

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SKYHAWKE TECHNOLOGIES, LLC,
Petitioner,

v.

L&H CONCEPTS, LLC,
Patent Owner.

Case IPR2014-00438
Patent 5,779,566

Before JAMES T. MOORE, PATRICK R. SCANLON, and
MITCHELL G. WEATHERLY, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION

Inter Partes Review

35. U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

SkyHawke Technologies, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1–5, 13, and 17 of U.S. Patent No. 5,779,566 (Ex. 1001, the “’566 patent”) pursuant to 35 U.S.C. § 311. L&H Concepts, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”) to the Petition. We instituted *inter partes* review of claims 1–5, 13, and 17 of the ’566 patent (Paper 7, “Inst. Dec.”).

Claims	Ground	Reference
1–3	§ 103	Palmer ¹ and Vanden Heuvel ²
4, 5, 13, and 17	§ 103	Palmer, Vanden Heuvel, and Osamu ³

Patent Owner filed a Patent Owner’s Response (Paper 18, “PO Resp.”) urging, *inter alia*, the combination of references would not have been made by one of ordinary skill in the art, the prior art does not teach every element of the claims, and the testimony of the Petitioner’s witness lacks credibility and should be given no weight. We entertained oral argument in this proceeding on April 27, 2015. A transcript of the hearing is included in the record. Paper 29.

Petitioner filed a Reply (Paper 21, “Pet. Reply”).

The Board has jurisdiction under 35 U.S.C. § 6(c). In this Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, we determine that the record adduced at trial supports a conclusion that Petitioner has demonstrated by a preponderance of the evidence that the

¹ WO 92/04080, Mar. 19, 1992 (Ex. 1005, “Palmer”).

² US 5,426,422, June 20, 1995 (Ex. 1006, “Vanden Heuvel”).

³ GB 2 249 202 A, Apr. 29, 1992 (Ex. 1007, “Osamu”).

claims for which trial was instituted, claims 1–5, 13, and 17, are unpatentable.

II. THE '566 PATENT

The '566 patent is involved in litigation. Petitioner states that the '566 patent is asserted in co-pending civil action *L&H Concepts, LLC v. SkyHawke Technologies, LLC*, No. 2:13-cv-00199-JRG (E.D. Tex.). Pet. 2–3. We observe that the civil action has been transferred to the Southern District of Mississippi as No. 3:14-cv-00224. An amended order staying that proceeding was entered July 7, 2014. Docket Entry 76. A motion is pending to lift the stay. See *L&H Concepts, LLC v. SkyHawke Techs, LLC*, No. 3:14-cv-00224(S.D. Miss. Apr. 10, 2015) (Docket Entry 83)(“MOTION to Lift Stay for Purposes of Fact Discovery by L&H Concepts, LLC”).

The '566 patent was also involved in an ex-parte reexamination proceeding, number 90/008,817. A reexamination certificate, US 5,779,566 C1, was issued on March 31, 2009. The patentability of claims 1–37 was confirmed during that proceeding. A final decision in IPR2014-00437, which challenges different claims of the '566 patent, is being issued on the same day as this decision.

The claims relate to a computer with a display for user interaction before, during, and after a game. The unit is said to be a “recording, reporting, and advising” unit. Ex. 1001, Abstract.

III. ILLUSTRATIVE CLAIM

Claim 1 of the '566 patent is illustrative of the claims at issue in this proceeding:

1. An apparatus for recording and reporting golf information to increase a player's ability to improve from experience, the apparatus comprising:

a self-contained computer unit having a memory, a power source and a display for selectively displaying a plurality of information screens and associated data stored in the memory, the information screens including screen-dependent data input fields for the associated data;

key entry means for retrieving and selectively displaying the information screens from the memory on the display, and for retrieving, selecting, and recording the associated data with each information screen, wherein the key entry means includes first key means comprising one entry key for selectively displaying information screens, second screen-dependent field select key means for selecting a particular data input field of predefined data on a displayed screen, the second screen-dependent field select key means comprising two bi-directional tab keys for scrolling in opposite directions through the data input fields on a displayed information screen, and third screen-dependent value select key means for displaying and selectively recording or altering selected data in a selected data input field, the third screen-dependent value select key means comprising two bi-directional scroll keys for scrolling in opposite directions through the predefined data associated with the data input field on the displayed information screen.

Ex. 1001, 16:65–17:25.

IV. ANALYSIS OF CLAIM CHALLENGES

A. The Level of Ordinary Skill in the Art in 1993

We first turn to the testimony of the Petitioner’s witness, Professor Carl A. Gutwin (hereinafter “Dr. Gutwin”). We look to this Declaration testimony to discern his viewpoint on the level of ordinary skill in the art. He testifies that he has more than 20 years of experience in the field of computer science and computer-human interaction. Ex. 1012 ¶ 3. His credentials and CV provide sufficient evidence for us to deem him to be an expert witness. *Id.* ¶¶ 4–9, App. A.

According to Dr. Gutwin, the relevant field is human-computer interaction. *Id.* ¶ 11. Also according to Dr. Gutwin, the prior art demonstrates that a person of ordinary skill in the field at the time of the effective filing date of the '566 patent, was aware of and capable of designing key-based interactive systems using known interface techniques. *Id.* ¶ 13.

Patent Owner's witness, Mr. Alan Ball, while not having as extensive an educational background as Dr. Gutwin, nonetheless has significant experience. Ex. 2014 ¶¶ 5–10. His experience persuades us that he too is qualified to be considered as an expert witness. According to Mr. Ball, the field is to be more narrowly circumscribed than Dr. Gutwin has indicated. Instead of human-computer interaction, Mr. Ball thinks the more appropriate field is handheld sports, particularly golf, recording devices. *Id.* ¶ 11. Mr. Wilens, the inventor, thinks the field is handheld sports devices. Ex. 2016 ¶ 5.

We think neither witness is persuasive on this point, and the inventor's original disclosure is closer to the actual state of the art at the time the invention was made.

We thus turn to the Patent Specification, at Ex. 1001, 2:27–40, as representative of a more objective form of evidence.

In its most basic form the inventive apparatus is a comfortably handheld, self-contained computer unit having a non-volatile memory, a power source, a general output display for selectively displaying a plurality of informational screens stored in the memory, and a program that determines logical screen and information sequence and processes the data entered. The unit is provided with key entry means for retrieving and selectively displaying various screens from the memory on the display and for entering game data into each screen to be stored

in the memory. The provision of a general output display, the variety of specialized screens for organization of data, and the handheld portability of the invention result in a device with nearly unlimited potential.

We believe this passage reflects most fairly the field of the invention. Therefore, we find the field to be that of portable computing devices for the entry, organization, and analysis of data, including, but not limited to, sports data. For example, claim 13 is not restricted to golf.

As to the level of skill in this field, Patent Owner asserts that the parties are in agreement that the level of ordinary skill in the art in 1992 was relatively low. Paper 18, 9. Petitioner's witness, Dr. Gutwin, stated in his Declaration that the level of ordinary skill was a "person to whom an expert in the relevant field could assign a routine task with reasonable confidence that the task would be successfully carried out." Ex. 1012 ¶ 13.

Moreover, Patent Owner asserts that Dr. Gutwin confirmed in deposition that he did not believe that there was either a minimum educational threshold or a minimum experience requirement to qualify as a person of ordinary skill. Ex. 2015, 101–02. Patent Owner's witness, Mr. Ball, is said to confirm the relatively immature state of the art in handheld devices in 1992. Ex. 2014 ¶¶ 19–20.

Petitioner responds that "a person skilled in the art at the time the '566 patent was filed was a generalist having an understanding of the design principles applicable to handheld key-based systems, whether the device was to be used for sports or personal communication, for example." Paper 21, 6. Petitioner points to Patent Owner's witness testimony that he "was at least one of ordinary skill in the art in 1992" (Ex. 2014 ¶ 19), based on his experience. Paper 21, 5–6 (citing Ex. 2014 ¶ 10; Ex. 1033, 94:11–17).

We have determined that Mr. Ball’s testimony as to the level of ordinary skill in the art is most credible and accurate – while the level of skill in the pertinent time period was somewhat low, that “an ordinary artisan would have at least some experience working in the field” either “designing or building” portable computing devices. Ex. 2014 ¶ 18. In other words, the skilled artisan would have a grasp as to what was practicable to do back in the time the invention was made.

B. Claim Construction

The Board interprets unexpired claims using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, No. 2014-1301, 2015 WL 4097949, at *6 (Fed. Cir. July 8, 2015); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). The ’566 patent expires July 14, 2015. Ex. 1001.

