Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 52 and 53, as follows:

1. (Previously Presented) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

identifying a potential waypoint; and

performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

2-4. (Canceled)

5. (Previously Presented) The method of claim 1, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Previously Presented) The method of claim 1, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Previously Presented) The method of claim 1, the preselected conditions including a weather condition.

11-18. (Canceled)

19. (Previously Presented) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

receiving a user defined graphical filter area from the user;

identifying the user defined graphical filter area on a display;

analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Previously Presented) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

receiving one or more preselected conditions from a user;

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

24-26. (Canceled)

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Previously Presented) The computer readable medium of claim 23, the preselected conditions including a water depth.

34. (Previously Presented) An electronic marine navigation device, comprising:

a processor;

a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

35-37. (Canceled)

38. (Previously Presented) The electronic marine navigation device of claim 34, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Previously Presented) The electronic marine navigation device of claim 34, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Previously Presented) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

45. (Previously Presented) A method for marine navigation, comprising:

receiving indication of a minimum water depth from a user;

identifying a potential waypoint; and

performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints.

46. (Previously Presented) The method of claim 45, displaying a visual indication of places along the calculated course where the water depth is expected to approach the minimum water depth.

47. (Previously Presented) A method for marine navigation, comprising:

receiving indication of a minimum water depth from a user;

displaying marine cartographic data;

receiving indication of a potential waypoint;

displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth; and

performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

48. (Previously Presented) A method for marine navigation, comprising:

displaying marine cartographic data;

receiving indication of a potential waypoint;

displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth; and

performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

49. (Previously Presented) The method of claim 48, wherein the minimum water depth is user selectable.

50. (Previously Presented) The method of claim 48, wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth.

51. (Previously Presented) The method of claim 48, wherein the line is displayed on the marine cartographic data in a plan view.

52. (Currently Amended) The method of claim [[48]] <u>50</u>, wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner.

53. (Currently Amended) The method of claim [[48]] <u>50</u>, wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color.

54. (Previously Presented) A method for marine navigation, comprising:

displaying marine cartographic data;

receiving indication of a potential waypoint; and

displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth.

55. (Previously Presented) The method of claim 54, further including the step of performing a marine route calculation algorithm to route a course from the first location to the potential waypoint avoiding areas where the water depth is expected to be less than the minimum water depth by identifying one or more non-user selected waypoints.

56. (Previously Presented) The method of claim 55, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

57. (Previously Presented) The method of claim 54, wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth.

58. (Previously Presented) The method of claim 1, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

59. (Previously Presented) The computer readable medium of claim 23, further including instructions for displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

60. (Previously Presented) The electronic marine navigation device of claim 34, further including a display for displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

61. (Previously Presented) The method of claim 44, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

62. (Previously Presented) The method of claim 45, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

63. (Previously Presented) The method of claim 47, wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints.

64. (Previously Presented) The method of claim 63, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

65. (Previously Presented) The method of claim 47, wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth.

66. (Previously Presented) The method of claim 48, wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints.

67. (Previously Presented) The method of claim 66, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

REMARKS:

Status Of Claims

Claims 1, 5-10, 19-23, 27-34, and 38-67 were previously pending in the application. Claims 52 and 53 have been amended. Thus, claims 1, 5-10, 19-23, 27-34, and 38-67 are currently pending in the application with claims 1, 19, 23, 34, 44, 45, 47, 48, and 54 being independent.

Office Action

In the Office Action, the Examiner rejected claims 52 and 53 under 35 U.S.C. § 112, second paragraph. Claims 52 and 53 have been amended to obviate this ground of rejection. Therefore, this amendment at least places the application in a better condition for appeal. Thus, Applicant respectfully requests that this amendment be entered after Final Action.

The Examiner also rejected claims 19, 20, and 22 under 35 U.S.C. 102(b) as being anticipated Bailey et al., U.S. Patent No. 4,873,676. The Examiner also rejected claims 1, 5-10, 23, 27-32, 34, 38-40, 42-44, 58-61, 66, and 67 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0006423 (Fujimoto '423) in view of Michaelson et al., U.S. Patent No. 6,734,808. The Examiner also rejected claim 21 under 35 U.S.C. 103(a) as being unpatentable over Bailey in view of Fujimoto '423. The Examiner also rejected claim 33 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson, in view of Tobin Jr., U.S. Patent No. 4,323,992. The

Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto ‘423 and Michaelson in view of Bailey. The Examiner also rejected claims 45, 46, and 62 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto ‘423 and Michaelson in view of Walsh et al., U.S. Patent No. 3,886,487. The Examiner also rejected claims 47-57 and 63-65 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0003958 (Fujimoto ‘958), in view of Fujimoto ‘423 and Michaelson. Applicant respectfully submits that the currently pending claims distinguish the present invention from both Fujimoto references, Tobin, Bailey, Michaelson, Walsh, and the other prior art references of record, taken alone or in combination with each other.

Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). More specifically, “Federal Circuit decisions repeatedly emphasize that anticipation (lack of novelty) is established only if (1) all the elements of an invention, as stated in a patent claim, (2) are identically set forth, (3) in a single prior art reference”. Chisum on Patents § 3.02. *See also* Gechter v. Davidson, 43 USPQ2d 1030, 1032 (Fed. Cir. 1997) (“Under 35 U.S.C. § 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim.”).

Claim 19 recites “analyzing cartographic data only within the user defined graphical filter area for the preselected conditions". The Examiner mistakenly asserts that this limitation is disclosed by Bailey in column 3, lines 26-36 and 46-48. However, column 3, lines 26-29 state "[a]utomatic display scale changing is provided in response to the detected bottom going off-scale, or in response to the detected bottom rising to within a predetermined depth". Therefore, Bailey actually rather clearly teaches a system for automatically ***redefining*** a display area based on changing water depth. In other words, rather than analyzing data only within a user defined area, Bailey teaches automatically redefining some user defined display area. In fact, on page 14 of the Final Office Action, the Examiner acknowledges "Bailey discloses an automatic display scale changing". Furthermore, Bailey analyzes the entirety of this automatically redefined display area for target data or sonar returns.

In column 3, lines 46-48, Bailey goes on to suggest user "selection of an area of interest" to be displayed. The Examiner appears to be focusing on this "customizable (user-defined)" display screen. Page 14 of the Final Office Action. However, a distinction must be drawn between what is displayed and what is analyzed. Bailey teaches only customizing a display. In fact, Bailey is completely devoid of any suggestion of "***analyzing*** cartographic data ***only*** within the user defined graphical filter area", emphasis added. At best, lines 46-48 can only suggest displaying some limited area of interest.

In fact, Bailey doesn't teach "analyzing ***cartographic*** data", emphasis added, at all. Rather, as discussed above, Bailey teaches analyzing target data or sonar returns. Furthermore, Bailey must analyze all of the received target data or sonar returns. These are important distinctions in that Bailey's sonar signals, by their very nature, must pass completely through a predefined space under a boat. This space is predefined by the transducer itself. The ***only*** limits that ***can*** be imposed on this space are related to the maximum depth that the sonar signals reach. This is a function of transducer design and underwater obstacles, neither of which is under the user's control. In other words, the user simply cannot define where the sonar signals go, and therefore cannot define any area, and Bailey's device therefore cannot analyze only a portion of the returns. Simply put, Bailey cannot be said to suggest analyzing data ***only*** within a user defined area, much less "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions", as claimed. As a result, Bailey simply fails to disclose, suggest or make obvious "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions" as claimed in claim 19.

Obviousness

Obviousness can be a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has the benefit of the applicant's disclosure as a blueprint and guide. In contrast, one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Furthermore, once an obviousness rejection has been made, the applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection.

For these reasons, the law places upon the Examiner the initial burden of establishing a *prima facie* case of obviousness. If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper and will be overturned. *In re Rijckaert,* 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993). Only if the Examiner's burden is met does the burden shift to the Applicant to provide evidence to refute the rejection.

In meeting this initial burden, the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine,* 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Thus, the Examiner is required to perform the "critical step" of casting his or her mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See, e.g., W. L. Gore & Assoc., Inc. v. Garlock, Inc.,* 721 F.2d 1540, 1553, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

Rejections on obviousness grounds also cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn,* 441 F.3d 977, 988, 78 U.S.P.Q.2d 1329 (Fed. Cir. 2006). The factual inquiry performed by the Examiner in issuing an obviousness rejection must be thorough and searching. *McGinley v. Franklin Sports, Inc.,* 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001 (Fed. Cir. 2001). The prohibition against conclusory examination is as much rooted in the Administrative Procedure Act, which ensures due process and non-arbitrary decision-making, as it is in § 103. *In re Kahn*, 441 F.3d at 988.

Three criteria must be satisfied by the Examiner in order to establish a prima facie case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the combination of references must teach or suggest all the claim limitations. *See* MPEP § 706.02(j), *citing In re Vaeck,* 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). This "motivation-suggestion-teaching" requirement protects against the entry of hindsight into the obviousness analysis, a problem which § 103 was meant to confront. *In re Kahn,* 441 F.3d at 988.

Consequently, an Examiner's mere identification in the prior art of each individual element claimed is insufficient to defeat the patentability of a claimed invention without a proper suggestion to combine or modify the elements. *In re Rouffet,* 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125 (Fed. Cir. 1984).

In presenting the suggestion or motivation to combine prior art references, the Examiner may not resort to broad and conclusory statements; as such statements are not "evidence" of anything. *In re Kotzab,* 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). The suggestion to make the claimed combination must be found in the prior art, not in the applicant's disclosure. *In re Vaeck,* 947 F.2d at 490. If the Examiner's proposed combination renders the prior art invention unsatisfactory for its intended purpose, or changes its principal of operation, there can be no suggestion or motivation to form the combination—and thus no *prima facie* case of obviousness. *See* MPEP § 2143.01*; In re Gordon*, 733 F.2d at 902.

Claims 1, 23, 34, 44, and 45, stand rejected under various combinations of Fujimoto '423, Michaelson, and Walsh. Claim 1 recites "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Similarly, claim 23 recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Claim 34 recites "wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Claim 44 recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Claim 45 recites "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints".

In contrast, the Examiner acknowledges that "Fujimoto discloses identifying user waypoints … but does not disclose non-user waypoints". Page 4 of the Final Office Action. To cure this defect, the Examiner mistakenly asserts that "Michaelson, on the other hand discloses re-routing the course by identifying one or more non-user waypoints". Page 4 of the Final Office Action. In supporting this assertion, the Examiner points to column 24 lines 41-50 and 55-64. The Examiner also points to column 13, line 56, through column 14, line 4.

However, column 24 clearly states that Michaelson's invention merely "alerts the crew to a new heading to steer or engine setting to avoid collisions". Column 24, lines 38-41. Specifically, column 24, lines 57-58, state an "alternate track PT' is first generated by incrementing the ship's heading by [a] nominal step size". Columns 13 and 14, on the other hand, merely disclose providing warnings such as "go shallow" to avoid grounding a submarine. Thus, Michaelson only suggests a heading and/or depth change to avoid an obstacle. In fact, Michaelson is devoid of any suggestion of "***identifying one or more non-user selected waypoints***", emphasis added, as claimed.

Walsh doesn't even suggest an alternate heading/depth. Specifically, as stated in column 9, lines 6-10, Walsh merely discloses transmitting "as signal to the alarm 188 which in turn then warns the operator of the ship 20 to change course or take other evasive action", when the depth ahead is too shallow. In other words, Walsh simply provides a warning of an impending collision/grounding. Thus, Walsh fails to even provide a suggested heading and/or depth change, much less non-user selected waypoints that may be used to avoid the hazard.

As a result, no combination of Fujimoto '423, Michaelson, and/or Walsh discloses, suggests or makes obvious "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 1. No combination of Fujimoto '423, Michaelson, and/or Walsh discloses, suggests or makes obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 23. No combination of Fujimoto '423, Michaelson, and/or Walsh discloses, suggests or makes obvious "wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 34. No combination of Fujimoto '423, Michaelson, and/or Walsh discloses, suggests or makes obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 44. No combination of Fujimoto '423, Michaelson, and/or Walsh discloses, suggests or makes obvious "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints", as claimed in claim 45.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423, Michaelson, and/or Walsh. Rather, with respect to claims 1 and 44, the Examiner asserts "[i]t would have been obvious to disclose non-user waypoints so that an operator of a ship relies on automatic navigation between a point of origin and a destination without constantly monitoring the ship's travel route". Page 4 of the Final Office Action.

However, the test is not what might "have been obvious to disclose". Rather, there must be some suggestion, found in the prior art rather than the applicant's disclosure, to combine one prior art reference with another. Here, as discussed above, the references don't even teach what the Examiner asserts, much less provide any suggestion or motivation to combine their teachings.

With respect to claim 45, the Examiner asserts “[i]t would have been obvious to avoid a water depth less than the minimum water depth so that a ship’s operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships’ passengers”. However, this assertion does not provide any motivation to actually identify “one or more non-user selected waypoints”, as claimed, certainly not over Michaelson’s warnings and suggestion of a heading change. In other words, once the crew has been alerted and even given a new heading the steer, as taught by Michaelson, any such motivation would be satisfied. Specifically, once the crew has been alerted and even given a new heading, there would be no need for Walsh’s warning. Therefore, the stated motivation doesn’t actually provide any motivation to combine Walsh with the system of Michaelson, much less any motivation that might render the present claims obvious.

Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

Claims 47, 48, 51, and 54 stand rejected under Fujimoto ‘958, Fujimoto ‘423, and Michaelson. Claim 47 recites “displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth". Similarly, claim 48 now recites "displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth". Claim 51 recites "wherein the line is displayed on the marine cartographic data in a plan view". Claim 54 recites "displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth".

In contrast, the only straight line the Examiner points to, Fujimoto '958's item 45, is depicted completely independently of water depth. In fact, Fujimoto '958's item 45 "designates an alarm water depth line". ¶ 73. This line is arbitrarily set by the user as a minimum water depth, above which Fujimoto '958's apparatus provides an alarm. Therefore, as taught by Fujimoto '958, this line, item 45, as well as all other lines taught by Fujimoto '958, is necessarily displayed on a sonar display, rather than "between a first location and the potential waypoint", much less "on the marine ***cartographic*** data", emphasis added, or "wherein the line is displayed on the marine cartographic data in a plan view", as claimed.

Fujimoto '958's only line that relates to an actual water depth is item 43, which depicts a seabed and therefore simply cannot be substantially straight. Of course, displaying item 43 as substantially straight would render it unsatisfactory for its intended purpose, namely depicting the seabed. Furthermore, as discussed above, this line, item 43, is necessarily displayed on a sonar display, rather than "between a first location and the potential waypoint", much less "on the marine ***cartographic*** data", emphasis added, or "wherein the line is displayed on the marine cartographic data in a plan view", as claimed.

Finally, neither of these lines, themselves, actually highlight or distinguish where the water depth is above or below a minimum. In fact, the Examiner acknowledges that "Fujimoto does not disclose highlighting the water depth line". Page 11 of the Final Office Action. In order to cure this defect, the Examiner asserts "Michaelson discloses highlighting a terrain threat indication". Pages 11 and 12 of the Final Office Action. However, the Examiner fails to cite to any portion of Michaelson that teaches this. In fact, Michaelson does not include any variation on the word "highlight". Michaelson simply does not teach highlighting or distinguishing any portion of any ***line*** "between a first location and the potential waypoint", much less any line "on the marine ***cartographic*** data", emphasis added, or "wherein the line is displayed on the marine cartographic data in a plan view", as claimed.

As a result, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth", as claimed in claim

47, “displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth”, as claimed in claim 48, “wherein the line is displayed on the marine cartographic data in a plan view”, as claimed in claim 51, or “displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth”, as claimed in claim 54.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto ‘958, Fujimoto ‘423, and/or Michaelson. Rather, the Examiner’s asserted motivation is found only in Applicant’s own disclosure. Specifically, as discussed above, none of the prior art references actually teach emphasizing “a water depth line by highlighting”, as asserted by the Examiner. Page 12 of the Final Office Action. Such teachings are found only in Applicant’s own disclosure. In contrast, as discussed above, in order to establish a *prima facie* case of obviousness, there must be some suggestion, found in the prior art rather than the applicant's disclosure, to combine one prior art reference with another. Here, as discussed above, the references don’t even teach what the Examiner asserts, much less provide any suggestion or motivation to combine their teachings.

Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

Claim 50 recites "wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth".

The Examiner mistakenly asserts that Fujimoto '958 teaches these limitations. However, as discussed above, Fujimoto '958 merely displays a seabed line 125 above or below a depth mark 124, as the case may be, but the seabed line 125 is otherwise displayed in the exact same manner. In fact, the Examiner acknowledges that "Fujimoto does not disclose highlighting the water depth line". Page 11 of the Final Office Action. The Examiner also acknowledges that "Fujimoto … does not disclose first and second manners of displaying a line". Page 12 of the Final Office Action. Simply put, there is no difference in the line itself or the manner in which it is displayed, such as highlighting color, solid vs. broken or dashed, whether that portion of the line is flashing, or whether that portion of the line is bolded. In fact, Fujimoto '958 lacks any suggestion to show any portion of the seabed line 123 in a different manner. As a result, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth", as claimed in claim 50.

Claim 52 recites "wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner". Claim 53 recites "wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color". Claim 57 recites "wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth". Claim 65 recites "wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth".

For example, this capability is shown in figures 2A, 4A, and 4C and described on pages 11-14, among other places. Of course, claim 48, from which claims 52 and 53 depend, recites "displaying a substantially straight line between a first location and the potential waypoint". Similarly, claim 54, from which claim 57 depends, recites "displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint". Finally, claim 47, from which claim 65 depends, recites "displaying a substantially straight line between a first location and the potential waypoint". Thus, the line is substantially straight and depicts a path between two points. Furthermore, in the case of claim 57, the line is displayed on "marine cartographic data".

In contrast, the Examiner acknowledges that "Fujimoto … does not disclose first and second manners of displaying a line". Page 12 of the Final Office Action. In order to cure this defect, the Examiner asserts "Michaelson discloses first and second colors to display terrain indications". Page 12 of the Final Office Action. In supporting this assertion, the Examiner points to column 27, lines 40-65. However, Michaelson's terrain indications are simply not analogous to the presently claimed line. Specifically, Michaelson merely teaches varying the color of the displayed terrain data itself, rather than any path through the terrain. *See* column 27, lines 48-65. As a result, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner", as claimed in claim 52, "wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color", as claimed in claim 53, "wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth", as claimed in claim 57, or "wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth", as claimed in claim 65.

Claim 55 recites "performing a marine route calculation algorithm to route a course from the first location to the potential waypoint avoiding areas where the water depth is expected to be less than the minimum water depth by identifying one or more non-user selected waypoints". Claims 63 and 66 each recite "wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints". Similarly, claims 56, 58-62, 64, and 67 each recite "displaying the course from the first location to the potential waypoint via the non-user selected waypoints".

In contrast, as discussed above, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "identifying one or more non-user selected waypoints", as claimed in claims 55, 63, and 66, or "displaying the course from the first location to the potential waypoint via the non-user selected waypoints", as claimed in claims 56, 58-62, 64, and 67, much less in combination with the other limitations of these claims.

The remaining claims all depend directly or indirectly from independent claims 1, 19, 23, 34, 45, or 48, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

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Electronic Acknowledgement Receipt

EFS ID:	1236078
Application Number:	10667026
Confirmation Number:	9123
Title of Invention:	Methods, systems, and devices for cartographic alerts
First Named Inventor:	Darrin W. Kabel
Customer Number:	38933
Filer:	David L. Terrell/Christine Terrell
Filer Authorized By:	David L. Terrell
Attorney Docket Number:	702.254
Receipt Date:	04-OCT-2006
Filing Date:	18-SEP-2003
Time Stamp:	17:44:30
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1		Amendment7.pdf	145952	yes	33

FLIR-1002.232

	Multipart Description		
	Doc Desc	**Start**	**End**
	Amendment After Final	1	1
	Claims	2	15
	Applicant Arguments/Remarks Made in an Amendment	16	33
Warnings:			
Information:			
	Total Files Size (in bytes):	145952	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

PTO/SB/06 (08-03)
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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 10/667026

CLAIMS AS FILED – PART I

FOR	NUMBER FILED (Column 1)	NUMBER EXTRA (Column 2)	SMALL ENTITY RATE	SMALL ENTITY FEE	OR	OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY FEE
BASIC FEE (37 CFR 1.16(a))				$	OR		$
TOTAL CLAIMS (37 CFR 1.16(c))	minus 20 =		X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(b))	minus 3 =		X $ =		OR	X $ =	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))			+ $ =		OR	+ $ =	
			TOTAL		OR	TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED – PART II

AMENDMENT 2-25-06

	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
Total (37 CFR 1.16(c))	* 50	Minus	** 50	= —	X $ =		OR	X $ =	
Independent (37 CFR 1.16(b))	* 9	Minus	*** 9	= —	X $ =		OR	X $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT 10/5/06

	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
Total (37 CFR 1.16(c))	* 50	Minus	** 50	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(b))	* 9	Minus	*** 9	=	X $ =		OR	X $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT

	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
Total (37 CFR 1.16(c))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(b))	*	Minus	***	=	X $ =		OR	X $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

38933 7590 08/08/2006

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EXAMINER	
MEHMOOD, JENNIFER	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/667,026	Applicant(s) KABEL ET AL.	
	Examiner Jennifer A. Mehmood	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 25 July 2006.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1,5-10,19-23,27-34 and 38-67 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,5-10,19-23,27-34 and 38-67 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date July 25, 2006.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 52 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 52 and 53 recites the limitations "the first manner" and "the second manner" in lines 1-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 19, 20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailey et al. (US 4,873,676).

For claim 19, Bailey discloses a method for marine navigation, comprising: receiving one or more preselected conditions from a user (col 7, lns 62-68; col 8, lns 1-4, 19, and 20; Fig. 1, item 15a, 16a); receiving a user defined graphical filter area from the user (col 4, lns 11-14; col 8, lns 15-17); identifying the user defined graphical filter area on a display (col 8, lns 25-37; Fig. 1, item 15a); analyzing cartographic data only within the user defined graphical filter area for the preselected conditions (col 3, lns 26-36 and 46-48); and providing an alert signal when cartographic data within the user defined graphical filter area indicate the preslected conditions (col 9, lns 1-15; col 15, lns 25-28; col 23, lns 30-38; col 28, lns 40-45).

For claim 20, Bailey discloses identifying the user defined graphical filter area includes repositioning the user defined graphical filter area (col 3, lns 30-36; col 4, lns 11-24; col 8, lns 14-20; col 10, lns 59-68; col 11, lns 1-17).

For claim 22, Bailey discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 10, lns 50-55; col 28, lns 18-32 and 40-45).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 5-10, 23, 27-29, 38, 39, 42-44, 58-61, 66, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and further in view of Michaelson et al. (US 6,734,808).

For claims 1, 44, 60, 61, 66, and 67 Fujimoto discloses a method for marine navigation, comprising: receiving one or more preselected conditions from a user (parag 0115; parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint (paragraph 0071, 0072; Figure 4); and performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions (parag 0076-0078), including analyzing cartographic data between the first location and the potential waypoint (parag 0023, 0132, 0133; Fig. 22a, 22b) and re-routing the course to avoid the preselected conditions (parag 0023, 0132, 0133; Fig. 22a, 22b). Fujimoto discloses identifying user waypoints (parag 0140, lns 1-5), but does not disclose identifying non-user waypoints. Michaelson, on the other hand discloses re-routing a course by identifying one or more non-user waypoints (determined by the system, not the user) between the first location and the potential waypoint (col 24, lns 41-50 and 55-64). It would have been obvious to disclose non-user waypoints so that an operator of a ship relies on automatic navigation between a point of origin and a destination without constantly monitoring the ship's travel route.

For claims 5 and 27, Fujimoto determines a first location on the course based on a signal from a GPS; and analyzing cartographic data for a predetermined area around the first location for preselected conditions (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072).

For claims 6, 28, and 39 Fujimoto does not disclose an alert signal; however, Michaelson discloses an alert signal when analyzed cartographic data for a predetermined area around a location includes preselected conditions (col 5, lns 35-40;

col 13, lns 56-67). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claims 7, 30, and 40 Fujimoto discloses analyzing cartographic data between the first location and the potential waypoint includes preselected conditions, but does not disclose an alert signal between a first location and a potential waypoint; however, Michaelson discloses an alert signal is provided when the analyzed cartographic data for the predetermined data between the first location and the potential waypoint (col 5, lns 35-40; col 13, lns 56-67). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a dangerous condition to ensure the safety of the ships passengers.

For claims 8 and 31, the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6 and 7 as stated above. In addition, Michaelson discloses the alert signal includes emitting an audio alert (col 6, lns 15-18; Fig. 2, item 28). It would have been obvious to emit an audio alert so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claims 9 and 32, the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6-8 as stated above. Michaelson discloses providing the alert signal to include displaying a visual alert (Fig. 48). It would have been obvious to emit a visual alert so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 10, Fujimoto discloses receiving preselected conditions, but does not include weather conditions. However, Michaelson discloses this feature (col 26, lns 18-30). It would have been obvious to include weather conditions, so that an operator of a ship predicts changing weather patterns via a weather radar display.

For claim 23, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 1 as stated above. In addition, Fujimoto discloses a computer readable medium having a set of computer readable instructions (parag 0067, lns 1-10; parag 0068, lns 1-8 and last 12 lines) for receiving one or more preselected conditions as discussed in the limitations of claim 1.

For claim 29, Fujimoto discloses acquiring cartographic data from a GPS (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072).

For claim 34, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 1 as stated above, regarding re-routing a course and non-user selected waypoints. Furthermore, Fujimoto discloses an electronic marine navigation device, comprising: a processor; a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user (parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302); a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location (parag 0067, lns 6-12; Fig. 1, items 2, 3); and a memory operatively coupled to the processor and the location input (parag

0116), the memory having cartographic data including data related to the preselected conditions (parag 0115), wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.

For claim 38, Fujimoto discloses a GPS system operatively coupled to the processor (Fig. 1, items 3, 6; parag 0066, lns 1-3, 12-16), wherein the processor determines the first location on the course based on a signal received from the GPS (parag 0068, last 9 lines), and analyzes cartographic data for a predetermined area around the first location for preselected conditions (parag 0072; 0113). Even though Fujimoto does not specifically disclose a GPS receiver, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to include a GPS receiver to receive signals from a satellite in order to determine the ships position.

For claim 42, Fujimoto discloses a first location and a potential waypoint independent of a current location of a device implementing the method (parag 0139; 0140).

For claim 43, Fujimoto discloses at least a portion of the course is unrelated to a current heading of a device implementing the method (parag 0140, last 10 lines).

For claims 58 and 59, Fujimoto discloses the step of displaying the course form the first location to the potential waypoint via user selected waypoints (parag 0067, lns 6-12), but not non-user selected waypoints. However, Michaelson discloses displaying the course form the first location to the potential waypoint via non-user user selected waypoints (col 25, lns 55-63; Fig. 34, item 4000; Figs. 35, 36). It would have been obvious to display all user waypoints, so that an operator of a ship predicts the path of travel.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al. (US 4,873,676), and further in view of Fujimoto et al. (US 2004/0006423).

Bailey discloses analyzing cartographic data, but does not acquire the cartographic data from a GPS; however, Fujimoto discloses acquiring cartographic data from a GPS (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072). It would have been obvious to acquire cartographic data from a GPS so that a ship's captain relies on accurate real-time data in order to ensure a navigational route.

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and Michaelson et al. (US 6,734,808), and further in view of Tobin, Jr. (US 4,323,992).

Fujimoto does not disclose the preselected condition of water depth; however, Michaelson discloses a preselected condition of water depth (col 8, lns 54-62; col 9, lns 6-16 and 36-39). It would have been obvious to include the preselected condition of water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

10. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423) and Michaelson et al. (US 6,734,808), as applied to claim 34, and further in view of Bailey et al. (US 4,873,676).

Fujimoto discloses a processor to operate on the marine route calculation algorithm to analyze cartographic data (parag 0067, lns 6-12; parag 0068, lns 1-10); however, Fujimoto does not disclose an alert signal. Michaelson discloses an alert as discussed in the rejection of claim 6. However, Fujimoto does not disclose a user defined graphical filter area. Bailey, on the other hand, does disclose a user defined graphical filter area (col 4, lns 11-14; col 7, lns 62-68; col 8, lns 1-4,15-17, 25-37; Fig. 1, item 15a, 16a); wherein a processor operates to analyze cartographic data within the defined graphical filter area and provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions. It would have been obvious to display cartographic data as a user defined graphical filter area to so that a user has a certain degree of control over the display in order to customize it according to the user's preferences.

11. Claims 45, 46, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and Michaelson et al. (US 6,734,808) further in view of Walsh et al. (US 3,886,487).

