

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

MINERVA INDUSTRIES, INC.	§	
	§	
vs.	§	CASE NO. 2:07-CV-229-CE
	§	
MOTOROLA, INC. ET AL.	§	

**MEMORANDUM OPINION AND ORDER**

After considering the submissions and the arguments of counsel, the court issues the following order concerning the claim construction issues:

**I. Introduction**

The plaintiff Minerva Industries, Inc. (“Minerva”) contends that the defendants Alltel Communications, LLC f/k/a Alltel Communications, Inc.; AT&T Mobility, LLC; Cellco Partnership d/b/a Verizon Wireless; Dobson Cellular Systems, Inc.; HTC America, Inc.; HELIO LLC; Kyocera Wireless Corp.; LG Electronics MobileComm U.S.A., Inc.; MetroPCS Wireless, Inc.; Nextel Communications of the Mid-Atlantic, Inc.; Nextel of California, Inc.; Nextel of New York, Inc.; Nextel of Texas, Inc.; Nextel South Corp.; Nextel West Corp.; Nokia Inc.; Samsung Telecommunications America LLC; Sprint Spectrum L.P.; Tmobile USA, Inc.; TracFone Wireless, Inc.; Virgin Mobile USA, LP (collectively “Alltel Defendants”); the Hewlett-Packard Company; Palm, Inc; Pantech Wireless, Inc.; Sanyo North America Corporation; Sony Ericsson Mobile Communications, Inc; and Research In Motion Corporation (collectively “Palm Defendants”) infringe various claims of United States Patent Nos. 7,321,783 (“the ‘783 patent”) and 6,681,120 (“the ‘120 patent”). The two patents asserted in this case contain similar subject matter and relate back to an application, No. 08/846,108 (“the ‘108 application”), filed in 1997. The ‘783 patent, which issued on January 22, 2008, is a continuation of application No. 09/531,356 (“the ‘356

application”), and the ‘356 application is a continuation-in-part of the ‘108 application. The ‘120 patent, which issued January 20, 2004, is a continuation-in-part of the ‘108 application. Both patents are titled “Mobile Entertainment and Communication Device” and share the same written disclosure.

This opinion resolves the parties’ claim construction disputes. The court will briefly discuss the technology at issue and then will address the claim construction issues.

## **II. Background of the Technology**

The specification contains the following description of the invention:

This invention relates to a mobile entertainment and communication device that is readily carried by a person and provides numerous conveniences and features including, but not limited to, a cellular or satellite telephone with access to the Internet.

A principle [sic] object of this invention is to provide a personal entertainment and communication device that is portable and includes a cellular or satellite accessible telephone with the ability to access the internet, replaceable memory cards for downloading data from the internet, and means for reproducing such data on the device from the cards. Specifically, the device of this invention is particularly adapted to download music, images or other data in a wireless manner from the internet and selectively reproduce such music, images or other data from replaceable memory cards for one’s personal enjoyment or other use.

Still another object of the present invention is to provide a mobile entertainment and communication device that wirelessly records data from the internet and selectively reproduces that data, such as music and/or images, and also provides a portable security device capable of automatically communicating with a remote telephone and transmitting emergency data including sounds, pictures, location and similar information when selectively activated by the owner or when automatically activated by conditions sensed by integral sensors, including conditions such as sudden movement, sounds, light, heat, smoke or the like.

(‘783 Patent, 1:9-35). The ‘783 patent contains 48 independent claims and 77 dependent claims.

The ‘120 patent contains 5 independent claims and 30 dependent claims. Claim 1 of the ‘783 patent is a representative independent claim:

A mobile entertainment and communication device for communicating with the Internet and remotely located telephones, comprising:  
a housing of a palm-held size;  
a cellphone provided in said housing, said cellphone adapted for selectively and wirelessly connecting to the Internet and remotely located telephones and adapted for controlling selection of at least one of (1) downloading data or uploading data from or to the Internet, or (2) downloading data to a computer or other electronic device and said cellphone having at least one of (1) voice controlled dialing, (2) a wireless earphone or (3) a wire connection jack earphone with a microphone for operation of the mobile entertainment and communication device;  
a memory operatively connected to said cellphone;  
a microprocessor operatively connected to said memory;  
said microprocessor adapted for storing data to said memory that is received from the Internet or a remotely located telephone; and  
a display panel operatively connected to said microprocessor, said display panel adapted for reproducing images or other data from at least one of said memory or the Internet, said other data including at least one of moving images, combined sounds and moving images, or music with or without images.

(‘783 Patent, Claim 1). The dependent claims include additional features and limitations.