We note, for completeness of the record, that our decision remains unchanged under either the “broadest reasonable interpretation” standard or the district court standard of construing each claim of the patent in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

As Figure 1 of the instant patent provides a visual frame of reference that is useful in understanding the claim language, Figure 1 is reproduced below.

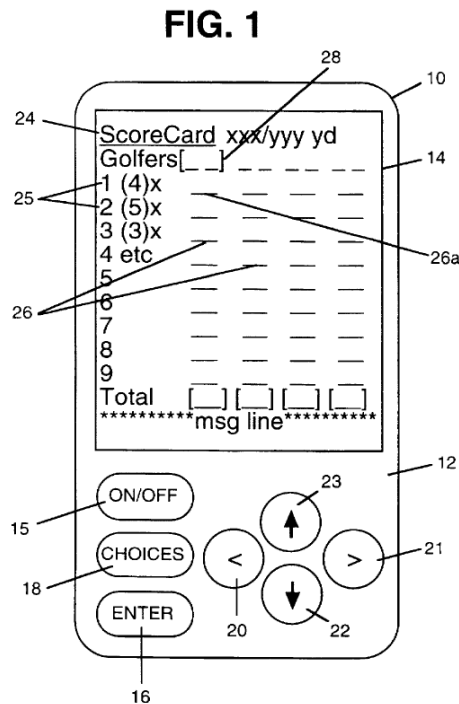


Figure 1 is a plan view of an embodiment of the '566 patent.

i. Preamble Language

Petitioner concludes that the preambles of the claims are non-limiting. Pet. 17. Patent Owner disagrees. Prelim. Resp. 4. Patent Owner asserts that the preambles give life to the meaning of the claims in reciting an apparatus for recording and reporting data from golf or sports events. *Id.* Patent Owner in the Patent Owner's Response states that "Patent Owner accepts the claim constructions set forth by the Board in the Institution Decision." PO Resp. 2. As Patent Owner has not pointed to any additional persuasive argument, referencing only its prior arguments, we reiterate the previous determination, and note that any further arguments are waived on this point.

We find that the preamble is non-limiting. A claim preamble has the import that the claim as a whole suggests for it. When the claim preamble recites structural limitations of the claimed invention, the PTO and courts give limiting effect to that usage. Conversely, when the claim body defines

a structurally complete invention and the preamble only states a purpose or intended use for the invention, the preamble is not claim limiting. *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997).

While the preambles in the challenged claims may give some overall context for the claim limitations, we find that they are not necessary to give life to the claim terms or breathe meaning into the claims. The claims and the Specification indicate that the challenged claims may be used in the field of golf or similar sporting events, without necessarily limiting their application only to golf.⁴ We observe that claims 1–5 and 17 each contain specific references to golf in the preamble of the claim. Ex. 1001, 16:65–17:41, 20:50–21:9. Claim 13 does not discuss golf in either the body or the preamble. *Id.* at 19:3–33. In any event, as Palmer describes a handheld golf device, for the purposes of this decision, we see no practical difference in whether the “golf” portion of the preamble applies to the challenged claims, as handheld golf devices were well-known.

⁴ See, e.g., Ex. 1001, 2:20–22 (“The present invention is a greatly improved handheld computer unit for recording and reporting sports information, for example golf information”); see also *id.* at 16:47–53 (“The inventive handheld reporting unit and method of operation is of course not limited to the game of golf, as those skilled in the art will be able to adapt the invention to almost any sport or game for which it is desirable to record and report a large amount of data. Golf is the game for which the invention is best suited, but not the only game to which it can be applied.”). Note also claim 13 is devoid of the term “golf.”

ii. Means-Plus-Function Language

Petitioner asserts that claims 1–3, 13, and 17 are means-plus-function claims governed by 35 U.S.C. § 112, sixth paragraph.⁵ Pet. 16. Patent Owner disagrees. Prelim. Resp. 10 n.7.

To invoke § 112, paragraph six, the alleged means-plus-function claim element must not recite a definite structure that performs the described function. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996). As in *Cole*, the drafter of the instant claims was “enamored of the word ‘means,’” *id.*, utilizing it seven times in the final paragraph of claim 1 to include a piece of structure which essentially was completely recited within the claim. Stripped of the excessive “means” verbiage, claim 1 recites:

key entry . . . wherein the key entry . . . includes first key . . . comprising one entry key for selectively displaying information screens, second screen-dependent field select key . . . the second screen-dependent field select key . . . comprising two bi-directional tab keys for scrolling in opposite directions through the data input fields on a displayed information screen, and third screen-dependent value select key . . . the third screen-dependent value select key . . . comprising two bi-directional scroll keys for scrolling in opposite directions through the predefined data associated with the data input field on the displayed information screen.

Ex. 1001, 17:7–26 (“means” language deleted).

We are persuaded that such detailed recitation of structure (including three particular types of keys with particular functions) removes these limitations of claim 1 from the ambit of § 112, sixth paragraph. As a consequence, we conclude the final paragraph of claim 1 describes a user

⁵ Because the ’566 patent has an effective filing date before September 16, 2012, we refer to the pre-AIA version of 35 U.S.C. § 112.

key interface which requires three types of keys, each having the particular function recited — an entry key for selecting a display screen, two bi-directional tab keys for scrolling through entry fields in a display screen, and two bi-directional scroll keys for scrolling through data to input in a display screen.

Claim 2 differs slightly in its manner of interpretation, but again without a practical difference for purposes of this decision. Claim 2 adds the limitation of a “choice means” for non-sequential selection or changing of information screens. Ex. 1001, 17:27–31. In this instance, as noted by Petitioner, no structure is recited in the claim. Pet. 19–20. On the current record we discern that the Specification illustrates a single embodiment for this — a choice key accessing choices menu 18. *Id.* at 11:18. Claim 3 includes the limitation that the choice means is “screen-dependent” which we interpret as permitting the menu to vary depending upon the screen.

Claims 13 and 17, similar to claim 1, contain enough structure to remove these claims from interpretation pursuant to § 112, sixth paragraph. Each “means” is defined as a “key” having a particular function. *Id.* at 19:3–33, 20:49–21:9.

iii. Pre-Game, Game-Interactive, and Post-Game

These terms occur in claims 4, 5, 13, and 17. We observe that no particular order of steps is recited or required except where expressly temporally limited in the claim (e.g., pre-game, game interactive, and post-game and the use of a sequence term such as “subsequently”). We determine that pre-game means at any time prior to a game. Likewise, game-interactive means during a game, and post-game means after a game.

V. ANALYSIS

We turn now to the instituted grounds of unpatentability. We consider the arguments made by Petitioner in the Petition and the Petitioner's Reply (Paper 22, "Pet. Reply"), as well as the arguments in Patent Owner's Response, in determining whether Petitioner has prevailed.

A. Claims 1–3 under 35 U.S.C. § 103(a) as unpatentable over Palmer and Vanden Heuvel

Claims 1–3 were challenged as being unpatentable over the combination of Palmer and Vanden Heuvel. These claims are apparatus claims reciting a computer having display screens and specific keys. Ex. 1001, 16:65–17:33.

i. Palmer (Ex. 1005)

Palmer is a handheld golf "device for determining a golf play parameter." Ex.1005, Abstract. In general, Palmer describes a handheld computing device with screens, in one embodiment utilizing an infrared beam to determine a distance to an object to determine and display a play parameter, such as club selection for a given distance, and performance recording. *Id.*; Pet. 27.

Page 5⁶ of Palmer is cited to illustrate a keypad connected with a processing means for the input of data related to play and the actuations of given functions. Pet. 27. In one embodiment, Palmer describes that the read only memory contains a club selection database. *Id.* Program instructions and algorithms used by the processor to determine the appropriate club for a given distance. *Id.* This is said to be with or without reference to data

⁶ Citation is to the Exhibit page, not the original pagination within the reference.

concerning the personal performance of the user stored in the device. *Id.* The device also contains instructions for interactive training exercises, player performance analysis, and/or score keeping. *Id.* at 27–28.

Figure 3, which is illustrative of the device of Palmer, illustrates a screen, a handheld unit, and input keys, and is reproduced below.