For claim 45, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 1 as stated above. In addition, Fujimoto discloses a method for marine navigation, comprising: receiving indication of a preselected condition from a user (parag 0047; parag 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint (paragraph 0066; 0072, lines 1,2); and performing a marine route calculation algorithm to route a course between a first location and the potential waypoint (parag 0068, lns 5-8) in order to avoid the preselected condition. Fujimoto, on the other hand, discloses neither receiving indication of a minimum water depth from a user nor avoiding water depth less than the minimum water depth However, Walsh discloses receiving indication of a minimum water depth from a user and avoiding water depth less than the minimum water depth (col 2, lns 13-19; col 3, lns 21-30; col 8, lns 24-34, 53-60; col 9, lns 1-10; Fig. 4, items 182, 184, 186, 188, 98; Figs. 1 and 2, items 40, 42, 48). It would have been obvious to avoid a water depth less than the minimum water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

For claim 46, Fujimoto discloses displaying a visual indication of places along the calculated course to include expected preselected conditions (parag 0047; parag 0115; Fig. 17a-c, items 301, 302); however, Fujimoto does not disclose the preselected conditions to include a water depth that is expected to approach the minimum water depth. Walsh, on the other hand, discloses receiving indication of a water depth that is expected to approach the minimum water depth. (col 3, lns 21-30; col 8, lns 24-34, 53-60; col 9, lns 1-10; Fig. 4, items 182, 184, 186, 188, 98; Figs. 1 and 2, items 40, 42, 48). It would have been obvious to avoid a water depth less than the minimum water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

For claim 62, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 58 as stated above.

12. Claims 47-57, and 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (2004/0003958) and further in view of Fujimoto et al. (US 2004/0006423) and Michaelson et al. (US 6,734,808).

For claims 47 and 54, Fujimoto '958 discloses a method for marine navigation comprising: receiving indication of a minimum water depth from a user (Fig. 3, item 47; parag 0125, lns 7-14; parag 0126, lns 3, 4, 10-17); displaying marine cartographic data (Fig. 3); displaying substantially straight line between a first location and a second location, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth (parag 0073; Fig. 3, items 45, 47, 43; parag 0125, lns 6-15). Fujimoto '958, however, discloses neither receiving indications of waypoints nor performing a marine route calculation algorithm to route a course between a first location and a potential waypoint avoiding water depth less than a minimum water depth. Fujimoto '423, on the other hand, discloses receiving indications of waypoints and performing a marine route calculation algorithm to route a course between a first location and a potential waypoint avoiding a preselected condition (parag 0075-0078; parag 0115; 0047; 0115; Fig. 17a-c, items 301, 302). It would have been obvious to receive indications of waypoints and perform a marine route calculation algorithm to route a course between a first location and a potential waypoint avoiding water depth less than the minimum water depth so that accurate navigation is achieved while avoiding low water levels to ensure the safety of the ships' passengers. Furthermore, Fujimoto does not disclose highlighting the water depth line, however, Michaelson discloses highlighting a terrain threat indication. It would have been obvious to emphasize a water depth line by highlighting so that an individual easily recognizes and avoids locations of low water levels that are threatening to the path of travel.

For claim 48, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 47 as stated above. In addition, the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth (parag 0073; Fig. 3, items 45, 47, 43; parag 0125, lns 6-15).

For claim 49, Fujimoto '958 discloses the minimum water depth is user selectable (Fig. 3, item 47; parag 0125, lns 7-14; 0126, lns 3, 4, 10-17).

For claim 50, Fujimoto '958 discloses a line depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth (parag 0133; Fig. 23, items 128, 124, 125; parag 0129).

For claim 51, Fujimoto '958 discloses the line displayed on the marine cartographic data in a plan view (Fig. 22, 23).

For claims 52 and 53, Fujimoto discloses a water depth line but does not disclose first and second manners of displaying a line; however, Michaelson discloses first and second colors to display terrain indications (col 27, lns 40-65; Fig. 48). It would have been obvious to emphasize a water depth line by color changes so that an individual easily recognizes and avoids low water levels that are threatening to the path of travel.

For claims 55 and 56, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 54 as stated above.

For claim 57, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 48 and 52 as stated above.

For claims 63 and 64, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1, 58, and 59 as stated above.

For claim 65, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 48 and 53 as stated above.

Response to Arguments

13. Applicant's arguments filed July 25, 2006 have been fully considered but they are not persuasive.

For amended claim 1 (old claim 4), Applicant argues as follows: Michaelson does not re-route a course by identifying one or more non-user waypoints, but only alerts the crew to a new heading to steer or engine setting to avoid collisions. Michaelson only suggests a heading change to avoid an obstacle.

Reference rejection of claim one. By Michaelson alerting the crew to a new heading to avoid potential collisions, Michaelson is re-routing a course by identifying non-user waypoints. In addition, column 13, lines 56-67 and column 14, lines 1-4 disclose a course that is re-routed by identifying non-user waypoints. See also figure 9A.

For claim 19, Applicant argues as follows: Bailey does not disclose analyzing cartographic data only within the user defined graphical filter area for the preselected conditions. Bailey discloses an automatic display scale changing is provided in response to the detected bottom going off-scale or in response to the detected bottom rising to within a predetermined depth.

The display screen, which includes preselected conditions (Fig. 1) is completely customizable (user defined) by the user via the control switches 16a. Therefore, cartographic data is analyzed only within the user defined graphical filter area for the preselected conditions.

For claim 47, Fujimoto '958's only line that relates to water depth is item 43, which depicts a seabed and therefore simply cannot be substantially straight.

See the straight line in figure 3, item 45 which relates to alarm water depth line paragraph 0073.

For claim 50, because Fujimoto '958 does not depict a difference in a line, Fujimoto does not disclose a line depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth.

See figure 23, the line for the water depth (124) is depicted in a first manner as a non-alarming condition where the seabed line (125) does not intersect the water depth line. Furthermore, 124 is depicted in a second manner as an alarming condition where the seabed line intersects the water depth line to produce an alarm (128).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Mehmood whose telephone number is (571) 272.2976. The examiner can normally be reached 8:00-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Daniel Wu can be reached at (571) 272.2964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273.8300 for regular and after final communications.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272.2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Mehmood
July 28, 2006

DANIEL WU
SUPERVISORY PATENT EXAMINER
8/3/06

IDS - 07/25/2006

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10677026
	Filing Date	2003-09-18
	First Named Inventor	KABEL, DARIN W.
	Art Unit	2612
	Examiner Name	MEHMOOD, JENNIFER
	Attorney Docket Number	702.254

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code1	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
JM	1	5398188		1995-03-14	Maruyama	
JM	2	5872526		1999-02-16	Tognazzini	

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FLIR-1002.252

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	10677026
	Filing Date	2003-09-18
	First Named Inventor	KABEL, DARIN W.
	Art Unit	2612
	Examiner Name	MEHMOOD, JENNIFER
	Attorney Docket Number	702.254

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
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EXAMINER SIGNATURE

Examiner Signature	/Jennifer Mehmood/	Date Considered	07/27/2006

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Index of Claims	Application No.	Applicant(s)
	10/667,026	KABEL ET AL.
	Examiner	Art Unit
	Jennifer A Mehmood	2612

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date	Claim		Date	Claim		Date
Final	Original	7/28/06	Final	Original	7/28/06	Final	Original	
	1	√		51	√		101	
	~~2~~	–		52			102	
	~~3~~	–		53			103	
	~~4~~	–		54			104	
	5	√		55			105	
	6			56			106	
	7			57			107	
	8			58			108	
	9			59			109	
	10			60			110	
	~~11~~	–		61			111	
	~~12~~	–		62			112	
	~~13~~	–		63			113	
	~~14~~	–		64			114	
	~~15~~	–		65			115	
	~~16~~	–		66			116	
	~~17~~	–		67			117	
	~~18~~	–		68			118	
	19	√		69			119	
	20			70			120	
	21			71			121	
	22			72			122	
	23			73			123	
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	~~25~~	–		75			125	
	~~26~~	–		76			126	
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	28			78			128	
	29			79			129	
	30			80			130	
	31			81			131	
	32			82			132	
	33			83			133	
	34			84			134	
	~~35~~	–		85			135	
	~~36~~	–		86			136	
	~~37~~	–		87			137	
	38	√		88			138	
	39			89			139	
	40			90			140	
	41			91			141	
	42			92			142	
	43			93			143	
	44			94			144	
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	46			96			146	
	47			97			147	
	48			98			148	
	49			99			149	
	50			100			150	

FLIR-1002.254

Search Notes

Application No.	Applicant(s)
10/667,026	KABEL ET AL.
Examiner	**Art Unit**
Jennifer A Mehmood	2612

SEARCHED

Class	Subclass	Date	Examiner
340	686.6 995.1 984 985 851 539.13	12/28/2005	JS
340	539.2 961	12/28/2005	JS
340	539.22	12/28/2005	JS
340	7.56	12/28/2005	JS
340	825.36	12/28/2005	JS
340	995.11	12/28/2005	JS
367	909	12/28/2005	JS
342	357.13 41	12/28/2005	JS
701	21 201	12/28/2005	JS
701	301	12/28/2005	JS
340	850 851	9/27/2005	JS
367	87-116	4/21/2006	JM
701	211	7/25/2006	JM

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
Brent Swartout	1/5/2005	JS
East Search	12/28/2004	JS
Brent Swartout	5/24/2005	JS
Updated Search	5/20/2005	JS
Updated Search	9/27/2005	JS
Updated Search	12/27/2005	JS
Updated Search	**4/21/2006**	**JM**
Updated Search	7/25/2006	JM

Y

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S123	2	"6734808".pn. and (alarm$4 alert$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/27 14:35
S124	4	("20040003958").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/27 14:35
S125	0	("1and(highlight$4color$4)").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/27 14:36
S126	1	S124 and (highlight$4 color$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:42
S127	15	"340".clas. and ((water near5 depth) and ((line mark$4) same (color highlight$4)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:49
S128	0	701/211.ccls. and ((water near5 depth) and ((line mark$4) same (color highlight$4)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:49
S129	212	701/211.ccls. and ((change near4 color) highlight$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:51
S130	1	"6734808".pn. and (color$4 hightlight$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:51

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	)	
	)	
KABEL, DARRIN W.	)	**Attorney Docket No.:**
	)	**702.254**
Serial No.: 10/667,026	)	
	)	
Filed: September 18, 2003	)	**Group Art Unit No. 2636**
	)	
METHODS, SYSTEMS AND DEVICES	)	
FOR CARTOGRAPHIC ALERTS	)	**Examiner: MEHMOOD, J.**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action of May 3, 2006, applicant respectfully requests that this amendment be entered in the above-referenced application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 18 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 1, 5, 7, 23, 34, 38, 40, 44, 45, 47, and 48, cancel claims 2-4, 11-18, 24-26, and 35-37 without prejudice or disclaimer, as follows:

1. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user~~, the preselected conditions being selected from the group of water depth, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, and type of water bottom~~;

identifying a potential waypoint; and

performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

2-4. (Canceled)

5. (Currently Amended) The method of claim [[2]] <u>1</u>, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Currently Amended) The method of claim [[2]] <u>1</u>, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Previously Presented) The method of claim 1, the preselected conditions including a weather condition.

11-18. (Canceled)

19. (Previously Presented) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

receiving a user defined graphical filter area from the user;

identifying the user defined graphical filter area on a display;

analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Currently Amended) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

receiving one or more preselected conditions from a user~~, the preselected conditions being selected from the group of water depth, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, and type of water bottom~~;

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

24-26. (Canceled)

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Previously Presented) The computer readable medium of claim 23, the preselected conditions including a water depth.

34. (Currently Amended) An electronic marine navigation device, comprising:

a processor;

a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user~~, the preselected conditions being selected from the group of water depth, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, and type of water bottom~~;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

35-37. (Canceled)

38. (Currently Amended) The electronic marine navigation device of claim [[35]] <u>34</u>, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Currently Amended) The electronic marine navigation device of claim [[35]] <u>34</u>, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Currently Amended) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user ~~and selected from the group of naturally occurring land mass, water depth, sandbars, shelves, wind conditions, weather conditions, ice, and type of water bottom~~ and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

45. (Currently Amended) A method for marine navigation, comprising:

receiving indication of a minimum water depth from a user;

identifying a potential waypoint; and

performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints.

46. (Previously Presented) The method of claim 45, displaying a visual indication of places along the calculated course where the water depth is expected to approach the minimum water depth.

47. (Currently Amended) A method for marine navigation, comprising:

receiving indication of a minimum water depth from a user;

displaying marine cartographic data;

receiving indication of a potential waypoint;

displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth; and

performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

48. (Previously Presented) A method for marine navigation, comprising:

displaying marine cartographic data;

receiving indication of a potential waypoint;

displaying a substantially straight line between a first location and the potential waypoint, wherein the line ~~depicts both~~ distinguishes where the water depth is expected to be greater than a preset minimum water depth ~~and~~ from where the water depth is expected to be less than the minimum water depth; and

performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

49. (Previously Presented) The method of claim 48, wherein the minimum water depth is user selectable.

50. (Previously Presented) The method of claim 48, wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth.

Please add new claims 51-67, as follows:

51. (New) The method of claim 48, wherein the line is displayed on the marine cartographic data in a plan view.

52. (New) The method of claim 48, wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner.

53. (New) The method of claim 48, wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color.

54. (New) A method for marine navigation, comprising:

displaying marine cartographic data;

receiving indication of a potential waypoint; and

displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth.

55. (New) The method of claim 54, further including the step of performing a marine route calculation algorithm to route a course from the first location to the potential waypoint avoiding areas where the water depth is expected to be less than the minimum water depth by identifying one or more non-user selected waypoints.

56. (New) The method of claim 55, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

57. (New) The method of claim 54, wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth.

58. (New) The method of claim 1, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

59. (New) The computer readable medium of claim 23, further including instructions for displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

60. (New) The electronic marine navigation device of claim 34, further including a display for displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

61. (New) The method of claim 44, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

62. (New) The method of claim 45, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

63. (New) The method of claim 47, wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints.

64. (New) The method of claim 63, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

65. (New) The method of claim 47, wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth.

66. (New) The method of claim 48, wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints.

67. (New) The method of claim 66, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

REMARKS:

Status Of Claims

Claims 1-50 were previously pending in the application. Claims 1, 5, 7, 23, 34, 38, 40, 44, 45, 47, and 48 have been amended. Claims 2-4, 11-18, 24-26, and 35-37 have been canceled without prejudice or disclaimer. Claims 51-67 have been added. Thus, claims 1, 5-10, 19-23, 27-34, and 38-67 are currently pending in the application with claims 1, 19, 23, 34, 44, 45, 47, 48, and 52 being independent.

Office Action

In the Office Action, the Examiner rejected claims 1-3, 5, 6, 11, 12, 15-18, 23-25, 27-29, 33, 34-36, 38, and 42-44 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0006423 (Fujimoto '423), in view of Tobin Jr., U.S. Patent No. 4,323,992. The Examiner also rejected claims 4, 7-10, 13, 14, 26, 30-32, 37, 39, and 40 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Tobin in view of Michaelson et al., U.S. Patent No. 6,734,808. The Examiner also rejected claims 19, 20, and 22 under 35 U.S.C. 102(b) as being anticipated Bailey et al., U.S. Patent No. 4,873,676. The Examiner also rejected claim 21 under 35 U.S.C. 103(a) as being unpatentable over Bailey in view of Fujimoto '423. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Tobin in view of Bailey. The Examiner also rejected claims 45 and 46 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto 423 in view of Walsh et al., U.S. Patent No. 3,886,487. The

Examiner also rejected claims 47-50 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0003958 (Fujimoto '958), in view of Fujimoto '423. Applicant respectfully submits that the currently pending claims distinguish the present invention from both Fujimoto references, Tobin, Bailey, Michaelson, Walsh, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claim 1 now recites "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Similarly, claim 23 now recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Claim 34 now recites "wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". It should be noted that claims 1, 23, and 34 now include limitations similar to those previously found in claims 4, 26, and 37, respectively.

In contrast, in rejecting claim 4, the Examiner acknowledges that "Fujimoto discloses re-routing the course … by identifying user waypoints", rather than non-user waypoints. To cure this defect, the Examiner mistakenly asserts that "Michaelson, on the other hand discloses re-routing the course by identifying one or more non-user waypoints". In supporting this assertion, the Examiner points to column 24. However, column 24 clearly states that Michaelson's invention merely "alerts the crew to a new heading to steer or engine setting to avoid collisions". Column 24, lines 38-41. Specifically, column 24, lines 57-58, state an "alternate track PT' is first generated by incrementing the ship's heading by [a] nominal step size". Thus, Michaelson discloses only suggesting a heading change to avoid an obstacle. In fact, Michaelson is devoid of any suggestion of "re-routing the course to avoid the preselected conditions ***by identifying one or more non-user selected waypoints***", emphasis added, as claimed in claim 1.

As a result, no combination of either Fujimoto references, Tobin, Bailey, and/or Michaelson discloses, suggests or makes obvious "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 1. Furthermore, no combination of either Fujimoto references, Tobin, Bailey, and/or Michaelson discloses, suggests or makes obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 23. Finally, no combination of either Fujimoto references, Tobin, Bailey, and/or Michaelson discloses, suggests or makes obvious "wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 34.

Claim 19 recites "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions". The Examiner mistakenly asserts that this limitation is disclosed by Bailey in column 3, lines 26-36 and 46-48. However, column 3, lines 26-29 state "[a]utomatic display scale changing is provided in response to the detected bottom going off-scale, or in response to the detected bottom rising to within a predetermined depth". Thus, Bailey actually rather clearly teaches a system for automatically ***redefining*** a display area based on changing water depth. As a result, Bailey simply fails to disclose, suggest or make obvious "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions" as claimed in claim 19.

Claim 44 now recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Claim 45 now recites "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints".

In contrast, as discussed above with regard to claims 1, 23, and 34, neither Fujimoto references, Tobin, Bailey, and/or Michaelson disclose avoiding a hazard by identifying non-user selected waypoints. For example, as discussed above, Michaelson only discloses suggesting a heading change. Walsh doesn't even go that far. Specifically, as stated in column 9, lines 6-10, Walsh simply discloses transmitting "as signal to the alarm 188 which in turn then warns the operator of the ship 20 to change course or take other evasive action", when the depth ahead is too shallow. Thus, Walsh fails to even provide a suggested heading change, much less non-user selected waypoints that may be used to avoid the hazard. As a result, no combination of the cited prior art references discloses, suggests or makes obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 44, or "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints", as claimed in claim 45.

Claim 47 now recites "displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth". Similarly, claim 48 now recites "displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth".

In contrast, the only straight line the Examiner points to, Fujimoto '958's item 45, is depicted completely independently of water depth. Fujimoto '958's only line that relates to water depth is item 43, which depicts a seabed and therefore simply cannot be substantially straight. Furthermore, displayed item 43 as substantially straight would render it unsatisfactory for its intended purpose, namely depicting the seabed. As a result, neither Fujimoto reference discloses, suggests or makes obvious "displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth", as claimed in claim 47, or "displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth", as claimed in claim 48.

Claim 50 recites "wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth". For example, this capability is shown in figures 2A, 4A, and 4C and described on pages 11-14, among other places.

The Examiner mistakenly asserts that Fujimoto '958 teaches this limitation. However, Fujimoto '958 merely displays a seabed line 125 above or below a depth mark 124, as the case may be, but the seabed line 125 is otherwise displayed in the exact same manner. Simply put, there is no difference in the line itself or the manner in which it is displayed, such as highlighting color, solid vs. broken or dashed, whether that portion of the line is flashing, or whether that portion of the line is bolded. In fact, Fujimoto '958 lacks any suggestion to show any portion of the seabed line 123 in a different manner. As a result, neither Fujimoto reference discloses, suggests or makes obvious "wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth", as claimed in claim 50.

Claims 51-67 have been added to further distinguish the present invention over the prior art. The remaining claims all depend directly or indirectly from independent claims 1, 19, 23, 34, 45, or 48, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

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PTO/SB/08a (08-03)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	10677026
	Filing Date	2003-09-18
	First Named Inventor	KABEL, DARIN W.
	Art Unit	2612
	Examiner Name	MEHMOOD, JENNIFER
	Attorney Docket Number	702.254

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	2	5872526		1999-02-16	Tognazzini	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Application Number	10677026
	Filing Date	2003-09-18
	First Named Inventor	KABEL, DARIN W.
	Art Unit	2612
	Examiner Name	MEHMOOD, JENNIFER
	Attorney Docket Number	702.254

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Application Number	10677026
	Filing Date	2003-09-18
	First Named Inventor	KABEL, DARIN W.
	Art Unit	2612
	Examiner Name	MEHMOOD, JENNIFER
	Attorney Docket Number	702.254

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☑ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/David L. Terrell/	Date (YYYY-MM-DD)	2006-07-25
Name/Print	David L. Terrell	Registration Number	50,576

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EFS ID:	1126598
Application Number:	10667026
Confirmation Number:	9123
Title of Invention:	Methods, systems, and devices for cartographic alerts
First Named Inventor:	Darrin W. Kabel
Customer Number:	38933
Filer:	David L. Terrell
Filer Authorized By:	
Attorney Docket Number:	702.254
Receipt Date:	25-JUL-2006
Filing Date:	18-SEP-2003
Time Stamp:	15:50:03
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1		Amendment6.pdf	99742	yes	25

	Multipart Description		
	Doc Desc	**Start**	**End**
	Amendment - After Non-Final Rejection	1	1
	Claims	2	17
	Applicant Arguments/Remarks Made in an Amendment	18	25

Warnings:

Information:

2	Information Disclosure Statement (IDS) Filed	US_IDS_Form__SB_08a.pdf	705695	no	4

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

PTO/SB/06 (09-03)
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 10/667026

CLAIMS AS FILED – PART I

FOR	NUMBER FILED (Column 1)	NUMBER EXTRA (Column 2)	SMALL ENTITY RATE	SMALL ENTITY FEE	OR	OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY FEE
BASIC FEE (37 CFR 1.16(a))				$	OR		$
TOTAL CLAIMS (37 CFR 1.16(c))	minus 20 =	*	x $ =		OR	x $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(b))	minus 3 =	*	x $ =		OR	x $ =	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))			+ $ =		OR	+ $ =	
			TOTAL		OR	TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED – PART II

2-25-06

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
Total (37 CFR 1.16(c))	* 58	Minus	** 58	= —	x $ =		OR	x $ =	
Independent (37 CFR 1.16(b))	* 9	Minus	*** 9	= —	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
Total (37 CFR 1.16(c))	*	Minus	**	=	x $ =		OR	x $ =	
Independent (37 CFR 1.16(b))	*	Minus	***	=	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
Total (37 CFR 1.16(c))	*	Minus	**	=	x $ =		OR	x $ =	
Independent (37 CFR 1.16(b))	*	Minus	***	=	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20"
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3"
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

38933 7590 05/03/2006

GARMIN LTD.
C/O GARMIN INTERNATIONAL, INC.
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1200 EAST 151ST STREET
OLATHE, KS 66062

EXAMINER	
MEHMOOD, JENNIFER	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 10/667,026	Applicant(s) KABEL ET AL.	
	Examiner Jennifer A. Mehmood	Art Unit 2612	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *March 28, 2006 (RCEX filed)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3/28/2006
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FLIR-1002.290

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19, 20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailey et al. (US 4,873,676).

For claim 19, Bailey discloses a method for marine navigation, comprising: receiving one or more preselected conditions from a user (col 7, lns 62-68; col 8, lns 1-4, 19, and 20; Fig. 1, item 15a, 16a); receiving a user defined graphical filter area from the user (col 4, lns 11-14; col 8, lns 15-17); identifying the user defined graphical filter area on a display (col 8, lns 25-37; Fig. 1, item 15a); analyzing cartographic data only within the user defined graphical filter area for the preselected conditions (col 3, lns 26-36 and 46-48); and providing an alert signal when cartographic data within the user defined graphical filter area indicate the preslected conditions (col 9, lns 1-15; col 15, lns 25-28; col 23, lns 30-38; col 28, lns 40-45).

For claim 20, Bailey discloses identifying the user defined graphical filter area includes repositioning the user defined graphical filter area (col 3, lns 30-36; col 4, lns 11-24; col 8, lns 14-20; col 10, lns 59-68; col 11, lns 1-17).

For claim 22, Bailey discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 10, lns 50-55; col 28, lns 18-32 and 40-45).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

<u>Claims 1-3, 5, 6, 42, and 43</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and further in view of Tobin, Jr. (US 4,323,992). <u>For claim 1,</u> Fujimoto discloses a method for marine navigation, comprising: receiving one or more preselected conditions from a user (parag 0115; parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint (paragraph 0071, 0072; Figure 4); and performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions (parag 0076-0078). Fujimoto does not disclose selecting a preselected condition from the group of water depth, sandbars, shelves, tidal data, wind conditions, weather conditions, ice, and type of water bottom. However, Tobin discloses a user selected (preselected) condition of water depth (col 8, lns 54-62; col 9, lns 6-16 and 36-39). It would have been obvious to include the preselected condition of water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is

maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

For claim 2, Fujimoto discloses performing the marine route calculation algorithm to include analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions (parag 0023, parag 0106, lines 1-7; parag 0113; parag 0115).

For claim 3, Fujimoto discloses the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint (parag 0023, 0132, 0133; Fig. 22a, 22b).

For claim 5, Fujimoto determines a first location on the course based on a signal from a GPS; and analyzing cartographic data for a predetermined area around the first location for preselected conditions (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072).

For claim 6, Fujimoto does not disclose an alert signal; however, Tobin discloses an alert signal when analyzed cartographic data for the predetermined area around a location includes preselected conditions (col 12, lns 34-40; Fig. 8, items 252, 248). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 42, Fujimoto discloses a first location and a potential waypoint independent of a current location of a device implementing the method (parag 0139; 0140).

For claim 43, Fujimoto discloses at least a portion of the course is unrelated to a current heading of a device implementing the method (parag 0140, last 10 lines).

4. Claims 4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and Tobin, Jr. (US 4,323,992), and further in view of Michaelson et al. (US 6,734,808).

For claim 4, Fujimoto discloses re-routing the course calculated, but does so by identifying user waypoints (parag 0140, lns 1-5). Michaelson, on the other hand discloses re-routing a course by identifying one or more non-user waypoints (determined by the system, not the user) between the first location and the potential waypoint (col 24, lns 41-50 and 55-64). It would have been obvious to disclose non-user waypoints so that an operator of a ship relies on automatic navigation between a point of origin and a destination without constantly monitoring the ship's travel route.

For claim 7, Fujimoto does not disclose an alert signal between a first location and a potential waypoint; however, Michaelson discloses an alert signal is provided when the analyzed cartographic data for the predetermined data between the first location and the potential waypoint includes preselected conditions (col 6, lns 13-26). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 8, the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6 and 7 as stated above. In addition, Michaelson discloses the alert signal includes emitting an audio alert (col 6, lns 15-18; Fig. 2, item 28). It would have been obvious to emit an audio alert so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 9, the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6-8 as stated above. Michaelson discloses providing the alert signal to include displaying a visual alert. It would have been obvious to emit a visual alert so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 10, Fujimoto discloses receiving preselected conditions, but does not include weather conditions. However, Michaelson discloses this feature (col 26, lns 18-30). It would have been obvious to include weather conditions, so that an operator of a ship predicts changing weather patterns via a weather radar display.

5. Claims 11, 12, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Tobin, Jr. (US 4,323,992).

For claim 11, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 6 as stated above.

For claim 12, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 15, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 16, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 17, Fujimoto discloses analyzing cartographic data further comprises acquiring cartographic data from a GPS (parag 0067, lns 1-5).

For claim 18, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 11 as stated above.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al. (US 4,873,676), and further in view of Fujimoto et al. (US 2004/0006423).

Bailey discloses analyzing cartographic data, but does not acquire the cartographic data from a GPS; however, Fujimoto discloses acquiring cartographic data from a GPS (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072). It would have been obvious to acquire cartographic data from a GPS so that a ship's captain relies on accurate real-time data in order to ensure a navigational route.

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423) and Tobin, Jr. (US 4,323,992), and further in view of Michaelson et al. (US 6,734,808).

For claim 13, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

For claim 14, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

8. Claims 23-25, 27-29, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423) and Tobin, Jr. (US 4,323,992).

For claim 23, Fujimoto discloses a computer readable medium having a set of computer readable instructions (parag 0067, lns 1-10; parag 0068, lns 1-8 and last 12 lines), the set of computer readable instructions comprising instructions for: receiving one or more preselected conditions from a user (parag 0115, parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint upon a first event (parag 0071, 0072; parag 0077, 0078); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (parag 0082). Fujimoto does not disclose selecting a preselected condition from the group of water depth, sandbars, shelves, tidal data, wind conditions, weather conditions, ice, and type of water bottom. However, Tobin discloses a user selected (preselected) condition of water depth (col 8, lns 54-62; col 9, lns 6-16 and 36-39). It would have been obvious to include the preselected condition of water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

For claim 24, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 2 as stated above.

For claim 25, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 27, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 28 is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 29, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 17 as stated above.

For claim 33, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 23 as stated above.

9. Claims 26, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and Tobin, Jr. (US 4,323,992), and further in view of Michaelson et al. (US 6,734,808).

Claim 26 is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

Claims 30-32 are interpreted and rejected for the same reasons as stated in the rejection of claims 7-9, respectively, and as stated above.

10. Claims 34-36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423), and further in view of Tobin, Jr. (US 4,323,992.

For claim 34, Fujimoto discloses an electronic marine navigation device, comprising: a processor; a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user (parag 0018;

0047; 0115; Fig. 17a-c, items 301, 302); a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location (parag 0067, lns 6-12; Fig. 1, items 2, 3); and a memory operatively coupled to the processor and the location input (parag 0116), the memory having cartographic data including data related to the preselected conditions (parag 0115), wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data. Fujimoto does not disclose selecting a preselected condition from the group of water depth, sandbars, shelves, tidal data, wind conditions, weather conditions, ice, and type of water bottom. However, Tobin discloses a user selected (preselected) condition of water depth (col 8, lns 54-62; col 9, lns 6-16 and 36-39). It would have been obvious to include the preselected condition of water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

For claim 35, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 2 and 34 as stated above.

For claim 36, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 3 and 34 as stated above.