### **III. General Principles Governing Claim Construction**

“A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999) (quoting *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989)). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996).

To ascertain the meaning of claims, the court looks to three primary sources: the claims, the specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996) (quoting *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1561 (Fed. Cir. 1991)). Under the patent law, the specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the

invention. 35 U.S.C. 112; *Id.* at 978. A patent’s claims “must be read in view of the specification, of which they are a part.” *Markman*, 52 F.3d at 979. “For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims.” *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s claims. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). And, although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Scis., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This court’s claim construction decision must be informed by the Federal Circuit’s decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the *claims* of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (emphasis added) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim “are generally given their ordinary and customary meaning.” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “[T]he ordinary and customary meaning

of a claim term 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, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention. *Id.* The patent is addressed to and intended to be read by others skilled in the particular art. *Id.*

The primacy of claim terms notwithstanding, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314-17. The Supreme Court stated long ago that “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

*Phillips*, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. The prosecution history helps to demonstrate how the inventor and the PTO understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence. *Id.* That evidence is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*

*Phillips* rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. *Id.* The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319-24. The approach suggested by *Texas Digital*—the assignment of a limited role to the specification—was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id.* at 1320-21 (quoting *Vitronics*, 90 F.3d at 1582). According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that “[t]he patent system is based on the proposition that the claims cover only the invented subject matter.” *Id.* What is described in the claims flows from the statutory requirement imposed on the patentee to describe and particularly claim what he or she has invented. *Id.* The definitions found in dictionaries, however, often flow from the editors’ objective of assembling all of the possible definitions for a

word. *Id.* at 1321-22.

*Phillips* does not preclude all uses of dictionaries in claim construction proceedings. *Phillips*, 415 F.3d at 1322. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. *Id.* at 1317-19. In doing so, the court emphasized that claim construction issues are not resolved by any “magic formula.” *Id.* at 1324. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant. *Id.* at 1324.

Means-plus-function claim terms are governed by § 112, ¶ 6, which states that a claim term “may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, ¶ 6. After the function of the means-plus-function limitation has been identified, the “court looks to the written description to identify the structure corresponding to that function.” *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999). As the Federal Circuit stated in *In re Donaldson Co.*, 16 F.3d 1189 (Fed. Cir. 1994) (en banc):

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

*Id.* at 1195. The court must determine whether “one skilled in the art” would find enough structure disclosed in the specification to find the claim sufficiently definite. *Atmel Corp. v. Info. Storage*

*Devices, Inc.*, 198 F.3d 1374, 1378 (Fed. Cir. 1999). For computer-implemented means-plus-function limitations, the corresponding structure in the specification is the algorithm that performs the claimed function. *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999).

The specification must disclose enough detail about the algorithm, such as a formula, prose, or a flow chart, to provide the structure required by § 112, ¶ 6. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008). The court now turns to a discussion of the relevant claim terms.

#### **IV. Agreed Constructions**

The parties have stipulated to the construction of the following terms in the claims:

“Engagement element” means “a structural element that contacts, meshes, or interlocks with a corresponding feature in a replaceable memory card.”

“Engagement feature” means “a feature in a replaceable memory card shaped to contact, mesh, or interlock with an engagement element.”

“Emergency call button” means “a dedicated button for dialing emergency services.”

“Position” means “latitude and longitude of an object.”

“Separate switches for separately operating said microphone for capturing sounds and said camera for capturing said still or continuing images” means “at least one switch for operating the microphone for capturing sounds and at least one other switch that operates the camera for capturing the still or continuing images.”

“Activating said cellphone for wirelessly communicating” means “enabling the cellphone for wirelessly communicating.”

“Radio” means “an AM and/or FM radio.”



“Radio receiver” means “an AM and/or FM radio receiver.”

“During a telephone call” means “the time period when a voice channel is open for communication.”

“A display and a speaker provided with said housing” means “the housing has its own display and speaker.”

“During the person-to-person telephone calls” means “the time period when a voice channel is open for communication.”

“Spring in direct contact” means “a spring touching.”

“Hole for use in securing said replaceable memory card” means “an opening, extending through the body of the memory card, for use in securing the replaceable memory card.”

“Telephonically connected” means “the time period when a voice channel is open for communication.”

For the term “means for direct connection to a computer for downloading or uploading data between the computer and the device,” the function is “direct connection to a computer for downloading or uploading data between the computer and the device,” and the corresponding structure is “computer jack connected to a hard wire.”

“Operatively connected” means “linked together.”

“Within a range of said housing” means “capable of being detected at the housing.”