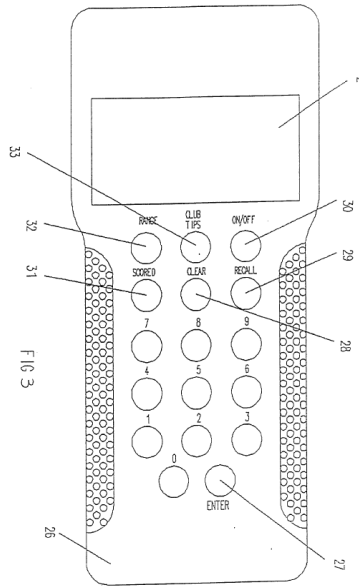


Figure 3 is a plan view of a handheld device of Palmer.

Palmer describes an apparatus for recording and reporting golf information to increase a player's ability to improve from experience. Ex. 1005, 5 (describing a keypad and processor to input data and actuate functions relating to the play of golf).

Palmer further describes a random access memory and a non-volatile memory. *Id.* at 6. Palmer also describes the device is to be hand held (*id.* at 7) and battery powered (*id.* at 10). The display is to present instructions and information to the user, while the keyboard is to input user responses. *Id.* at 9–10. Various data fields can be utilized by a user, including past performance and course information. *Id.* at 6.

ii. *Vanden Heuvel (Ex. 1006)*

Vanden Heuvel describes a pager-type device (“selective call receiver”) that receives, stores, and displays messages utilizing a plurality of screens. Ex. 1006, Abstract. A limited keypad having up, down, left, and right cursor movement keys allows for retrieving and selectively displaying the information screens from the memory on the display, utilizing quick view mode prompts 206a through 206d. *Id.* at 5:48–6:3, Pet. 29.

Vanden Heuvel’s key 40a allows the user to selectively display an information screen. Figure 6 is reproduced below:

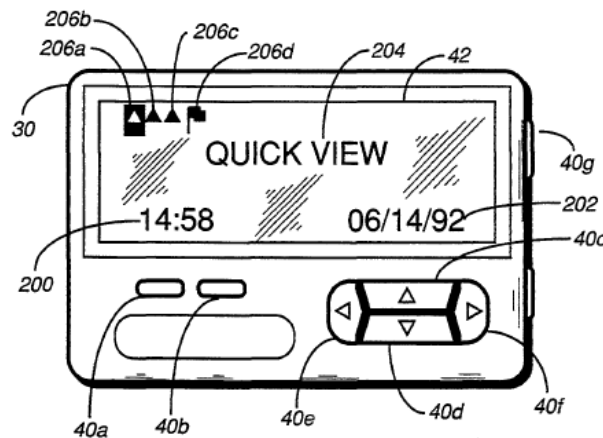


FIG. 6

Figure 6 is a top plan view of Vanden Heuvel’s apparatus and user selectable screen.

Depending upon the screen selected, keys 40e and 40f allow the selection of a particular data field of predefined data on a displayed screen. These keys are two bi-directional tab keys, and are configured to scroll in opposite directions through the data fields on a displayed information screen. In one embodiment, activation of one of the cursor movement keys 40b, 40d, 40e, or 40f permits adjustment of the active character position or values. Ex. 1006, 8:44–9:38; Pet. 30–31. One set of keys appears to select the field, and the other pair of keys appears to change the value. Pet. 31–32.

iii. The Combination of References

According to Dr. Gutwin, a person of ordinary skill in the art at the time the invention was made would have combined the display, processor, and inputs of Palmer's handheld device with the teachings of Vanden Heuvel (Ex. 1006) relating to a portable pager device, as doing so represented nothing more than the simple substitution of a screen-dependent input for a keypad to yield predictable results. Pet. 26 (citing Ex. 1012 ¶¶ 71–81).

Also according to Dr. Gutwin, “the size and handheld nature of the device limits the number of user input buttons that may reasonably be incorporated into the design.” Ex. 1012 ¶ 70. Vanden Heuvel's buttons allow a user to scroll sequentially or non-sequentially. *Id.* ¶ 75 (citing Ex. 1006, Figs. 13–15, 5:61–6:19).

Patent Owner asserts that Petitioner has not set forth a rationale why one of ordinary skill in the art would seek to modify the Palmer reference as Petitioner asserts. PO Resp. 3. Patent Owner asserts that given the level of ordinary skill in the art at the time of the invention, Petitioner has failed to establish that one of ordinary skill in the art would have had reason to believe that the technology of Vanden Heuvel could even be employed in the system of Palmer. *Id.* at 2–3 (citing Ex. 2014 ¶¶ 26–31); *see also id.* at 15–19 (arguing that the combination of Palmer and Vanden Heuvel is improper because the technology disclosed in Vanden Heuvel is fundamentally unsuitable for use in the device of Palmer).

Patent Owner's witness, Mr. Ball, testifies that the reasons stated by Petitioner for combining Palmer with Vanden Heuvel are lacking. In particular, Patent Owner challenges Petitioner's assertion that one of

ordinary skill in the art would have modified Palmer in view of Vanden Heuvel to “increase the [Palmer] device’s display size, thereby rendering the device more easily usable on the golf course.” Ex. 2014 ¶ 26 (citing Pet. 27).

Mr. Ball points to Palmer Figure 3 (reproduced above on page 13) and notes that there is more than enough space to enlarge the screen in Palmer. Ex. 2014 ¶ 27. Mr. Ball also challenges the practical design considerations as well, including removal of buttons making operation more challenging (*id.* ¶ 29–30) and increased power consumption (*id.* ¶ 31). While drawings are not necessarily to scale nor are they indicative of what may be operationally behind the cover of a device, this argument and evidence has some merit and persuasive value.

We do think this additional testimony undercuts at least one portion of the motivation rationale put forth by the Petitioner. Based on the preponderance of the evidence, we are not persuaded that one of ordinary skill in the art at the time the invention was made would have made the combination for one reason advanced by Dr. Gutwin – increasing the display size.

The Petition also did argue more generically that the ’566 patent’s claimed replacing numeric or alphanumeric character keys with a set of tab and scroll keys was a simple design choice widely employed by skilled artisans well before the priority date of the ’566 patent. Pet. 26. In more detail, it is urged that:

A person of ordinary skill would have combined the teachings of Vanden Heuvel with the handheld electronic device of Palmer as doing so represented nothing more than a simple substitution of one known element (*i.e.*, the keypad of Palmer) for another (*i.e.*, the screen-dependent data input of Vanden

Heuvel) to yield predictable results – namely, the entry of data into the scorecard or other fields associated with the Palmer device. Specifically, and as recognized by Palmer, one way of accomplishing data input in a handheld device is by the use of a keyboard with function key inputs. Ex. 1005 at p. 10 and FIG. 3. However, as taught by Vanden Heuvel, another known way to input data into a handheld device is through the use of screen-dependent data fields and values adjusted using bi-directional tab or scroll keys. Ex. 1006 at 9:5-38. *See also* Ex. 1012 at ¶¶ 68 and 69. A person of ordinary skill in the art could have predictably implemented Vanden Heuvel’s data input method into the handheld device of Palmer

Pet. 26–27.

This argument is buttressed firmly by Ex. 1012 ¶ 69, where Dr. Gutwin testifies as to the search for known data entry mechanisms. We deem this testimony to be credible.

Mr. Ball challenges that testimony somewhat in his testimony at Ex. 2014 ¶ 32–45, *inter alia*. In essence, he points to the difficulties in using the entry mechanism of Vanden Heuvel with the Palmer system, such that the system would largely be unusable with golf. He mentions the effects of sunlight principally and the effects of using part of the screen for entry of data, relying heavily on the description in Vanden Heuvel of an alternate alert device to alert of a message.

Patent Owner in its response urges that the combination of Palmer and Vanden Heuvel is improper because the technology disclosed in Vanden Heuvel is fundamentally unsuitable for use in the device of Palmer. PO Resp. 15 (citing Ex. 2014 ¶¶ 32–36). According to the Patent Owner, one of ordinary skill at the time of the invention would have believed that replacing the keyboard of Palmer with a screen dependent input mechanism would

result in a device that would be unsuitable and often unusable on a golf course for a variety of significant reasons. *Id.*

We are not persuaded that these purported drawbacks would have prevented one of ordinary skill from contemplating the inclusion of an alternate data entry mechanism such as Vanden Heuvel.

Indeed, one of the underpinnings of Mr. Ball’s testimony is the existence of an auxiliary alert device as indicative of a sunlight problem. We, however, observe that Vanden Heuvel itself simply uses the alert device to inform a user a message has been received. Ex. 1006, 4:39–41. The alert could be a light or a sound. *Id.* at 5:18–22. We have not found any description in Vanden Heuvel concerning visibility outdoors.