For claim 38, Fujimoto discloses a GPS system operatively coupled to the processor (Fig. 1, items 3, 6; parag 0066, lns 1-3, 12-16), wherein the processor determines the first location on the course based on a signal received from the GPS (parag 0068, last 9 lines), and analyzes cartographic data for a predetermined area around the first location for preselected conditions (parag 0072; 0113). Even though Fujimoto does not specifically disclose a GPS receiver, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to include a GPS receiver to receive signals from a satellite in order to determine the ships position.

11. Claims 37, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and Tobin, Jr. (US 4,323,992), and further in view of Michaelson et al. (US 6,734,808).

For claim 37, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 4 and 34 as stated above.

For claim 39, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 6 and 34 as stated above.

For claim 40, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 7 and 34 as stated above.

12. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423) and Tobin, Jr. (US 4,323,992), as applied to claim 34, and further in view of Bailey et al. (US 4,873,676).

Fujimoto discloses a processor to operate on the marine route calculation algorithm to analyze cartographic data (parag 0067, lns 6-12; parag 0068, lns 1-10); however, Fujimoto does not disclose an alert signal. Tobin discloses an alert signal wherein a processor provides an alert signal when analyzed cartographic data includes preselected conditions (col 12, lns 34-40; Fig. 8, items 252, 248). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers. However, neither Fujimoto nor Tobin discloses a user defined graphical filter area. Bailey, on the other hand, does disclose a user defined graphical filter area (col 4, lns 11-14; col 7, lns 62-68; col 8, lns 1-4,15-17, 25-37; Fig. 1, item 15a, 16a); wherein a processor operates to analyze cartographic data within the defined graphical filter area and provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions. It would have been obvious to display cartographic data as a user defined graphical filter area to so that a user has a certain degree of control over the display in order to customize it according to the user's preferences.

13. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and further in view of Tobin, Jr. (US 4,323,992).

Fujimoto discloses a method for marine navigation, comprising: identifying a potential waypoint (paragraph 0066; 0072, lines 1,2); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint (parag 0068, lns 5-8) in order to avoid preselected conditions received from a user. Fujimoto does not disclose selecting a preselected condition from the group of naturally occurring land mass, water depth, sandbars, shelves, wind conditions, weather conditions, ice, and type of water bottom (parag 0047; parag 0115; Fig. 17a-c, items 301, 302). However, Tobin discloses a user selected (preselected) condition of water depth (col 8, lns 54-62; col 9, lns 6-16 and 36-39). It would have been obvious to provide an alert signal so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

14. Claims 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2004/0006423) and further in view of Walsh et al. (US 3,886,487).

For claim 45, Fujimoto discloses a method for marine navigation, comprising: receiving indication of a preselected condition from a user (parag 0047; parag 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint (paragraph 0066; 0072, lines 1,2); and performing a marine route calculation algorithm to route a course between a first location and the potential waypoint (parag 0068, lns 5-8) in order to avoid the preselected condition. Fujimoto, on the other hand, discloses neither receiving indication of a minimum water depth from a user nor avoiding water depth less than the minimum water depth However, Walsh discloses receiving indication of a minimum water depth from a user and avoiding water depth less than the minimum water depth (col 2, lns 13-19; col 3, lns 21-30; col 8, lns 24-34, 53-60; col 9, lns 1-10; Fig. 4, items 182, 184, 186, 188, 98; Figs. 1 and 2, items 40, 42, 48). It would have been obvious to avoid a water depth less than the minimum water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

For claim 46, Fujimoto discloses displaying a visual indication of places along the calculated course to include expected preselected conditions (parag 0047; parag 0115; Fig. 17a-c, items 301, 302); however, Fujimoto does not disclose the preselected conditions to include a water depth that is expected to approach the minimum water depth. Walsh, on the other hand, discloses receiving indication of a water depth that is expected to approach the minimum water depth. (col 3, lns 21-30; col 8, lns 24-34, 53-60; col 9, lns 1-10; Fig. 4, items 182, 184, 186, 188, 98; Figs. 1 and 2, items 40, 42, 48). It would have been obvious to avoid a water depth less than the minimum water depth so that a ship's operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships' passengers.

15. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (2004/0003958) and further in view of Fujimoto et al. (US 2004/0006423).

Fujimoto '958 discloses a method for marine navigation comprising: receiving indication of a minimum water depth from a user (Fig. 3, item 47; parag 0125, lns 7-14; parag 0126, lns 3, 4, 10-17); displaying marine cartographic data (Fig. 3); displaying substantially straight line between a first location and a second location, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth (parag 0073; Fig. 3, items 45, 47, 43; parag 0125, lns 6-15). Fujimoto '958, however, discloses neither receiving indications of waypoints nor performing a marine route calculation algorithm to route a course between a first location and a potential waypoint avoiding water depth less than a minimum water depth. Fujimoto '423, on the other hand, discloses receiving indications of waypoints and performing a marine route calculation algorithm to route a course between a first location and a potential waypoint avoiding a preselected condition (parag 0075-0078; parag 0115; 0047; 0115; Fig. 17a-c, items 301, 302). It would have been obvious to receive indications of waypoints and perform a marine route calculation algorithm to route a course between a first location and a potential waypoint avoiding water depth less than the minimum water depth so that accurate navigation is achieved while avoiding low water levels to ensure the safety of the ships' passengers.

16. Claims 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (2004/0003958) and further in view of Fujimoto et al. (US 2004/0006423).

For claim 48, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 47 as stated above.

For claim 49, Fujimoto '958 discloses the minimum water depth is user selectable (Fig. 3, item 47; parag 0125, lns 7-14; 0126, lns 3, 4, 10-17).

For claim 50, Fujimoto '958 discloses a line depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth (parag 0133; Fig. 23, items 128, 124, 125; parag 0129).

Response to Arguments

17. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Mehmood whose telephone number is (571) 272.2976. The examiner can normally be reached 8:00-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Daniel Wu can be reached at (571) 272.2964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273.8300 for regular and after final communications.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272.2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Mehmood
April 25, 2006

BENJAMIN C. LEE
PRIMARY EXAMINER

FORM PTO-1449 (Rev. 2-32) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTORNEY DOCKET NO.: 702.254	SERIAL NUMBER: 10/667,026	
	APPLICANT: KABEL, Darrin W.		
	FILING DATE: September 18, 2003	GROUP: ~~2686~~ 2612	CONF. NO.: 9123

U.S. PATENT DOCUMENTS

EXAM. INITIAL		DOCUMENT NUMBER	INVENTOR NAME	CLASS	SUB-CLASS	ISSUE DATE (PATENT); PUBLICATION DATE (PUBLISHED APPLICATION); OR FILING DATE (NON-PUBLISHED APPLICATION
JM		4,646,244	Bateman et al.			2/1987
JM		5,220,507	Kirson			6/1993
JM		5,470,233	Fruchterman et al.			11/1995
		5,543,789	Behr et al.			08/1996
		5,559,707	DeLorme et al.			09/1996
		5,635,924	Tran et al.			06/1997
		5,878,368	DeGraaf			03/1999
		5,893,081	Poppen			04/1999
		6,061,629	Yano et al.			05/2000
		6,104,316	Behr et al.			08/2000
		6,289,277	Feyereisen et al.			09/2001
		6,362,751	Upparapalli			03/2002
		6,381,538	Robinson et al.			04/2002
		6,577,947	Kronfeld et al.			06/2003
		6,654,689	Kelly			11/2003
		6,845,324	Smith			1/2005

FOREIGN PATENT DOCUMENTS

EXAM. INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUB-CLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Publisher, Author, Title, Date, Relevant Pages, and Place of Publication)

JM	U. S. Publication No. 2002/0121989 entitled METHOD AND SYSTEM FOR PROVIDING PERSONALIZED TRAFFIC ALERTS, Pub. Date 9/5/2002, Burns.

EXAMINER /Jennifer Mehmood/	DATE CONSIDERED 05/01/2006

EXAMINER: Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.

Notice of References Cited	Application/Control No. 10/667,026	Applicant(s)/Patent Under Reexamination KABEL ET AL.	
	Examiner Jennifer A. Mehmood	Art Unit 2612	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2004/0003958	01-2004	Fujimoto et al.	181/124
*	B	US-4,323,992	04-1982	Tobin, Jr., Leo W.	367/108
*	C	US-3,886,487	05-1975	Walsh et al.	367/92
*	D	US-4,873,676	10-1989	Bailey et al.	367/98
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims

Application No.	Applicant(s)
10/667,026	KABEL ET AL.
Examiner	**Art Unit**
Mehmood Jennifer A ~~Stone~~	12 263~~8~~

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim Final	Claim Original	11/6/2005	8/25/05	9/30/05	12/27/05	4/25/06	Claim Final	Claim Original	Date	Claim Final	Claim Original	Date
	1	✓	✓	✓	✓	✓		51			101	
	2							52			102	
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	18			✓	✓			68			118	
	19			=	=			69			119	
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	22			✓	✓			72			122	
	23			✓	✓			73			123	
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	46							96			146	
	47							97			147	
	48							98			148	
	49							99			149	
	50					✓		100			150	

Search Notes	Application No.	Applicant(s)	
	10/667,026	KABEL ET AL.	
	Examiner	Art Unit	
	Jennifer A ~~Stone~~ Mehmood	26~~36~~ 27	

SEARCHED			
Class	Subclass	Date	Examiner
340	686.6 995.1 984 985 851 539.13	12/28/2005	JS
340	539.2 961	12/28/2005	JS
340	539.22	12/28/2005	JS
340	7.56	12/28/2005	JS
340	825.36	12/28/2005	JS
340	995.11	12/28/2005	JS
367	909	12/28/2005	JS
342	357.13 41	12/28/2005	JS
701	21 201	12/28/2005	JS
701	301	12/28/2005	JS
340	850 851	9/27/2005	JS
367	87-116	4/21/2006	JM

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Brent Swartout	1/5/2005	JS
East Search	12/28/2004	JS
Brent Swartout	5/24/2005	JS
Updated Search	5/20/2005	JS
Updated Search	9/27/2005	JS
Updated Search	12/27/2005	JS
Updated Search	**4/21/2006**	JM

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	**Attorney Docket No.: 702.254**
Serial No.: 10/667,026	
Filed: September 18, 2003	**Group Art Unit No. 2636**
METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	**Examiner: STONE, Jennifer**

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being sent by facsimile to 571-273-8300 on:
3/28/06 (Date) Clint M Terrell (Signature)

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

This preliminary amendment is being submitted simultaneously with the filing of a Request for Continued Examination of the above-referenced application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 17 of this paper.

03/29/2006 NNGUYEN1 00000002 501791 10667026

02 FC:1201 600.00 DA
03 FC:1202 300.00 DA

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 1, 11, 23, 33, 34, and 44, as follows:

1. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land,~~ water depth, ~~rock(s),~~ sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles,~~ and type of water bottom;

identifying a potential waypoint; and

performing a marine route calculation algorithm to ~~analyze~~ route a course between a first location and the potential waypoint ~~in view of~~ avoiding the preselected conditions.

2. (Original) The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.

3. (Original) The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

4. (Original) The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

5. (Original) The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Original) The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Previously Presented) The method of claim 1, the preselected conditions including a weather condition.

11. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land,~~ water depth, ~~rock(s),~~ sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles,~~ and type of water bottom;

identifying a potential waypoint;

analyzing cartographic data between a first location and the potential waypoint for the preselected conditions; and

providing an alert signal when cartographic data between the first location and the potential waypoint indicate the preselected conditions.

12. (Original) The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

13. (Original) The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

14. (Original) The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

15. (Original) The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

16. (Original) The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

17. (Original) The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

18. (Previously Presented) The method of claim 11, the preselected conditions including a water depth.

19. (Previously Presented) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

receiving a user defined graphical filter area from the user;

identifying the user defined graphical filter area on a display;

analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Currently Amended) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land,~~ water depth, ~~rock(s),~~ sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles,~~ and type of water bottom;

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

24. (Original) The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. (Original) The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

26. (Original) The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Currently Amended) The computer readable medium of claim 23, the preselected conditions including ~~an underwater obstacle~~ a water depth.

34. (Currently Amended) An electronic marine navigation device, comprising:

a processor;

a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land,~~ water depth, ~~rock(s),~~ sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles,~~ and type of water bottom;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.

35. (Original) The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

36. (Original) The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. (Original) The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. (Original) The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Original) The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Currently Amended) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in ~~view of~~ order to avoid preselected conditions received from a user and selected from the group of naturally occurring land mass, water depth, ~~rock(s),~~ sandbars, shelves, wind conditions, weather conditions, ice, ~~underwater obstacles,~~ and type of water bottom.

Please add claims 45-50 as follows:

45. (New) A method for marine navigation, comprising:

receiving indication of a minimum water depth from a user;

identifying a potential waypoint; and

performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth.

46. (New) The method of claim 45, displaying a visual indication of places along the calculated course where the water depth is expected to approach the minimum water depth.

47. (New) A method for marine navigation, comprising:

receiving indication of a minimum water depth from a user;

displaying marine cartographic data;

receiving indication of a potential waypoint;

displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth; and

performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

48. (New) A method for marine navigation, comprising:

displaying marine cartographic data;

receiving indication of a potential waypoint;

displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than a preset minimum water depth and where the water depth is expected to be less than the minimum water depth; and

performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

49. (New) The method of claim 48, wherein the minimum water depth is user selectable.

50. (New) The method of claim 48, wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth.

REMARKS:

Status Of Claims

Claims 1-44 were previously pending in the application. Claims 1, 11, 23, 33, 34, and 44 have been amended. Claims 45-50 have been added. Thus, claims 1-50 are currently pending in the application with claims 1, 11, 19, 23, 34, 44, 45, 47, and 48 being independent.

Office Action

Applicant would like to thank the Examiner for indicating that claims 19-22 are allowed.

In the Office Action, the Examiner rejected claims 1-3, 5, 23-25, 27, 29, 33-36, and 42-44 under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al., U.S. Patent Application No. 2004/0006423. The Examiner also rejected claim 38 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto. The Examiner also rejected claims 4, 6-18, 26, 28, 30-32, 37, 39, and 40 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto in view of Michaelson, U.S. Patent No. 6,734,808. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto in view of Michaelson and Horvath et al., U.S. Patent No. 6,473,003. Applicant respectfully submits that the currently pending claims distinguish the present invention from Fujitmoto, Michaelson, Horvath, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claims 1, 11, and 23 all recite "receiving one or more preselected conditions from a user". Similarly, claim 34 recites "a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user". Claim 44 recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user", emphasis added. Furthermore, claims 1, 11, 23, and 34, each now require that the preselected conditions be "selected from the group of water depth, sandbars, shelves, wind conditions, weather conditions, ice, and type of water bottom". Claim 44 now requires the preselected conditions being "selected from the group of naturally occurring land mass, water depth, sandbars, shelves, wind conditions, weather conditions, ice, and type of water bottom". Finally, claim 10 recites "the preselected conditions including a weather condition", claim 18 recites "the preselected conditions including a water depth", and claim 33 now recites "the preselected conditions including a water depth". It should be noted that the claims require actually routing and/or analyzing a course in view of the preselected conditions to provide an alert or avoid the preselected conditions.

In contrast, Fujimoto neither discloses nor suggests any of these criteria being used as preselected conditions. Rather, Fujimoto only discloses an automatic maneuvering system that can avoid docks and other man-made structures, and then only when the user specifically defines those obstacles for his system. While Michaelson does display weather conditions, Michealson fails to teach analyzing a course in view of those weather contidtions, much less routing a course to avoid them. Thus, no combination of Fujimoto, Michaelson, and/or Horvath discloses, suggests, or make obvious the limitations of the currently pending claims.

Claims 45-50 have been added to further distinguish the present invention over the prior art. The remaining claims all depend directly or indirectly from independent claims 1, 11, 23, and 34, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By: ______________________

David L. Terrell, Reg. No. 50,576
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	)	Group Art Unit No. 2636
KABEL, Darin W.	)	Examiner: STONE, Jennifer A.
Serial No.: 10/667,026	)	Confirmation No.: 9123
Filed: 09/18/2003	)	Customer No.: 38933
	)	Docket No. 702.254

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Transmitted herewith is a list on Form PTO-1449 of patents, publications, or other information submitted by the applicants for consideration by the Office pursuant to the duty of disclosure under 37 CFR 1.56, together with legible copies of any non-patent or foreign patent publications to the extent clean copies are available.

It is respectfully submitted that the present invention as claimed is patentable over the listed references.

Any additional fee which might be due in connection with this Disclosure Statement should be applied against our Deposit Account No. 501-791.

Respectfully submitted,

By ______________________

David L. Terrell, Reg. No. 50,576
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FORM PTO-1449 (Rev. 2-32) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTORNEY DOCKET NO.: 702.254	SERIAL NUMBER: 10/667,026	
	APPLICANT: KABEL, Darrin W.		
	FILING DATE: September 18, 2003	GROUP: 2636	CONF. NO.: 9123

U.S. PATENT DOCUMENTS

EXAM. INITIAL		DOCUMENT NUMBER	INVENTOR NAME	CLASS	SUB-CLASS	ISSUE DATE (PATENT); PUBLICATION DATE (PUBLISHED APPLICATION); OR FILING DATE (NON-PUBLISHED APPLICATION
		4,646,244	Bateman et al.			2/1987
		5,220,507	Kirson			6/1993
		5,470,233	Fruchterman et al.			11/1995
		5,543,789	Behr et al.			08/1996
		5,559,707	DeLorme et al.			09/1996
		5,635,924	Tran et al.			06/1997
		5,878,368	DeGraaf			03/1999
		5,893,081	Poppen			04/1999
		6,061,629	Yano et al.			05/2000
		6,104,316	Behr et al.			08/2000
		6,289,277	Feyereisen et al.			09/2001
		6,362,751	Upparapalli			03/2002
		6,381,538	Robinson et al.			04/2002
		6,577,947	Kronfeld et al.			06/2003
		6,654,689	Kelly			11/2003
		6,845,324	Smith			1/2005

FOREIGN PATENT DOCUMENTS

EXAM. INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUB-CLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (Including Publisher, Author, Title, Date, Relevant Pages, and Place of Publication)

	U. S. Publication No. 2002/0121989 entitled METHOD AND SYSTEM FOR PROVIDING PERSONALIZED TRAFFIC ALERTS, Pub. Date 9/5/2002, Burns.

EXAMINER	DATE CONSIDERED
EXAMINER: Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.	

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TO:	USPTO
FAX #:	(571) 273-8300
FROM:	David L. Terrell
	Garmin International, Inc. (E-mail: david.terrell@garmin.com)
DATE:	March 28, 2006

FACSIMILE COVER SHEET (Page 1 of 26)

Re:

Darrin W. Kabel et al.
Serial No. 10/667,026
Filed: 9-18-2003

Atty. Dkt. No. 702.254
Examiner: Stone, Jennifer
Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is a Request for Continued Examination (in duplicate); Amendment Fee Worksheet (in duplicate); Preliminary Amendment (19 pages); Information Disclosure Statement (1 page); and Form 1449 (1 page) for filing in connection with the above-referenced application. The Commissioner is hereby authorized to charge any additional fee which is found to be due, or credit any overpayment, to Deposit Account No. 501-791.

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GARMIN INTERNATIONAL, INC.
1200 East 151st Street
Olathe, Kansas 66062

Applicant(s): KABEL Darin W. et al.

Serial No.: 10/667,026

Filed: 09/18/2003

For: METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attorney Docket No. 702.254

Group Art Unit: 2636

Examiner: STONE, Jennifer

Confirmation No. 9123

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Alexandria, VA 22313-1450

Transmitted herewith is an amendment in the above-identified application. The fee has been calculated as shown below:

CLAIMS AS AMENDED						
	Currently Filed Claims	Highest Number Previously Paid For	Extra	Rate		Amount
				Large Entity	Small Entity	
Total Number of claims Remaining after Amendment	50	44	6	$ 50	$ 25	$ 300
Independent Claims Remaining after Amendment	9	6	3	200	100	$ 600
First Presentation of Multiple Dependent Claims				360	180	$
Extension Fee: a) One Month b) Two Months c) Three Months d) Four Months e) Five Months				120 450 1,020 1,590 2,160	60 225 510 795 1,080	$
TOTAL FEE DUE						$ 900

- [ ] No additional fee is required.
- [ ] A check in the amount of * is attached.
- [x] Charge $900 to Deposit Account No. 501-791. A duplicate of this sheet is enclosed.
- [x] Charge any additional fees or credit any overpayment to Deposit Account No. 501-791. A duplicate of this sheet is enclosed.

A verified statement under 37 C.F.R. §§ 1.9 and 1.27

- [ ] is attached.
- [x] is of record in this application.

Respectfully submitted,
GARMIN INTERNATIONAL, INC.

Date: 3/28/06

By ____

Name: David L. Terrell
Reg. No. 50,576

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PTO/SB/30 (04-05)
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Request for Continued Examination (RCE) Transmittal

Address to:
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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/667,026
Filing Date	September 18, 2003
First Named Inventor	KABEL, Darrin W.
Art Unit	2636
Examiner Name	STONE, Jennifer
Attorney Docket Number	702.254

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).
   - a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
     - i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on ______
     - ii. ☐ Other ______
   - b. ☑ Enclosed
     - i. ☑ Amendment/Reply
     - ii. ☐ Affidavit(s)/ Declaration(s)
     - iii. ☑ Information Disclosure Statement (IDS)
     - iv. ☐ Other ______
2. Miscellaneous
   - a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of ______ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
   - b. ☐ Other ______
3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
   - a. ☑ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 501-791. I have enclosed a duplicate copy of this sheet.
     - i. ☑ RCE fee required under 37 CFR 1.17(e)
     - ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)
     - iii. ☐ Other ______
   - b. ☐ Check in the amount of $ ______ enclosed
   - c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature	David L. Terrell	Date	3/28/06
Name (Print/Type)		Registration No.	50,576

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature			
Name (Print/Type)	Christine M. Terrell	Date	3/28/06

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03/29/2006 NNGUYEN1 00000002 501791 10667026
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PTO/SB/30 (04-05)
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Request for Continued Examination (RCE) Transmittal

Address to:
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P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/667,026
Filing Date	September 18, 2003
First Named Inventor	KABEL, Darrin W.
Art Unit	2636
Examiner Name	STONE, Jennifer
Attorney Docket Number	702.254

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).
   - a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
     - i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on ______
     - ii. ☐ Other ______
   - b. ☑ Enclosed
     - i. ☑ Amendment/Reply
     - ii. ☐ Affidavit(s)/ Declaration(s)
     - iii. ☑ Information Disclosure Statement (IDS)
     - iv. ☐ Other ______
2. Miscellaneous
   - a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of ______ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
   - b. ☐ Other ______
3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
   - a. ☑ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 501-791. I have enclosed a duplicate copy of this sheet.
     - i. ☑ RCE fee required under 37 CFR 1.17(e)
     - ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)
     - iii. ☐ Other ______
   - b. ☐ Check in the amount of $ ______ enclosed
   - c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature	[signature]	Date	3/28/06
Name (Print/Type)	David L. Terrell	Registration No.	50,576

CERTIFICATE OF MAILING OR TRANSMISSION

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Signature	[signature]		
Name (Print/Type)	Christine M. Terrell	Date	3/28/06

PTO/SB/06 (12-04)
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 10/667,026

APPLICATION AS FILED – PART I

FOR	NUMBER FILED (Column 1)	NUMBER EXTRA (Column 2)	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))							
SEARCH FEE (37 CFR 1.16(k), (i), or (m))							
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))							
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	x =		OR	x =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	x =			x =	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

AMENDMENT A

		CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
AMENDMENT A	Total (37 CFR 1.16(i))	* 44	Minus	** 44	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	* 6	Minus	*** 6	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

3/28/06

AMENDMENT B

		CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
AMENDMENT B	Total (37 CFR 1.16(i))	* 50	Minus	** 44	= 6	x =		OR	x 50 =	300
	Independent (37 CFR 1.16(h))	* 9	Minus	*** 6	= 3	x =		OR	x 200 =	600
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	900

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

38933 7590 01/10/2006

DEVON A. ROLF
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EXAMINER	
STONE, JENNIFER A	
ART UNIT	**PAPER NUMBER**
2636	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/667,026	KABEL ET AL.	
	Examiner	Art Unit	
	Jennifer A. Stone	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *19-22* is/are allowed.

6)☒ Claim(s) *1-18 and 23-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5, 42, 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

For claim 1, Fujimoto discloses a method for marine navigation, comprising: receiving one or more preselected conditions from a user (parag 0115); the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom, (parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint (paragraph 0071, 0072; Figure 4); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions (parag 0076-0078).

For claim 2, Fujimoto discloses performing the marine route calculation algorithm to include analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions (parag 0023, parag 0106, lines 1-7; parag 0113; parag 0115).

For claim 3, the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint (parag 0023, 0132, 0133; Fig. 22a, 22b).

For claim 5, Fujimoto determines a first location on the course based on a signal from a GPS; and analyzing cartographic data for a predetermined area around the first location for preselected conditions (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072).

For claim 42, Fujimoto discloses a first location and a potential waypoint independent of a current location of a device implementing the method (parag 0139; 0140).

For claim 43, Fujimoto discloses at least a portion of the course is unrelated to a current heading of a device implementing the method (parag 0140, last 10 lines).

3. Claims 23-25, 27, 29, 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

For claim 23, Fujimoto discloses a computer readable medium having a set of computer readable instructions (parag 0067, lns 1-10; parag 0068, lns 1-8 and last 12 lines), the set of computer readable instructions comprising instructions for: receiving one or more preselected conditions from a user (parag 0115), the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom, (parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302); identifying a potential waypoint upon a first event (parag 0071, 0072; parag 0077, 0078); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (parag 008245).

For claim 24, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 2 as stated above.

For claim 25, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 27, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 29, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 17 as stated above.

For claim 33, the computer readable medium includes underwater obstacles as preselected conditions (parag 0108). A jetty and a pier are examples of both underwater and above water obstacles.

4. Claims 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

For claim 34, Fujimoto discloses an electronic marine navigation device, comprising: a processor; a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom (parag 0018; 0047; 0115; Fig. 17a-c, items 301, 302) (parag 0067, lns 6-12; Fig. 1, items 2, 3); a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and a memory operatively coupled to the processor and the location input (parag 0116), the memory having cartographic data including data related to the preselected conditions (parag 0115), wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.

For claim 35, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 2 and 34 as stated above.

For claim 36, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 3 and 34 as stated above.

5. Claim 44 is rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

Fujimoto discloses a method for marine navigation, comprising: identifying a potential waypoint (paragraph 0066; 0072, lines 1,2); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint (parag 0068, lns 5-8) in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom (parag 0047; parag 0115; Fig. 17a-c, items 301, 302).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423),

Fujimoto discloses a GPS system operatively coupled to the processor (Fig. 1, items 3, 6; parag 0066, lns 1-3, 12-16), wherein the processor determines the first location on the course based on a signal received from the GPS (parag 0068, last 9 lines), and analyzes cartographic data for a predetermined area around the first location for preselected conditions (parag 0072; 0113). Even though Fujimoto does not specifically disclose a GPS receiver, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to include a GPS receiver to receive signals from a satellite in order to determine the ships position.

8. Claims 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

For claim 4, Fujimoto discloses re-routing the course calculated, but does so by identifying user waypoints (parag 0140, lns 1-5). Michaelson, on the other hand discloses re-routing a course by identifying one or more non-user waypoints (determined by the system, not the user) between the first location and the potential waypoint (col 24, lns 41-50 and 55-64). It would have been obvious to disclose non-user waypoints so that an operator of a ship relies on automatic navigation between a point of origin and a destination without constantly monitoring the ship's travel route.

For claim 6, Fujimoto does not disclose an alert signal; however, Michaelson discloses and alert signal is provided when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions (col 2, lns 11-14; col 6, lns 13-17). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 7, Fujimoto does not disclose an alert signal; however, Michaelson discloses an alert signal is provided when the analyzed cartographic data for the predetermined data between the first location and the potential waypoint includes preselected conditions (col 6, lns 13-26). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

For claim 8, the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6 and 7 as stated above. In addition, Michaelson discloses the alert signal includes emitting an audio alert (col 6, lns 15-18; Fig. 2, item 28).

For claim 9, the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6-8 as stated above. Michaelson discloses providing the alert signal to include displaying a visual alert.

For claim 10, Fujimoto discloses receiving preselected conditions, but does not include weather conditions. However, Michaelson discloses this feature (col 26, lns 18-30). It would have been obvious to include weather conditions, so that an operator of a ship predicts changing weather patterns via a weather radar display.

9. Claims 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

For claim 11, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 6 as stated above.

For claim 12, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 13, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

For claim 14, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

For claim 15, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 16, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 17, Fujimoto discloses analyzing cartographic data further comprises acquiring cartographic data from a GPS (parag 0067, lns 1-5).

For claim 18, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above. In addition, Fujimoto discloses receiving preselected conditions, but does not include water depth. However, Michaelson discloses this feature (col 2, lns 15-19, 35-47; Fig. 9A-10B, col 13, lns 56-67; col 14, lns 1-10). It would have been obvious to include water depth, so that an operator of a ship maneuvers based on the depth of the water in order to avoid underwater obstacles.

10. Claims 26, 28, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

Claim 26 is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

Claim 28 is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

Claims 30-32 are interpreted and rejected for the same reasons as stated in the rejection of claims 7-9, respectively, and as stated above.

11. Claims 37, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

For claim 37, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 4 and 34 as stated above.

For claim 39, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 6 and 34 as stated above.

For claim 40, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 7 and 34 as stated above.

12. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), as applied to claim 34, and further in view of Michaelson et al. (US 6,734,808) and Horvath et al. (US 6,473,003).

Fujimoto discloses a processor to operate on the marine route calculation algorithm to analyze cartographic data (parag 0067, lns 6-12; parag 0068, lns 1-10); however, Fujimoto does not disclose an alert signal. Michaelson discloses an alert signal wherein a processor provides an alert signal when analyzed cartographic data includes preselected conditions (col 2, lns 11-14; col 6, lns 13-17). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers. However, neither Fujimoto nor Michaelson disclose a user defined graphical filter area. Horvath, on the other hand, does disclose a user defined graphical filter area (col 1, lns 10-14; col 2, lns 30, 31, 44-48) wherein a processor operates to analyze cartographic data and provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions (col 2, lns 60-63; Fig. 4, 30i). Even though Horvath's primary application is aircraft navigation, it would have been obvious to apply a user defined graphical filter area to a marine navigation system so that a user has a certain degree of control over the display in order to customize it according to the user's preferences.

Allowable Subject Matter

13. Claims 19-22 are allowed.

Response to Arguments

14. Applicant's arguments filed December 20, 2005 have been fully considered but they are not persuasive.

The Applicant argues as follows:

a. Fujimoto neither discloses nor suggests any of these criteria (selected from the group of land, water depth, rock(s), sandbars, shelves, wind/weather conditions, weather conditions, ice, underwater obstacles, and type of water bottom) being used as preselected conditions.

b. Fujimoto only discloses an automatic maneuvering system that can avoid docks and the like, and then only when the user specifically defines the docks for the system. Fujimoto, Michaelson, and Horvath do not disclose receiving one or more preselected conditions from a user.

a. Fujimoto discloses that during marine navigation obstacles are avoided by either GPS data or manually set data (parag 0015). Further, Fujimoto describes the obstacles as a jetty and pier (Fig. 13-17, items 302 and 301, respectively). These obstacles are considered both underwater and above water obstacles. A jetty's support system and a pier include support systems that are underwater. In addition, a jetty is a rock, land, or other manmade structure that extends into a body of water in order to influence the tide or current, or protect the frame of a pier. The area of a jetty that is either above or underwater changes depending on tidal changes. Therefore, Fujimoto meets the criteria being used as preselected conditions.

b. Fujimoto discloses obstacles such as piers and jetty's, not docks. In addition, a user either specifically defines the obstacle received as a preselected condition or the system automatically recognizes the preset condition based on GPS data (parag 0115). Either of the above methods of defining an obstacle constitute the system to recognize and receive one or more preselected conditions from a user. Thus, Fujimoto meets all claim limitations.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Stone whose telephone number is (571) 272.2976. The examiner can normally be reached on M-F from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass, can be reached at (571) 272.2981. The fax phone number for the organization where this application or proceeding is assigned is (571) 273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Stone
December 27, 2005

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Search Notes	Application No. 10/667,026	Applicant(s) KABEL ET AL.	
	Examiner Jennifer A Stone	Art Unit 2636	

SEARCHED

Class	Subclass	Date	Examiner
340	686.6 995.1 984 985 851 539.13	12/28/2005	JS
340	539.2 961	12/28/2005	JS
340	539.22	12/28/2005	JS
340	7.56	12/28/2005	JS
340	825.36	12/28/2005	JS
340	995.11	12/28/2005	JS
367	909	12/28/2005	JS
342	357.13 41	12/28/2005	JS
701	21 201	12/28/2005	JS
701	301	12/28/2005	JS
340	850 851	9/27/2005	JS

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
Brent Swartout	1/5/2005	JS
East Search	12/28/2004	JS
Brent Swartout	5/24/2005	JS
Updated Search	5/20/2005	JS
Updated Search	9/27/2005	JS
Updated Search	12/27/2005	JS

Index of Claims

Application No.	Applicant(s)
10/667,026	KABEL ET AL.
Examiner	**Art Unit**
Jennifer A Stone	2636

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim Final	Claim Original	Date 1/11/2005	Date 5/25/05	Date 9/30/05	Date 12/27/05	Date	Date	Date	Date	Date
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TO:	**USPTO**
FAX #:	**(703) 872-9306**
FROM:	**David L. Terrell** **Garmin International, Inc. (E-mail: david.terrell@garmin.com)**
DATE:	**December 20, 2005**

FACSIMILE COVER SHEET (Page 1 of 18)

Re:

Darrin W. Kabel et al.	Atty. Dkt. No. 702.254
Serial No. 10/667,026	Examiner: Stone, Jennifer
Filed: 9-18-2003	Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is an Amendment for filing in connection with the above-referenced application. The Commissioner is hereby authorized to charge any additional fee which is found to be due, or credit any overpayment, to Deposit Account No. 501-791.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	Attorney Docket No.: 702.254
Serial No.: 10/667,026	
Filed: September 18, 2003	Group Art Unit No. 2636
METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	Examiner: STONE, Jennifer

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being sent by facsimile to 571-273-8300 on:
12/20/05
Date Signature

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action of October 4, 2005, applicant respectfully requests that this amendment be entered in the above-referenced application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 15 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 1, 10, 11, 18, 23, 33, 34, and 44, as follows:

1. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom;

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

2. (Original) The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.

3. (Original) The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

4. (Original) The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

5. (Original) The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Original) The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Currently Amended) The method of claim 1, the ~~further including receiving~~ preselected conditions ~~selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions,~~ including a weather condition[[s]]~~, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas~~.

11. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom;

identifying a potential waypoint;

analyzing cartographic data between a first location and the potential waypoint for the preselected conditions; and

providing an alert signal when cartographic data between the first location and the potential waypoint indicate the preselected conditions.

12. (Original) The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

13. (Original) The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

14. (Original) The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

15. (Original) The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

16. (Original) The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

17. (Original) The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

18. (Currently Amended) The method of claim 11, the ~~further including receiving~~ preselected conditions ~~selected from the group of land,~~ including a water depth~~, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above water obstacles, underwater obstacles, type of water bottom, and prohibited areas~~.

19. (Previously Presented) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

receiving a user defined graphical filter area from the user;

identifying the user defined graphical filter area on a display;

analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Currently Amended) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom;

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

24. (Original) The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. (Original) The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

26. (Original) The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Currently Amended) The computer readable medium of claim 23, ~~further including receiving~~ the preselected conditions ~~selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above water obstacles,~~ including an underwater obstacle[[s]]~~, type of water bottom, and prohibited areas~~.

34. (Currently Amended) An electronic marine navigation device, comprising:

a processor;

a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user, the preselected conditions being selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.

35. (Original) The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

36. (Original) The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. (Original) The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. (Original) The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Original) The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Currently Amended) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, wind conditions, weather conditions, ice, ~~above water obstacles,~~ underwater obstacles, and type of water bottom~~, and prohibited areas~~.

REMARKS:

Status Of Claims

Claims 1-44 were previously pending in the application. Claims 1, 10, 11, 18, 23, 33, 34, and 44 have been amended. Thus, claims 1-44 are currently pending in the application with claims 1, 11, 19, 23, 34, and 44 being independent.

Office Action

Applicant would like to thank the Examiner for indicating that claims 19-22 are allowed.

In the Office Action, the Examiner rejected claims 1-3, 5, 10, 23-25, 27, 29, 33-36, and 42-44 under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al., U.S. Patent Application No. 2004/0006423. The Examiner also rejected claim 38 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto. The Examiner also rejected claims 4, 6-9, 11-18, 26, 28, 30-32, 37, 39, and 40 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto in view of Michaelson, U.S. Patent No. 6,734,808. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Fujimoto in view of Michaelson and Horvath et al., U.S. Patent No. 6,473,003. Applicant respectfully submits that the currently pending claims distinguish the present invention from Fujitmoto, Michaelson, Horvath, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claims 1, 11, and 23 all recite "receiving one or more preselected conditions from a user". Similarly, claim 34 recites "a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user". Claim 44 recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user", emphasis added. Furthermore, claims 1, 11, 23, 34, and 44 each now require the preselected conditions being "selected from the group of land, water depth, rock(s), sandbars, shelves, wind conditions, weather conditions, ice, underwater obstacles, and type of water bottom". Finally, claim 10 recites "the preselected conditions including a weather condition", claim 18 recites "the preselected conditions including a water depth", and claim 33 recites "the preselected conditions including an underwater obstacle".

In contrast, Fujimoto neither discloses nor suggests any of these criteria being used as preselected conditions. Rather, Fujimoto only discloses an automatic maneuvering system that can avoid docks and the like, and then only when the user specifically defines the docks for his system. As previously argued, no combination of Michaelson and/or Horvath discloses, suggests, or makes obvious "receiving one or more preselected conditions from a user". Nor does any combination of Michaelson and/or Horvath cure the defects in Fujimoto. Therefore, no combination of Fujimoto, Michaelson, and/or Horvath discloses, suggests, or make obvious the limitations of the currently pending claims.

The remaining claims all depend directly or indirectly from independent claims 1, 11, 23, and 34, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By:

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Olathe, KS 66062
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(913) 397-9079 (Fax)

PTO/SB/06 (12-04)
Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 10/667026

APPLICATION AS FILED – PART I

FOR	NUMBER FILED (Column 1)	NUMBER EXTRA (Column 2)	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))							
SEARCH FEE (37 CFR 1.16(k), (i), or (m))							
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))							
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	x =		OR	x =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	x =			x =	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

AMENDMENT A

	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 44	Minus	** 44	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	* 6	Minus	*** 6	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	CLAIMS REMAINING AFTER AMENDMENT (Column 1)		HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2)	PRESENT EXTRA (Column 3)	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

38933 7590 10/04/2005

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EXAMINER	
STONE, JENNIFER A	
ART UNIT	**PAPER NUMBER**
2636	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/667,026	KABEL ET AL.
	Examiner	Art Unit
	Jennifer A. Stone	2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *31 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *19-22* is/are allowed.

6)☒ Claim(s) *1-18 and 23-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FLIR-1002.373

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5, 10, 42, 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

For claim 1, Fujimoto discloses a method for marine navigation, comprising: receiving one or more preselected conditions from a user (parag 0115); identifying a potential waypoint (paragraph 0071, 0072; Figure 4); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions (parag 0076-0078).

For claim 2, Fujimoto discloses performing the marine route calculation algorithm to include analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions (parag 0023, parag 0106, lines 1-7; parag 0113; parag 0115).

For claim 3, the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint (parag 0023, 0132, 0133; Fig. 22a, 22b).

For claim 5, Fujimoto determines a first location on the course based on a signal from a GPS; and analyzing cartographic data for a predetermined area around the first location for preselected conditions (parag 0067, lns 1-10; parag 0068, last 9 lines; parag 0071, 0072).

For claim 10, Fujimoto discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (parag 0047; parag 0115; Fig. 17a-c, items 301, 302).

For claim 42, Fujimoto discloses a first location and a potential waypoint independent of a current location of a device implementing the method (parag 0139; 0140).

For claim 43, Fujimoto discloses at least a portion of the course is unrelated to a current heading of a device implementing the method (parag 0140, last 10 lines).

3. Claims 23-25, 27, 29, 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

For claim 23, Fujimoto discloses a computer readable medium having a set of computer readable instructions (parag 0067, lns 1-10; parag 0068, lns 1-8 and last 12 lines), the set of computer readable instructions comprising instructions for: receiving one or more preselected conditions from a user (parag 0115); identifying a potential waypoint upon a first event (parag 0071, 0072; parag 0077, 0078); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (parag 008245).

For claim 24, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 2 as stated above.

For claim 25, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 27, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 29, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 17 as stated above.

For claim 33, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above.

4. Claims 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

For claim 34, Fujimoto discloses an electronic marine navigation device, comprising: a processor; a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user (parag 0067, lns 6-12; Fig. 1, items 2, 3); a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and a memory operatively coupled to the processor and the location input (parag 0116), the memory having cartographic data including data related to the preselected conditions (parag 0115), wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.

For claim 35, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 2 and 34 as stated above.

For claim 36, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 3 and 34 as stated above.

5. Claim 44 is rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 20045/0006423).

Fujimoto discloses a method for marine navigation, comprising: identifying a potential waypoint (paragraph 0066; 0072, lines 1,2); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint (parag 0068, lns 5-8) in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (parag 0047; parag 0115; Fig. 17a-c, items 301, 302).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423),

Fujimoto discloses a GPS system operatively coupled to the processor (Fig. 1, items 3, 6; parag 0066, lns 1-3, 12-16), wherein the processor determines the first location on the course based on a signal received from the GPS (parag 0068, last 9 lines), and analyzes cartographic data for a predetermined area around the first location for preselected conditions (parag 0072; 0113). Even though Fujimoto does not specifically disclose a GPS receiver, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to include a GPS receiver to receive signals from a satellite in order to determine the ships position.

8. Claims 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

For claim 4, Fujimoto discloses re-routing the course calculated, but does so by identifying user waypoints (parag 0140, lns 1-5). Michaelson, on the other hand discloses re-routing a course by identifying one or more non-user waypoints (determined by the system, not the user) between the first location and the potential waypoint (col 24, lns 41-50 and 55-64). It would have been obvious to disclose non-user waypoints so that an operator of a ship relies on automatic navigation between a point of origin and a destination without constantly monitoring the ship's travel route.

<u>For claim 6,</u> Fujimoto does not disclose an alert signal; however, Michaelson discloses and alert signal is provided when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions (col 2, lns 11-14; col 6, lns 13-17). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

<u>For claim 7,</u> Fujimoto does not disclose an alert signal; however, Michaelson discloses an alert signal is provided when the analyzed cartographic data for the predetermined data between the first location and the potential waypoint includes preselected conditions (col 6, lns 13-26). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers.

<u>For claim 8,</u> the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6 and 7 as stated above. In addition, Michaelson discloses the alert signal includes emitting an audio alert (col 6, lns 15-18; Fig. 2, item 28).

<u>For claim 9,</u> the claim is interpreted and rejected for the same reasons as stated in the rejections of claim 6-8 as stated above. Michaelson discloses providing the alert signal to include displaying a visual alert.

9. <u>Claims 11-18</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

<u>For claim 11</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 6 as stated above.

<u>For claim 12</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

<u>For claim 13</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

<u>For claim 14</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

<u>For claim 15</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

<u>For claim 16</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

<u>For claim 17,</u> Fujimoto discloses analyzing cartographic data further comprises acquiring cartographic data from a GPS (parag 0067, lns 1-5).

<u>For claim 18</u>, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above.

10. <u>Claims 26, 28, and 30-32</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

<u>Claim 26</u> is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

Claim 28 is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

Claims 30-32 are interpreted and rejected for the same reasons as stated in the rejection of claims 7-9, respectively, and as stated above.

11. Claims 37, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), and further in view of Michaelson et al. (US 6,734,808).

For claim 37, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 4 and 34 as stated above.

For claim 39, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 6 and 34 as stated above.

For claim 40, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 7 and 34 as stated above.

12. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 20045/0006423), as applied to claim 34, and further in view of Michaelson et al. (US 6,734,808) and Horvath et al. (US 6,473,003).

Fujimoto discloses a processor to operate on the marine route calculation algorithm to analyze cartographic data (parag 0067, lns 6-12; parag 0068, lns 1-10); however, Fujimoto does not disclose an alert signal. Michaelson discloses an alert signal wherein a processor provides an alert signal when analyzed cartographic data includes preselected conditions (col 2, lns 11-14; col 6, lns 13-17). It would have been obvious to provide an alert signal so that a ship's operator acknowledges an alert and verifies that the ship is maneuvered around a preselected condition to ensure the safety of the ships passengers. However, neither Fujimoto nor Michaelson disclose a user defined graphical filter area. Horvath, on the other hand, does disclose a user defined graphical filter area (col 1, lns 10-14; col 2, lns 30, 31, 44-48) wherein a processor operates to analyze cartographic data and provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions (col 2, lns 60-63; Fig. 4, 30i). Even though Horvath's primary application is aircraft navigation, it would have been obvious to apply a user defined graphical filter area to a marine navigation system so that a user has a certain degree of control over the display in order to customize it according to the user's preferences.

Allowable Subject Matter

13. Claims 19-22 are allowed.

Continued Examination Under 37 CFR 1.114

14. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 31, 2005 has been entered.

Response to Arguments

15. Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Stone whose telephone number is (571) 272.2976. The examiner can normally be reached 8:00-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jeffery Hofsass can be reached at (571) 272.2981.. The fax phone number for the organization where this application or proceeding is assigned is (571) 273.8300 for regular and after final communications.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272.2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Stone
September 30, 2005

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Notice of References Cited	Application/Control No. 10/667,026	Applicant(s)/Patent Under Reexamination KABEL ET AL.	
	Examiner Jennifer A. Stone	Art Unit 2636	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-2004/0006423	01-2004	Fujimoto et al.	701/201
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application No.	Applicant(s)	
	10/667,026	KABEL ET AL.	
	Examiner	Art Unit	
	Jennifer A Stone	2636	

SEARCHED

Class	Subclass	Date	Examiner
340	686.6 995.1 984 985 851 539.13	12/28/2005	JS
340	539.2 961	12/28/2005	JS
340	539.22	12/28/2005	JS
340	7.56	12/28/2005	JS
340	825.36	12/28/2005	JS
340	995.11	12/28/2005	JS
367	909	12/28/2005	JS
342	357.13 41	12/28/2005	JS
701	21 201	12/28/2005	JS
701	301	12/28/2005	JS
340	850 851	9/27/2005	JS

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
Brent Swartout	1/5/2005	JS
East Search	12/28/2004	JS
Brent Swartout	5/24/2005	JS
Updated Search	5/20/2005	JS
Updated East Search	9/27/2005	JS

Index of Claims

Application No.	Applicant(s)
10/667,026	KABEL ET AL.
Examiner	**Art Unit**
Jennifer A Stone	2636

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
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Claim Final	Claim Original	Date 1/6/2005	Date 8/25/05	Date 9/30/05	Date	Date	Date	Date	Date	Date
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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
10/667,026		2636	28M1

Correspondence Address / Fee Address Change

The following fields have been set to Customer Number 38933 on 09/30/2005

- Correspondence Address
- Maintenance Fee Address

The address of record for Customer Number 38933 is:
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	Attorney Docket No.: 702.254
Serial No.: 10/667,026	
Filed: September 18, 2003	Group Art Unit No. 2636
METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	Examiner: STONE, Jennifer

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being sent by facsimile to 571-273-8300 on:

8/31/05
Date

Signature

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

This preliminary amendment is being submitted simultaneously with the filing of a Request for Continued Examination of the above-referenced application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 14 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 1, 11, 19, 23, and 34, as follows:

1. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

2. (Original) The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.

3. (Original) The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

4. (Original) The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

5. (Original) The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Original) The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Original) The method of claim 1, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

11. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

identifying a potential waypoint;

analyzing cartographic data between a first location and the potential waypoint for the preselected conditions; and

providing an alert signal when cartographic data between the first location and the potential waypoint indicate the preselected conditions.

12. (Original) The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

13. (Original) The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

14. (Original) The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

15. (Original) The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

16. (Original) The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

17. (Original) The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

18. (Original) The method of claim 11, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

19. (Currently Amended) A method for marine navigation, comprising:

<u>receiving one or more preselected conditions from a user;</u>

<u>receiving a user defined graphical filter area from the user;</u>

identifying [[a]] <u>the</u> user defined graphical filter area on a display;

analyzing cartographic data <u>only</u> within the user defined graphical filter area for <u>the</u> preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate <u>the</u> preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Currently Amended) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

receiving one or more preselected conditions from a user;

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

24. (Original) The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. (Original) The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

26. (Original) The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Original) The computer readable medium of claim 23, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

34. (Currently Amended) An electronic marine navigation device, comprising:

a processor;

<u>a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user;</u>

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including <u>data related to the</u> preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of <u>the</u> preselected conditions of the cartographic data.

35. (Original) The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

36. (Original) The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. (Original) The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. (Original) The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Original) The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Previously Presented) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

REMARKS:

Status Of Claims

Claims 1-44 were previously pending in the application. Claims 1, 11, 19, 23, and 34 have been amended. Thus, claims 1-44 are currently pending in the application with claims 1, 11, 19, 23, 34, and 44 being independent.

Office Action

In the June 1, 2005 Office Action, the Examiner rejected claims 1-18 and 23-40 under 35 U.S.C. 102(e) as being anticipated by Michaelson et al., U.S. Patent No. 6,734,808. The Examiner also rejected claims 19-22 under 35 U.S.C. 103(a) as being unpatentable over Horvath et al., U.S. Patent No. 6,473,003. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Horvath. The Examiner also rejected claim 42 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Mounce, U.S. Patent No. 4,340,936. The Examiner also rejected claim 43 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Wyant et al., U.S. Patent No. 6,885,919. The Examiner also rejected claim 44 under 35 U.S.C. 102(b) as being anticipated by Mounce. Applicant respectfully submits that the currently pending claims distinguish the present invention from Michaelson, Horvath, Mounce, Wyant, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claims 1, 11, 19, and 23 all now recite "receiving one or more preselected conditions from a user". Similarly, claim 34 recites "a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user". Finally, claim 44 previously recited and currently recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of ***preselected conditions received from a user***", emphasis added. Support for these amendments may be found, among other places, on page 6, lines 9-20:

> In addition, memory 330 can further retrievably store cartographic data, including marine craft data and a variety of preselected conditions that are also used in conjunction with the marine route calculation algorithm. Preselected conditions can include user identified parameters, and any values associated with the parameters, that are associated with geographical conditions of particular interest. For example, preselected conditions a user can select include, but are not limited to, indications of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles (e.g., bridges), underwater obstacles (e.g., submerged wrecks), type of water bottom, and prohibited areas, to name only a few. The preselected conditions, and their associated values, can be selected and programmed by a user through, for example, controlling one or more input menus on display screen 340 with the location input 320.

Thus, these claims require the user to select the "preselected conditions" to be avoided. Specifically, the present invention analyzes map data looking for a condition to be avoided, preselected by the user.

In contrast, as previously argued, Michaelson and Horvath both analyze map data looking for a depth, or height, that conflicts with the vessel's, or aircraft's, current depth, or altitude, as determined by the device. As pervasively argued, this current depth, or altitude, is dynamic and is simply not ***preselected*** by the user. Thus, no combination of Michaelson and/or Horvath discloses, suggests, or makes obvious "receiving one or more preselected conditions from a user", as claimed in claims 1, 11, 19, and 23. Nor does any combination of Michaelson and/or Horvath disclose, suggest, or make obvious "a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user", as claimed in claim 34, or "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user", as claimed in claim 44.

While Mounce does disclose a user 'selecting' some information, Mounce simply does not disclose a user providing the preselected conditions defined in the specification or used in the claims. Specifically, Mounce discloses only a user selecting whether or not to display individual pieces of information. For example, the Examiner points to Mounce's column 3, lines 2-6 and 10-12, column 4, lines 9-20, and Figure 1, items 1-5. However, column 3, lines 2-6, discloses "[t]he present illustrated embodiment shows more than a dozen readouts which are processed and displayed, and a display control unit is provided with a switch for each calculated readout by which the operator can selectively display or skip that value". Column 3, lines 10-12, discloses "[t]he main routine of the microprocessor calculates selected readouts sequentially and displays selected ones thereof so that each value is displayed for an interval of time long enough to make it easy to read". Column 4, lines 9-20, discloses:

> It is still another important object of the invention to provide a system having an automatic routine which sequentially displays the calculated

> information and companion alpha identification, but which can be manually controlled by the operator to omit, or include, any selection of measured or calculated data. The system provides a set of display switches so arranged that the actuation of the switches determines which data will be displayed and which will be passed over without display, whereby the operator can elect to display in more rapid succession only those quantities which particularly interest him at the moment.

Thus, the cited portions of Mounce merely disclose which of several inputs the user wishes to be displayed. Finally, as disclosed in column 5, items 1-5 of Mounce's Figure 1 are "input parameter sensors". It should also be noted that Mounce's input sensors are variable inputs, received from sensors, rather than "preselected conditions received from a user", as claimed in claim 44

Furthermore, Mounce simply does not disclose the other limitations of claim 44. For example, Mounce simply does not calculate a route, as defined in the specification and used in the claims. Rather, as disclosed in column 3, lines 38-56:

> The microprocessor system calculates such values as actual wind direction and speed, actual boat direction and speed over the bottom, relative wind direction on the port side, or on the starboard side, leeway angle, course and distance to or from a destination mark, or course and distance from an origin at the beginning of the course being traversed by the boat, etc.
>
> It is another very important object of the invention to provide a system capable of making calculations at a high rate from the raw data being collected as measured parameters from the sensors because the raw data is all interrelated and continuously varying, so that manually made calculations would provide only very incomplete and sparse data. The rapidity of the calculations and the high repetition rate permit effective integrating of the values to provide much more accurate information as to the progress and ultimate position of the boat with respect to an origin point or with respect to a destination mark.

In fact, Mounce' only use of the term route, in column 10, lines 46-50, relates to 'routing' information from a RAM to a display. In any case, no route or course of Mounce is ever analyzed in view of preselected conditions received from a user. Therefore, Mounce only discloses calculation of a heading based on variable inputs received from sensors.

The Examiner might be confused by Mounce's disclosure of the user selecting which of those inputs he or she wishes to be displayed. However, such disclosure is just that. The user's selections only impact which inputs will be displayed. The user's selections have no impact on the calculation of the heading, and is therefore simply not analogous to analyzing a route in view of preselected conditions received from a user, as described in the specification and claimed in the claims. Thus, Mounce does not disclose, suggest, or make obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user", much less the other limitations of claim 44.

Claim 19 further recites "receiving a user defined graphical filter area from the user" and "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions". Support for this amendment may be found, among other places, on page 8, lines 11-25:

> The marine route calculation algorithm can also be used to analyze cartographic data within a user defined graphical filter area (shown as 478 in Figure 4E). In one embodiment, the user defined graphical filter area includes a geographical area defined by a user on the display screen 340. Examples of defining the user defined graphical filter area on the display screen 340 include, but are not limited to, use of the input devices 216 or the display screen 340 itself. For example, a user could draw the user defined graphical filter area using a cursor shown on the display screen 340. The

user defined graphical filter area can include an area smaller than the display screen 340.

The user defined graphical filter area can also include any number of shapes, including, but not limited to, square, rectangular, triangular, or circular. Other shapes for the user defined graphical filter area are also possible. The user defined graphical filter area can further be positioned and/or repositioned over any number of locations on the display screen 340. In one embodiment, a displayed cursor under the control of one or more of the input devices 216 can be used to position and/or reposition the user defined graphical filter area over any number of locations on the display screen 340.

As stated on page 9, lines 5-13:

> In one example, the dynamic analysis of cartographic data, including the marine craft data, within the defined graphical filter area for preselected conditions allows for a user to be aware of preselected conditions that may be located within the area, but not necessarily at the first location and/or along the course which the device is traveling. In an additional embodiment, analyzing the cartographic data within the defined graphical filter area can be available regardless of whether a calculated course is being used or not. In other words, a user need not have a destination point, one or more waypoints (e.g., a potential, or other waypoint) and/or a calculated a course to have the cartographic data analyzed within the defined graphical filter area.

Thus, claim 19 also requires the user to define an area to which the analysis will be limited.

In contrast, as previously argued, neither Michaelson nor Horvath disclose the user to defining an area to which analysis is limited. As previously argued, Horvath's range indicator is just that, a circle showing a fixed range from an aircraft. While the circle is useful for showing the aircraft's relation to objects, and for general situational awareness, the area within Horvath's circle is simply not analyzed for anything or even defined in any useful way. For example, as stated in column 7, lines 27-29, "a range ring can be overlaid on a weather, terrain, statutory map, traffic, or other display of a condition near the aricraft". Thus, Horvath simply discloses an overlay which defines, at most, a linear relationship rather than an area. As a result, Horvath does not disclose, suggest, or make obvious "receiving a user defined graphical filter area from the user" or "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions", as claimed in claim 19.

The remaining claims all depend directly or indirectly from independent claims 1, 11, 19, 23, and 34, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By: [signature]

David L. Terrell, Reg. No. 50,576
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1200 East 151st Street
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(913) 397-9079 (Fax)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	**Attorney Docket No.: 702.254**
Serial No.: 10/667,026	
Filed: September 18, 2003	**Group Art Unit No. 2636**
METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	**Examiner: STONE, Jennifer**

CERTIFICATE OF MAILING
37 C.F.R. 1.8
I hereby certify that this correspondence is being sent by facsimile to 571/273-8300 on:
8/31/05
Date
Signature

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CONTINUED EXAMINATION TRANSMITTAL

This is a Request for Continued Examination (RCE) under 37 C.F.R. §1.114 of the above-identified application. Applicant requests consideration of the Preliminary Amendment filed simultaneously herewith.

The Commissioner is hereby authorized to charge the filing fee in the amount of $790, and any other required fees, or credit any overpayments, to Deposit Account No. 501-791.

Respectfully submitted,

By:

09/01/2005 TL0111 00000023 501791 10667026
01 FC:1801 790.00 DA

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TO:	**USPTO**
FAX #:	**(703) 872-9306**
FROM:	**Devon A. Rolf, Assistant General Counsel—Intellectual Property** **Garmin International, Inc. (E-mail: devon.rolf@garmin.com)**
DATE:	**August 31, 2005**

FACSIMILE COVER SHEET (Page 1 of 23)

Re:

Darrin W. Kabel et al.
Serial No. 10/667,026
Filed: 9-18-2003

Atty. Dkt. No. 702.254
Examiner: Stone, Jennifer
Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is a Request for Continued Examination and Preliminary Amendment for filing in connection with the above-referenced application. The Commissioner is hereby authorized to charge any additional fee which is found to be due, or credit any overpayment, to Deposit Account No. 501-791.

