213 patent 2 :50-62 (defining a complex tactile sensation as that generated by a non-binary signal and offering such examples as sensation caused by "varying the frequency of the vibration," "varying the duration of the impulses," "varying the combination of amplitude and frequency," and "sequencing multiple vibrotactile units with different amplitude or frequency profiles").

Sony argues that the element at issue here should be construed to require that each actuator produce a complex tactile sensation. Sony relies on the use of the word "each" in the phrase "individually activating each of said mass-moving actuators" to conclude that each mass-moving actuator must cause a complex tactile sensation. However, as Immersion points out, the claim language requires only that "a" complex tactile "sensation" be produced, not that multiple complex tactile sensations be produced. Thus, the most natural reading of this element, considered in light of the examples of complex tactile sensation given in the specification, is that the mass-moving actuators need only produce a complex tactile sensation in combination.

Similarly, Sony argues that this limitation should be construed to mean that "each activating signal varies its current or voltage over time in order to cause each actuator to create a vibration that varies in frequency and amplitude over the duration of the vibration, not a signal that only sets a frequency or starts or stops an actuator." It is difficult to see how this interpretation could be drawn from the language of the claims, which, as previously stated, require only that the mass-moving actuators be activated individually and that they collectively produce a(one) complex tactile sensation. However, the specification could be read to support Sony's contention, in that it defines a complex tactile sensation as "a non-binary signal from a single or multiple vibrotactile units." '213 3:50-54. Sony interprets this language to mean that in order to produce a complex tactile sensation, each vibrotactile unit must be activated with a non-binary signal. While this is a plausible reading of the language of the specification, it becomes less plausible when the claims are considered as a whole, because the ' 213 patent includes claims that involve only one mass-moving actuator and claims that involve a plurality of mass-moving actuators. Considering the language of the specification in the context of claims addressing varying numbers of mass-moving actuators, a more natural reading of this language is that when one mass-moving actuator is involved, it must be activated with a non-binary signal in order to produce a complex tactile sensation, but when more than one mass-moving actuator is involved, a complex tactile sensation must be produced by the combined effect of all the mass-moving actuators, such that not each mass-moving actuator has to be activated by a non-binary signal. Therefore, the Court rejects Sony's proposed construction in favor of the plain meaning of the claim.

VII. Means for Modulating the Current to Said Motor Means Based Upon Said Signal, Wherein the Magnitude of the Desired Tactile Sensation is Controlled by Modulating Pulses of Current Sent to

Said Motor Means and the Frequency of the Desired Tactile Sensation is Controlled Independently of the Magnitude by Repeating Pulses of Current Sent to Said Motor Means at a Selected Rate

While the parties agree that this element of claim 19 of the '213 patent is a means-plus-function claim governed by 35 U.S.C. s. 112(6), they dispute a number of other aspects of the meaning of this element. First, they disagree as to the scope of the function at issue. Immersion argues that the function is "modulating the current to said motor means based upon said signal," while Sony argues that the function includes all the limitations of the element. The Court sees no reason to limit the function to "modulating the current to said motor means based upon said signal," and so agrees with Sony that the function includes all of the limitations of the element. The parties also disagree regarding which structures correspond to this function. Having reviewed the corresponding structures identified by both Immersion and Sony, the Court concludes that the structures identified in the following passages of the '213 patent correspond to this function: 2:34-53, 3:63-4:9, 6:44-49, 12:40-53, 13:35-39, 13:51-54, 14:6-14, 15:23-16:12, 17:8-22, and Figures 17, 19A, 19B, 25A, 25B, 25C, and 27.

The parties also disagree regarding the proper construction of the word "modulating" in "means for modulating the current to said motor means." Immersion argues that "modulating" should be construed as "regulating"; Sony argues that "modulating" should be construed as "varying." Both rely on the ordinary meaning of the word "modulating," as expressed in dictionary definitions, to support their proposed construction. Neither party points to any passages of the specification or prosecution history that would support its proposed construction, nor any passages that would exclude the other party's proposed construction. In these circumstances, the Court declines to adopt either construction exclusively. *Tex. Digital Sys.*, 308 F.3d at 1203 ("If more than one dictionary definition is consistent with the use of the words in the intrinsic record, the claim terms may be construed to encompass all such consistent meanings."). Instead, the Court construes "modulating" to mean "regulating or varying." FN8

FN8. Immersion advances its proposed construction out of concern that construing "modulating" as "varying" would exclude the possibility of turning the motor on and off. The use of the word "varying" does not exclude this possibility.

III. Processor Separate from Said Host Computer

The parties dispute the meaning of the phrase "processor separate from said host computer" as used in claims 42, 43, 44, and 46 of the '213 patent. Immersion argues that this phrase should be construed to mean "processing electronics separate from the host computer." Sony argues that this phrase should be construed to mean "a processor enclosed separately from the host computer." The Court rejects both Immersion's and Sony's proposed constructions as lacking support in the specification and failing to increase the clarity of the claim language. The Court therefore declines to construe the phrase "processor separate from said host computer."

IX. Enabling Control of Said Plurality of Rotating-Mass Actuators to Create in Combination a Vibration Upon Said User with an Amplitude that is Non-Uniform over a Duration of Said Vibration

The parties dispute the meaning of this element of claim 14 of the '333 patent. Sony argues that "enabling control" is not a defined act, and so this is a step-plus-function element that must be construed pursuant to 35 U.S.C. s. 112(6). However, the Court finds that this element contains sufficient description of an act to be outside the ambit of s. 112(6). *See Masco Corp. v. United States*, 303 F.3d 1316, 1327 (Fed.Cir.2002)

("Where the claim drafter has not signaled his intent to invoke s. 112, paragraph 6 by using the 'step for' language, we are unwilling to resort to that provision to constrain the scope of the coverage of a claim limitation without a showing that the limitation contains nothing that can be construed as an act.").

Immersion argues that this element should be construed to mean "multiple actuators that together create a combined vibration on the user that has more than one amplitude over a duration of the combined vibration." Sony, however, argues that this element should be construed to mean "the combination of rotating mass actuators creates a vibration and the vibration has an amplitude that varies during the course of the vibration." The Court agrees with Sony that this dispute is one of wording as opposed to meaning, and further agrees with Sony that its proposed construction is more clear. Therefore, the Court construes this element to mean "the combination of rotating mass actuators creates a vibration and the vibration has an amplitude that varies during the course of the vibration."

CONCLUSION

For the foregoing reasons, the Court construes the disputed terms and phrases in the foregoing manner.

IT IS SO ORDERED.

N.D.Cal.,2003.

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