“In view of said housing” means “capable of being captured by the camera.”

“Continuing images” means “a sequence of discrete still images captured by a video camera, commonly referred to as video.”

“Within a range of said microphone” means “capable of being detected by said microphone.”

“Low ambient light levels” means “light levels below a threshold.”

## V. Disputed Claim Terms

### A. “housing”

All of the independent claims have a housing limitation, such as “a housing of palm-held size.” (‘783 Patent, Claim 1). Although Minerva and the Palm defendants believe “housing” simply means “a case or enclosure,” the Alltel defendants argue that Minerva disclaimed hinges and slides during reexamination. As such, the Alltel defendants recommend that “housing” be construed as “a single rigid casing without hinges or slides.”

During reexamination, Minerva distinguished its invention from Mack reference, which described a portable telephone that could be unfolded to form a headset that fits over a user’s head. Minerva’s alleged disclaimer is based on the following statement to the USPTO: “Mack’s device has at least more than three housings connected to each other through hinges, while the claims of the Present Patent require that the camera and the cellphone be provided in the same housing.” According to the Alltel defendants, by distinguishing the Mack reference, which had hinges, Minerva has disclaimed multi-segment housings connected through hinges or sliders.

“The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution.” *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005). The alleged disclaimer “must be ‘clear and unmistakable,’” however, “and unclear prosecution history cannot be used to limit claims.” *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009).

The first portion of Minerva’s statement, “Mack’s device has at least more than three housings connected to each other through hinges,” clarifies the meaning of housing and also acts as

a limited disclaimer. The patentee indicates that segments connected via hinges are separate housings; thus, a single housing may not contain a hinge. Through this definition of a “hingeless” housing, the patentee disclaims prior art devices comprised of four or more housings. Minerva does not disclaim hinges altogether, but instead distinguishes devices having at least three hinges. In contrast to hinges, the prosecution history does not show that Minerva has disclaimed sliders or housings having slides. The Mack device contains two segments connected by slides. Yet in its statement to the USPTO, Minerva called these two segments “the housing of the cellphone.” As such, a housing may contain multiple segments connected by slides.

The second portion of Minerva’s statement, “while the claims of the Present Patent require that the camera and the cellphone be provided in the same housing,” also acts as a limited disclaimer. Some of the dependent claims add a limitation that the device must have a camera. (*E.g.*, ‘783 Patent, Claim 5 (“The device of claim 1 or 2, further including a camera provided in said housing . . .”). Minerva’s statement to the USPTO effectively disclaims devices having a camera in one housing and the cellphone in a different housing.

Based upon the prosecution history discussed above, the court construes the term “housing” as “a single case or enclosure, or several cases or enclosures connected through slides.”

**B. “cellphone” / “cellular telephone”**

The term “cellphone” or “cellular telephone” appears in the independent claims. Claim 50 of the ‘783 patent states in part, “a cellphone having a portable housing of a size and weight for being handheld by a person and adapted for placing and receiving person-to-person telephone calls to and from remotely located telephones.” The plaintiff proposes that “cellphone” and “cellular telephone” mean “a portable telephone capable of communicating wirelessly in a cellular system or

satellite system.” In contrast, the defendants contend that these terms mean “a device capable of communicating wirelessly via a cellular or satellite network and including an antenna, a transmitting/receiving section, a microprocessor, a memory, a dialing pad, a microphone, and a speaker.”

The defendants argue that the components comprising the cellphone must be enumerated to allow the fact finder to determine if those components are in the claimed “housing.” This argument is based in part upon the Alltel defendants’ proposed claim construction of “housing,” in which Minerva allegedly disclaimed housings with slides or hinges. The defendants also quote the following passage from the specification in support of their proposed construction:

Referring more particularly to the figures, the entertainment and communication device, generally designated 100, includes *a cellular telephone or satellite accessible telephone* or the like, hereinafter referred to collectively as a “cellphone”, having a *dialing pad* 101 . . . . The cellphone includes a *microphone* 103 and a *speaker* 125 . . . . The cellphone also includes a *dialing memory* 113, a dialing section 114, a *transmitting/receiving section* 115, an *antenna* 119 and a ring signal capturing section 122. The microphone 103 and speaker 125 are connected through an audio signal processing section 108 to *the microprocessor 112 of the device 100*.

(‘783 Patent, 1:52-2:3) (emphasis added).

Minerva disputes the need to enumerate the cellphone’s components. The plaintiff points out that some of the dependent claims add limitations indicating that the cellphone includes “a microphone, a speaker, . . . and a memory” (‘783 Patent, Claim 50) and a microprocessor (‘783 Patent, Claim 32). These additional limitations would be redundant if the term “cellphone” were construed to include a microphone, speaker, memory, and microprocessor. Furthermore, the written description does not assert that the individual cellphone components, deemed necessary by the defendants, are novel or required.