GARMIN INTERNATIONAL, INC.
1200 East 151st Street
Olathe, Kansas 66062

Applicant(s): Darrin W. Kabel et al.
Serial No.: 10/667,026
Filed: 9-18-2003
For: METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attorney Docket No. 702.254
Group Art Unit: 2636
Examiner: Stone, Jennifer
Confirmation No. 9123

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Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Transmitted herewith is an amendment in the above-identified application. The fee has been calculated as shown below:

CLAIMS AS AMENDED						
	Currently Filed Claims	Highest Number Previously Paid For	Extra	Rate		Amount
				Large Entity	Small Entity	
Total Number of claims Remaining after Amendment	44	44	0	$ 50	$ 25	$
Independent Claims Remaining after Amendment	6	6	0	200	100	$
First Presentation of Multiple Dependent Claims				360	180	$
Extension Fee: a) One Month b) Two Months c) Three Months d) Four Months e) Five Months				120 450 1,020 1,590 2,160	60 225 510 795 1,080	$
Request for Continued Examination						$ 790
TOTAL FEE DUE						$

- [ ] No additional fee is required.
- [ ] A check in the amount of * is attached.
- [x] Charge $790.00 to Deposit Account No. 501-791. A duplicate of this sheet is enclosed.
- [x] Charge any additional fees or credit any overpayment to Deposit Account No. 501-791. A duplicate of this sheet is enclosed.

A verified statement under 37 C.F.R. §§ 1.9 and 1.27
- [ ] is attached.
- [x] is of record in this application.

Respectfully submitted,

GARMIN INTERNATIONAL, INC.

Date: 8/31/05

By
Name: David L. Terrell
Reg. No. 50.576

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TO:	**USPTO**
FAX #:	**(703) 872-9306**
FROM:	**Devon A. Rolf, Assistant General Counsel—Intellectual Property** **Garmin International, Inc. (E-mail: devon.rolf@garmin.com)**
DATE:	**August 31, 2005**

FACSIMILE COVER SHEET (Page 1 of 23)

Re:

Darrin W. Kabel et al.		Atty. Dkt. No. 702.254
Serial No.	10/667,026	Examiner: Stone, Jennifer
Filed:	9-18-2003	Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is a Request for Continued Examination and Preliminary Amendment for filing in connection with the above-referenced application. The Commissioner is hereby authorized to charge any additional fee which is found to be due, or credit any overpayment, to Deposit Account No. 501-791.

GARMIN INTERNATIONAL, INC.
1200 East 151st Street
Olathe, Kansas 66062

Applicant(s): Darrin W. Kabel et al.

Serial No.: 10/667,026

Filed: 9-18-2003

For: METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attorney Docket No. 702.254

Group Art Unit: 2636

Examiner: Stone, Jennifer

Confirmation No. 9123

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Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Transmitted herewith is an amendment in the above-identified application. The fee has been calculated as shown below:

CLAIMS AS AMENDED						
	Currently Filed Claims	Highest Number Previously Paid For	Extra	Rate: Large Entity	Rate: Small Entity	Amount
Total Number of claims Remaining after Amendment	44	44	0	$ 50	$ 25	$
Independent Claims Remaining after Amendment	6	6	0	200	100	$
First Presentation of Multiple Dependent Claims				360	180	$
Extension Fee: a) One Month b) Two Months c) Three Months d) Four Months e) Five Months				120 450 1,020 1,590 2,160	60 225 510 795 1,080	$
Request for Continued Examination						$ 790
TOTAL FEE DUE						$

- [ ] No additional fee is required.
- [ ] A check in the amount of * is attached.
- [x] Charge $790.00 to Deposit Account No. 501-791. A duplicate of this sheet is enclosed.
- [x] Charge any additional fees or credit any overpayment to Deposit Account No. 501-791. A duplicate of this sheet is enclosed.

A verified statement under 37 C.F.R. §§ 1.9 and 1.27
- [ ] is attached.
- [X] is of record in this application.

Respectfully submitted,

GARMIN INTERNATIONAL, INC.

Date: 8/31/05

By [signature]
Name: David L. Terrell
Reg. No. 50,576

Entered with RCE of 8-31-05

~~Do NOT enter~~ 9/12/05

JAS 8/8/2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

KABEL, DARRIN W.

Serial No.: 10/667,026

Filed: September 18, 2003

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attorney Docket No.: 702.254

Group Art Unit No. 2636

Examiner: STONE, Jennifer

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being sent by facsimile to 703-872-9306 on
7/12/05
Date
Signature

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action of June 1, 2005, applicant respectfully requests that this amendment be entered in the above-referenced application. Because this Amendment puts the application in a condition for allowance and does not present new issues or require a new search, Applicant respectfully requests that this Amendment be entered after Final Action.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 14 of this paper.

10/667,026

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number: 702.254 10/667026

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20=	* 21
INDEPENDENT CLAIMS	5 minus 3 =	* 2
MULTIPLE DEPENDENT CLAIM PRESENT	☐	

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐ OR OTHER THAN SMALL ENTITY

RATE	FEE		RATE	FEE
BASIC FEE	375.00	OR	BASIC FEE	750.00
X$ 9=		OR	X$18=	
X42=		OR	X84=	168
+140=		OR	+280=	
TOTAL		OR	TOTAL	

CLAIMS AS AMENDED - PART II

5/4/05

AMENDMENT A		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
	Total	* 44	Minus	** 41	= 3
	Independent	* 6	Minus	*** 5	= 1
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$~~18~~ 50=	150
X42=		OR	X~~84~~ 200=	200
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	350

7-12-05

AMENDMENT B		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
	Total	* 42	Minus	** 44	=
	Independent	* 6	Minus	*** 6	= /
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

8-31-05

AMENDMENT C		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
	Total	* 44	Minus	** 44	= /
	Independent	* 6	Minus	*** 6	= /
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Teh

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

7590 08/24/2005

Devon A. Rolf
GARMIN INTERNATIONAL, INC.
1200 East 151st Street
Olathe, KS 66062

EXAMINER	
STONE, JENNIFER A	

ART UNIT	PAPER NUMBER
2636	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

FLIR-1002.416

Advisory Action Before the Filing of an Appeal Brief	Application No.	Applicant(s)	
	10/667,026	KABEL ET AL.	
	Examiner	Art Unit	
	Jennifer A. Stone	2636	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 12 July 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires ______months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-44*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: Mounce discloses receiving one or more preselected conditions from a user. See the rejection of claim 44 in the final rejection.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

FLIR-1002.417

Do NOT enter. JAS 8/8/2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	**Attorney Docket No.: 702.254**
Serial No.: 10/667,026	
Filed: September 18, 2003	**Group Art Unit No. 2636**
METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	**Examiner: STONE, Jennifer**

CERTIFICATE OF MAILING
37 C.F.R. 1.8
I hereby certify that this correspondence is being sent by facsimile to 703-872-9306 on:
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Date Signature

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action of June 1, 2005, applicant respectfully requests that this amendment be entered in the above-referenced application. Because this Amendment puts the application in a condition for allowance and does not present new issues or require a new search, Applicant respectfully requests that this Amendment be entered after Final Action.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 14 of this paper.

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TO:	**USPTO**
FAX #:	**(703) 872-9306**
FROM:	**Devon A. Rolf, Assistant General Counsel—Intellectual Property Garmin International, Inc. (E-mail: devon.rolf@garmin.com)**
DATE:	**July 12, 2005**

FACSIMILE COVER SHEET (Page 1 of 20)

Re:

Darrin W. Kabel et al.
Serial No. 10/667,026
Filed: 9-18-2003

Atty. Dkt. No. 702.254
Examiner: Stone, Jennifer
Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is a response to the outstanding Final Office Action dated June 1, 2005 for filing in connection with the above-referenced application. It is believed that no additional fee is due; however, the Commissioner is hereby authorized to charge any additional fee which is found to be due, or credit any overpayment, to Deposit Account No. 501-791.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	**Attorney Docket No.: 702.254**
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METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	**Examiner: STONE, Jennifer**

CERTIFICATE OF MAILING
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Date Signature

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action of June 1, 2005, applicant respectfully requests that this amendment be entered in the above-referenced application. Because this Amendment puts the application in a condition for allowance and does not present new issues or require a new search, Applicant respectfully requests that this Amendment be entered after Final Action.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 14 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 1, 11, 19, 23, and 34, as follows:

1. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

2. (Original) The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.

3. (Original) The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

4. (Original) The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

5. (Original) The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Original) The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Original) The method of claim 1, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

11. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

identifying a potential waypoint;

analyzing cartographic data between a first location and the potential waypoint for the preselected conditions; and

providing an alert signal when cartographic data between the first location and the potential waypoint indicate the preselected conditions.

12. (Original) The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

13. (Original) The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

14. (Original) The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

15. (Original) The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

16. (Original) The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

17. (Original) The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

18. (Original) The method of claim 11, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

19. (Currently Amended) A method for marine navigation, comprising:

receiving one or more preselected conditions from a user;

receiving a user defined graphical filter area from the user;

identifying [[a]] the user defined graphical filter area on a display;

analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Currently Amended) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

receiving one or more preselected conditions from a user;

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

24. (Original) The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. (Original) The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

26. (Original) The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Original) The computer readable medium of claim 23, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

34. (Currently Amended) An electronic marine navigation device, comprising:

a processor;

a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.

35. (Original) The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

36. (Original) The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. (Original) The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. (Original) The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Original) The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Previously Presented) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

REMARKS:

Status Of Claims

Claims 1-44 were previously pending in the application. Claims 1, 11, 19, 23, and 34 have been amended. Thus, claims 1-44 are currently pending in the application with claims 1, 11, 19, 23, 34, and 44 being independent.

Office Action

In the office action, the Examiner rejected claims 1-18 and 23-40 under 35 U.S.C. 102(e) as being anticipated by Michaelson et al., U.S. Patent No. 6,734,808. The Examiner also rejected claims 19-22 under 35 U.S.C. 103(a) as being unpatentable over Horvath et al., U.S. Patent No. 6,473,003. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Horvath. The Examiner also rejected claim 42 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Mounce, U.S. Patent No. 4,340,936. The Examiner also rejected claim 43 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Wyant et al., U.S. Patent No. 6,885,919. The Examiner also rejected claim 44 under 35 U.S.C. 102(b) as being anticipated by Mounce. Applicant respectfully submits that the currently pending claims distinguish the present invention from Michaelson, Horvath, Mounce, Wyant, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claims 1, 11, 19, and 23 all now recite "receiving one or more preselected conditions from a user". Similarly, claim 34 recites "a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user". Finally, claim 44 previously recited and currently recites "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of ***preselected conditions received from a user***", emphasis added. Support for these amendments may be found, among other places, on page 6, lines 9-20:

> In addition, memory 330 can further retrievably store cartographic data, including marine craft data and a variety of preselected conditions that are also used in conjunction with the marine route calculation algorithm. Preselected conditions can include user identified parameters, and any values associated with the parameters, that are associated with geographical conditions of particular interest. For example, preselected conditions a user can select include, but are not limited to, indications of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles (e.g., bridges), underwater obstacles (e.g., submerged wrecks), type of water bottom, and prohibited areas, to name only a few. The preselected conditions, and their associated values, can be selected and programmed by a user through, for example, controlling one or more input menus on display screen 340 with the location input 320.

Thus, these claims require the user to select the "preselected conditions" to be avoided. Specifically, the present invention analyzes map data looking for a condition to be avoided, preselected by the user.

In contrast, as previously argued, Michaelson and Horvath both analyze map data looking for a depth, or height, that conflicts with the vessel's, or aircraft's, current depth, or altitude, as determined by the device. As pervasively argued, this current depth, or altitude, is dynamic and is simply not ***preselected*** by the user. Thus, neither Michaelson nor Horvath disclose, suggest, or make obvious "receiving one or more preselected conditions from a user", "a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user", or "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user", as claimed.

While Mounce does disclose a user providing selected information, Mounce simply does not disclose a user providing the preselected conditions, as defined in the specification or used in the claims. Furthermore, Mounce simply does not disclose the other limitations of claim 44. For example, Mounce simply does not calculate a route, as defined in the specification and used in the claims. Rather, as disclosed in column 3, lines 38-56:

> The microprocessor system calculates such values as actual wind direction and speed, actual boat direction and speed over the bottom, relative wind direction on the port side, or on the starboard side, leeway angle, course and distance to or from a destination mark, or course and distance from an origin at the beginning of the course being traversed by the boat, etc.
>
> It is another very important object of the invention to provide a system capable of making calculations at a high rate from the raw data being collected as measured parameters from the sensors because the raw data is all interrelated and continuously varying, so that manually made calculations would provide only very incomplete and sparse data. The rapidity of the calculations and the high repetition rate permit effective integrating of the values to provide much more accurate information as to the progress and ultimate position of the boat with respect to an origin point or with respect to a destination mark.

Specifically, Mounces' "course" is simply a heading or vector to the destination. Such a simple heading is hardly a route, as defined in the present specification. In fact, Mounce' only use of the term route, in column 10, lines 46-50, relates to 'routing' Information from a RAM to a display. In any case, no route or course of Mounce is ever analyzed "in view of preselected conditions received from a user", as claimed in claim 19. Thus, Mounce does not disclose, suggest, or make obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user", much less the other limitations of claim 44.

As claim 44 previously included this limitation, these amendments do not present new issues or require a new search. Thus, applicant requests that this amendment be entered after Final Action.

Claim 19 further recites "receiving a user defined graphical filter area from the user" and "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions". Support for this amendment may be found, among other places, on page 8, lines 11-25:

> The marine route calculation algorithm can also be used to analyze cartographic data within a user defined graphical filter area (shown as 478 in Figure 4E). In one embodiment, the user defined graphical filter area includes a geographical area defined by a user on the display screen 340. Examples of defining the user defined graphical filter area on the display screen 340 include, but are not limited to, use of the input devices 216 or the display screen 340 itself. For example, a user could draw the user defined graphical filter area using a cursor shown on the display screen 340. The user defined graphical filter area can include an area smaller than the display screen 340.

> The user defined graphical filter area can also include any number of shapes, including, but not limited to, square, rectangular, triangular, or circular. Other shapes for the user defined graphical filter area are also possible. The user defined graphical filter area can further be positioned and/or repositioned over any number of locations on the display screen 340. In one embodiment, a displayed cursor under the control of one or more of the input devices 216 can be used to position and/or reposition the user defined graphical filter area over any number of locations on the display screen 340.

As stated on page 9, lines 5-13:

> In one example, the dynamic analysis of cartographic data, including the marine craft data, within the defined graphical filter area for preselected conditions allows for a user to be aware of preselected conditions that may be located within the area, but not necessarily at the first location and/or along the course which the device is traveling. In an additional embodiment, analyzing the cartographic data within the defined graphical filter area can be available regardless of whether a calculated course is being used or not. In other words, a user need not have a destination point, one or more waypoints (e.g., a potential, or other waypoint) and/or a calculated a course to have the cartographic data analyzed within the defined graphical filter area.

Thus, claim 19 also requires the user to define an area to which the analysis will be limited.

In contrast, as previously argued, neither Michaelson nor Horvath disclose the user to defining an area to which analysis is limited. As previously argued, Horvath's range indicator is just that, a circle showing a fixed range from an aircraft. While the circle is useful for showing the aircraft's relation to objects, and for general situational awareness, the area within Horvath's circle is simply not analyzed for anything or even defined in any useful way. For example, as stated in column 7, lines 27-29, "a range ring can be overlaid on a weather, terrain, statutory map, traffic, or other display of a condition near the aricraft". Thus, Horvath simply discloses an overlay which defines, at most, a linear relationship rather than an area. As a result, Horvath does not disclose, suggest, or make obvious "receiving a user defined graphical filter area from the user" or "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions", as claimed in claim 19.

The remaining claims all depend directly or indirectly from independent claims 1, 11, 19, 23, and 34, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By: ______________________

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TO:	**USPTO**
FAX #:	**(703) 872-9306**
FROM:	**Devon A. Rolf, Assistant General Counsel—Intellectual Property** **Garmin International, Inc. (E-mail: devon.rolf@garmin.com)**
DATE:	**July 12, 2005**

FACSIMILE COVER SHEET (Page 1 of 20)

Re:

Darrin W. Kabel et al.
Serial No. 10/667,026
Filed: 9-18-2003

Atty. Dkt. No. 702.254
Examiner: Stone, Jennifer
Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is a response to the outstanding Final Office Action dated June 1, 2005 for filing in connection with the above-referenced application. It is believed that no additional fee is due; however, the Commissioner is hereby authorized to charge any additional fee which is found to be due, or credit any overpayment, to Deposit Account No. 501-791.

PAGE 1/1 * RCVD AT 7/12/2005 3:55:05 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/2 * DNIS:8729306 * CSID:913 397 9079 * DURATION (mm-ss):00-52

10/667,026

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number
702.254
10/667026

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20=	* 21
INDEPENDENT CLAIMS	5 minus 3 =	* 2
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐ RATE	FEE	OR	OTHER THAN SMALL ENTITY RATE	FEE
BASIC FEE	375.00	OR	BASIC FEE	750.00
X$ 9=		OR	X$18=	
X42=		OR	X84=	168
+140=		OR	+280=	
TOTAL		OR	TOTAL	

CLAIMS AS AMENDED - PART II

5/4/5

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 44	Minus	** 41	= 3
Independent	* 6	Minus	*** 5	= 1
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
X$ 9=		OR	X$~~18~~ 50=	150
X42=		OR	~~X84~~ 200=	200
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	350

7-12-05

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 42	Minus	** 44	=
Independent	* 6	Minus	*** 6	= /
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Edn

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

7590 06/01/2005

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EXAMINER	
STONE, JENNIFER A	

ART UNIT	PAPER NUMBER
2636	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/667,026	KABEL ET AL.	
	Examiner	Art Unit	
	Jennifer A. Stone	2636	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. <u>Claims 1-10</u> are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

<u>For claim 1,</u> Michaelson discloses a method for marine navigation, comprising (col 2, lns 11-14 and 35-38): identifying a potential waypoint (Fig. 28, points A-F; col 23, lns 30-32 and 39-41); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (col 23, lns 64-67; col 24, lns 33-45 and 62-66).

<u>For claim 2,</u> Michaelson discloses performing the marine route calculation algorithm to include analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions (col 24, lns 37-45).

For claim 3, the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint (col 24, lns 25-37 and 55-61).

For claim 4, re-routing the course calculated further includes identifying one or more non-user waypoints (determined by the system, not the user) between the first location and the potential waypoint (col 24, lns 41-50 and 55-64).

For claim 5, Michaelson determines a first location on the course based on a signal from a GPS; and analyzing cartographic data for a predetermined area around the first location for preselected conditions (col 7, lns 50-65; col 8, lns 11-21 and 46-51.

For claim 6, an alert signal is provided when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions (col 2, lns 11-14; col 6, lns 13-17).

For claim 7, an alert signal is provided when the analyzed cartographic data for the predetermined data between the first location and the potential waypoint includes preselected conditions (col 6, lns 13-26).

For claim 8, the alert signal includes emitting an audio alert (col 6, lns 15-18; Fig. 2, item 28).

For claim 9, Michaelson discloses providing the alert signal to include displaying a visual alert.

For claim 10, Michaelson discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 2, lns 41-43; col 8, lns 28-36 and 40-52).

3. Claims 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 11, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 6 as stated above.

For claim 12, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 13, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

For claim 14, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

For claim 15, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 16, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 17, Michaelson discloses analyzing cartographic data further comprises acquiring cartographic data from a GPS (col 7, lns 54-56).

For claim 18, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above.

4. Claims 23-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 23, Michaelson discloses a computer readable medium having a set of computer readable instructions (col 11, lns 38-41), the set of computer readable instructions comprising instructions for: identifying a potential waypoint upon a first event (col 23, lns 30-41); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (col 27, lns 11-20).

For claim 24, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 2 as stated above.

For claim 25, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 26, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

For claim 27, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 28, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 29, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 17 as stated above.

For claim 30, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

For claim 31, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 8 as stated above.

For claim 32, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 9 as stated above.

For claim 33, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above.

5. Claims 34-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 34, Michaelson discloses an electronic marine navigation device, comprising: a processor (col 2, lns 41-44; Fig. 40, item 486); a location input operatively coupled to the processor (col 5, lns 12-15; Fig. 40, item 24), wherein the location input receives a first location and a potential waypoint separate from the first location (col 23, lns 30-32 and 39-41; Fig. 28); and a memory operatively coupled to the processor and the location input (col 31, lns 18-24; Fig. 40, item 4760), the memory having cartographic data including preselected conditions (Fig. 40, 4800; col 31, lns 48-51), wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data (col 23, lns 30-41).

For claim 35, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 2 and 34 as stated above.

For claim 36, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 3 and 34 as stated above.

For claim 37, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 4 and 34 as stated above.

For claim 38, Michaelson discloses a receiver for a GPS (Fig. 2, GPS, 14; Fig. 40, item 24) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS (col 7, lns 50-56), and analyzes cartographic data for a predetermined area around the first location for preselected conditions (col 5, lns 9-15).

For claim 39, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 6 and 34 as stated above.

For claim 40, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 7 and 34 as stated above.

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 44 is rejected under 35 U.S.C. 102(b) as being anticipated by Mounce (US 4,340,936).

Mounce discloses a method for marine navigation, comprising: identifying a potential waypoint (col 3, lns 38-43 and 51-56); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 3, lns 2-6 and 10-12; col 4, lns 9-20; Fig. 1, items 1-5).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvath et al. (US 6,473,003).

For claim 19, Horvath discloses identifying a user defined graphical filter area on a display; analyzing cartographic data within the user defined graphical filter area for preselected conditions; and providing an alert signal when cartographic data within the user defined graphical filter area indicate preselected conditions. Even though Horvath's primary application is aircraft navigation, it would have been obvious one of ordinary skill in the art, at the time the invention was made to apply the disclosure of Horvath to a marine navigation system so that a user has a certain degree of control over the display in order to customize it according to the user's preferences. In addition, the graphical filter area is applied to one or more display maps, such as weather, terrain, and traffic. All of the aforementioned maps are also applied to marine navigation (col 7, lns 26-31).

For claim 20, identifying the user defined graphical filter area includes repositioning the user defined graphical filter area (col 2, lns 26-37).

For claim 21, Horvath includes analyzing cartographic data further comprises acquiring cartographic data from a GPS (col 4, lns 54-56; Fig. 7, item 110, 123-125).

For claim 22, Horvath discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 4, lns 60-63; col 7, lns 26-31; Fig. 7, items 124, 125).

9. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelson et al. (US 6,734,808), as applied to claim 34, and further in view of Horvath et al. (US 6,473,003).

Michaelson discloses a processor to operate on the marine route calculation algorithm to analyze cartographic data, wherein the processor provides an alert signal when the analyzed cartographic data includes preselected conditions; however, Michaelson does not disclose a user defined graphical filter area. Horvath, on the other hand, does disclose a user defined graphical filter area (col 1, lns 10-14; col 2, lns 30, 31, 44-48) wherein a processor operates to analyze cartographic data and provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions (col 2, lns 60-63; Fig. 4, 30i). Even though Horvath's primary application is aircraft navigation, it would have been obvious to apply a user defined graphical filter area to a marine navigation system so that a user has a certain degree of control over the display in order to customize it according to the user's preferences.

10. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelson et al. (US 6,734,808), as applied to claim1, and further in view of Mounce (US 4,340,936).

Michaelson does not disclose a first location and a potential waypoint independent of a current location; however, Mounce discloses this feature (col 7 lns 36-42). Mounce is only concerned with parameters between a point of origin and a waypoint. It would have been obvious to disregard a current location between a first location and a potential waypoint and place a higher priority on parameters such as distance to waypoint and current drift in order to predict a course.

11. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelson et al. (US 6,734,808), as applied to claim 1, and further in view of Wyant et al. (US 6,885,919).

Michaelson includes a course related to current heading; however, Wyant discloses a portion of a course for marine navigation that is unrelated to a current heading of a device implementing (col 1, lns 4-14; col 4, lns 36-50) the method. After a route is planned (Fig. 1), the system will re-route the vessel according to the following parameters depicted in Fig. 2, items 21, 22, and 24, which are unrelated to a current heading of the vessel. It would have been obvious for a portion of the course to be unrelated to a current heading, and related to other parameters, such as fuel level, so that a sufficient amount of fuel is available to reach a destination thereby ensuring the safety of the vessel and its passengers.

Response to Remarks

12. Applicant's arguments filed May 4, 2005 have been fully considered but they are not persuasive.

The Applicant argues as follows:

a. Michaelson does not disclose waypoints in view of pre-selected conditions.

b. Horvath fails to disclose a user-defined graphical filter area for pre-selected conditions.

a. A waypoint is defined as a point between major points on a route, as along a track. Michaelson, therefore, discloses multiple waypoints (col 4, lns 1 and 2; Fig. 28, items A-F). In addition, Michaelson discloses a system that analyzes a course between a first location and the potential waypoint in view of pre-selected conditions (col 23, lns 30-44). The pre-selected conditions are hazardous terrain or obstructions (col 25, lns 21-34). Furthermore, pre-selected conditions of independent claims 1, 11, 23, and 34 are not limited to user-defined conditions, therefore, Machaelson discloses the computer/machine defined pre-selected conditions (col 6, lns 27-35).

b. The graphical filter area disclosed by Horvath is considered to be user-defined because the user can choose between two modes: a set scale distance mode and a fixed distance mode. In addition, the pre-selected conditions consist of selected targets within a user-defined boundary (col 7, lns 3-7).

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Stone whose telephone number is (571) 272.2976. The examiner can normally be reached on M-F from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass, can be reached at (571) 272.2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Stone
January 5, 2004

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Notice of References Cited	Application/Control No. 10/667,026	Applicant(s)/Patent Under Reexamination KABEL ET AL.	
	Examiner Jennifer A. Stone	Art Unit 2636	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-4,340,936	07-1982	Mounce, George R.	701/200
	B	US-6,885,919	04-2005	Wyant et al.	701/21
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application No. 10/667,026	Applicant(s) KABEL ET AL.
	Examin r Jennifer A Stone	Art Unit 2636

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Claim Final	Claim Original	Date 1/6/2005	9/25/05							
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Search Notes	Application No. 10/667,026	Applicant(s) KABEL ET AL.
	Examiner Jennifer A Stone	Art Unit 2636

SEARCHED

Class	Subclass	Date	Examiner
340	686.6 995.1 984 985 851 539.13	12/28/2005	JS
340	539.2 961	12/28/2005	JS
340	539.22	12/28/2005	JS
340	7.56	12/28/2005	JS
340	825.36	12/28/2005	JS
340	995.11	12/28/2005	JS
367	909	12/28/2005	JS
342	357.13 41	12/28/2005	JS
701	21 201	12/28/2005	JS
701	301	12/28/2005	JS

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
Brent Swartout	1/5/2005	JS
East Search	12/28/2004	JS
Brent Swartout	5/24/2005	JS
Updated Search	5/20/2005	JS

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TO:	**USPTO**
FAX #:	**(703) 872-9306**
FROM:	**Devon A. Rolf, Assistant General Counsel—Intellectual Property** **Garmin International, Inc. (E-mail: devon.rolf@garmin.com)**
DATE:	**May 4, 2005**

FACSIMILE COVER SHEET (Page 1 of 26)

Re:

Darrin W. Kabel et al.
Serial No. 10/667,026
Filed: 9-18-2003

Atty. Dkt. No. 702.254
Examiner: Stone, Jennifer
Group Art Unit 2636

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS

Attached is a response to the outstanding Office Action dated January 12, 2005 along with a request for a one month extension of time for filing in connection with the above-referenced application. The Commissioner is hereby authorized to charge any fee which may be due, or credit any overpayment, to Deposit Account No. 501-791.

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1200 East 151st Street
Olathe, Kansas 66062

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Applicant(s): Darrin W. Kabel et al. : Attorney Docket No. 702.254

Serial No.: 10/667,026 : Group Art Unit: 2636

Filed: September 18, 2003 : Examiner: Stone, Jennifer

METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS · Confirmation No. 9123

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Transmitted herewith is an amendment in the above-identified application. The fee has been calculated as shown below:

CLAIMS AS AMENDED						
	Currently Filed Claims	Highest Number Previously Paid For	Extra	Rate Large Entity	Rate Small Entity	Amount
Total Number of claims Remaining after Amendment	44	41	3	$ 50	$ 25	$ 150
Independent Claims Remaining after Amendment	6	5	1	200	100	$ 200
First Presentation of Multiple Dependent Claims				360	180	$
Extension Fee: a) One Month b) Two Months c) Three Months d) Four Months e) Five Months				120 450 1,020 1,590 2,160	60 225 510 795 1,080	$ 120
TOTAL FEE DUE						$ 470

☐ No additional fee is required.

☐ A check in the amount of * is attached.

☒ Charge $470 to Deposit Account No. 501-791.

☒ Charge any additional fees or credit any overpayment to Deposit Account No. 501-791.

A verified statement under 37 C.F.R. §§ 1.9 and 1.27

☐ is attached.

☒ is of record in this application.

Respectfully submitted,

GARMIN INTERNATIONAL, INC.