Yet, Mr. Ball states “[i]n fact, it appears that Vanden Heuvel was even cognizant of the fact that its screen may have been difficult to read and, thus included an ‘alert device 38 to alert the user that a selective call message has been received.’ . . . The alert device is either an LED light or an audio signal – neither of which are affected by direct sunlight.” Ex. 2014 ¶ 34 (citing Ex. 1007 [sic, 1006]).

We find that the inclusion of an alternate alert was to provide additional alerting means, as stated in Vanden Heuvel. We find the testimony of Mr. Ball that this inclusion of an alternate alert somehow indicates Vanden Heuvel was cognizant of a visibility problem to be not credible, and as a consequence do not accept the arguments founded upon it.

Patent Owner is further of the position that the substitution rationale is “clearly legally deficient” because it does not address why one would make the combination. PO Resp. 3–4.

We believe the Patent Owner is misinterpreting the guidance of the Supreme Court in its argument.

As the Supreme Court noted:

A person of ordinary skill is also a person of ordinary creativity, not an automaton. . . . When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. . . . [We] must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 417–21 (2007).

While the Petitioner’s proposed screen size motivation is no longer persuasive (or necessary) to this panel and this decision, we conclude that a preponderance of evidence in this trial supports a conclusion that replacing an alphanumeric keyboard with a set of tab and scroll keys was a substitution of one known data entry method with an equivalent data entry mechanism.

We expressly reject the screen washout argument made, and the underlying testimony in Mr. Ball’s Declaration.

Patent Owner also urges that Vanden Heuvel and Palmer each are nonanalogous art. PO Resp. 11.

In order to rely properly on a prior art reference to support a rejection, “the reference must either be in the field of the applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the

inventor was concerned.” *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

Patent Owner asserts that the ’566 patent is directed to a “greatly improved handheld computer unit for recording and reporting sports information, for example golf information.” Ex. 1001, 2:20–26; *see also id* at 1:8–13 (stating that the ‘Field of the Invention’ is ‘related to an apparatus and method for reporting and recording golf information and for providing golf advice.’).” PO Resp. 11 (emphasis omitted). Patent Owner asserts that the field of the invention is strictly the recording and reporting of sports information. *Id.* at 12.

As noted above, the field of “human computer interaction” suggested by Petitioner is far too broad. As the evidence of record from the ’566 patent itself supports a conclusion that the field is properly that of portable computing devices for the entry, organization, and analysis of data, we disagree with Patent Owner that the handheld devices of Palmer and Vanden Heuvel are nonanalogous.

With this background in place, we return to an analysis of the claims and their language individually.

iv. The Claims

Claim 1

Claim 1 is reproduced above in whole and recites an apparatus comprising “a self-contained computer unit” displaying “information screens” and three key entry means as discussed above. Ex. 1001, 16:65–17:26. The combination of Palmer and Vanden Heuvel are urged to teach the computer unit and screens, and the screen-dependent key entry means, respectively. Pet. 27–32.

With specific reference to each element:

“a self-contained computer unit having a memory, a power source and a display for selectively displaying a plurality of information screens and associated data stored in the memory, the information screens including screen-dependent data input fields for the associated data;”

Palmer describes random access memory 4 provided to store information regarding current play input from the keypad 3 and non-volatile memory 5 for receiving information input from keypad 3 and from the range finding system 7 regarding, for example, the users golfing abilities and past performance information regarding one or more golf courses. Pet. 28–29 (citing Fig. 1.; Ex. 1005, 9, 10).

Figure 1 of Palmer is reproduced below.

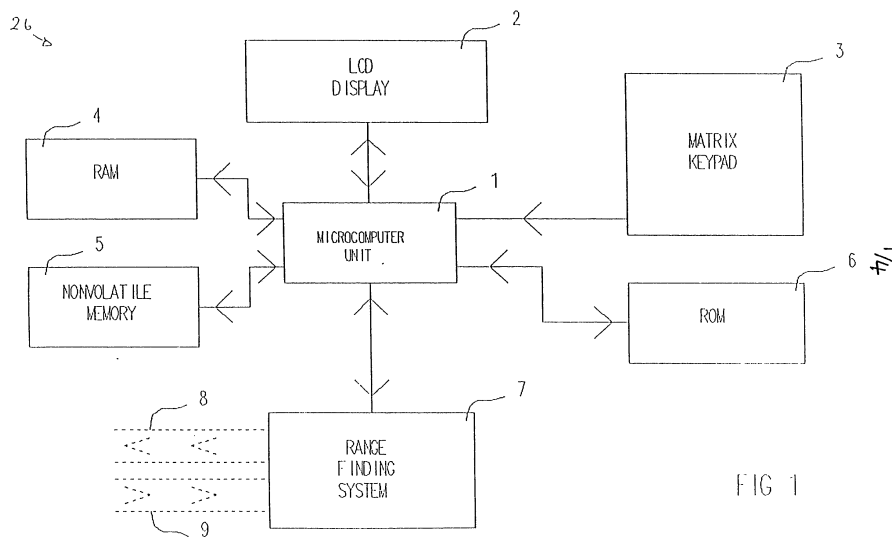


Figure 1 of Palmer is a block diagram of a handheld golf unit

Palmer's display 2 is used to give instructions and information to the user of the device, and a keypad 3 is provided for inputting the user's

responses. Palmer is meant to be handheld. Ex. 1005, Fig. 1. Palmer uses batteries as a power source. *Id.* at 10.

Palmer also describes entry of data including information regarding holes in a golf course. *Id.* at 14. The data is stored in memory. *Id.*

Vanden Heuvel describes a receiver which receives messages.

A memory (44) stores personal messages in a first portion (46) and database messages as a plurality of screens in a second portion (48). A display (42) displays the plurality of screens for the user's perusal....

Vanden Heuvel includes screen-dependent data input fields adjusted using entry keys and bi-directional scroll keys.

Pet. 28 (citing Ex. 1006, Abstract).

In accordance with the present invention, after the user selects the desired field **380** and that field is highlighted on the display **376**, the user activates **378** the function key **40b** which displays the current line while adding surrounding window values **382** and sets the active character initially to the first character of the upper window value **384**. Referring to FIG. **14**, the display **42** presents the current line of information "DJIA 3306.18" **410**. The current line is surrounded with an upper window value **412** and a lower window value **414**. The first character **416** of the upper window value **412** is the initial active character and is highlighted **386** (FIG. **12**).

If a user input is received **388** involving activation of one of the cursor movement keys **40b**, **40d**, **40e**, or **40f**, an adjustment of the active character position or value is performed **390**. If the cursor key activation involves activation of the left or right **40e**, **40f** keys, the active character position is adjusted **392** in the appropriate direction. If the up or down cursor keys **30c**, **40d** are activated **390**, the value of the active character is adjusted **394** up or down in the appropriate direction. After adjustment of the active character position **392** or the active character value **394**, processing returns to display

the current line with the surrounding window values **384** highlighting the active character **386** as adjusted. When the user has completed adjustment of all the active character values **394**, as shown in FIG. 15, activation of the function key **40b** as a user input **388** sets an active data check for the current database screen **396**. Processing returns to display the database screen **352** with a “check mark” icon **425** (FIG. 16) alternately displayed in the upper right corner of the display **42** with the original character located thereat.

Ex. 1006, 9:5–38.

Figure 12 of
Vanden Heuvel is
reproduced below.

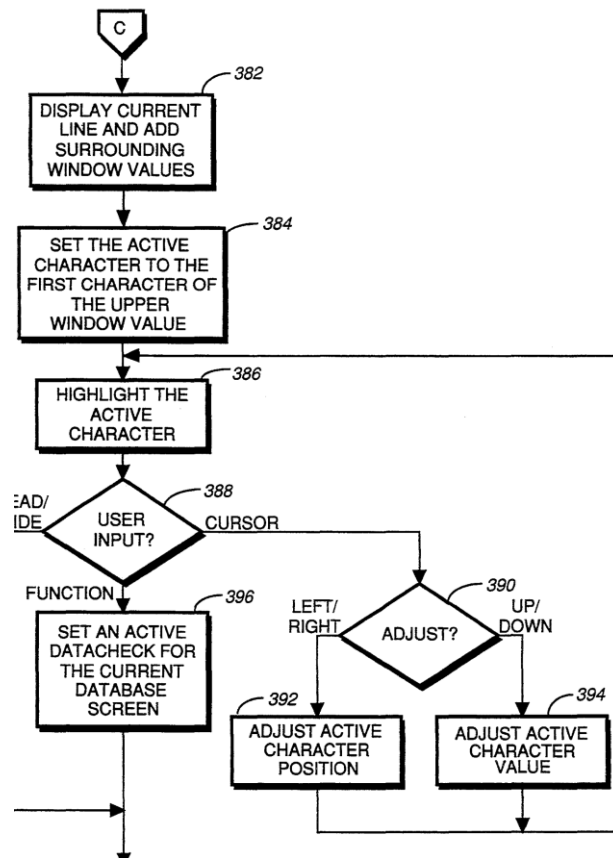


Figure 12 is a step block diagram of
the screen-dependent data entry process

This process is used, e.g., to alter preset Dow Jones Industrial Average numbers which serve as triggers for alerts. Ex. 1006, 9:42–52.