As shown in the quoted passage above, the specification does describe the cellphone as having a dialing pad, microphone, speaker, a dialing memory, transmitting/receiving section, and an antenna. The court finds that an ordinary artisan would recognize that a cellphone requires these components, and they are not optional features of a preferred embodiment. However, despite the enumeration of a microprocessor, the specification’s language does not clearly state that the cellphone includes a microprocessor; some of the cellphone’s components are merely connected to the microprocessor of the claimed portable entertainment device. (*See* ‘783 Patent, 1:67-2:6 (“The microphone 103 and speaker 125 are connected . . . to the microprocessor 112 of *the device 100*. The dialing memory 113, dialing section 114, transmitting/receiving section 115, ring signal capturing section 122 and dialing pad 101 are also connected to the microprocessor 112 . . . .”)) (emphasis added)) For the reasons provided above, the court construes the terms “cellphone” and “cellular telephone” to mean “a device capable of communicating wirelessly via a cellular or satellite network and including an antenna, a transmitting/receiving section, a memory, a dialing pad, a microphone, and a speaker.”

**C. “memory includes an audio recorder” / “said memory including an audio recorder mounted in said housing”**

Claim 4 of the ‘783 patent states in part, “wherein said memory includes an audio recorder in said housing for recording sounds.” Likewise, claim 77 contains the following limitation: “said memory including an audio recorder mounted in said housing.” Both parties chose to construe the full term “said memory including an audio recorder mounted in said housing” in claim 77, but the shorter term “memory includes an audio recorder” in claim 4. For “said memory including an audio recorder mounted in said housing,” Minerva argues that no construction is necessary, or

alternatively, the term means “the memory is linked to a device within the housing for recording sounds.” The defendants contend that this term means “the memory contains a device for recording sounds that is attached to the housing.” Minerva’s proposed definition of “memory includes an audio recorder” is “the memory contains instructions for recording audio.” The defendants assert that this term means “the memory contains a device for recording audio.” The written description provides no definition of “includes” or “audio recorder,” and its usage of “memory” appears to be consistent with that word’s plain and ordinary meaning.

The proposed constructions differ regarding whether the audio recorder is a physical device or software instructions and whether the audio recorder is located in the memory or in the housing. The defendants argue that the plain and ordinary meaning of the term “includes” is “contains.” *See* Merriam-Webster’s Collegiate Dictionary 588 (10th ed. 1998). Thus, according to the defendants, the memory must contain the audio recording device. But the dictionary also defines “include” as “to take in or comprise as a part of a whole or group.” Merriam-Webster’s Collegiate Dictionary 629 (11th ed. 2006).

In contrast, Minerva contends that, according to one of skill in the art, it would make no sense to have memory—a storage medium for data—contain a separate device. *See Phillips*, 415 F.3d at 1312-13. Therefore, Minerva wishes to define “audio recorder” as either a set of instructions or a separate physical device linked to memory.

Defining “includes” as “contains” does not make sense, because the audio recorder would have to be contained in the memory as well as in the housing. Likewise, there is no support for defining “audio recorder” as memory instructions in claim 4, but in claim 77, defining it as a physical device. The court perceives no meaningful difference between the disputed terms in claim

4 and 77. Thus, the court defines the terms “memory includes an audio recorder in said housing” and “memory including an audio recorder mounted in said housing” to mean “the memory comprises an associated device in the housing for recording sounds.”

**D. “global positioning system”**

Several of the claims require that the mobile device have a global positioning system (“GPS”), which is used to transmit the position of the device to an emergency telephone number or a remote phone. The defendants propose that the term “global positioning system” should be construed as “a system designed to use information from satellites to calculate the exact coordinates of a device’s longitude and latitude anywhere on earth.” In contrast, Minerva contends that the term “global positioning system” means “a system designed to use information from satellites to calculate the coordinates of a device's longitude and latitude on earth.”

The written description does not define or clarify the term “global positioning system.” The defendants cite the definition of “global positioning system” from a technical dictionary: “a positioning or navigation system designed to use 17 to 24 satellites, each carrying atomic clocks, to provide a receiver *anywhere on earth* with *extremely accurate* measurements of its three-dimensional position, velocity, and time.” McGraw-Hill Dictionary of Scientific and Technical Terms 856 (5th ed. 1994) (emphasis added).