Date: 5/4/5

By [signature]
Name: David L. Terrell
Reg. No. 50,576

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	
KABEL, DARRIN W.	Attorney Docket No.: 702.254
Serial No.: 10/667,026	
Filed: September 18, 2003	Group Art Unit No. 2636
METHODS, SYSTEMS AND DEVICES FOR CARTOGRAPHIC ALERTS	Examiner: STONE, Jennifer

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being sent by facsimile to 703-872-9306 on:

5/4/05
Date

Signature

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action of January 12, 2005, applicant respectfully requests that this amendment be entered in the above-referenced application. A request for a one-month extension of time accompanies this amendment.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 13 of this paper.

05/06/2005 EFLORES 00000070 501791 10667026

01 FC:1201 200.00 DA
02 FC:1202 150.00 DA

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

1. (Original) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions.

2. (Original) The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.

3. (Original) The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

4. (Original) The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

5. (Original) The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Original) The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. (Original) The method of claim 1, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

11. (Original) A method for marine navigation, comprising:

identifying a potential waypoint;

analyzing cartographic data between a first location and the potential waypoint for preselected conditions; and

providing an alert signal when cartographic data between the first location and the potential waypoint indicate preselected conditions.

12. (Original) The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

13. (Original) The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

14. (Original) The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

15. (Original) The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

16. (Original) The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

17. (Original) The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

18. (Original) The method of claim 11, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

19. (Original) A method for marine navigation, comprising:

identifying a user defined graphical filter area on a display;

analyzing cartographic data within the user defined graphical filter area for preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Original) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions.

24. (Original) The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. (Original) The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

26. (Original) The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and

analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Original) The computer readable medium of claim 23, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

34. (Original) An electronic marine navigation device, comprising:

a processor;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data.

35. (Original) The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

36. (Original) The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. (Original) The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. (Original) The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Original) The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

Please add claims 42-44, as follows:

42. (New) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (New) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (New) A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions received from a user and selected from the group of land, water depth, rock(s), sandbars, shelves, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

REMARKS:

Status Of Claims

Claims 1-41 were previously pending in the application. Claims 42-44 has been added. Thus, claims 1-44 are currently pending in the application with claims 1, 11, 19, 23, 34, and 44 being independent.

Office Action

In the office action, the Examiner rejected claims 1-18 and 23-40 under 35 U.S.C. 102(e) as being anticipated by Michaelson et al., U.S. Patent No. 6,734,808. The Examiner also rejected claims 19-22 under 35 U.S.C. 103(a) as being unpatentable over Horvath et al., U.S. Patent No. 6,473,003. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Horvath. Applicant respectfully submits that the currently pending claims distinguish the present invention from Michaelson, Horvath, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claim 1 recites "analyze a course between a first location and the ***potential waypoint*** in view of preselected conditions", emphasis added.

As stated on page 7, lines 1-4:

> Embodiments of the present invention also allow for a course to be analyzed between the first location and one or more waypoints, where cartographic data, including marine craft data, for the area between the first location and the waypoints can be analyzed to determine whether preselected conditions are present along the course.

As stated on page 7, lines 18-24:

> In addition, the processor 310 further operates on the marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data, including the marine craft data. So, for example, the processor 310 can operate on the route calculating algorithm to analyze the cartographic data, including the marine craft data, to identify and avoid preselected conditions in the course being calculated between the first location and the potential waypoint.

As stated on page 8, lines 4-10:

> In a situation where the processor 310 operating on the marine route calculation algorithm identifies one or more preselected conditions in analyzing the course, the processor 310 operates on the route calculating algorithm to re-route the course to avoid the preselected conditions. In one embodiment, in routing and/or re-routing the course to avoid the preselected conditions, the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

As shown in figures 4A and 4B, and stated on page 12, line 18, through page 13, line 4:

> Figure 4A illustrates course 404 between a first location 410 and a potential waypoint 414 that passes through land 416. In the present embodiment, the first location 410 is shown as a first waypoint that has been selected by a user. As described herein, land can be classified as a preselected condition. As such, course 404 has been highlighted to indicate that at least one preselected condition has been identified in the analysis of course 404. Highlighting in the instant case is provided by a bolding of the line representative course 404 in a region 418. At this point, the device can calculate one or more possible courses around the preselected condition.
>
> Figure 4B provides map display 400 having course 403 recalculated to avoid the one or more preselected conditions (e.g., avoid the land in region 418 of the previous course 404). Recalculating of course 403 relative to the original calculation of course 404 shown in Figure 4A provides the recalculated course 403 with one or more additional waypoints, shown as

> 420. The additional waypoints 420 have been included to allow the course 403 to avoid the preselected conditions. The waypoints 420, in the present situation, are non-user waypoints. In other words, waypoints 420 were determined by the system, and not the user. Embodiments however are not so limited. In an additional embodiment, the user can indicate waypoints to be used and/or alter waypoints that are provided by the system.

Therefore, the above discussed portions of the instant application make it clear that the waypoints, between which a course is analyzed, are not simply projections along a vessel's present heading. For example, as shown in figure 4A, if it is assumed that the vessel is heading toward waypoint 410, along course 404, then the portion of course 404 between waypoints 410 and 414 is clearly not a projection along the vessel's present heading. It is at least that portion of course 404, between waypoints 410 and 414, that is being analyzed for the preselected conditions. Furthermore, neither of waypoints 410 or 414 are necessarily even related to the vessel's current location. Thus, the waypoints of the present invention are simply not defined by a vessel's present heading or current location.

In contrast, Michaelson's invention is strictly limited to analyzing a "look ahead distance". Specifically, Michaelson determines a vessel's current location and present heading, or a direction the vessel is travelling. Then, Michaelson looks for bottom hazards from the vessel's current location extending for specified look ahead distances along the vessel's present heading. Therefore, Michaelson's warning system is limited to projections from the vessel's current location along the vessel's present heading. There is simply no disclosure of waypoints, as defined in the present specification and used in the currently pending claims. As Michaelson fails to disclose waypoints, as defined in the present specification and used in the currently pending claims, Michaelson fails to disclose "analyze a course between a first location and the ***potential waypoint*** in view of preselected conditions", as claimed in claim 1.

Claim 10 defines the preselected conditions as being "selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas".

As stated on page 6 of the present specification, lines 11-20:

> Preselected conditions can include user identified parameters, and any values associated with the parameters, that are associated with geographical conditions of particular interest. For example, preselected conditions a user can select include, but are not limited to, indications of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles (e.g., bridges), underwater obstacles (e.g., submerged wrecks), type of water bottom, and prohibited areas, to name only a few. The preselected conditions, and their associated values, can be selected and programmed by a user through, for example, controlling one or more input menus on display screen 340 with the location input 320.

Thus, the method of the present invention, as claimed in claims 1 and 10, analyzes a course for one or more preselected conditions, such as conditions to be avoided like "land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas".

By way of example, suppose a user intends to use the present invention on a small and light fiberglass canoe. In this case, the user may be primarily concerned with rocks, having the ability to portage their boat over land, but not wanting to risk impact with the rocks. The user would pre-select rocks, thereby configuring the present invention to calculate a route avoiding any rocks.

By way of another example, suppose a user intends to use the present invention on a large ocean going ship. In this case, the user may simply select a water depth greater than the ship's draft, thereby avoiding any possible grounding problems. It is important to note that, as claimed in claims 1 and 10, these conditions must be "preselected".

In contrast, Michaelson's system must dynamically determine his conditions to be avoided. Specifically, as Michaelson discloses in column 8, lines 48-49, "the present invention addresses hazards related to submerged vessels", such as submarines. Simply put, in Michaelson, the water depth that presents a hazard changes dynamically with the submarine's current depth, and therefore cannot be "preselected", as claimed in the present claims.

For example, as stated in Michaelson, column 8, lines 23-28:

> Navigation system 14 also stores data or retrieves input from other shipboard systems as needed to compute the maximum bull depth. In the case of a submerged submarine, this parameter can be computed or obtained directly from on board pressure instrumentation such as a fathometer designed to measure depth below the surface.

Since submarines can be at virtually any depth, and therefore need to avoid obstacles conflicting with a dynamic depth, Michaelson's system must avoid dynamic depths rather than "preselected" depths. In fact, throughout his disclosure, Michaelson teaches generating alerts and course deviations based on dynamic, rather than "preselected", conditions. As a result, Michaelson simply does not disclose, suggest, or make obvious "analyze a course between a first location and the potential waypoint in view of preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas", as claimed in claim 1, much less "receiving the preselected conditions from a user", as claimed in claim 10.

Similarly, claims 11, 19, 23, and 34 are all limited to "preselected conditions". As discussed above, Michaelson fails to disclose waypoints and seeks to avoid dynamic, rather than "preselected", conditions, and therefore does disclose, suggest, or make obvious the limitations of claims 11, 19, 23, or 34.

Furthermore, Horvath fails to disclose waypoints, as defined in the present specification and used in the currently pending claims. Horvath is likewise concerned with dynamic conditions, rather than the "preselected conditions" claimed in claim 19. Rather than Michaelson's submarine, Horvath is concerned with terrain avoidance for aircraft. However, just like a submarine can be at virtually any depth, an aircraft can be at virtually any altitude. Therefore, both Michaelson and Horvath teach of warning against possible impact with obstacles based on a dynamic height above those obstacles and not on any "preselected condition".

Finally, Horvath also fails to disclose the graphical filter area, as described in the present specification and claimed in claims 19-22 and 41. Specifically, claim 19 recites "analyzing cartographic data within the user defined graphical filter area for preselected conditions".

As stated on page 8, lines 11-25:

> The marine route calculation algorithm can also be used to analyze cartographic data within a user defined graphical filter area (shown as 478 in Figure 4E). In one embodiment, the user defined graphical filter area includes a geographical area defined by a user on the display screen 340. Examples of defining the user defined graphical filter area on the display screen 340 include, but are not limited to, use of the input devices 216 or the display screen 340 itself. For example, a user could draw the user defined graphical filter area using a cursor shown on the display screen 340. The user defined graphical filter area can include an area smaller than the display screen 340.
>
> The user defined graphical filter area can also include any number of shapes, including, but not limited to, square, rectangular, triangular, or circular. Other shapes for the user defined graphical filter area are also possible. The user defined graphical filter area can further be positioned and/or repositioned over any number of locations on the display screen 340. In one embodiment, a displayed cursor under the control of one or more of the input devices 216 can be used to position and/or reposition the user defined graphical filter area over any number of locations on the display screen 340.

As stated on page 9, lines 5-13:

> In one example, the dynamic analysis of cartographic data, including the marine craft data, within the defined graphical filter area for preselected conditions allows for a user to be aware of preselected conditions that may be located within the area, but not necessarily at the first location and/or along the course which the device is traveling. In an additional embodiment, analyzing the cartographic data within the defined graphical filter area can be available regardless of whether a calculated course is being used or not.

> In other words, a user need not have a destination point, one or more waypoints (e.g., a potential, or other waypoint) and/or a calculated a course to have the cartographic data analyzed within the defined graphical filter area.

Thus, the term graphical filter area, as used in the present specification and the claims, refers to a user defined ***area*** that is analyzed for the "preselected conditions", instead of or in addition to a potential path of the vessel.

In contrast, Horvath discloses no such functionality. As discussed above, Horvath does not disclose "preselected conditions". In addition, Horvath does not disclose functionality analogous to the graphical filter area of the present invention. The Examiner mistakenly points to Horvath's range indicator as showing this functionality. However, Horvath's range indicator is just that, a circle showing a fixed range from an aircraft. While the circle is useful for showing the aircraft's relation to objects, and for general situational awareness, the area within Horvath's circle is simply not analyzed for anything or even defined in any useful way. For example, as stated in column 7, lines 27-29, "a range ring can be overlaid on a weather, terrain, statutory map, traffic, or other display of a condition near the aricraft". Thus, Horvath simply discloses an overlay which defines, at most, a linear relationship rather than an area. Furthermore, neither that linear relationship nor any area associated with Horvath's range indicator is analyzed. As a result, Horvath does not disclose, suggest, or make obvious "analyzing cartographic data within the user defined graphical filter area for preselected conditions", as claimed in claim 19.

Obviousness, it will be appreciated, can be a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has benefit of the Applicant's disclosure as a blueprint and guide, whereas one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Furthermore, once an obviousness rejection has been made, the Applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection. For these reasons, MPEP § 2142 places upon the Examiner the initial burden of establishing a *prima facie* case which requires, among other things, that there be identified some motivation or suggestion in the prior art or in the knowledge of one with ordinary skill to modify the reference or to combine reference teachings. If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper and will be overturned. *In re Rijckaert*, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). Only if the Examiner's burden is met does the burden shift to the applicant to provide evidence to refute the rejection.

Specifically, the Examiner must satisfy three criteria in order to establish the requisite *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or combination of references) must teach or suggest all the claim limitations. MPEP §706.02(j), citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

In meeting this initial burden, the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". *In re Fine*, 5 USPQ 2d 1596,1600 (Fed. Cir. 1988). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure. *In re Vaeck*, 1442 (Fed. Cir. 1991). Thus, measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See e.g., W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed. Cir. 1983).

Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch,* 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992); *see also In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Additionally, "the mere possibility that one [element] could be modified or replaced ... does not make the [claim] obvious 'unless the prior art suggested the desirability of [such a] modification' or replacement". *In re Brouwer*, 37 USPQ2d 1663 (Fed. Cir. 1995) (citing *In re Gordon*).

In the present case, the prior art references made of record do not teach or suggest each of the claimed limitations. For example, as discussed above, neither Michaelson nor Horvath disclose waypoints or the "preselected conditions" of the present claims.

Furthermore, Horvath fails to disclose "analyzing cartographic data within the user defined graphical filter area for preselected conditions", as claimed in claim 19. As a result, the present obviousness rejections simply cannot be sustained.

Claims 42-44 have been added to further distinguish the present invention over the prior art. The remaining claims all depend directly or indirectly from independent claims 1, 11, 19, 23, and 34, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By: ______________________

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Darrin W. Kabel et al.	)	Attorney Docket No. 702.254
	)	
Serial No. 10/667,026	)	Examiner: Stone, Jennifer
	)	
Filed: September 18, 2003	)	
	)	Art Unit: 2636
METHODS, SYSTEMS AND DEVICES	)	
FOR CARTOGRAPHIC ALERTS	)	

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being sent by facsimile to 703-872-9306 on:

5/4/05 [signature]

Date Signature

PETITION FOR EXTENSION OF TIME

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

It is hereby requested that the time period for responding to the outstanding Office Action be extended for one month or until May 12, 2005.

The Commissioner is hereby authorized to charge the Petition fee in the amount of $120, and any additional fees that are required, or credit any overpayment, to Deposit Account No. 501-791.

05/06/2005 EFLORES 00000069 501791 10667026
01 FC:1251 120.00 DA

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PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number
702.254
10/667026

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20=	* 21
INDEPENDENT CLAIMS	5 minus 3 =	* 2
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	375.00	OR	BASIC FEE	750.00
X$ 9=		OR	X$18=	
X42=		OR	X84=	168
+140=		OR	+280=	
TOTAL		OR	TOTAL	

CLAIMS AS AMENDED - PART II

5/4/05

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 44	Minus	** 41	= 3
Independent	* 6	Minus	*** 5	= 1
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	~~X$18=~~ 50	150
X42=		OR	~~X84=~~ 200	200
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	350

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
***If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,026	09/18/2003	Darrin W. Kabel	702.254	9123

7590 01/12/2005

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EXAMINER	
STONE, JENNIFER A	

ART UNIT	PAPER NUMBER
2636	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

FLIR-1002.485

Office Action Summary	Application No.	Applicant(s)
	10/667,026	KABEL ET AL.
	Examin r	Art Unit
	Jennifer A Stone	2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FLIR-1002.486

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 1, Michaelson discloses a method for marine navigation, comprising (col 2, lns 11-14 and 35-38): identifying a potential waypoint (Fig. 28, points A-F; col 23, lns 30-32 and 39-41); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (col 23, lns 64-67; col 24, lns 33-45 and 62-66).

For claim 2, Michaelson discloses performing the marine route calculation algorithm to include analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions (col 24, lns 37-45).

For claim 3, the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint (col 24, lns 25-37 and 55-61).

For claim 4, re-routing the course calculated further includes identifying one or more non-user waypoints (determined by the system, not the user) between the first location and the potential waypoint (col 24, lns 41-50 and 55-64).

For claim 5, Michaelson determines a first location on the course based on a signal from a GPS; and analyzing cartographic data for a predetermined area around the first location for preselected conditions (col 7, lns 50-65; col 8, lns 11-21 and 46-51.

For claim 6, an alert signal is provided when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions (col 2, lns 11-14; col 6, lns 13-17).

For claim 7, an alert signal is provided when the analyzed cartographic data for the predetermined data between the first location and the potential waypoint includes preselected conditions (col 6, lns 13-26).

For claim 8, the alert signal includes emitting an audio alert (col 6, lns 15-18; Fig. 2, item 28).

For claim 9, Michaelson discloses providing the alert signal to include displaying a visual alert.

For claim 10, Michaelson discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 2, lns 41-43; col 8, lns 28-36 and 40-52).

3. Claims 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 11, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 6 as stated above.

For claim 12, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 13, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

For claim 14, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

For claim 15, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 16, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 17, Michaelson discloses analyzing cartographic data further comprises acquiring cartographic data from a GPS (col 7, lns 54-56).

For claim 18, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above.

4. Claims 23-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 23, Michaelson discloses a computer readable medium having a set of computer readable instructions (col 11, lns 38-41), the set of computer readable instructions comprising instructions for: identifying a potential waypoint upon a first event (col 23, lns 30-41); and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions (col 27, lns 11-20).

For claim 24, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 2 as stated above.

For claim 25, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

For claim 26, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 4 as stated above.

For claim 27, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 5 as stated above.

For claim 28, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claim 29, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 17 as stated above.

For claim 30, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 7 as stated above.

For claim 31, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 8 as stated above.

For claim 32, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 9 as stated above.

For claim 33, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 10 as stated above.

5. Claims 34-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelson et al. (US 6,734,808).

For claim 34, Michaelson discloses an electronic marine navigation device, comprising: a processor (col 2, lns 41-44; Fig. 40, item 486); a location input operatively coupled to the processor (col 5, lns 12-15; Fig. 40, item 24), wherein the location input receives a first location and a potential waypoint separate from the first location (col 23, lns 30-32 and 39-41; Fig. 28); and a memory operatively coupled to the processor and the location input (col 31, lns 18-24; Fig. 40, item 4760), the memory having cartographic data including preselected conditions (Fig. 40, 4800; col 31, lns 48-51), wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data (col 23, lns 30-41).

For claim 35, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 2 and 34 as stated above.

For claim 36, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 3 and 34 as stated above.

For claim 37, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 4 and 34 as stated above.

For claim 38, Michaelson discloses a receiver for a GPS (Fig. 2, GPS, 14; Fig. 40, item 24) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS (col 7, lns 50-56), and analyzes cartographic data for a predetermined area around the first location for preselected conditions (col 5, lns 9-15).

For claim 39, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 6 and 34 as stated above.

For claim 40, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 7 and 34 as stated above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvath et al. (US 6,473,003).

For claim 19, Horvath discloses identifying a user defined graphical filter area on a display; analyzing cartographic data within the user defined graphical filter area for preselected conditions; and providing an alert signal when cartographic data within the user defined graphical filter area indicate preselected conditions. Even though Horvath's primary application is aircraft navigation, it would have been obvious one of ordinary skill in the art, at the time the invention was made to apply the disclosure of Horvath to a marine navigation system so that a user has a certain degree of control over the display in order to customize it according to the user's preferences. In addition, the graphical filter area is applied to one or more display maps, such as weather, terrain, and traffic. All of the aforementioned maps are also applied to marine navigation (col 7, lns 26-31).

For claim 20, identifying the user defined graphical filter area includes repositioning the user defined graphical filter area (col 2, lns 26-37).

For claim 21, Horvath includes analyzing cartographic data further comprises acquiring cartographic data from a GPS (col 4, lns 54-56; Fig. 7, item 110, 123-125).

For claim 22, Horvath discloses receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas (col 4, lns 60-63; col 7, lns 26-31; Fig. 7, items 124, 125).

8. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelson et al. (US 6,734,808), as applied to claim 34, and further in view of Horvath et al. (US 6,473,003).

Michaelson discloses a processor to operate on the marine route calculation algorithm to analyze cartographic data, wherein the processor provides an alert signal when the analyzed cartographic data includes preselected conditions; however, Michaelson does not disclose a user defined graphical filter area. Horvath, on the other hand, does disclose a user defined graphical filter area (col 1, lns 10-14; col 2, lns 30, 31, 44-48) wherein a processor operates to analyze cartographic data and provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions (col 2, lns 60-63; Fig. 4, 30i). Even though Horvath's primary application is aircraft navigation, it would have been obvious to apply a user defined graphical filter area to a marine navigation system so that a user has a certain degree of control over the display in order to customize it according to the user's preferences.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Clark et al. (US 4,893,127) discloses a marine navigation system that analyzes cartographic data based on preselected conditions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Stone whose telephone number is (571) 272.2976. The examiner can normally be reached 8:00-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jeffery Hofsass can be reached at (571) 272.2981.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872.9306 for regular and after final communications.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272.2600.

Jennifer Stone
January 6, 2005

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Notice of References Cited	Application/Control No. 10/667,026	Applicant(s)/Pat nt Under Reexamination KABEL ET AL.	
	Examiner Jennifer A Stone	Art Unit 2636	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,473,003	10-2002	Horvath et al.	340/945
	B	US-6,734,808	05-2004	Michaelson et al.	340/984
	C	US-4,893,127	01-1990	Clark et al.	342/386
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
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	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application No.	Applicant(s)
	10/667,026	KABEL ET AL.
	Examiner	Art Unit
	Jennifer A Stone	2636

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date							
Final	Original	1/6/2005							
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BIBDATASHEET

Bib Data Sheet

CONFIRMATION NO. 9123

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/667,026	09/18/2003 RULE	340	2636	702.254

APPLICANTS

Darrin W. Kabel, Overland Park, KS;

Steven J. Myers, Edgerton, KS;

** CONTINUING DATA *************************

** FOREIGN APPLICATIONS ********************

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 12/11/2003

	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
Foreign Priority claimed ☐ yes ☑ no 35 USC 119 (a-d) conditions met ☐ yes ☑ no ☐ Met after Allowance Verified and Acknowledged Examiner's Signature Initials JAS	KS	10	41	5

ADDRESS
Devon A. Rolf
GARMIN INTERNATIONAL, INC.
1200 East 151st Street
Olathe , KS
66062

TITLE
Methods, systems, and devices for cartographic alerts

FILING FEE RECEIVED		
1296	FEES: Authority has been given in Paper No. _________ to charge/credit DEPOSIT ACCOUNT No. _________ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other ____________ ☐ Credit

Search Notes	Application No.	Applicant(s)	
	10/667,026	KABEL ET AL.	
	Examin r	Art Unit	
	Jennifer A Stone	2636	

SEARCHED

Class	Subclass	Date	Examiner
340	686.6 ✓ 995.1 984- 985-	12/28/05	JS
340	851 539.13		
340	539.2 539.22		
340	7.56 825.36		
340	961 995.11		
367	909		
342	41 357.13		
701	21 201		
701	301		

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	DATE	EXMR
East Search	12/28/2005	JS
Brent Swartout 2636	1/5/2005	

UTILITY PATENT APPLICATION TRANSMITTAL (for nonprovisional applications under 37 C.F.R§ 1.53(b))	Attorney Docket No.	702.254

CERTIFICATE OF MAILING
37 C.F.R. 1.10

I hereby certify that this correspondence, along with any document referred to, is being deposited with the U.S. Postal Service, on 9-18-03, in an envelope addressed Mail Stop Patent Application, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 as Express Mail Post Office to Addressee" Mailing Label No. EL 917297110 US.

Uneeda Royer

10/667026 09/18/03

TO: Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Inventor(s): Darrin W. Kabel and Steven J. Myers

Title: METHODS, SYSTEMS, AND DEVICES FOR CARTOGRAPHIC ALERTS

Enclosed are:

19	pages of specification
7	pages of claims
1	pages of Abstract
10	sheet(s) of drawings
X	an assignment of the invention, including Cover Sheet for Assignment accompanying New Patent Application to: GARMIN LTD., a Cayman Islands Corporation
X	Declaration/Oath of Inventor(s) [X] Newly executed [ ] Copy from a prior application (for contin/div)
	Incorporation by Reference: the entire disclosure of the prior application, from which a copy of the oath or declaration is supplied, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
	Applicant hereby asserts status as a small entity under 37 C.F.R. § 1.27
	a small entity statement was filed in prior application; status still proper and desired.
	Information Disclosure Statement/PTO-1449/Copies of IDS citations.
	Preliminary Amendment
	Amendment to Claims
	Cancel in this application claims ________ before calculating filing fee.
	Add claims shown on attached amendment.
X	Other: Request and Certification under C.F.R. 122(b)(2)(B)(i)

If a Continuing Application: Check appropriate box, and supply the requisite information below:

	Continuation		Divisional		Continuation-in-Part (CIP)	of prior application No.

Filing Date of Prior application: Prior application information: Examiner:	Group Art Unit: Reel/Frame of Assignment of Parent Application:

CLAIMS AS FILED

	NUMBER FILED	NUMBER EXTRA	RATE	FEE
BASIC FEE			$750	$ 750
TOTAL CLAIMS	40 - 20 =	20	X $ 18	$ 360
INDEPENDENT CLAIMS	5 - 3 =	2	X $ 84	$ 168
MULTIPLE DEPENDENT CLAIM PRESENT			$280	$
* Number extra must be zero or larger			TOTAL	$1,446
	If applicant has small entity status under 37 CFR 1.9 and 1.27, then divide total fee by 2, and enter amount here.		SMALL ENTITY TOTAL	$

[ ] A check in the amount of $ to cover the filing fee is enclosed.

[X] Commissioner is hereby authorized to charge/credit Deposit Acct. No. 501-791 as described below. Enclosed is a duplicate of this sheet.

- [X] **Charge the amount of $1,486.00 as filing fee and assignment recordal fee.**
- [X] Credit any overpayment.
- [X] Charge any additional filing fees required under 37 CFR 1.16 and 1.17.

Signature: [signature] Date: 9/17/03

Correspondence Address: Name: Devon A. Rolf
GARMIN INTERNATIONAL, INC.
1200 East 151st Street
Olathe, Kansas 66062

Reg. No.: 35,337
Phone: 913-397-8200
Fax: 913-397-9079

FLIR-1002.500

PTO/SB/35 (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE
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NONPUBLICATION REQUEST UNDER 35 U.S.C. 122(b)(2)(B)(i)	First Named Inventor	Darrin W. Kabel
	Title	Methods, Systems, and Devices For Cartographic Alerts
	Attorney Docket Number	702.254

I hereby certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral agreement, that requires publication ateig hteen months after filing.

I hereby request that the attached application not be published under 35 U.S.C. 122(b).

9/17/03
Date

Signature

(913) 397-8200
Telephone number

Devon A. Rolf
Typed or printed name

This request must be signed in compliance with 37 CFR 1.33(b) and submitted with the application **upon filing.**

Applicant may rescind this nonpublication request at any time. If applicant rescinds a request that an application not be published under 35 U.S.C. 122(b), the application will be scheduled for publication at eighteen months from the earliest claimed filing date for which a benefit is claimed.

If applicant subsequently files an application directed to the invention disclosed in the attached application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant**mu st** notify the United States Patent and Trademark Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

Attorney Docket No. 702.254

EXPRESS MAIL NO.
EL917297110US

Methods, Systems, and Devices for Cartographic Alerts

Field of the Invention

The present invention relates generally to navigational devices, and in particular to marine navigational devices with cartographic alert capabilities.

Background of the Invention

Boating is an activity enjoyed by many people. Safe boating, however, requires common sense and the ability to remain alert to the prevailing boating conditions. A variety of equipment is available to boaters to aid them in these endeavors. For example, boats can be equipped with radios, radar systems, cameras, and sensors for providing a variety of information to the boater. The boater can then use the information from these devices in planning and navigating a course for the boat.

Many times, however, there can be quite a lot of information for the boater to consider in planning and navigating a course for the boat. For example, which courses might be preferable, or even available, for the size and type of boat being used. In addition, a user may inadvertently overlook one or more hazards in planning their course.

Brief Description of the Drawings

Figure 1 is a representative view of a Global Positioning System (GPS);

Figures 2A and 2B illustrate views for one embodiment of an electronic marine navigational device;

Figure 3 is a block diagram of one embodiment for the electronic components within the hardware of Figures 2A-2B;

Figures 4A-4E illustrate a number of display screen embodiments which are operable with the electronic marine navigational device of the present invention; and

Figures 5-7 are flow charts illustrating various method embodiments.

Detailed Description of the Invention

Embodiments of the present invention include marine navigational methods, systems, and devices having course calculation and analysis capabilities. The marine navigational methods, systems, and devices can use any number of devices for determining one or more positions. For example, the marine navigational device can include devices for receiving signals (e.g., radio signals) from which positional triangulation can be performed to determine the one or more positions. In additional embodiments, a global positioning system (GPS) enabled marine navigational device can be used for determining one or more positions. Such GPS systems are known and have a variety of uses.

Although the term marine navigation is used in the present application, one of ordinary skill in the art will appreciate from reading the disclosure that the techniques described herein could equally be applied for use in non-street based navigation. So, the use of the word "marine" in the embodiments of the present invention (including the claims) could be replaced with the phrase "non-street based", where non-street based can include a navigational method, system, and devices that do not necessarily rely on one or more roads, highways, streets, and/or freeways in providing navigational methods, systems and/or devices.

In general, GPS is a satellite-based radio navigation system capable of determining continuous position, velocity, time, and in some instances direction information for an unlimited number of users. GPS incorporates a plurality of satellites which orbit the earth in extremely precise orbits. Based on these precise orbits, GPS satellites can relay their location to any number of receiving units.

