Furthermore, according to an embodiment of the present invention, the instructions include navigational instructions.

Further, according to an embodiment of the present invention, the instructions are directional instructions, selected from move forwards, move backwards, move right, move left, stop moving and start moving and combinations thereof.

Importantly, according to an embodiment of the present invention, the directional instructions are suitable for walking, running, trekking, swimming, cycling, driving, riding, hearing-disabled person navigation, sight-disabled person navigation, blind dog navigation, police, rescue and military dog navigation, disabled person navigation, Alzheimer disease patient navigation and combinations thereof.

Additionally, according to an embodiment of the present invention, the directional instructions are suitable for a hiker, a sight-disabled person, a dog, a hearing-disabled person, a soldier, a policeman, a guard, a sportsperson, an athlete and combinations thereof.

Furthermore, according to an embodiment of the present invention, the instructions are non-directional instructions.

Moreover, according to an embodiment of the present invention, the instructions include movement instructions.

Additionally, according to an embodiment of the present invention, the movement instructions are selected from the group consisting of a go-slow command, a go faster command, a stop command, a start moving command, a group divide command, a group merge command, a start trek command, a finish trek command and combinations thereof.

According to an aspect, there is provided a hands-free system for provision of a set of distinguishable tactile instructions to a user, the system comprising:

a. at least one portable forearm-band sensation device for attachment to at least one forearm of said user, each device comprising at least four tactile stimulus components, each component adapted to impact on a specific area of skin of a user to provide a plurality of tactile stimuli, and wherein said at least four tactile stimulus components are adapted to provide a plurality of combinations of tactile stimuli from end portions to specific areas of skin, wherein said specific areas of skin are disposed at least 3 cm away from each other, and wherein each said tactile stimuli combination provides only one instruction of said set to the user, wherein said device is configured

to provide unmistakable, distinguished commands, without the need for verbal and/or visual instructions;

b. a portable communication apparatus configured to be carried by the user, adapted to provide instructions to said at least one forearm-band sensation device, wherein said at least one forearm-band sensation device is adapted to receive commands from said communication apparatus to activate said at least four tactile stimulus components, and

c. an Application Program Interface (API) configured for seamless operation between said communication apparatus and said at least one portable device, said API configured to activate an App to receive data from said at least one device and to provide said information to said at least one device and wherein said tactile instructions are selected from movement instructions and navigational instructions.

The present invention will be more fully understood from the following detailed description of the preferred embodiments thereof, taken together with the drawings.

CLAIMS

1. A hands-free system for provision of a set of distinguishable tactile instructions to a user, the system comprising:

   a. at least one portable forearm-band sensation device for attachment to at least one forearm of said user, each device comprising at least four tactile stimulus components, each component adapted to impact on a specific area of skin of a user to provide a plurality of tactile stimuli, and wherein said at least four tactile stimulus components are adapted to provide a plurality of combinations of tactile stimuli from end portions to specific areas of skin, wherein said specific areas of skin are disposed at least 3 cm away from each other, and wherein each said tactile stimuli combination provides only one instruction of said set to the user, wherein said device is configured to provide unmistakable, distinguished commands, without the need for verbal and/or visual instructions;

   b. a portable communication apparatus configured to be carried by the user, adapted to provide instructions to said at least one forearm-band sensation device, wherein said at least one forearm-band sensation device is adapted to receive commands from said communication apparatus to activate said at least four tactile stimulus components, and

   c. an Application Program Interface (API) configured for seamless operation between said communication apparatus and said at least one portable device, said API configured to activate an App to receive data from said at least one device and to provide said information to said at least one device and wherein said tactile instructions are selected from movement instructions and navigational instructions.

2. A system according to claim 1, wherein said set of distinguishable tactile instructions are directional instructions selected from, selected from move forwards, move backwards, move right, move left, stop moving and start moving and combinations thereof.

3. A system according to claim 1, wherein said App is configured to provide current data to a screen on said at least one device.

4. A system according to claim 2, wherein said at least one device comprises two devices, each adapted to be worn on a separate forearm of said user.