Dr. Gutwin testifies at length as to the screen-dependent data entry at Ex. 1012 ¶¶ 71–81.

“key entry means for retrieving and selectively displaying the information screens from the memory on the display, and for retrieving, selecting, and recording the associated data with each information screen,”

Vanden Heuvel describes keys 40a through 40g which can be used to select and display specific information screens. Pet. 29–30 (citing Ex. 1006, 5:48–6:3).

If there are quick view entries **102**, then selection of the quick view mode prompts display of a quick view status screen **104**, as shown in FIG. 6. The quick view status screen (FIG. 6) comprises time information **200**, date information **202**, and a message indicating activation of quick view mode **204** which may be personalized by the service provider. Additionally, selected screen icons **206a**, **206b** and **206c** indicate that three screens have been preselected by the user for display during quick view operation. Flag-shaped screen icon **206d** indicates that a fourth screen has automatically been inserted for quick view display in accordance with the present invention.

Ex. 1006, 5:48–60.

We find these quick views are specific information screens selected by the keys and displayed.

Vanden Heuvel describes pressing key 40b to display a menu for editing the fields shown on the screen. Pet. 29–30 (citing Ex. 1006, 8:44–9:39). This then describes the editing of the information contained in the triggering menu screen and reselecting the screen.

Referring to FIG. 13, the user selects a current line **400** (as shown boxed) for triggering information. The chosen line, or the current line, contains a desired field for user selection. Referring back to FIG. 11, the current database screen is displayed and the current line is highlighted **368**. In FIG. 13, for example, line **400**, the second line of the display, is the current line and is therefore highlighted. A user input **370** of one of the cursor movement keys **40c**, **40d** allows the user to adjust the current line **372**, and the database screen is again displayed with the adjusted current line highlighted **368**. . . .

After choosing the appropriate line for triggering, the user activates **370** the function key **40b** which initially selects the first numeric field on the line as the active field **374**. The current line only is displayed with the active field highlighted **376**. Activation of the cursor keys **40d**, **40e** as a user input **378** allows the user to adjust, or select, the active field desired **380**. As the active field is adjusted **380**, the current line is displayed with the selected active field highlighted **376**.

Ex. 1006, 8:46–9:1.

We find this to be retrieving, selecting, and recording the associated data as claimed.

“wherein the key entry means includes first key means comprising one entry key for selectively displaying information screens,”

Vanden Heuvel describes operation of key **40a**, in conjunction with the processor of device **30** and associated software selectively displays a desired information screen **206**. Pet. 30 (citing Ex. 1006, Fig. 6, 5:61–6:3).

The highlighting of icon **206a** indicates that the left most icon **206a** is the current active icon. In accordance with the present invention, activation of the read key **40a** or the down cursor key **40d** as a user input **106** (FIG. 4) will cause display of the selected quick view database screen, which initially is the screen indicated by the current icon **206a** (FIG. 6). To adjust the current active icon **109**, the user activates the left cursor key **40e** or the right cursor key **40f** for movement left or right,

respectively, among the screen indication icons **206a**, **206b**, **206c**, and **206d**.

Ex. 1006, 5:61–6:3.

Patent Owner initially challenged that Petitioner has not shown where the “key entry means” of claim 1 has been shown. Prelim. Resp. 8. The gravamen of this argument is that Petitioner did not show what structure is the key entry means. However, as this position was based on an interpretation of the claims as being means-plus-function, the argument was and is not persuasive. We find that the key entry means is encompassed by the structure recited in the claim, specifically, keys with functions.

We find that the Vanden Heuvel passage quoted above describes a first key means comprising one entry key for selectively displaying information screens as claimed.

“second screen-dependent field select key means for selecting a particular data input field of predefined data on a displayed screen, the second screen-dependent field select key means comprising two bi-directional tab keys for scrolling in opposite directions through the data input fields on a displayed information screen, and”

Figure 13 of Vanden Heuvel is reproduced below.

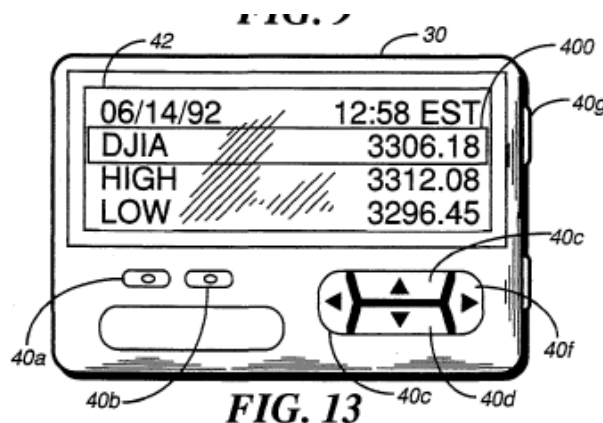


Figure 13 of Vanden Heuvel illustrates scroll buttons in a front plan view of a handheld call device

Vanden Heuvel describes at key 40b which initiates the display of the function menu 70. Buttons 40c–40f allow a user to scroll to select a function. In the data check function, a value for the current line is initially set to the top line of the display 366. Referring to Figure 13, reproduced above, the user selects a current line 400 (as shown boxed) for triggering information. Ex. 1006, 5:23–37; Pet. 30–31.

We find that buttons 40e (left)⁷ and 40f (right) meet this element of two bi-directional tab keys for scrolling in opposite directions through the data input fields on a displayed information screen.

“third screen-dependent value select key means for displaying and selectively recording or altering selected data in a selected data input field, the third screen-dependent value select key means comprising two bi-directional scroll keys for scrolling in opposite directions through the predefined data associated with the data input field on the displayed information screen.”

Vanden Heuvel describes additional bi-directional keys 40c and 40d which scroll in opposite directions. If the cursor key activation involves activation of the left or right 40e, 40f keys, the active character position is adjusted 392 in the appropriate direction. If the up or down cursor keys 40c, 40d are activated 390, the value of the active character is adjusted 394 up or down in the appropriate direction. See Ex. 1006, 9:18–38; Pet. 31–32.

We find that this meets the claim element of two bi-directional scroll keys for scrolling in opposite directions through the predefined data associated with the data input field on the displayed information screen.

In sum, each recited key entry means is described in Vanden Heuvel. See especially Figures 13 and 14 with the function key 40b, and the cursor movement keys 40c–f; Pet. 31–32.

⁷ Misabeled in Fig. 13 as 40C, compare. Figure 13 with Figure 14.

Looking to the rebuttal evidence of record, we note that Mr. Wilens, the inventor, has testified to some evidence of secondary considerations. Ex. 2016 ¶¶ 14–15. He testifies that he met with firms including JABIL and Saturn Electronics and Engineering and met with technicians regarding the implementation of his idea. He testified that he was told that devices for outside use were “best designed using [] marked keys and [he] encountered surprise in proposing an alternate way.” *Id.* He therefore testifies that he believes that the screen-based system in a handheld golf apparatus was innovative and not obvious. *Id.*

We weigh this evidence and find it entitled to very little weight. First, the Vanden Heuvel device used unmarked keys, and we discredit the testimony that it could not be used outdoors. Furthermore, none of the technicians are identified, and have not testified in this proceeding, which greatly lessens the probative value of the evidence.

Accordingly, we conclude that Petitioner has prevailed and shown unpatentability of claim 1 over Palmer and Vanden Heuvel.

Claim 2

Claim 2 reads as follows:

2. Apparatus as defined in claim 1, wherein the first key means permits changing of the information screens in sequential fashion, and the first key means further includes choice means for non-sequential selection or changing of information screens.

Ex. 1001, 17:26–31.

Vanden Heuvel describes operation of key 40a as displaying information screens 206a–206d. Ex. 1006, 5:61–6:19; Pet. 32–33.

More specifically, we find that Vanden Heuvel describes “activation of the read key **40a** or the down cursor key **40d** as a user input **106** (FIG. 4) will cause display of the selected quick view database screen.” Ex. 1006, 5:63–66.