The parties disagree about the GPS’s required accuracy. The defendants contend that the claimed GPS functionality must provide “exact coordinates.” The exact location is necessary, according to the defendants, for the claimed function of transmitting the device’s position to emergency services to work as intended. In response, Minerva notes that the dictionary definition requires “extremely accurate” coordinates, but the defendants’ proposed definition requires “exact

coordinates”; “extremely accurate” and “exact” are not synonymous. If the construction must specify accuracy, Minerva contends that the systems’ accuracy should be defined as “to a degree of accuracy available in commercial devices as of October 15, 1999.”

The court is not persuaded that the GPS must provide “exact” coordinates. The cited dictionary definition does not require exact accuracy. One skilled in the art would recognize this type of position measurement system inherently has some degree of error. An “extremely accurate” GPS can sufficiently perform the intended function of notifying emergency services of the device’s position.

The defendants, relying on the dictionary definition and the word “global” in “global positioning system,” also argue that the GPS must operate “anywhere on earth.” The plaintiff denies that a location device must operate “anywhere on earth” to be a “global positioning system.” Instead, Minerva contends that a GPS configured to operate only in North America is still a GPS.

Although the dictionary definition of “global positioning system” cited by the defendants requires the system to function “anywhere on earth,” several other dictionaries’ definitions do not contain this restriction.<sup>1</sup> One of ordinary skill in the art would find that a device that uses satellites to calculate longitude and latitude is a GPS, despite the device’s inability to work anywhere on earth.

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<sup>1</sup> “A system of satellites, computers, and receivers that is able to determine the latitude and longitude of a receiver on Earth by calculating the time difference for signals from different satellites to reach the receiver.” American Heritage Dictionary of the English Language (4th ed. 2004). “A system of satellites combined with receivers on the Earth that determines the latitude and longitude of any particular receiver through triangulation. The distance of the receiver to three of the satellites is ascertained by measuring the time-delay of a predetermined radio signal (called a pseudo-random code). Errors in timing can be corrected by checking the signals against the signal from a fourth satellite. Current systems can pinpoint the location of the receiver with an accuracy of around 5 m (16 ft). The system is used for navigation, surveying, and many other applications.” American Heritage Science Dictionary.



As such, the court holds that the term “global positioning system” means “a system designed to use information from satellites to calculate, extremely accurately, the coordinates of a device’s longitude and latitude.”

**E. “separate switch(es)”**

Minerva proposes the following definition for the terms “separate switch” and “separate switches”: “two or more controls for making, breaking, or changing connections in an electric circuit.” The defendants assert that “separate switch” should be construed as “a plurality of independent, mechanically actuated device(es) for making, breaking, or changing connections in an electric circuit.” The term “separate switches” appears in several claims in the following manner: “separate switches for separately operating said microphone for capturing sounds and said camera for capturing said still or continuing images.” (*E.g.*, ‘783 Patent, Claim 28). The terms “switch” or “separate switch” appear nowhere in the specification. The parties dispute whether “separate switches” must be “mechanically actuated.”

According to the defendants, the plain and ordinary meaning of “switch” is “a manual or mechanically actuated device for making, breaking or changing connections in an electrical circuit.” McGraw-Hill Dictionary of Scientific and Technical Terms 1968 (5th ed. 1994). In addition, the Federal Circuit has previously construed the term “a plurality of discrete switches” to mean “two or more distinct and separate manual or mechanically actuated devices for making, breaking, or changing the connections in an electric circuit.” *NCR Corp. v. Palm, Inc.*, 120 F. App’x 328, 331-32 (Fed. Cir. 2005). Finally, the defendants argue that the specification discloses only mechanically actuated push buttons, and the term should not be construed more broadly than what the patentee disclosed.

Minerva responds that the plain and ordinary meaning of “switch” does not require a mechanical limitation. The plaintiff cites a dictionary definition of “switch,” which states, “a device for turning on or off or directing an electric current, or making or breaking a circuit. The Random House College Dictionary (revised ed. 1988). Minerva also reiterates that it is improper to limit a claim to the disclosed embodiment. *Liebel-Flarsheim*, 358 F.3d at 906.

“[T]he context in which a term is used in the asserted claim can be highly instructive.” *Phillips*, 415 F.3d at 1314. In the patents at issue, the separate switches are used to operate the device’s microphone and camera. It is implied that the human user is who operates the separate switches. Thus, the switches in this context are not circuit elements but mechanical devices, such as the disclosed push buttons, for humans to operate. Therefore, the court construes the term “separate switches” to mean “a plurality of distinct, mechanically actuated device(s) for making, breaking, or changing connections in an electric circuit.”