5. A system according to claim 1, wherein said system is configured to guide the user via a route to a destination and each device of said at least one device comprise at least six tactile stimulus components.

6. A system according to claim 5, wherein said at least six tactile stimulus components are vibration elements, each adapted to vibrate on said specific area of skin on said forearm, wherein said specific areas of skin are disposed at least 4 cm away one from the other.

7. A system according to claim 1, wherein said App is configured to provide at least one of a current time, a compass, an azimuth, a temperature (C or F), an altitude (measurements – US or Eu, set in apps' settings), a longitude, a latitude, a speed, a terrain/route steepness (elevation profil**e**), a distance from start point, a distance from last waypoint, a distance to a next waypoint, a distance to a last waypoint/destination, a time from a start point, a time from a last waypoint, a time to a next waypoint and a time to a last waypoint/destination.

8. A system according to claim 6, wherein said communication apparatus is configured to activate different tactile stimulus components to instruct said user with different instructions.

9. A system according to claim 1, wherein said at least one portable device comprise six flexible arms.

10. A system according to claim 9, wherein said flexible arms each comprises a visual stimulus component disposed therein.

11. A system according to claim 10, wherein each said visual stimulus component comprises at least one light emitting diode (LED) or other light devices (not LED).

12. A system according to claim 11, wherein at least one of said at least one light emitting diode (LED) is configured to be activated by said communication apparatus responsive to said position of said user.

13. A system according to claim 12, wherein at least one of said at least one light emitting diode (LED) is configured to be activated by said communication apparatus responsive to said position of said user.

14. A system according to claim 13, wherein said communication apparatus is configured to activate different visual stimulus components to instruct said user with different instructions.

15. A system according to claim 1, wherein said communication apparatus is selected from a cell phone, a smart phone, a tablet, a laptop computer, a mobile communication apparatus, a portable communication apparatus, a radio phone and an army phone.

16. A system according to claim 1, wherein said at least one portable device weighs less than 300 grams and said communication apparatus weighs less than 200 grams.

17. A system according to claim 1, comprising a plurality of portable devices, each device is adapted for use of a different user in a group, wherein one user is a leader of said group.

18. A system according to claim 17, wherein said communication apparatus is adapted for leader control to follow movements of said users of said group.

19. A system according to claim 1, comprising a device suitable for attachment to a dog, and wherein said communication apparatus is adapted for handling by said user, said user being a handler of said dog.

20. A system according to claim 17, wherein said set comprises a go-slow command, a go faster command, a stop command, and a start moving command.

21. A system according to claim 17, wherein said set further comprises a group divide command, a group merge command, a start trek command, a finish trek command and combinations thereof.

22. A system according to claim 1, wherein said set of distinguishable tactile instructions comprises directional instructions suitable for walking, running, trekking, swimming, cycling, driving, riding, hearing-disabled person navigation, sight-disabled person navigation, blind dog navigation, police, rescue and military dog navigation,

disabled person navigation, Alzheimer disease patient navigation and combinations thereof.

23. A system according to claim 1, wherein said set of distinguishable tactile instructions comprises directional instructions suitable for a hiker, a sight-disabled person, a hearing-disabled person, a soldier, a policeman, a guard, a sportsperson, an athlete and combinations thereof.

24. A system according to claim 1, wherein said set of distinguishable tactile instructions comprises movement instructions.

25. A system according to claim 24, wherein said movement instructions are selected from the group consisting of a go-slow command, a go faster command, a stop command, a start moving command, a group divide command, a group merge command, a start trek command, a finish trek command and combinations thereof.

26. A system according to claim 3, wherein said at least one portable device communicates with real-time data with said communication apparatus.

27. A system according to claim 26, wherein said screen communicates said real-time data.

28. A system according to claim 27, wherein said screen comprises a touch screen adapted to display information selected from environmental information, navigational information, trek information and combinations thereof.

29. A system according to claim 17, wherein said system is further configured to enable said group to be led by said team leader using said set of distinguishable tactile instructions by providing a tactile language to said different users in said group.

30. A system according to claim 1, wherein said App is a navigational App.