

CLAIMS

1. A radio communication system comprising:
a portable device;
a beacon receiving device; and
a server;
wherein the portable device comprises:
a transmitter configured to repeatedly transmit signals; and
a receiver configured to receive data from the server;
wherein the beacon receiving device comprises:
a receiver configured to receive signals from the portable device; and
a transmitter configured to transmit an indication to the server based on the received signal; and
wherein the server comprises:
a receiver configured to receive the indication from the beacon receiving device; and
a transmitter configured to transmit data to the portable device based on the indication.
2. The radio communication system of claim 1,
wherein the portable device is a mobile radio communication device.
3. The radio communication system of claim 1,
wherein the portable device comprises a mobile radio communication device and a wearable device.
4. The radio communication system of claim 3,
wherein the transmitter of the portable device is provided in the wearable device.

5. The radio communication system of claim 3,
wherein the receiver of the portable device is provided in the mobile radio communication device.
6. The radio communication system of claim 1,
wherein the indication comprises an identifier of the beacon receiving device.
7. The radio communication system of claim 1,
wherein the data comprises a coupon for a promotion at a location of the beacon receiving device.
8. The radio communication system of claim 1,
wherein the server further comprises a location tracking circuit configured to track a location of the portable device based on the indication.
9. The radio communication system of claim 8,
wherein the server further comprises a determination circuit configured to determine whether a further portable device moves jointly with the portable device based on the tracked location information.
10. The radio communication system of claim 9,
wherein the data comprises a coupon for a joint promotion for the user of the portable device and the user of the further portable device if the determination circuit determines that the further portable device moves jointly with the portable device.
11. The radio communication system of claim 9,
wherein the transmitter of the server is further configured to transmit the data to the further portable device if the determination circuit determines that the further portable device moves jointly with the portable device.

12. The radio communication system of claim 9,
wherein the beacon receiving device comprises a motion determination circuit configured to determine whether a motion of the portable device comprises a pre-determined motion.

13. The radio communication system of claim 12,
wherein the portable device comprises a motion determination circuit configured to determine whether a motion of the portable device comprises the pre-determined motion;

wherein the transmitter of the portable device is further configured to transmit a motion identifier to the beacon receiving device if the motion determination circuit of the portable device determines that the motion of the portable device comprises the pre-determined motion;

wherein the motion determination circuit of the beacon receiving device is configured to determine whether the motion of the portable device comprises the pre-determined motion based on the motion identifier; and

wherein the indication comprises an identifier of the beacon receiving device, an identifier of the portable device and an identifier of the pre-determined motion if the motion determination circuit of the beacon receiving device determines that the motion of the portable device comprises the pre-determined motion.

14. The radio communication system of claim 13,
wherein the server comprises a determination circuit configured to determine whether at least two portable devices perform the pre-determined motion at the same location at the same time.

15. The radio communication system of claim 14,
wherein the server further comprises a social network circuit configured to link users of the at least two portable devices on a social network if the determination circuit

of the server determines that at least two portable devices perform the pre-determined motion at the same location at the same time.

16. A radio communication method comprising:
repeatedly transmitting signals from a portable device;
receiving signals from the portable device in a beacon receiving device;
transmitting an indication to the server from the beacon receiving device based on the received signal;
receiving the indication from the beacon receiving device in a server;
transmitting data from the server to the portable device based on the indication;
and
receiving data from the server in the portable device.
17. The radio communication method of claim 16,
wherein the portable device is a mobile radio communication device.
18. The radio communication method of claim 16,
wherein the portable device comprises a mobile radio communication device and a wearable device.
19. The radio communication method of claim 18,
wherein the repeatedly transmitting of signals from the portable device is performed by the wearable device.
20. The radio communication system of claim 18,
wherein the receiving of data from the server in the portable device is performed by the mobile radio communication device.
21. The radio communication method of claim 16,
wherein the indication comprises an identifier of the beacon receiving device.