**F. “said separate switches are adapted for simultaneously operating said camera for capturing continuing images and operating said microphone for capturing sounds with the continuing images”**

Minerva contends that the term “said separate switches are adapted for simultaneously operating said camera for capturing continuing images and operating said microphone for capturing sounds with the continuing images” means “one of the switches is configured to operate the microphone and camera such that they allow the camera and microphone to operate at the same time.” The defendants’ proposed construction is “the independent switch for operating the camera and the independent switch for operating the microphone configured such that they can be actuated to allow the camera and microphone to begin operation at exactly the same time.” Claim 28 of the ‘783 patent requires “separate switches for separately operating said microphone for capturing

sounds and said camera for capturing said still or continuing images” and “said separate switches are adapted for *simultaneously* operating said camera . . . and operating said microphone.” (emphasis added).

The parties dispute the significance of “simultaneously,” although they have agreed upon a definition of the word: “occurring, done, etc. at the same time.” Webster’s New World Dictionary (3rd ed. 1990). The defendants assert that “simultaneously” means that the switches must be capable of beginning the operation of the camera and the microphone at exactly the same time. On the other hand, the plaintiff contends that the switches need only to allow the camera and microphone to operate at the same time. The dictionary definition of “simultaneously” does not require the operations to commence at exactly the same time. In addition, the claim language reads “*simultaneously operating*,” not “simultaneously commencing.”

The proposed constructions also differ on how the switches are used to simultaneously operate the camera and microphone. Minerva contends that one of the switches allows simultaneous operation of both the camera and microphone. The defendants maintain that there is an independent switch for the camera and an independent switch for the microphone. The simultaneous operation of the camera and microphone is controlled by “said separate switches”—this refers back to the initial disclosure of “separate switches” within the claim. The earlier claim limitation discusses separate switches for “separately operating said microphone” and “separately operating said camera.” There is no disclosure of a separate switch that jointly operates both the camera and microphone.

For the foregoing reasons, the court construes the term to mean “the independent switch for operating the camera and the independent switch for operating the microphone configured such that they allow the camera and microphone to operate at the same time.”

**G. “a spring bearing directly against the memory card when in place in the memory card socket for urging the replaceable memory card out of the socket” / “a spring bearing directly against the memory card”**

Minerva seeks construction of the term “a spring bearing directly against the memory card when in place in the memory card socket for urging the replaceable memory card out of the socket.” Minerva argues that this term means “a spring that is compressed by the memory card when the memory card is inserted in the socket, and which pushes the memory card out of the socket.” On the other hand, the defendants ask the court to construe the shorter term “a spring bearing directly against the memory card” to mean “a spring touching the memory card.” Claim 93 reads in part, “said replaceable memory card socket being provided with a spring bearing directly against the memory card when in place in the memory card socket for urging the replaceable memory card out of the socket.” The following sentence is the sole disclosure of a spring in the specification: “Still further, the socket 120A may be provided with a spring for urging the card 200 outwardly as soon as the card is unlatched.”

The two primary differences between the parties’ proposed constructions are whether the spring touches the memory card and whether the spring is compressed by the memory card. The defendants assert that the plain and ordinary meaning of “bearing” is “to support or sustain” and “directly” means “with nothing or no one between.” In addition, Minerva’s proposed construction is wrong, according to the defendants, because “compress” or “compressing” appears nowhere in the claims or specification.

Minerva responds that the defendants’ proposed construction should be rejected because it violates the doctrine of claim differentiation. *Clearstream Wastewater Sys. Inc. v. Hydro-Action Inc.*, 206 F.3d 1440, 1446 (Fed. Cir. 2000) (“Under the doctrine of claim differentiation, it is

presumed that different words used in different claims result in a difference in meaning and scope for each of the claims.”). The parties have already agreed that the term “a spring in direct contact with the replaceable memory card,” used in claims 96 and 97, means “a spring touching.” Minerva argues that the defendants’ proposed construction would result in “a spring touching” and “a spring bearing against” having the same meaning. The plaintiff also contends that, although the patent does not contain the word “compress,” compression of the spring is implicitly disclosed to one of ordinary skill in the art. The ordinary artisan allegedly understands that a spring has to be compressed before it may urge the memory card out of the socket.