The GPS system is implemented when a device specially equipped to receive GPS data begins scanning radio frequencies for GPS satellite signals. Upon receiving a radio signal from a GPS satellite, the device can determine the precise location of that satellite via one of different conventional methods. The device will continue scanning for signals until it has acquired at least three different satellite signals. Implementing geometric triangulation, the receiver utilizes the three known positions to determine its own two-dimensional position relative to the satellites. Additionally, acquiring a fourth satellite signal will allow the receiving device to calculate its three-dimensional position by the same geometrical calculation. The positioning and velocity data can be updated in real time on a continuous basis by an unlimited number of users.

Figure 1 is representative of a GPS denoted generally by reference numeral 100. A plurality of satellites 120 are in orbit about the Earth 124. The orbit of each satellite 120 is not necessarily synchronous with the orbits of other satellites 120 and, in fact, is likely asynchronous. A GPS receiver device 140 of the present embodiment is shown receiving spread spectrum GPS satellite signals 160 from the various satellites 120.

The spread spectrum signals 160 continuously transmitted from each satellite 120 utilize a highly accurate frequency standard accomplished with an extremely accurate atomic clock. Each satellite 120, as part of its data signal transmission 160, transmits a data stream indicative of that particular satellite 120. It will be appreciated by those skilled in the relevant art that the GPS receiver device 140 must acquire spread spectrum GPS satellite signals 160 from at least three satellites 120 for the GPS receiver device 140 to calculate its two-dimensional position by triangulation. Acquisition of an additional signal 160, resulting in signals 160 from a total of four satellites 120, permits GPS receiver device 140 to calculate its three-dimensional position.

Figures 2A and 2B illustrate views for one embodiment of an electronic marine navigational device 200. Device 200 can be portable and can be utilized in any number of implementations besides marine application. For example, device 200 could possibly be used in an automobile and in avionic navigation.

Figure 2A illustrates a front view of marine navigational device 200. Marine navigational device 200 can include a housing 202. In the various embodiments, housing 202 includes a fully gasketed, high-impact strength plastic or plastic/alloy, waterproof case and has been rounded for aesthetic and ergonomic purposes. This is but one example, and other protective housings 202 (e.g., metal or metal alloy) are possible.

Marine navigational device 200 further includes a control panel 204 that includes a display screen 214. For example, display screen 214 can be a color LCD display which is capable of displaying both text and graphical information. The invention, however, is not so limited. Audio information can likewise be provided. In addition, marine navigational device 200 can further include two-way voice communication capabilities (e.g., two-way radio or cellular communication) and capabilities for receiving National Oceanic and Atmospheric Administration (NOAA) weather broadcasts.

Display screen 214 is operable to present a number of different screen displays, examples of which are provided herein. The number of different screen displays includes, but are not limited to, a map display, including a split-screen moving map, a radio display, including, for example, channel selection and squelch code settings; location lookup for use with downloaded cartographic data, including marine craft data, of a map; a navigation display, including, for example, graphic compass, distance to destination, speed, and time of arrival prediction; point of interest display; listing of location display; trip computer display, including, for example, trip distance, average and maximum speeds, travel time, and location; and waypoint display for setting waypoints or locations.

Display 214 illustrates an embodiment of a map display. As will be explained in more detail below, in the various embodiments of the present invention, electronic marine navigational device 200 includes a basemap operable to show lakes, rivers, channels, lock and dams, buoys (e.g., marine buoys, navigation buoys, mooring buoys), channel markers, ports, docks, land, underwater obstacles, land, water depth, rock(s), sandbars, shelves, tidal conditions, tidal data, above-water obstacles (e.g., bridges), type of water bottom, and prohibited areas, cities, highways, streets, counties boundaries, and state boundaries on display 214. In one embodiment, the basemap can be built-in. In an additional embodiment, the basemap can be transferred to and/or provided on a removable data card to the device 200.

As further shown in Figure 2A, marine navigational device 200 further includes a number of input devices 216 such as a power on/off button, display zoom control buttons, menu selection button, user confirmation key, and the like. The input devices 216 shown in Figure 2A also include a multiposition (e.g., 3-axis) data entry button 220 for use with the display screen 214. The display 214 can also receive data through a touch sensitive screen (e.g., screen can be responsive to use of a stylus and/or finger touch).

Figure 2B illustrates a rear view for an embodiment of the electronic marine navigational device 200. The electronic marine navigational device 200 includes a data port 224 operable to upload and download data between the electronic marine navigational device 200 and another electronic device, such as by using a USB connector, Ethernet, or other suitable connection. In some embodiments, as will be discussed below, data can be uploaded and downloaded to the electronic marine navigational device 200 using a transceiver in the device 200 which can accommodate a wireless transmission medium such as, for example, infrared, Bluetooth, and/or Radio Frequency (RF) signals. Other transmission medium might also be used. In the various embodiments of the present invention and as will be explained further herein, the data port is operable to upload and download device 200 software, marine craft data, and/or other cartographic data. Marine navigational device 200 can also include at least one antenna, including GPS antenna 226 coupled to an integrated GPS receiver, and voice data antenna 228 coupled to an integrated communication transceiver. Device 200 can further include input ports for externally mounted antennas for GPS receiver and/or for the communication transceiver.

The marine navigational device 200 can includes an electrical power input port 230 for coupling to an external power supply. The invention, however, is not so limited. For example, a battery power supply could be operatively coupled to device 200 to power its electronic components. Likewise, the various embodiments can include an electronic device having a data card slot, or data card port 234. The marine navigational device 200 can further include a mounting bracket 236 so that device 200 can be selectably and removably mounted on a removable clip and/or surface.

The illustrations shown in Figures 2A and 2B are but one example of a hardware configuration for a marine navigational device according to the teachings of the present invention. However, the invention is not limited to the configuration shown in Figures 2A and 2B. Other suitable designs for a hardware device which can accommodate the present invention are also possible.

Figure 3 illustrates one embodiment of a block diagram for the electronic components within the hardware of Figures 2A-2B, such as within housing 202 and utilized by the electronic marine navigational device. The electronic components of the electronic device can include a processor 310 that is operatively coupled to a location input 320, such as input devices 216 (e.g., data entry button 220). Processor 310 can also be operatively coupled with memory 330 and display screen 340. It will be understood that input 320 may additionally include a microphone for receiving voice commands and/or an input from display screen 340 (e.g., touch sensitive screen). The electronic components further include a power source input 346 for powering the electronic components of the marine navigational device.

Memory 330 can retrievably store instructions for executing one or more executable programs according to the present invention. For example, the memory 330 can retrievably store a marine route calculation algorithm, as discussed herein, of the present invention. In addition, memory 330 can further retrievably store cartographic data, including marine craft data and a variety of preselected conditions that are also used in conjunction with the marine route calculation algorithm. Preselected conditions can include user identified parameters, and any values associated with the parameters, that are associated with geographical conditions of particular interest. For example, preselected conditions a user can select include, but are not limited to, indications of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles (e.g., bridges), underwater obstacles (e.g., submerged wrecks), type of water bottom, and prohibited areas, to name only a few. The preselected conditions, and their associated values, can be selected and programmed by a user through, for example, controlling one or more input menus on display screen 340 with the location input 320.

The location input 320 can also receive additional cartographic data, including marine craft data, through the input devices 216 (e.g., data entry button 220) and/or the display screen 340 from a user. This additional cartographic data, including marine craft data, can include a first location, such as a present location or a waypoint location, or other waypoint locations, such as a destination location, that can be used in calculating and/or analyzing a course for a marine craft. In one embodiment, the present location can be up-dated at a preselected rate in real-time. In addition, the location input 320 can further receive coordinate positions for the waypoints (e.g., a potential waypoint). The location input 320 can also receive the coordinate positions for waypoints by inputs through the display 340. In one example, the coordinate positions can be longitude and latitude coordinate positions.

Embodiments of the present invention also allow for a course to be analyzed between the first location and one or more waypoints, where cartographic data, including marine craft data, for the area between the first location and the waypoints can be analyzed to determine whether preselected conditions are present along the course. So, for example, a user may want to have a course analyzed between a first location and a potential waypoint that is separate from the first location. In the present example, the first location can be a present location of the device in which the coordinates of the present location can be entered by the user or determined based on a signal from a global positioning system, or other signal triangulation system. In an additional embodiment, the first location can be set as a waypoint location separate from the potential waypoint, in which the waypoint location will not change during the calculation of the course between the first location and the potential waypoint. In a further embodiment, the potential waypoint can identify a waypoint location that may be changed by the user, for example, based on the outcome of the course calculated between the first location and the potential waypoint. In other words, the potential waypoint may be moved so as to have alternative courses calculated and/or analyzed between the first location and the potential waypoint.

In addition, the processor 310 further operates on the marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data, including the marine craft data. So, for example, the processor 310 can operate on the route calculating algorithm to analyze the cartographic data, including the marine craft data, to identify and avoid preselected conditions in the course being calculated between the first location and the potential waypoint.

The course analyzed with the marine route calculation algorithm can also analyze a predetermined distance on either side of the calculated course for preselected conditions. In other words, a buffer zone around the calculated course can be analyzed for preselected conditions. In one embodiment, the predetermined distance to be analyzed can be automatically determined by the marine route calculation algorithm based on the type of marine craft that is being used. The predetermined distance can also be determined and programmed into the device by the user. The size of the predetermined distance can be influenced by any number of factors, including, but not limited to, the size (e.g., width), the maneuverability, and/or the steering characteristics of the marine craft.

In a situation where the processor 310 operating on the marine route calculation algorithm identifies one or more preselected conditions in analyzing the course, the processor 310 operates on the route calculating algorithm to re-route the course to avoid the preselected conditions. In one embodiment, in routing and/or re-routing the course to avoid the preselected conditions, the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

The marine route calculation algorithm can also be used to analyze cartographic data within a user defined graphical filter area (shown as 478 in Figure 4E). In one embodiment, the user defined graphical filter area includes a geographical area defined by a user on the display screen 340. Examples of defining the user defined graphical filter area on the display screen 340 include, but are not limited to, use of the input devices 216 or the display screen 340 itself. For example, a user could draw the user defined graphical filter area using a cursor shown on the display screen 340. The user defined graphical filter area can include an area smaller than the display screen 340.

The user defined graphical filter area can also include any number of shapes, including, but not limited to, square, rectangular, triangular, or circular. Other shapes for the user defined graphical filter area are also possible. The user defined graphical filter area can further be positioned and/or repositioned over any number of locations on the display screen 340. In one embodiment, a displayed cursor under the control of one or more of the input devices 216 can be used to position and/or reposition the user defined graphical filter area over any number of locations on the display screen 340.

The processor 310 can operate on the marine route calculation algorithm to analyze cartographic data within the user defined graphical filter area for preselected conditions. For example, the processor 310 can operate on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area selected and positioned, or repositioned, by the user for preselected conditions. In an additional example, the processor 310 can dynamically anlayze the cartographic data within the defined graphical filter area for preselected conditions as the area is being position and/or repositioned. So, for example, the processor 310 dynamically analyzes the cartographic data within the defined graphical filter area for preselected conditions when repositioning the graphical filter area from a first position to a second position.

In one example, the dynamic analysis of cartographic data, including the marine craft data, within the defined graphical filter area for preselected conditions allows for a user to be aware of preselected conditions that may be located within the area, but not necessarily at the first location and/or along the course which the device is traveling. In an additional embodiment, analyzing the cartographic data within the defined graphical filter area can be available regardless of whether a calculated course is being used or not. In other words, a user need not have a destination point, one or more waypoints (e.g., a potential, or other waypoint) and/or a calculated a course to have the cartographic data analyzed within the defined graphical filter area.

An antenna/receiver 350, such as a GPS antenna/receiver is operatively coupled to processor 310. It will be understood that the antenna and receiver, designated by reference numeral 350, are combined schematically for illustration, but that the antenna and receiver may be separately located components, and that the antenna may be a GPS patch antenna or a helical antenna. The electronic components further include I/O ports 370 operatively connected to processor 310. In addition, the electronic components can further include a cartridge bay 376 operatively coupled to the processor 310 for receiving cartographic data, including marine craft data, from a map data cartridge.

Using antenna/receiver 350 as a GPS, processor 310 can determine the first location, for example, as being a present location of the device on a course based on the signals received from the GPS. Processor 310 can dynamically analyze cartographic data, including the marine craft data, for a predetermined area around the first location, in this situation the present location, for preselected conditions. The area around the first location for analysis can have a preselected size and shape relative to the first location. In addition, the area to be analyzed can be refreshed at a preselected rate so as to ensure that the first location does not move out of the analyzed area prior to the analysis being refreshed.

In one example, the dynamic analysis of cartographic data, including the marine craft data, around the first location for preselected conditions allows for a user to be aware of preselected conditions that may be in the vicinity, but not necessarily at the first location and/or along the course which the device is traveling. In this way, the user will better understand the nature of the area surrounding the first location and/or the calculated course with respect to the preselected conditions. Analyzing the cartographic data around the first location can also be available regardless of whether a calculated course is being used or not. In other words, a user need not have a destination point, one or more waypoints (e.g., a potential, or other waypoint) and/or a calculated course to have the cartographic data analyzed for the predetermined area around the first location.

In a further embodiment, the analysis of the present invention also need not be used in conjunction with calculating a course, but rather can be used to analyze the cartographic data in the area between the first location and the potential waypoint. In this way a user can better understand what predetermined conditions exist between the first location and the potential waypoint without having to calculate a course. In an additional embodiment, the analysis of the present invention also can be used in conjunction with calculating a course that includes the first location and the potential waypoint.

The area to be dynamically analyzed can also have a preselected size and shape relative to the present location. Examples of the preselected shape include, but are not limited to, a triangular or a sector of a circle shape. In one embodiment, the size of the area can be defined by radii extending along the course from the first location (e.g., a present location), such as a heading determined through the use of a track log. In addition, the size of the predetermined area can be determined based on a number of factors, including, but not limited to, the speed and heading of the electronic marine navigational device. In an additional embodiment, an angle of the analyzed area emanating from the first location can be either set by the user or determined based on type and nature of the marine craft in which the device is being utilized (e.g., a large craft with a large turn radius may require a larger angle of analysis as compared to a smaller more maneuverable craft having a smaller turn radius). In an additional embodiment, the area can encircle the first location, where a radius of the area analyzed can be a function of the speed and heading of the electronic marine navigational device. Any number of shapes could be used for the area to be analyzed, where the area could be selected based on the application of the analysis.

The device of the present invention can also include one or more ways of providing an alert signal to the user of the device when a preselected condition is encountered during the analysis. In one embodiment, processor 310 provides the alert signal when the analyzed cartographic data, including the marine craft data, for the course and/or the predetermined area around the first location includes preselected conditions. So, processor 310 would provide the alert signal when the analyzed cartographic data, including the marine craft data, for the user defined graphical filter area and/or between the first location and the potential waypoint included preselected conditions. The device can further include an audio output device 380 operatively coupled to processor 310 to audibly present the alert signal. For example, the device can include a speaker, including associated amplifiers and circuitry, for providing the audio alert signal. The alert signal can also be graphically presented on display 340 under the control of processor 310. Examples of graphically presenting the alert signal can include, but are not limited to, highlighting the analyzed course and/or the analyzed area that includes the preselected condition. This highlighting can include, but it not limited to, causing a change in the display color for the analyzed course (e.g., changing the plotted course color from black to red, changing from a solid line to a broken or dashed line, or causing a line of the plotted course to flash on and off) or the analyzed area (e.g., stippling the area, or portion of the analyzed area that contains the preselected condition). In addition, the alert signal can also include text displayed on display 340 that indicates the preselected conditions encountered in analyzing the course and, optionally, indicators of their approximate locations along the course.

Different configurations of the components shown in Figure 3 are considered within the scope of the embodiments of the present invention.

Software embodiments of the present invention provide a device which is capable of analyzing a course between a first location and a potential waypoint or dynamically analyzing an area for preselected conditions. Embodiments of the device can also re-route to avoid the preselected condition between a first location and a potential waypoint, as discussed herein. The device can incorporate these and other functions as will be explained in more detail below in connection with Figures 4, 5, 6, and 7.

Figures 4A-4E, illustrate a number of display screen embodiments which are operable with various embodiments of the present invention. That is, software embodiments are operable to present data and provide various user interfaces on a display, such as those described herein.

For example, Figure 4A provides a map display 400 showing cartographic data 402, including the marine craft data, which includes, but is not limited to, water depth, land, geographical boundaries, rivers, navigational aides (e.g., landmarks), lakes, channels, lock and dams, buoys (e.g., marine buoys, navigation buoys, mooring buoys), channel markers, ports, docks, land, underwater structures (e.g., wrecks and obstructions), weather, and the like. In various embodiments, the displays of the present invention can be accessed and displayed using selectable menus shown on a display screen and/or through use of input devices on the device. As shown, map display 400 can include a portion of a course 404 along with cartographic data 402, including the marine craft data, such as rivers, lakes, topographic data, and county and state boarders, to name only a few.

Figure 4A illustrates course 404 between a first location 410 and a potential waypoint 414 that passes through land 416. In the present embodiment, the first location 410 is shown as a first waypoint that has been selected by a user. As described herein, land can be classified as a preselected condition. As such, course 404 has been highlighted to indicate that at least one preselected condition has been identified in the analysis of course 404. Highlighting in the instant case is provided by a bolding of the line representative course 404 in a region 418. At this point, the device can calculate one or more possible courses around the preselected condition.

Figure 4B provides map display 400 having course 403 recalculated to avoid the one or more preselected conditions (e.g., avoid the land in region 418 of the previous course 404). Recalculating of course 403 relative to the original calculation of course 404 shown in Figure 4A provides the recalculated course 403 with one or more additional waypoints, shown as 420. The additional waypoints 420 have been included to allow the course 403 to avoid the preselected conditions. The waypoints 420, in the present situation, are non-user waypoints. In other words, waypoints 420 were determined by the system, and not the user. Embodiments however are not so limited. In an additional embodiment, the user can indicate waypoints to be used and/or alter waypoints that are provided by the system.

The user can also request a subsequent recalculation of course 403 between the first location 410 and the potential waypoint 414. In one embodiment, this request could be made through a menu displayed on the display screen of the device. Other mechanisms for requesting the recalculation of course 404 are also possible. Additionally, in the situation where the user does not like the recalculated course 403, the user can reposition the potential waypoint 414 to a new location and allow a course between the new location and the first location 410 to be analyzed.

Figure 4C provides map display 400 having recalculated course 403. In Figure 4C, the potential waypoint (414 of Figures 4A and 4B) has now been designated by the user to be a second location 430. The user can select a new potential waypoint 414 so that an additional portion of course 404 can be analyzed. In the embodiment shown in Figure 4C, another preselected condition has been identified between the second location 430 and the potential waypoint 414. As such, a new portion of the course between 430 and 414 has been highlighted to indicate that at least one preselected condition has been identified in this portion of the course 403. Highlighting in the instant case is provided by a bolding of the line representative course 403 in a region 434. At this point, the device can once again calculate one or more possible courses around the preselected condition.

Figure 4D provides an additional embodiment of a map display 450, where cartographic data, including the marine craft data, is dynamically analyzed for preselected conditions in a predetermined area 454 around the first location 456. In the present embodiment, the first location 456 includes the present location of the device as determined using a GPS signal or other triangulation signals. In the embodiment shown in Figure 4D, the cartographic data, including the marine craft data, of the predetermined area 454 is dynamically analyzed for preselected conditions. In the present example, an alert signal 460 for at least one preselected condition within the predetermined area 454 is shown in Figure 4D.

In the present embodiment, the alert signal 460 is provided as a highlighted area that contains the one or more preselected conditions. In addition, one or more text messages may be associated with and displayed on display 470. For example, the one or more text messages may be automatically displayed on the display 470. The user may also interact with the marine device to request further information regarding the alert signal 460. When more than one alert signal is present on a display, each alert signal can be identified by a unique designator (e.g., "AX7") for which the user can request additional information.

The predetermined area 454 to be analyzed can be refreshed at a preselected rate so as to ensure that the first location 456 does not move out of the current analyzed area (e.g., area 454) prior to the analysis being refreshed. In one embodiment, the present speed, average speed, potential top speed, and heading of the marine craft can all be used in determining a refresh rate for analyzing subsequent predetermined area to ensure that the marine craft does not move out of the predetermined area 454 prior to the analysis being refreshed. Figure 4D also shows examples of previously analyzed areas 472, shown with, for example, broken lines. Other ways of representing the previously analyzed areas 472 are also possible, including not showing the previously analyzed areas.

In an additional embodiment, the device can further, optionally, provide alternative visual alerts to the encountered preselected conditions, audio to present the alert signal, and/or text messages displayed on the display that indicates the preselected conditions encountered in calculating the course and, optionally, indicators of their approximate locations along the course.

Figure 4E provides an additional embodiment of a map display 476, where cartographic data, including the marine craft data, can be dynamically analyzed for preselected conditions in a user defined graphical filter area 478. The size and shape of the user defined graphical filter area 478 can be selected by a user. In the embodiment shown in Figure 4E, the user defined graphical filter area 478 is shown positioned over both water 480 and at least one preselected condition (e.g., land 482). The user defined graphical filter area 478 provides a visually defined area that a user can, for example, position at one or more locations, including being dragged over, the map display 476 so as to identify the location of preselected conditions.

In the present example, an alert signal 486 for at least one preselected condition within the user defined graphical filter area 478 is shown in Figure 4E, in which the land 482 within the user defined graphical filter area 478 has a first color (e.g., black) that is different than a second color (e.g., grey) of land 490 outside of the user defined graphical filter area 478. One or more text messages may be associated with and displayed on display 476. Other visual and/or audio alerts to the encountered preselected conditions may also be used in conjunction with, or for, the alert signal 486 for at least one preselected condition within the user defined graphical filter area 478 in Figure 4E.

Embodiments of the present invention include software, application modules, and computer executable instructions operable on the devices and systems described herein. The embodiments, however, are not limited to any particular operating environment. Nor is the software limited to software written in a particular programming language. Thus, the invention includes a set of instructions executable by an information handling system to produce the embodiments described herein. That is, the software can reside on a free standing device as shown in Figures 2A and 2B and/or can, in some embodiments, be loaded, stored, and reside on a data cartridge.

Figures 5-7 are flow charts illustrating various method embodiments of the invention. As one of ordinary skill in the art will understand, the methods can be performed by software, application modules, and computer executable instructions operable on the systems and devices shown herein or otherwise. The invention, however, is not limited to any particular operating environment or to software written in a particular programming language.

Figure 5 is a flow chart illustrating one method according to an embodiment of the present invention. It should be understood by those of ordinary skill in the art that one or more of the methods provided herein may be executed in a different order than that described herein. That is, elements of each method claim do not need to be executed in the order shown unless it is stated herein that such order is explicitly required.

As shown in Figure 5, a method for marine navigation is provided. The method includes identifying a potential waypoint, 500. In the various embodiments, identifying the potential waypoint can be accomplished by identifying the potential waypoint on or through a display, as discussed herein. At 510, a marine route calculation algorithm can be performed to analyze a course between a first location and the potential waypoint in view of preselected conditions. The first location can include, but is not limited to, a first waypoint, as may be selected by a user, or a present location, as may be determined by a GPS or other triangulation signals. So, for example, a course could be analyzed between the present location (i.e., the first location in this example is the present location) and the potential waypoint. In an additional example, a course could by analyzed between a first waypoint (i.e., the first location in this example is the first waypoint as set by a user) and the potential waypoint.

Performing the marine route calculation algorithm can include analyzing cartographic data, including the marine craft data that includes preselected conditions between the first location and the potential waypoint. The course analysis is performed to avoid the preselected conditions. One approach to avoiding the preselected conditions includes routing and/or re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

In re-routing the course calculated by the marine route calculation algorithm, the algorithm can further include identifying one or more non-user waypoints between the first location and the potential waypoint. These non-user waypoints represent the waypoints identified by the device in re-routing the course. Alert signals can be provided to the user when the analyzed cartographic data, including the marine craft data, between the first location and the potential waypoint includes preselected conditions. Providing the alert signal can include displaying a visual alert and/or emitting an audio alert. Other alert signals are also possible, such as, for example, a mechanical alert (e.g., vibration of the device).

Figure 6 is a flow chart illustrating an additional method according to an embodiment of the present invention. As shown in Figure 6, a method for marine navigation is provided. The method includes identifying a potential waypoint at 600. In the various embodiments, identifying the potential waypoint can be accomplished by identifying the potential waypoint on or through a display. Cartographic data, including the marine craft data, for the area between a first location and the potential waypoint can be analyzed for preselected conditions at 610. In one example, analyzing the area between the first location and the potential waypoint includes identifying one or more preselected conditions in the area between the first location and the potential waypoint.

The one or more preselected conditions identified in the analysis can be used, along with other factors, in performing the marine route calculation algorithm to calculate the course so as to best avoid preselected conditions between the first location and the potential waypoint at 620. One approach to avoiding the preselected conditions includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint. Alert signals are provided to the user when the analyzed cartographic data, including the marine craft data, between the first location and the potential waypoint includes preselected conditions.

Figure 7 is a flow chart illustrating an additional method according to an embodiment of the present invention. As shown in Figure 7, a method for marine navigation is provided. The method includes identifying a user defined graphical filter area on a display at 700. In the various embodiments, identifying the user defined graphical filter area on the display can be accomplished through the use of a displayed cursor on a display screen, or through the display screen, as described in connection with Figure 3. Cartographic data, including the marine craft data, within the user defined graphical filter area can be analyzed for preselected conditions at 710. An alert signal can be provided at 720 when cartographic data within the user defined graphical filter area indicate preselected conditions.

In an additional embodiment, the method can further provide dynamic analysis for preselected conditions within the user defined graphical filter area. So, the user defined graphical filter area can, for example, be repositioned from a first location to a second location on the display screen. The user defined graphical filter area can be dynamically analyzed for preselected conditions as a user drags the user defined graphical filter area across the display screen. Based on the analysis, alert signals can be provided to the user of the device when the analyzed cartographic data, including the marine craft data, for the user defined graphical filter area includes preselected conditions.

The method sequence shown in Figures 5-7 can be repeated as many times as necessary, without limitation, in order to achieve a desired course. In addition, the analyzed cartographic data, including the marine craft data, between the first location and the potential waypoint can also be stored in the memory of the device so as to be available for repeated attempts at calculating a course according to the present invention. Thus, the present invention provides a system, device and method by which information received for a course and a reroute calculation can be maintained.

In addition, other variations on the above scenario are included within the scope of the present invention. That is, calculating the re-route can include calculating the re-route with a preference for avoiding one or more preselected conditions in any previous course. Thus, embodiments of the present invention provide methods by which one or more course and/or re-route analysis and/or calculations provide a course that best avoids courses with preselected conditions.

Although specific embodiments have been illustrated and described herein, those of ordinary skill in the art will appreciate that an arrangement calculated to achieve the same techniques can be substituted for the specific embodiments shown. This disclosure is intended to cover adaptations or variations of various embodiments of the invention. It is to be understood that the above description has been made in an illustrative fashion, and not a restrictive one. Combination of the above embodiments, and other embodiments not specifically described herein will be apparent to those of skill in the art upon reviewing the above description. The scope of the various embodiments of the invention includes other applications in which the above structures and methods are used. Therefore, the scope of various embodiments of the invention should be determined with reference to the appended claims, along with the full range of equivalents to which such claims are entitled.

It is emphasized that the Abstract is provided to comply with 37 C.F.R. § 1.72(b) requiring an Abstract that will allow the reader to quickly ascertain the nature of the technical disclosure. It is submitted with the understanding that it will not be used to limit the scope of the claims.

In the foregoing Detailed Description, various features are grouped together in a single embodiment for the purpose of streamlining the disclosure. This method of disclosure is not to be interpreted as reflecting an intention that the embodiments of the invention require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive subject matter lies in less than all features of a single disclosed embodiment. Thus, the following claims are hereby incorporated into the Detailed Description, with each claim standing on its own as a separate embodiment.

WHAT IS CLAIMED IS:

1. A method for marine navigation, comprising:

identifying a potential waypoint; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions.

2. The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.

3. The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

4. The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

5. The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and

analyzing cartographic data for a predetermined area around the first location for preselected conditions.

6. The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

8. The method of claim 7, wherein providing the alert signal includes emitting an audio alert.

9. The method of claim 7, wherein providing the alert signal includes displaying a visual alert.

10. The method of claim 1, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

11. A method for marine navigation, comprising:

identifying a potential waypoint;

analyzing cartographic data between a first location and the potential waypoint for preselected conditions; and

providing an alert signal when cartographic data between the first location and the potential waypoint indicate preselected conditions.

12. The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

13. The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

14. The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

15. The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and

analyzing cartographic data for a predetermined area around the first location for preselected conditions.

16. The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

17. The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

18. The method of claim 11, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

19. A method for marine navigation, comprising:

identifying a user defined graphical filter area on a display;

analyzing cartographic data within the user defined graphical filter area for preselected conditions; and

providing an alert signal when cartographic data within the user defined graphical filter area indicate preselected conditions.

20. The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

identifying a potential waypoint upon a first event; and

performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of preselected conditions.

24. The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

26. The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and

analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. The computer readable medium of claim 23, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

34. An electronic marine navigation device, comprising:

a processor;

a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and

a memory operatively coupled to the processor and the location input, the memory having cartographic data including preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data.

