

Claims

1. A mobile base (100) with a mobile base ID configured to be attached to a mobile object (400) for supervising the mobile object (400) inside an area, the area being divided into zones of at least two different types, namely an activation zone and a non-event prone zone, the mobile base (100) comprising:
- one or more event detection devices (130), each configured to detect a predefined event, and
 - a communication tag (120), wherein the communication tag (120) is configured to, depending on the zone type, activate or deactivate the corresponding event detection device(s) (130), the event detection device(s) (130) is configured to communicate a detected event with an event ID to the communication tag (120), and the communication tag (120) is configured to broadcast the event ID and mobile base ID.
2. A mobile base (100) according to claim 1, wherein each zone is identified by a unique zone ID, and wherein the mobile base comprises a primary tag configured to be activated by an electromagnetic field associated with the zone, activate the communication tag, receive the zone ID from the electromagnetic field and forward the zone ID to the communication tag.
3. A mobile base (100) according to claim 2, wherein the communication tag is configured to broadcast the mobile ID and the zone ID when the zone is a non-event prone zone for positioning of the mobile base by the system.
4. A mobile base (100) according to any of claims 1 to 3, wherein the communication tag is configured to deactivate the corresponding event detection device(s) when the zone is a non-event prone zone and the event detection device(s) is active.

5. A mobile base (100) according to any of claims 1 to 4, wherein the communication tag is configured to activate the corresponding event detection device(s) when the zone is an activation zone and the event detection device(s) is inactive.
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6. A mobile base (100) according to any of claims 1 to 5, wherein the area also comprises at least one event prone zone and each of the one or more activation zones is located between an event prone zone and a non-event prone zone.
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7. A mobile base (100) according to any of claims 1 to 6, wherein the communication tag is configured to broadcast the mobile base ID at predetermined time intervals, and the time intervals are shorter when the event detection device is activated than when it is deactivated.
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8. A mobile base (100) according to any of claims 1 to 7, wherein the mobile base is configured to broadcast information to be used by the system in determining the position of the mobile base when the event detection device is activated.
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9. A mobile base (100) according to claim 8, wherein the information to be used for positioning comprises a UWB signal.
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10. A mobile base (100) according to any of claims 1 to 9, wherein the one or more event detection devices (130) each comprise a sensor, and an internal algorithm prepared to determine if a predefined event has occurred.
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11. A mobile base (100) according to claim 10, wherein the one or more event detection devices (130) each comprise at least one of the following sensors: an acceleration, velocity, gyroscope, temperature, gas sensor, heart rate monitor, or barometer.

12. A mobile base (100) according to any of the preceding claims, wherein the primary tag (110) is a passive communication tag.
- 5 13. A mobile base (100) according to any of the preceding claims, wherein the primary tag (110) operates via radio frequency in the Low or Very Low Frequency range (3-300 kHz) or in the Ultra High Frequency range (300-3000 MHz), preferably within the range of 860-900 MHz.
- 10 14. A mobile base (100) according to any of the preceding claims, wherein the communication tag (120) is an active communication tag.
- 15 15. A mobile base according to any of the preceding claims, wherein the communication tag (120) preferably operates via radio frequency in the Ultra High Frequency range, preferably of 2,4 GHz, or preferably is a Bluetooth Low Energy tag.
- 20 16. A mobile base (100) according to any of the preceding claims, wherein the mobile base (100) is configured to be attached to a person (400) as a wristband.
- 25 17. A mobile base (100) according to claim 16, wherein the event detection device (130) comprises an acceleration sensor and is configured to detect a fall of a person (400) wearing the mobile base (100) on the wrist.
- 30 18. A system (500) for supervision of at least one mobile object (400) inside an area, the mobile object (400) having a mobile base (100) according to any of the preceding claims attached, the area being divided into zones of at least two different types, namely an activation zone and a non-event prone zone, the system (500) comprising one or more readers (200) located at fixed positions and configured to create an electromagnetic field (210) associated with each zone and to receive data transmitted from the

mobile base(s) (100), and to forward a corresponding mobile base ID to a central controller (300).

- 5 19. A system according to claim 18, wherein each zone is identified by a unique zone ID, each of the readers is configured with the zone ID corresponding to its location, and the electromagnetic field created by the reader comprises its zone ID.
- 10 20. A system (500) according to any of claims 18 and 19, wherein the area comprises event prone zones, and each of the one or more activation zones is located between at least one non-event prone zone and at least one event prone zone.
- 15 21. A system according to claim 20, the area comprising readers associated with the event prone zones and configured to receive an event ID transmitted by the mobile base and forward a corresponding mobile base ID and event ID to the central controller such that the system will be aware of the detected event and be able to identify the mobile object (400) and its location.
- 20 22. A system (500) according to claim 21, wherein the central controller (300) is configured to initiate a response upon receiving information that an event has occurred, and preferably such a response includes at least the initiation of an alarm.
- 25 23. A system (500) according to any of claims 21 and 22, wherein the one more readers associated with the event prone zones are positioned in event prone zones where a dangerous fall or a fall overboard may occur, such as an open deck, and are each configured to receive the event ID and the mobile ID from the mobile base for forwarding to the central controller, and wherein the corresponding event detection device (130) in the mobile base(s) (100) comprises an accelerometer and an internal
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algorithm configured to determine if a fall has occurred based on the measurements of the accelerometer.

24. A method for supervision of a mobile object (400) having attached a
5 mobile base (100) with a mobile base ID in an area divided into zones of at least two different types, namely an activation zone and non-event prone zone, where the mobile base (100) comprises a communication tag (120), and at least one event detection device (130), where the method comprises the following event driven sequential steps:
- 10 - activating or deactivating the corresponding event detection device(s) (130) depending on the zone type, and broadcasting the mobile base ID by the communication tag (120);
- detecting an event with an event ID and then notifying the communication tag (120) by the event detection device (130); and
- 15 - broadcasting also the event ID with the mobile base ID by the communication tag (120).
25. A method according to claim 24, wherein each zone is configured with a unique zone ID and the method comprises: sending the zone ID to the
20 primary tag via the electromagnetic field of the reader; sending the zone ID to the communication tag by the primary tag, and broadcasting the zone ID by the communication tag.
26. A method according to claim 25, wherein the method comprises: waking
25 up and sending the zone ID to a primary tag (110) by an electromagnetic field (210) when entered by the mobile base (100); and waking up and sending the zone ID to the communication tag (120) by the primary tag (110).
- 30 27. A method according to any of claims 24 to 26, wherein the area comprises event prone zones, and each of the activation zones are located between at least one non-event prone zone and at least one event-prone zone.

- 5 28. A method according to claim 27, wherein event prone zones are selected as areas within the area of supervision wherein one or more of the following situations may occur or is likely to occur: a dangerous fall, a fall overboard, a gas leak, fire, critical temperature level.
- 10 29. A method according to any of the claims 24 to 28, wherein a subsequent step comprises receiving the data broadcast from the communication tag (120) of the mobile base (100) by one or more readers (200) located at fixed positions and the readers (200) forwarding this data to a central controller (300), and optionally, the central controller (300), upon receiving data corresponding to an event, initiating a response, such as starting an alarm and/or determining a position of the mobile base (100).
- 15 30. A method according to claim 29, wherein the central controller (300), upon receiving data corresponding to a fall event, detects loss of radio frequency signals from the communication tag (120) of the mobile base (100), indicating that the mobile base (100) is in water and a fall overboard has occurred.
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