The court agrees that the “bearing directly against” language requires the spring to touch the memory card. The doctrine of claim differentiation is a rebuttable presumption, and it may not be used to overcome the plain meaning of the claim language. *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 243 F.3d 1316, 1329 (Fed. Cir. 2001). The dictionary definition of “directly” is “in immediate physical contact,” and the definition of “against” is “in contact with.” Merriam-Webster’s Collegiate Dictionary 22, 354. Nothing in the specification or claim language rebuts this plain meaning of the phrase “bearing directly against.” In addition, the claim differentiation presumption is weaker when two independent claims are compared, as opposed to an independent claim and an associated dependent claim. *See Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (holding that “the claim differentiation tool works best in the relationship between independent and dependent claims”).

Next, the court finds that the claim language, which requires the spring to urge the memory card out of the socket, implicitly discloses compression of the spring. Therefore, the court construes the term “a spring bearing directly against the memory card when in place in the memory card

socket for urging the replaceable memory card out of the socket” to mean “a spring that is compressed and directly contacted by the memory card when the memory card is inserted in the socket, and which pushes the memory card out of the socket.”

**H. “a control for activating said global positioning system for transmitting the position of said cellphone to the remotely located telephone or the Internet”**

Minerva argues that the meaning of “a control for activating said global positioning system for transmitting the position of said cellphone to the remotely located telephone or the Internet” is self-evident and requires no construction. The defendants contend that the limitation at issue is a means-plus-function limitation, which lacks corresponding structure in the specification, so the claim is indefinite. The absence of the word “means” gives rise to a presumption that the claim term is not governed by 35 U.S.C. § 112, ¶ 6. *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 703-04 (Fed. Cir. 1998) (internal citations omitted). The Federal Circuit has held, however, that “a limitation lacking the term ‘means’ may overcome the presumption against means-plus-function treatment if it is shown that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1353 (Fed. Cir. 2006) (internal quotations omitted). The defendants allege that the term “control” does not recite sufficiently definite structure. They cite *Biomedino, LLC v. Waters Technologies Corp.*, 490 F.3d 946 (Fed. Cir. 2007), which holds that “control” is “not a structure or material capable of performing the identified function.” *Id.* at 950.

The plaintiff counters that the defendants have not overcome the presumption against means-plus-function treatment. Minerva argues that the *Biomedino* case is inapposite because the term at issue was “control *means*,” not merely “control,” so there was a presumption of a means-plus-

function limitation. *Id.* (emphasis added). Therefore, according to Minerva, *Biomedino* merely holds that the recitation of a “control” is insufficient to overcome the presumption of means-plus-function when the term contained the word “means.” Finally, Minerva argues that one of skill in the art would recognize that a control, in this context, is a button, switch, or similar device.

Read in the context of the written description, a control is a button or other mechanically-activated device. Therefore, the court construes the term “a control for activating said global positioning system for transmitting the position of said cellphone to the remotely located telephone or the Internet” to mean “a button or switch for activating said global positioning system for transmitting the position of said cellphone to the remotely located telephone or the Internet.”

**I. “means for recording audible transmissions during the person-to-person telephone calls to and from said cellular telephone and for recording sounds within a range of said housing without a telephone call”**

Claim 77 of the ‘783 patent contains the following means-plus-function limitation: “means for recording audible transmissions during the person-to-person telephone calls to and from said cellular telephone and for recording sounds within a range of said housing without a telephone call.” Although their proposals differ slightly, both parties agree that the recited function is recording audible transmissions and sounds. Minerva contends the corresponding structure of this claimed function is “a button and microphone coupled to a microprocessor programmed to control recording sounds from the microphone or a remote telephone.” The defendants argue that the specification does not clearly associate any disclosed structure with the claimed function, and therefore this means-plus-function claim term is indefinite. *See Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). In *Aristocrat Technologies Australia Pty Ltd. v. International Game Technology*, 521 F.3d 1328 (Fed. Cir. 2008), the Federal Circuit held that “in a means-plus-

function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.” *Id.* at 1333.

Minerva advances two theories to explain why this means-plus-function term is not indefinite.<sup>2</sup> The plaintiff first argues that the *Aristocrat* line of cases are distinguishable because ‘783 patent specification discloses corresponding physical structures beyond just a microprocessor, i.e., a button and a microphone. According to Minerva, the following text describes the recording capability of the device:

The memory card 200 may be a prerecorded card or a flash (blank) card suitable for recording data from the microprocessor 112. By appropriately operating the cellphone to connect to or access the Internet and then operating the memory card control buttons 202, data from the Internet may be recorded on the replaceable memory card 200, such as musical performances, images (still or moving), written text or the like (hereinafter referred to as “data”). In addition to the audio data, the musical performance data from the Internet may include images of the performers or the like, and/or the words of the musical performance. Other audio and visual data also may be downloaded from the Internet to memory card 200.