35. The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

36. The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

Methods, Systems, and Devices for Cartographic Alerts

Abstract of the Disclosure

Systems, devices, and methods are provided for marine navigation and course calculation for avoiding preselected conditions. An electronic marine navigation device with marine course calculation capabilities includes a processor connected to a memory that includes cartographic data. A potential waypoint can be identified and a marine route calculation algorithm can be preformed to calculate a course between a first location and the potential waypoint in view of preselected conditions. Performing the marine route calculation algorithm includes analyzing the cartographic data for the area between the first location and the potential waypoint with a preference for providing a course that avoids preselected conditions. A display is connected to the processor and is capable of displaying the calculated course and cartographic data. The device is also adapted to dynamically analyze an area surrounding the first location for preselected conditions and display the results of the analysis.

TITLE: METHODS, SYSTEMS, AND DEVICES FOR CARTOGRAPHIC HAZARD ALERTS
INVENTOR: Darrin W. Kabel et al.
DOCKET NO.: 702.254

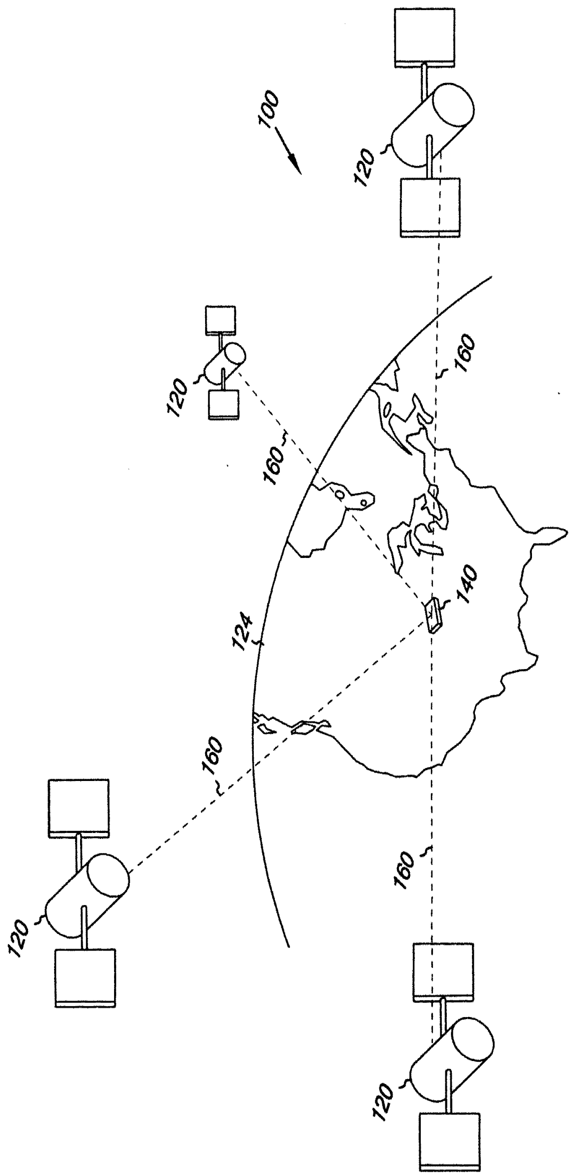


Fig. 1

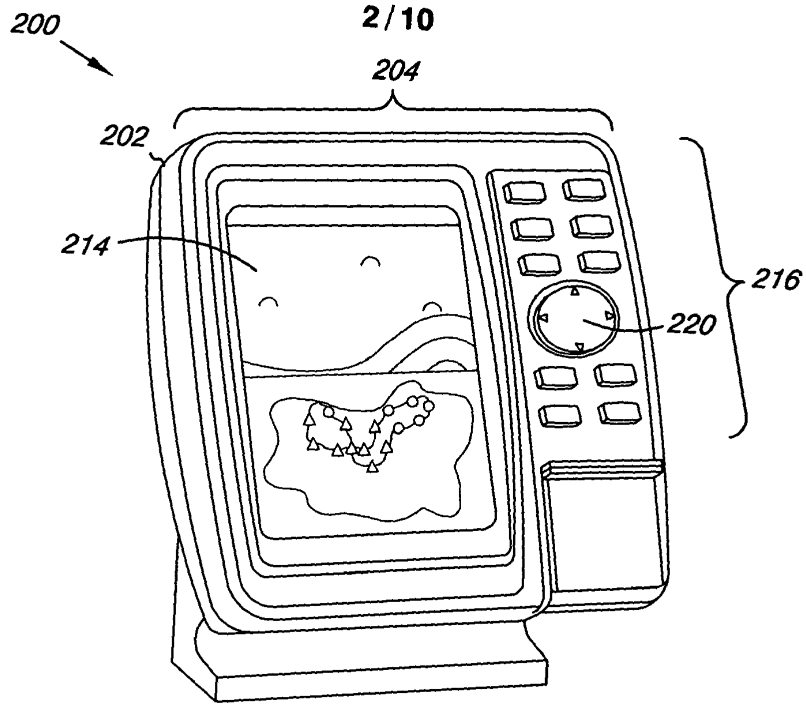


Fig. 2A

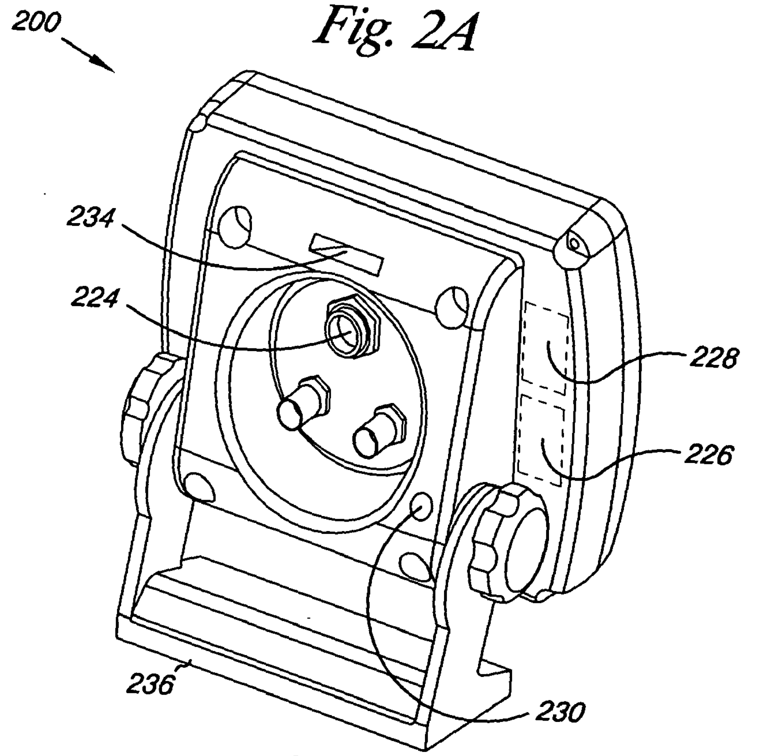
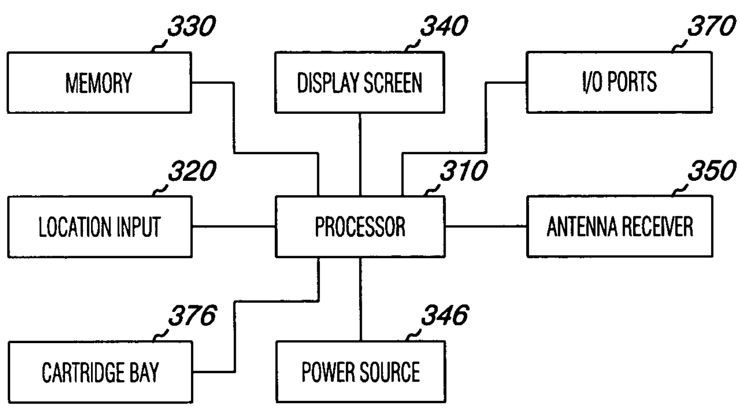


Fig. 2B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CARTRIDGE BAY
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POWER SOURCE

Fig. 3

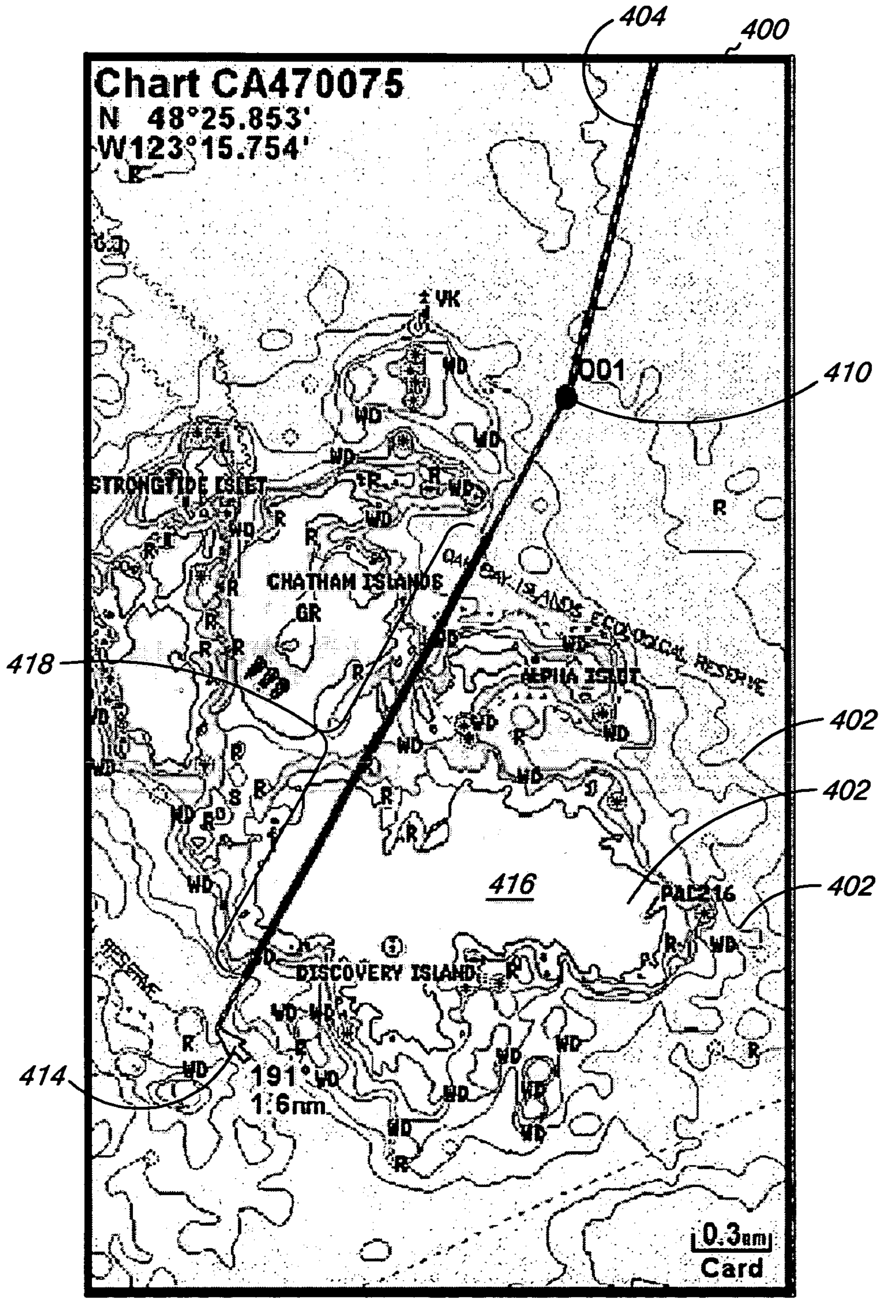
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Fig. 4A

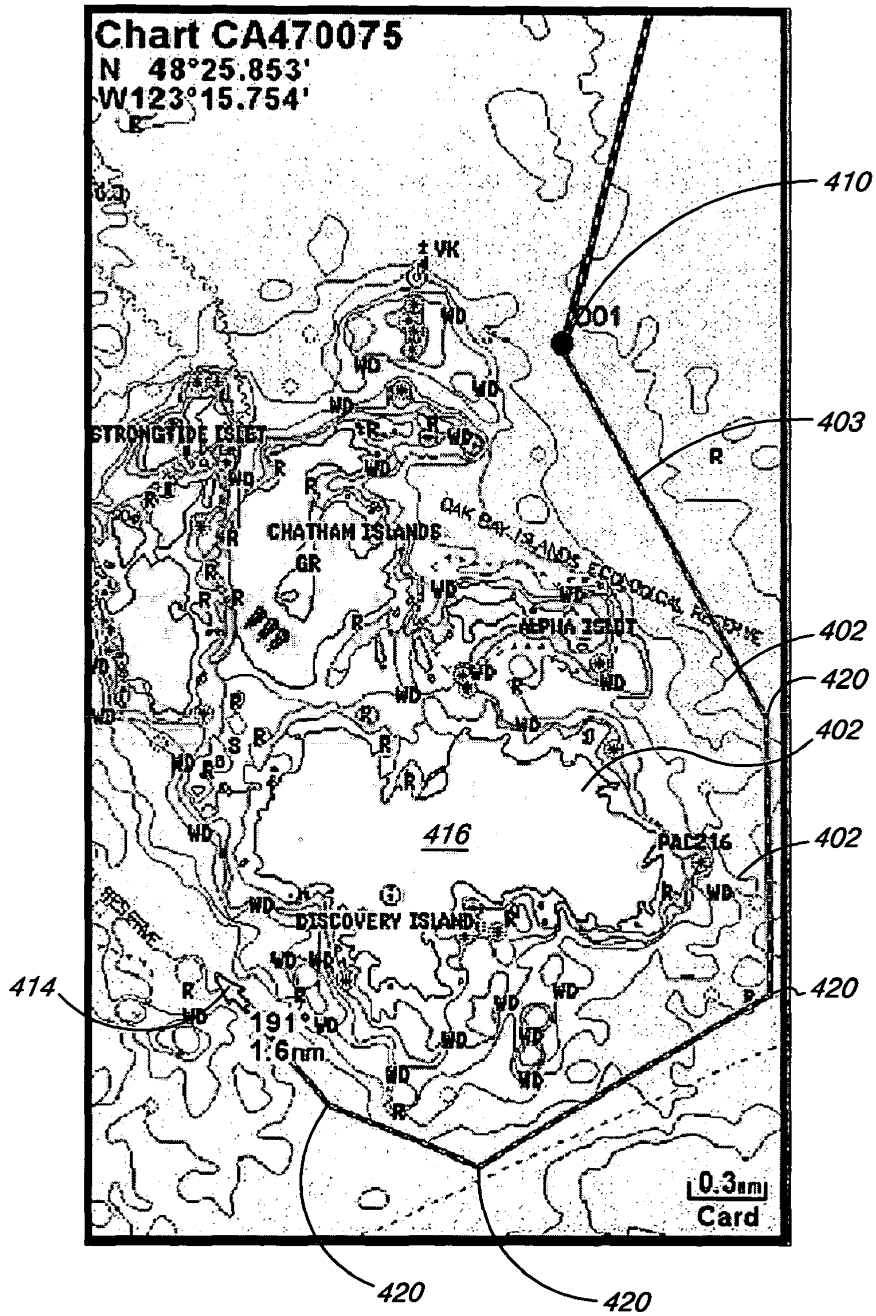
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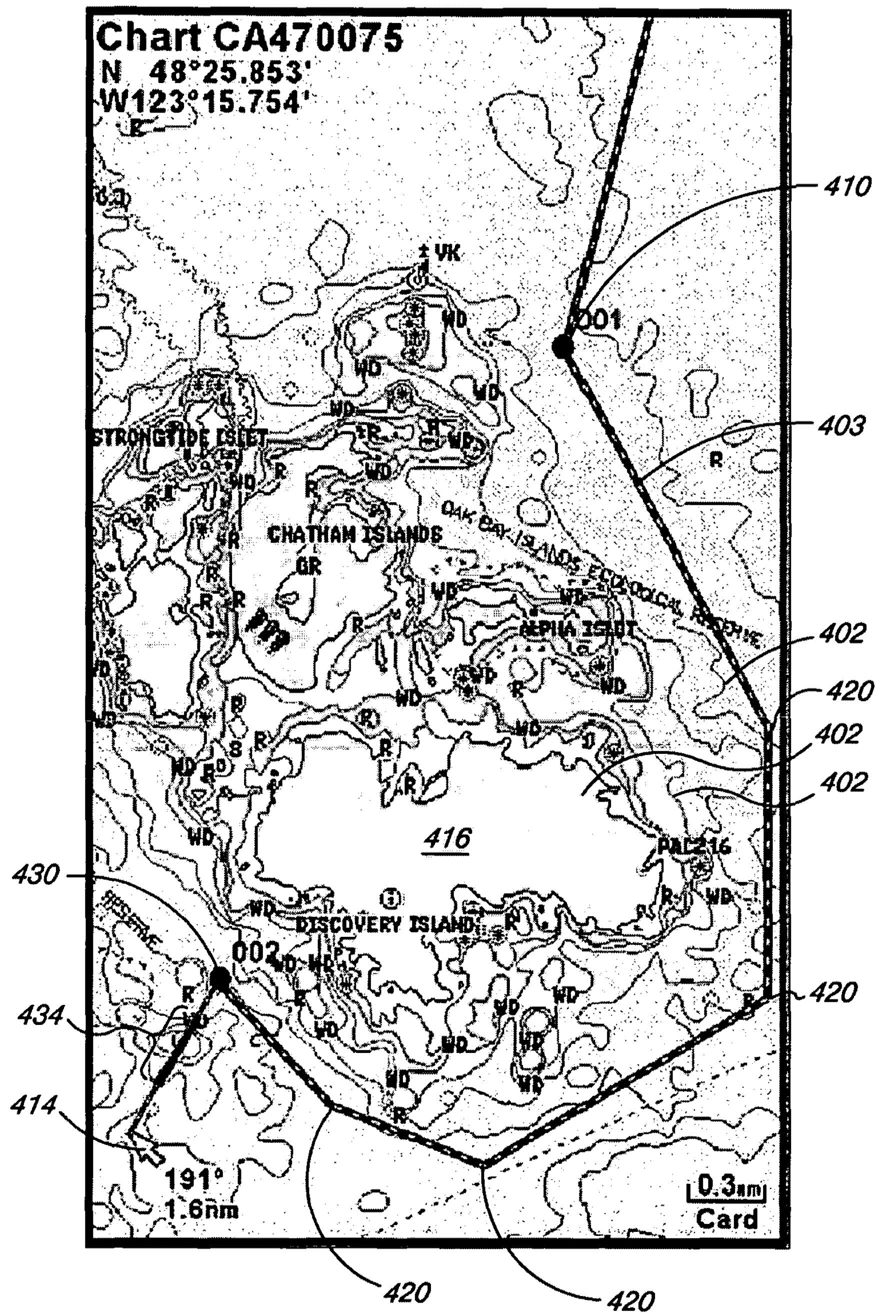
Fig. 4B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420
420

Fig. 4C

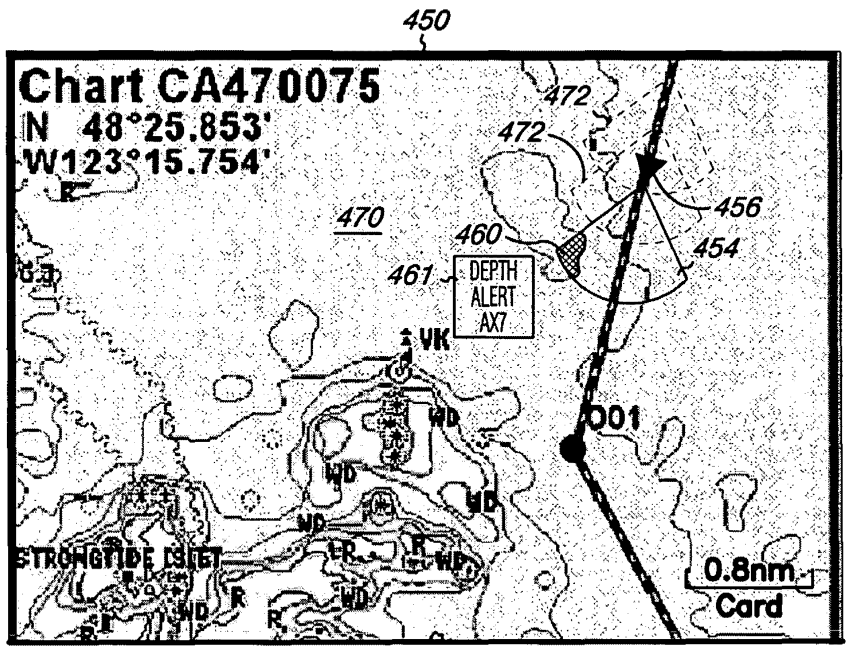
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Fig. 4D

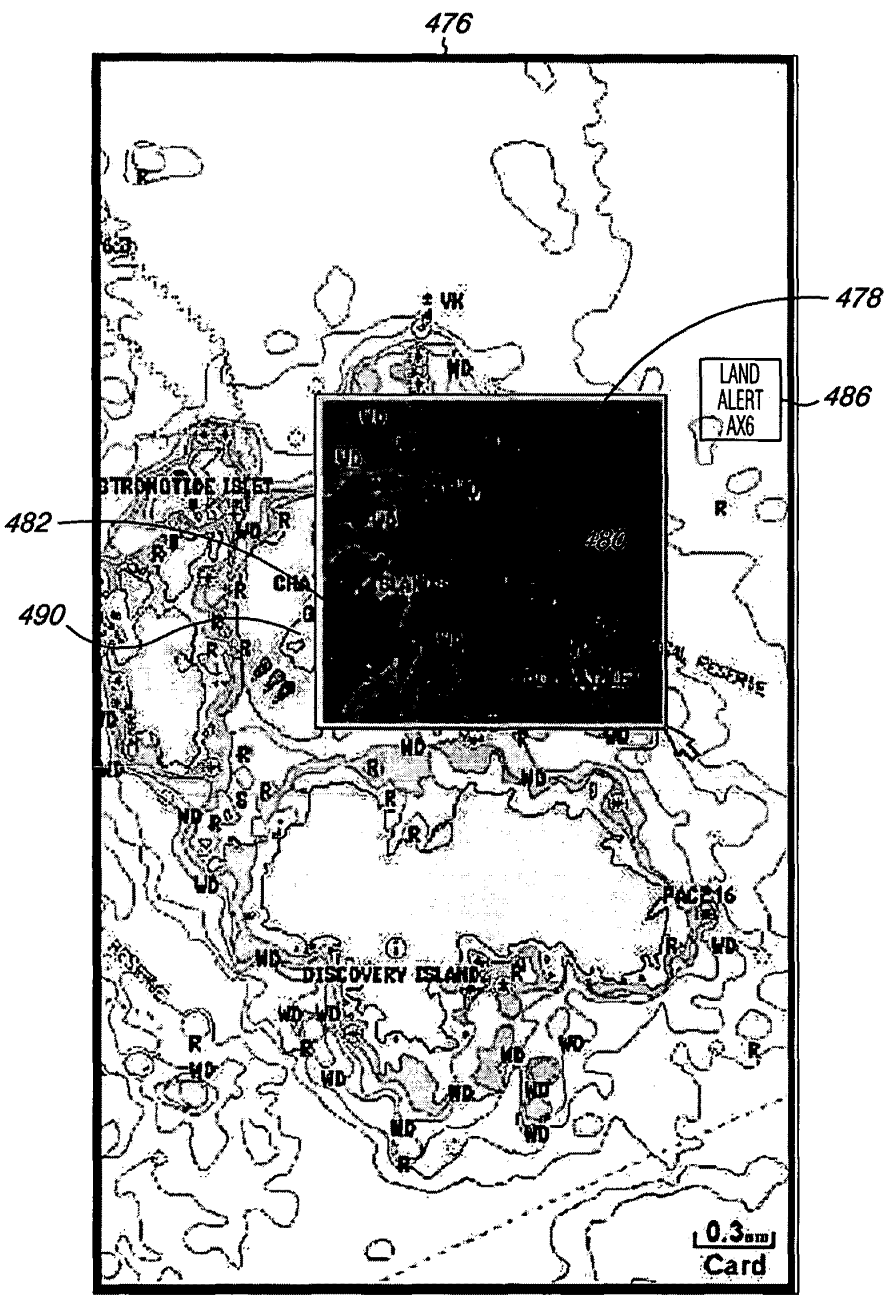
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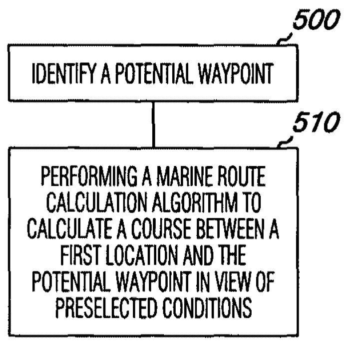
Fig. 4E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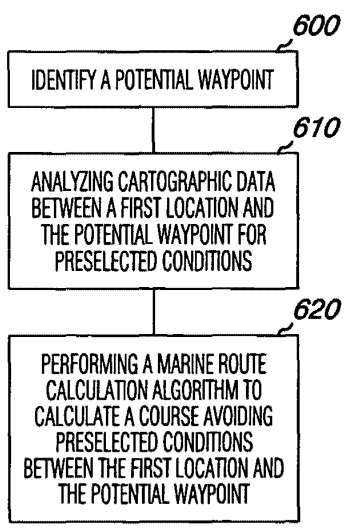
PERFORMING A MARINE ROUTE CALCULATION ALGORITHM TO CALCULATE A COURSE BETWEEN A FIRST LOCATION AND THE POTENTIAL WAYPOINT IN VIEW OF PRESELECTED CONDITIONS

Fig. 5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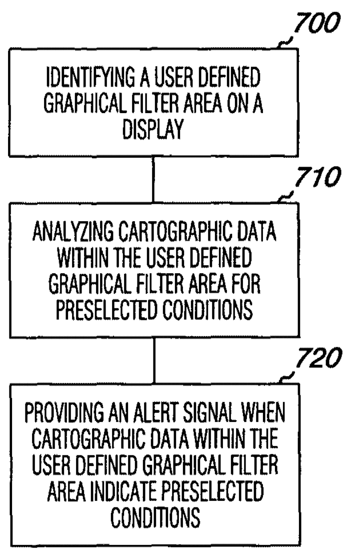
ANALYZING CARTOGRAPHIC DATA BETWEEN A FIRST LOCATION AND THE POTENTIAL WAYPOINT FOR PRESELECTED CONDITIONS
620
PERFORMING A MARINE ROUTE CALCULATION ALGORITHM TO CALCULATE A COURSE AVOIDING PRESELECTED CONDITIONS BETWEEN THE FIRST LOCATION AND THE POTENTIAL WAYPOINT

Fig. 6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IDENTIFYING A USER DEFINED GRAPHICAL FILTER AREA ON A DISPLAY
710
ANALYZING CARTOGRAPHIC DATA WITHIN THE USER DEFINED GRAPHICAL FILTER AREA FOR PRESELECTED CONDITIONS
720
PROVIDING AN ALERT SIGNAL WHEN CARTOGRAPHIC DATA WITHIN THE USER DEFINED GRAPHICAL FILTER AREA INDICATE PRESELECTED CONDITIONS

Fig. 7

JOINT DECLARATION FOR PATENT APPLICATION

As below-named inventors, we hereby declare that:

Our residence, post office address and citizenship are as stated below next to our respective names.

We believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled **METHODS, SYSTEMS, AND DEVICES FOR CARTOGRAPHIC ALERTS**, the specification of which is attached hereto.

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a), including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

We hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent or inventor's or plant breeder's right certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed: None.

We hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application: None.

We hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and to file and prosecute any corresponding foreign applications, including any international applications under the Patent Cooperation Treaty or the European Patent Convention: Devon A. Rolf, Reg. No. 35,337. Address all correspondence to: Devon A. Rolf, Garmin International, Inc., 1200 East 151st Street, Olathe, Kansas 66062, telephone number (913) 397-8200. Power of attorney is also given to: Edward J. Brooks, III, Reg. No. 40,925; Jeffrey L. Cameron, Reg. No. 43,527; and Joseph C. Huebsch, Reg. No. 42,673, all of the firm of E.J. Brooks & Associates, PLLC, 1221 Nicollet Avenue, Suite 500, Minneapolis, MN 55403.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Inventor's signature: ______________________ 9/16/03
Darrin W. Kabel — Date

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Citizenship: United States of America
Post Office Address: 15116 Horton
Overland Park, KS 66223

Inventor's signature: ______________________ 9/16/03
Steven J. Myers — Date

Residence: Edgerton, Johnson County, Kansas
Citizenship: United States of America
Post Office Address: 21310 Evening Star Road
Edgerton, KS 66021

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application:

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

PATENT APPLICATION SERIAL NO. ____________________

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

09/25/2003 AADOF01 00000052 501791 10667026

01 FC:1001 750.00 DA
02 FC:1201 168.00 DA
03 FC:1202 378.00 DA

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 489-267/69033

PATENT APPLICATION FEE DETERMINATION RECORD Effective January 1, 2003	Application or Docket Number 702.254

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20=	* 21
INDEPENDENT CLAIMS	5 minus 3 =	* 2
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐ RATE	FEE	OR	OTHER THAN SMALL ENTITY RATE	FEE
BASIC FEE	375.00	OR	BASIC FEE	750.00
X$ 9=		OR	X$18=	
X42=		OR	X84=	168
+140=		OR	+280=	
TOTAL		OR	TOTAL	

CLAIMS AS AMENDED - PART II

AMENDMENT A

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
AMENDMENT A	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

SMALL ENTITY RATE	ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
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	Independent	*	Minus	***	=
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X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
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	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

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X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
***If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

FLIR-1002.543