Display of this screen allows a choice of views of information screens.

Then in manual quick view operation, when the timer times out (step 112 of Fig. 4), the display reverts 104 to the quick view status display (Fig. 6) and awaits user selection 106 of a next quick view database screen. *Id.*

In automatic quick view operation, when the timer times out (step 112 of Fig. 4), the quick view controller 60 (Fig. 1) automatically selects the next quick view database screen 114 by retrieving the screen from database portion 48 of memory 44 and providing it to display driver 56 (Fig. 1).

We therefore find that Vanden Heuvel describes the claimed sequential screen display.

Vanden Heuvel also describes a key **40b** providing for additional non-sequential selection or changing of information screens via a function menu. As a result, this function key **40b**, overwrites the bottom line of the four line display 42 with function menu 70 showing a plurality of icons, each of the plurality of icons identifying a particular function. As a result:

The left/right cursor keys **40e**, **40f** allow the user to scroll among the various functions of the function menu **70** and to select one of the icons. Upon selection of the proper icon, e.g., **70a**, **70b**, or **70c** the user depresses the function key **40b** to activate that function.

Id.; see Pet. 33.

We, therefore, find that Vanden Heuvel also describes the claimed non-sequential screen selection by a user.

Accordingly, we conclude that the Petitioner has prevailed on the issue of the unpatentability of claim 2 over Palmer and Vanden Heuvel.

Claim 3

Claim 3 reads as follows:

3. Apparatus as defined in claim 2 wherein the choice means is screen-dependent to provide a customized set of screen-changing options for a displayed information screen.

Ex. 1001, 17:31–33.

Vanden Heuvel Fig. 7 is reproduced below:

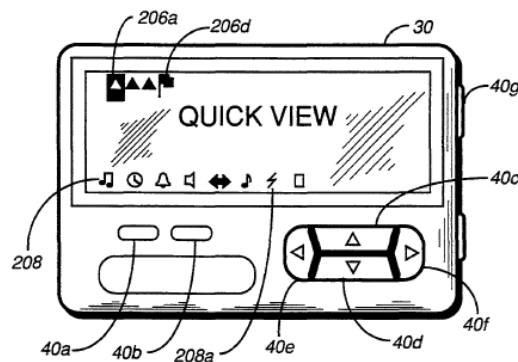


FIG. 7

Fig 7. is a planar view of an alternative embodiment of Vanden Heuvel.

Vanden Heuvel further describes that:

From the status screen **104**, user input **106** can request a quick view function menu **120** (Fig. 5). A menu request **120** is performed by activation of the function key **40b** (Fig. 6), which causes display of a function menu. A quick view status screen function menu **208** is shown in FIG. 7 [above]. The function menu **208** comprises a plurality of icons which can be utilized to select various quick view functions.

Ex. 1006, 6:34–55; *see also* Pet. 33.

Thus, the quick view screen is customizable.

We, therefore, conclude that Petitioner has prevailed on the issue of the unpatentability of claim 3 over the teachings of Palmer and Vanden Heuvel.

B. Claims 4, 5, 13, and 17 under 35 U.S.C. § 103(a) as unpatentable over Palmer, Vanden Heuvel, and Osamu

These claims recite particular screens — for pre-game, game-interactive, and post-game use. Ex. 1001, 17:35–42; 19:3–33; and 20:50–21:9.

i. Osamu (Ex. 1007)

Osamu describes a device and method for recording and reporting golf information to increase a player's ability to improve from experience. Ex. 1007, 13, Fig. 3.

Osamu Figure 3 also is illustrative, and reproduced below.

Fig. 3

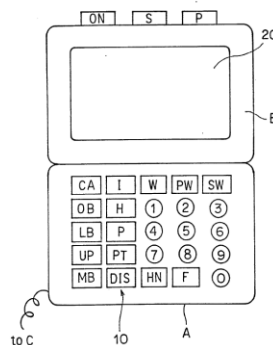


Figure 3 is a planar view of a portable golf device of Osamu.

Osamu describes a handheld electronic golf computer carried by a golfer and used to store location, score, and club selection data. *Id.* at Abstract. During a game-interactive mode, two game-interactive recording information screens are presented to the golfer. First, a scorecard screen, and second, a separate screen allowing the golfer to input the location of

each shot on a given hole and the club used for each shot to track them. *Id.* at 19. The carry distances for each shot are saved and displayed to the golfer. *Id.*

ii. The Combination of References

Petitioner's witness has testified that a person of ordinary skill would have combined the teachings of Osamu with those of Palmer and Vanden Heuvel because doing so represents utilizing a combination of prior art elements combined according to known methods to yield predictable results. Ex. 1012 ¶¶ 90–98.

We find that Osamu describes a handheld electronic golf computer that is carried by a golfer during the game of golf and used to store “location, score and club selection data,” among other things. Ex. 1007 Abstract. We also find that Palmer describes a plurality of pre-game, game-interactive, and post-game information screens. Ex. 1005, 10, 11, and 15–19.

Palmer describes pre-game entry of data regarding, e.g. how far the golfer can repeatedly hit the golf ball for each club is entered into a personal database, which is later used to provide personalized club selection recommendations during the play of the game. *Id.* at 15, 16.

Petitioner's witness also testifies that a person of ordinary skill would have been motivated to combine Osamu's shot tracker screen with the device of Palmer as doing so would allow the golfer to correlate actual performance to club selection, thereby improving Palmer's club selection database and enhancing the golfer's ability to learn from past performance, the objective of both Palmer and Osamu. Ex. 1012 ¶ 91 (citing Ex. 1005, 10, 11, and 17; Ex. 1007, 13–14, 20).

We find the testimony of Dr. Gutwin to be credible.

Accordingly, we conclude combining the teachings of Osamu into the Palmer/Vanden Heuvel system would have been combining prior art elements according to known methods to yield predictable results. Moreover, such combination would have been motivated to add additional functionality, which would have been a simple extension of the described screen sequences.

We now turn to analysis of the individual claims.

iii. The Challenged Claims

Claim 4

Claim 4 reads as follows:

4. Apparatus as defined in claim 1, wherein the information screens stored in the memory comprise one or more pre-game parameter recording information screens, one or more game-interactive recording information screens; and one or more post-game statistic report information screens.

Ex. 1001, 17:34–39.

Palmer (Ex. 1005) describes pre-game entry screens. Palmer describes that details regarding how far a user can repeatedly hit the golf ball for a given club is entered into the microcomputer unit 1 via keypad 3 or range finding system 7 or a combination of both, while the user can update the database at any time, except while actually playing a round of golf.

Palmer, in particular, indicates that an embodiment of the invention permits “information regarding each hole on one or more golf courses may be entered by the user and stored in the non-volatile memory 5. This information can be recalled whenever the user wishes to play a golf course whose data is stored.” Ex. 1005, 16.

The Patent Owner is of the opinion that Palmer and Osamu do not describe “pre-game” information screens (Prelim. Resp. 19–20), and asserts that each screen is at best “game interactive.” *Id.* at 20. The reason for this appears to be the Institution Decision’s reference to pages 10, 15, and 17 of the Palmer reference. Patent Owner asserts that none of them can be temporally pre-game screens. Patent Owner continues this position into the Patent Owner Response (Paper 18) at 19–22, challenging that the Decision on Institution (Paper 7) did not rely upon appropriate description in Palmer. Palmer, it is urged, shows only a disorganized listing of various golf information.

Patent Owner’s witness, Mr. Ball, testifies that:

While Palmer and Osamu do make mention of displaying golf related information, neither reference describes presenting pre-game and/or game interactive information in a particular screen or logical order of screens. To the contrary, in its description, Palmer merely provides various lists of the types of information that could be provided to the user with little or no description of how that information would be presented. Ex. 1005 at 10, 14, and 15. Osamu is little better. Ex. 1006 at 19 (describing that scores “may be reviewed by displaying on the LCD panel as desired”); *see also* Ex. 1006 at 20.

Ex. 2014 ¶ 40.

We are not persuaded by the testimony or Patent Owner’s assertions. It is not logical to assume data like identity, handicap, hole yardage, etc. cannot be entered temporally pre-game, or that one of ordinary skill in the art would not recognize how to temporally order data screens. As noted in *KSR*, 550 U.S. at 421, one of ordinary skill in the art is not an automaton.

Consequently, sufficient evidence of record supports a finding that Palmer describes a “pre-game screen.”