(‘783 Patent, 2:20-38). Contrary to Minerva’s assertion, even though the specification discloses additional hardware devices (analogous to computer peripherals), the term at issue is still a computer-implemented means-plus-function claim. Fig. 5 in the specification depicts the microprocessor as the central component that links all other hardware devices. The microprocessor controls any data or signals transferred among the buttons, microphone, and memory. While a

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<sup>2</sup> On December 31, 2009, which was over two months after Minerva filed its claim construction reply brief and less than a week before the scheduled *Markman* hearing, Minerva asserted a new theory: the specification allegedly discloses both manual and automatic embodiments. (Dkt. No. 402, at 4). This last-minute revelation of a new theory violates the Local Patent Rules, and thus it will not be considered by the court. *See* P.R. 4-5.



microphone can capture sound, and the button can signal the device to begin recording, the microprocessor must implement an algorithm to transfer and process data between the components. As such, the specification must disclose an algorithm to accomplish the function of “recording.”

Minerva argues that, if the recording means is computer-implemented and requires disclosure of a recording algorithm, the “recording” function merely requires a one-step algorithm: “begin recording.” The specification describes the use of the microphone to record sounds: “The microphone 103 may also be activated manually or automatically by the microprocessor 112 . . . for recording and/or transmitting sounds within range of the device 100 . . . .” (‘783 Patent, 4:27-32). This disclosed algorithm is sufficient, according to Minerva, because an algorithm may be disclosed in simple prose or any other understandable method of description. *Finisar*, 523 F.3d at 1340.

The Federal Circuit recently rejected an argument that disclosure of a one-step algorithm is sufficient to satisfy the corresponding structure requirement. In *Encyclopaedia Britannica, Inc. v. Alpine Electronics, Inc.*, 2009 WL 4458527 (Fed. Cir. Dec. 4, 2009), the patentee argued that the specification sufficiently disclosed a “one-step” algorithm to perform the recited function. *Id.* at \*5. The court rejected this argument and held that, “Britannica’s purported ‘one-step’ algorithm, however, is not an algorithm at all. Rather, it is simply a recitation of the claimed function.” *Id.* Likewise, the purported algorithm “begin recording” is just a restatement of the claimed function “recording.” Because the specification does not provide a sufficient algorithm to describe recording, this means-plus-function term lacks a corresponding structure and is indefinite.

**J. “means for activating said cellphone for wirelessly communicating with a remotely located telephone and, when said cellphone and the remotely located telephone are telephonically connected, then selectively either causing the currently captured sounds or the stored sounds to be transmitted by said cellphone to the remotely located telephone or causing said cellphone to receive and record the sounds from the remotely located telephone”**

Independent claims 1 and 2 of the ‘120 patent contain the following means-plus-function limitation:

means for activating said cellphone for wirelessly communicating with a remotely located telephone and, when said cellphone and the remotely located telephone are telephonically connected, then selectively either causing the currently captured sounds or the stored sounds to be transmitted by said cellphone to the remotely located telephone or causing said cellphone to receive and record the sounds from the remotely located telephone

The parties agree upon much of the recited function, except that Minerva quotes all the text after “means for” as the function, while the defendants break it up into four separate functions. The defendants argue that the specification provides no corresponding structure, but Minerva asserts the following structure: “a button, microphone, and internal memory or memory card coupled to a microprocessor programmed to control sending currently captured sounds or the stored sounds to a remote telephone or receiving and recording sounds from sounds from a remote telephone.”

For the corresponding structure of the “selectively causing . . . sounds to be transmitted” function, Minerva cites the following passage from the specification: “The microphone 103 may also be activated manually or automatically by the microprocessor 112 when either of the cameras 102 or 106 are activated for recording and/or transmitting sounds within the range of the device 100 synchronously with the recording or transmission of images by one of the cameras.” ‘120 Patent, 4:21-26. According to the plaintiff, this passage indicates that the microphone is the structure that “record[s] and/or transmit[s] sounds.”

A microphone is not capable of transmitting sounds to a remote telephone. Minerva has not cited any other structure capable of transmitting sounds. Nor has Minerva pointed to any passage in the specification that discloses a transmitting algorithm. Therefore, this means-plus-function term lacks corresponding structure and is indefinite. Because the asserted claims of the '120 patent all depend upon claim 1 or 2, the court need not construe the remaining disputed '120 patent claim terms.

## **VI. Conclusion**

The court adopts the constructions set forth in this opinion for the disputed terms of the '783 and '120 patents. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the court.

SIGNED this 3rd day of February, 2010.

  
CHARLES EVERINGHAM IV  
UNITED STATES MAGISTRATE JUDGE