Likewise, Palmer describes the use of in-game recording information screens. Ex. 1005, 17–18 (“As the user progresses around the golf course, the relevant hole data is automatically selected and used as the basis of certain of the devices indicated functions, most notably, the stroke allowance calculation and the performance analysis sections of the score keeping function to be described below. The details can be recorded during a round of golf or at any other time the user desires.”) Moreover, it seems apparent that strokes would be entered when taken, logically demanding an in-game entry screen.

Osamu, Ex. 1007, describes both in game and post-game play displays. Ex. 1007, 18–19. It is said to describe a golfer at a tee shot who begins recording data, such as hole number and ball location. Carry distance is computed and displayed along with number of shots. Similar activity is carried out for putting.

As for the postgame screens, scores are stored, and may be reviewed by displaying on LCD panel 20 as desired. *See, e.g.*, Ex. 1007, 19–20.

After play is finished, the data stored in the portable apparatus of Osamu is post-treated and edited. The data sent includes the hole numbers, route of shots, carry distances, scores, identity of clubs used, penalty counts, and putting counts. The computer prepares an image of a route map for each hole, which is displayed on a screen. A score table, ranking table in a competition, and correlation between a club used and wind nature also may be prepared. *Id.*

We find that the evidence of record supports a finding that the pre-game, in-game, and post-game display screens are described in this combination of Palmer, Vanden Heuvel, and Osamu.

Accordingly, Petitioner has prevailed on the ground that claim 4 is unpatentable over Palmer, Vanden Heuvel, and Osamu.

Claim 5

Claim 5 depends from claim 4, and further recites that “the information screens further include one or more game-interactive fact report information screens.” Ex. 1001, 17:39–42.

Palmer describes a device which is adapted to keep full scoring details for up to four players “which, in preferred embodiments of the invention include, but are not limited to: . . . a detailed performance analysis of the round.” Ex. 1005, 18–19.

We find that this evidence supports a finding that game-interactive fact report information screens are described in Palmer.

Accordingly, Petitioner has prevailed on the ground that claim 5 is unpatentable over Palmer, Vanden Heuvel, and Osamu.

Claim 13

Claim 13 is an apparatus claim, and reads as follows:

13. An apparatus for recording and reporting sports and game information to increase a player’s ability to improve from experience, the apparatus comprising:

a self-contained computer unit having a memory, a power source and a display for selectively displaying a plurality of information screens and associated data stored in the memory, the information screens including screen-dependent data input fields for the associated data;

a plurality of pre-game, game-interactive and post-game information screens stored in the memory of the computer unit;

means for displaying a pre-game information screen and prompting entry of data which defines parameters of an upcoming game, and means for subsequently displaying a game-interactive information screen corresponding to a game-

interactive mode defined by the parameters selected in the pre-game information screen;

entry key means for changing information screens in sequential fashion, the entry key means comprising one entry key;

choice key means for non-sequential selection or changing of information screens the choice key means comprising one choice key;

field select key means for choosing a particular data input field on a displayed information screen, the field select key means comprising two bi-directional keys; and

value select key means for displaying and selectively recording data in the chosen data input field the value select key means comprising two bi-directional keys.

Ex. 1001, 19:3–33.

“a self-contained computer unit having a memory, a power source and a display for selectively displaying a plurality of information screens and associated data stored in the memory, the information screens including screen-dependent data input fields for the associated data”

As noted above, Palmer, Ex. 1005, describes a keypad and processor to input data and actuate functions relating to the play of golf. *Id.* at 5.

Palmer further describes a random access memory and a non-volatile memory. *Id.* at 6. Palmer also describes the device is to be hand held (*id.* at 7) and battery powered (*id.* at 10). The display is to present instructions and information to the user, while the keyboard is to input user responses. *Id.* at 9–10; see also Fig. 1. Various data fields can be utilized by a user, including past performance and course information. *Id.* at 6.

“a plurality of pre-game, game-interactive and post-game information screens stored in the memory of the computer unit;”

These features of claim 13 are described by Palmer, as discussed above.

“means for displaying a pre-game information screen and prompting entry of data which defines parameters of an upcoming game, and means for subsequently displaying a game-interactive information screen corresponding to a game-interactive mode defined by the parameters selected in the pre-game information screen;”

Petitioner asserts that this is an entry key which is programmed to display the pre-game screen. Pet. 20. We find this to be a reasonable interpretation of this element, so long as the pre-game screen also allows further data to be entered in a location (Ex. 1001, 4:37–44) and provides a key to input game parameter data in the screen. The subsequent screen displayed should be dependent in some way on the parameters of the data entered in the pregame information screen.

Palmer describes the handheld unit describing screens prompting the entry of club selection data (club distances hit). Ex. 1005, 5. According to Palmer, the user can update the database at any time, except while actually playing a round of golf. *Id.* Likewise, a user can enter golf course data to be recalled whenever the user wants to play a round of golf. *Id.* at 17.

Palmer also describes screens available during the game to obtain club selection advice, when the distance from the pin is previously entered via keypad. *Id.* at 10–11.

“entry key means for changing information screens in sequential fashion, the entry key means comprising one entry key;”

As before, this element has sufficient structure to be a key which allows changing of screens sequentially.

Vanden Heuvel describes icon 206a as an indicator of the current active icon. Activation of the read key 40a or the down cursor key 40d as user input 106 changes screens in a sequential fashion. Ex. 1006, 5:61–6:3.

“choice key means for non-sequential selection or changing of information screens the choice key means comprising one choice key;”

Again, as discussed above, there is sufficient structure to take these elements outside the purview of 35 U.S.C. § 112, sixth paragraph.

Vanden Heuvel describes operation of key 40a as displaying information screens 206a–206d in both a sequential fashion and a non-sequential fashion. Ex. 1006, 5:23–37. Upon activation of function key 40b, the bottom line of four line display 42 is overwritten with function menu 70 showing a plurality of icons, each of the plurality of icons identifying a particular function. Pet. 40–41.

Vanden Heuvel’s key 40a allows the user to selectively display an information screen. Figure 6 is reproduced below:

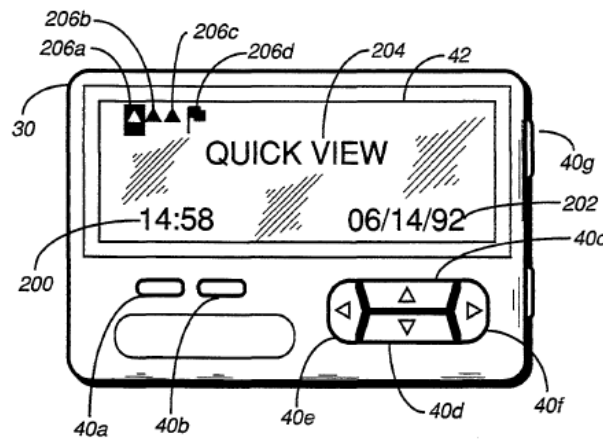


FIG. 6

Figure 6 is a top plan view of Vanden Heuvel’s apparatus and user selectable screen.

“field select key means for choosing a particular data input field on a displayed information screen, the field select key means comprising two bi-directional keys; and”

Depending upon the screen selected in Vanden Heuvel, keys 40e and 40f allow the selection of a particular data field of predefined data on a displayed screen. These keys are two bi-directional tab keys, and are configured to scroll in opposite directions through the data fields on a displayed information screen. In one embodiment, activation of one of cursor movement keys 40b, 40d, 40e, or 40f permits adjustment of the active character position or values. Ex. 1006, 8:61–67.

“value select key means for displaying and selectively recording data in the chosen data input field the value select key means comprising two bi-directional keys.”

Vanden Heuvel describes:

If a user input is received **388** involving activation of one of the cursor movement keys **40b**, **40d**, **40e**, or **40f**, an adjustment of the active character position or value is performed **390**. If the cursor key activation involves activation of the left or right **40e**, **40f** keys, the active character position is adjusted **392** in the appropriate direction. If the up or down cursor keys **30c**, **40d** are activated **390**, the value of the active character is adjusted **394** up or down in the appropriate direction.

Ex. 1006, 9:18–26.

We find that this describes sets of bi-directional keys used to select the field, and another set to change the value, as originally urged in the Petition. Pet. 40–41, 31–32.

Accordingly, Petitioner has prevailed on the ground that claim 13 is unpatentable over Palmer, Vanden Heuvel, and Osamu.

Claim 17

Claim 17 is reproduced below.

17. A handheld portable apparatus for recording and reporting golf information to increase a player's ability to improve from experience, the apparatus comprising:

a[] self-contained computer unit having a memory, a power source and a display for selectively displaying a plurality of information screens and associated data stored in the memory, the information screens including screen-dependent data input fields for the associated data;

first key entry means for sequentially displaying one or more pre-game information screens in a pre-game mode of operation and subsequently sequentially displaying one or more game-interactive information screens in a game-interactive mode of operation, the first key entry means comprising one entry key;

second key means for selecting a particular data field on a displayed information screen, the second key means comprising two bi-directional keys;

third key means for selectively recording or altering data in a selected data field, the third key means comprising two bi-directional keys; wherein,

the pre-game information screens include means for prompting the entry of data which defines parameters of an upcoming game, and means for selecting one of a plurality of game-interactive information screens representing different levels of data-recording detail in the game-interactive mode.

Ex. 1001, 20:49–21:9.

Claim 17 is much like claim 13, except that it includes a final wherein clause requiring that “the pre-game information screens include means for prompting the entry of data which defines parameters of an upcoming game, and means for selecting one of a plurality of game-interactive information screens representing different levels of data-recording detail in the game-interactive mode.” Ex. 1001, 21:4–9.

Petitioner urges that this means-plus-function language requires that the user can select, in a pre-game mode, the amount of detail to later record in a game-interactive mode. Pet. 25. On this record, we are persuaded that this is a broad, but reasonable interpretation given the description in the Specification that:

Depending on the game-interactive reporting mode selected by the player, additional pre-game screens requesting further setup data may be displayed and the information carried over into the game-interactive screen(s). Where the chosen level of recording detail is high, for example, the golfer will be prompted to enter data relating to a variety of extrinsic factors having an effect on a golf game, such as weather conditions, temperature, wind, golf ball compression data, and the like.

Ex. 1001, 4:36–44.

Palmer describes suggesting a club based upon the range of previous data entered in the keypad. Ex. 1005, 10. Palmer describes the recording of various details by its handheld device. “The details the device can store include, but are not limited to: the par for each hole; the stroke index for each hole, and the yardage of each hole.” *Id.* at 17.

Depending upon the mode selected, a user appears able to select a level of detail, e.g. practice, which might record only distance, or score keeping (which could record a foursome), or golf course database, which could record a larger amount of data, or a larger or smaller group of golfers with or without handicaps and supporting data.

This meets the claim limitation of claim 17 of a “means for selecting one of a plurality of game-interactive information screens representing different levels of data-recording detail.”

Accordingly, Petitioner has prevailed on the ground that claim 17 is unpatentable over Palmer, Vanden Heuvel, and Osamu.

iv. Dr. Gutwin

Patent Owner has asked the Board to give no weight to the testimony of Dr. Gutwin. PO Resp. 22. According to the Patent Owner, Dr. Gutwin contradicted his Declaration multiple times in his deposition, refused to provide the basis for his opinions on multiple occasions, and undermined the IPR process by refusing to answer any but the most basic questions. *Id.* at 22–23.

As support for this assertion, the Patent Owner observes that in his Declaration, Dr. Gutwin stated that “in practice, one of ordinary skill would have viewed the ’566 patent as describing and claiming nothing more than a common handheld golf computer.” PO Resp. 23 (emphasis omitted) (citing 1012 ¶ 20). Patent Owner then asserts that in deposition, Dr. Gutwin “testified that ‘[t]he elements of the claims do not describe a golf computer’ (149:22-24) and that ‘[t]he elements of the patent do not describe a golf computer.’” *Id.* (emphasis omitted) (citing Ex. 2015, 149:9–10).

Moreover, Patent Owner asserts that Dr. Gutwin at other times decided that the ’566 patent did address golf computers. We are pointed to Ex. 2015 “at 163:24–163:6 (testifying that ‘it’s certainly true that the ’566 describes a handheld device that’s used for making computations about some kind of game of golf’).” PO Resp. 23. Still elsewhere in his deposition, Dr. Gutwin was wholly unsure whether the ’566 claims a golf computer. *See, e.g.*, Ex. 2015, 164:7–17 (answering the question “[Y]es or no, does it claim a handheld golf computer?” with the answer that “. . . it

depends, I guess, on the elements and the preambles, and so we could look at that if you prefer.”); PO Resp. 23.

We are not so perturbed by Dr. Gutwin’s answers at deposition as the Patent Owner. Given the loose language use in questioning, what a patent describes, and what it claims can be very different things, and the parsing of claim language can be a tricky undertaking, especially under the stress of a deposition. Certainly, a witness’s demeanor and apparent evasion may be taken into account, but we are not pointed to actual instances of that.

As to other contradictions pointed to, such as whether it was Dr. Gutwin or his children who played a golf game, we agree it does go to the weight to be given to the particular testimony in question. But we decline the invitation to discard the testimony of Dr. Gutwin completely, based upon those items pointed out in the Patent Owner Response.

Nor are we particularly concerned with Dr. Gutwin’s answer during his deposition as to how a “game” is defined. PO Resp. 25. We have thoroughly reviewed the deposition transcript in question.

Dr. Gutwin has a point that games can be defined in different ways. Take, for example this colloquy:

Q. When you say, I’m going to go play a game of golf, what do you mean?

A. In different situations that could mean very different things. I could be implying that I’m going to a golf course to -- to walk around nine or 18 holes. I could mean that I’m going to mini golf or it could mean that I’m going to play a board game called golf, for all I know, so it’s – it’s really open-ended.

Ex. 2015, 16:15–24.

Note also the following exchange:

Q. What does “pre-game” mean there? How are you interpreting that, or how are you constructing that?

MR. FISHER: Objection, form.

A. Well, so as I said, the word “game” -- could mean many different things. And in general, prefixes like pre and post would imply a temporal relationship to another entity. And so if a game is a thing that happens in time, then a pre-game event is something that would happen before that game. But as I said, that doesn’t really nail down much about what exactly this pre-game phase is, because a game could be so broad.

Id. at 20:22–21:11.

Patent Owner states that:

[a] purported expert that cannot explain the meaning of the most basic words used in the both the ’566 patent and his declaration simply lacks any credibility. It defies logic that the opinion of a person who could not even explain how he used the word “game” in his own sworn declaration, could be relied upon as credible evidence regarding what a person of skill in the art would know. A person of ordinary skill in the art – at least – would be able to explain what a game is.

PO Resp. 26 (emphasis omitted).

We think the Patent Owner’s argument here lacks some precision. The words Dr. Gutwin was being deposed on were contained in claims drafted by the Patent Owner. Each claim, and its individual elements, have particular meanings, and it appears to us that Dr. Gutwin was being cautious, not necessarily evasive, in his response to the questioning.

One more example:

Q. What does “pre-game” mean to you as used in this claim?

MR. FISHER: Objection, form.

Q. Or what meaning did you place on “pre-game” for purposes of your opinion?

A. So as I’ve stated, the words “pre” and I believe they use “post” define the temporal relationship to another phase. And so if the pre-game phase and so the things that are occurring -- I guess some of these screens that involve a pre-game parameter recording is either related to or occurring before this other phase that involves the game itself.

Ex. 2015, 24:6–15.

The answer given by Dr. Gutwin seems reasonable to us.

We therefore decline the Patent Owner’s invitation to ignore Dr. Gutwin’s testimony.

VI. CONCLUSION

We conclude that Petitioner has prevailed on the following grounds of unpatentability asserted in the Petition:

Claims 1–3 under 35 U.S.C. § 103(a) as unpatentable over Palmer and Vanden Heuvel;

Claims 4, 5, 13, and 17 under 35 U.S.C. § 103(a) as unpatentable over Palmer, Vanden Heuvel, and Osamu.

VII. ORDER

In consideration of the foregoing, it is hereby:

For the reasons given, it is

ORDERED that claims 1–3 are unpatentable under 35 U.S.C. § 103(a) as obvious over Palmer and Vanden Heuvel;

FURTHER ORDERED that claims 4, 5, 13, and 17 are unpatentable under 35 U.S.C. § 103(a) over Palmer, Vanden Heuvel, and Osamu; and

IPR2014-00438
Patent 5,779,566

FURTHER ORDERED that parties to the proceeding seeking judicial review of this final written decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

For PETITIONER:

Thomas Fisher
cpdocketfisher@oblon.com

Scott McKeown
cpdocketmckeown@oblon.com

Christopher Ricciuti
cpdocketricciuti@oblon.com

Alexander Englehart
cpdocketenglehart@oblon.com

For PATENT OWNER:

David Hoffman
hoffman@fr.com

Matthew Wernli
wernli@fr.com