22. The radio communication method of claim 16,
wherein the data comprises a coupon for a promotion at a location of the beacon receiving device.
23. The radio communication method of claim 16, further comprising:
tracking in the server a location of the portable device based on the indication.
24. The radio communication method of claim 23, further comprising:
determining in the server whether a further portable device moves jointly with the portable device based on the tracked location information.
25. The radio communication method of claim 24,
wherein the data comprises a coupon for a joint promotion for the user of the portable device and the user of the further portable device if the server determines that the further portable device moves jointly with the portable device.
26. The radio communication method of claim 24, further comprising:
transmitting the data from the server to the further portable device if it is determined that the further portable device moves jointly with the portable device.
27. The radio communication method of claim 24, further comprising:
determining in the beacon receiving device whether a motion of the portable device comprises a pre-determined motion.
28. The radio communication method of claim 27, further comprising:
determining in the portable device whether a motion of the portable device comprises the pre-determined motion;

transmitting a motion identifier from the portable device to the beacon receiving device if the portable device determines that the motion of the portable device comprises the pre-determined motion;

wherein the beacon receiving device determines whether the motion of the portable device comprises the pre-determined motion based on the motion identifier; and

wherein the indication comprises an identifier of the beacon receiving device, an identifier of the portable device and an identifier of the pre-determined motion if the beacon receiving device determines that the motion of the portable device comprises the pre-determined motion.

29. The radio communication method of claim 28, further comprising:
determining in the server whether at least two portable devices perform the pre-determined motion at the same location at the same time.

30. The radio communication method of claim 29, further comprising:
linking users of the at least two portable devices on a social network if the server determines that at least two portable devices perform the pre-determined motion at the same location at the same time.

CLAIMS

1. A radio communication device comprising:
 - a beacon receiving device comprising
 - a receiver configured to receive signals from a portable device; and
 - a transmitter configured to transmit an indication to a server based on the received signals;
 - wherein the server comprises:
 - a receiver configured to receive the indication from the beacon receiving device;
 - a transmitter configured to transmit data to the portable device based on the indication;
 - a location tracking circuit configured to track a location of the portable device based on the indication; and
 - a determination circuit configured to determine whether a further portable device moves jointly with the portable device based on the tracked location information.
2. A radio communication device comprising:
 - a server comprising
 - a receiver configured to receive the indication from a beacon receiving device;
 - a transmitter configured to transmit data to a portable device based on the indication;
 - a location tracking circuit configured to track a location of the portable device based on the indication; and
 - a determination circuit configured to determine whether a further portable device moves jointly with the portable device based on the tracked location information;
 - wherein the beacon receiving device comprises

a receiver configured to receive signals from a portable device; and
a transmitter configured to transmit an indication to a server based
on the received signals.

3. The radio communication device of claims 1 or 2, further comprising the portable device.

4. The radio communication device of any one of claims 1 to 3, wherein the portable device comprises:

a transmitter configured to repeatedly transmit signals; and
a receiver configured to receive data from the server.

5. The radio communication device of claim 4,
wherein the portable device comprises a mobile radio communication device and a wearable device.

6. The radio communication device of claim 5,
wherein the transmitter of the portable device is provided in the wearable device.

7. The radio communication device of claim 5,
wherein the receiver of the portable device is provided in the mobile radio communication device.

8. The radio communication device of any one of claims 1 to 7,
wherein the indication comprises an identifier of the beacon receiving device.

9. The radio communication device of any one of claims 1 to 8,
wherein the data comprises a coupon for a promotion at a location of the beacon receiving device.

10. The radio communication device of any one of claims 1 to 9,
wherein the data comprises a coupon for a joint promotion for a user of the portable device and a user of the further portable device if the determination circuit determines that the further portable device moves jointly with the portable device.
11. The radio communication device of any one of claims 1 to 10,
wherein the transmitter of the server is further configured to transmit the data to the further portable device if the determination circuit determines that the further portable device moves jointly with the portable device.
12. The radio communication device of any one of claims 1 to 3,
wherein the beacon receiving device comprises a motion determination circuit configured to determine whether a motion of the portable device comprises a pre-determined motion.
13. The radio communication device of claim 12,
wherein the portable device comprises a motion determination circuit configured to determine whether the motion of the portable device comprises the pre-determined motion;
wherein a transmitter of the portable device is configured to transmit a motion identifier to the beacon receiving device if the motion determination circuit of the portable device determines that the motion of the portable device comprises the pre-determined motion;
wherein the motion determination circuit of the beacon receiving device is configured to determine whether the motion of the portable device comprises the pre-determined motion based on the motion identifier; and
wherein the indication comprises an identifier of the beacon receiving device, an identifier of the portable device and an identifier of the pre-determined motion if the motion determination circuit of the beacon receiving device determines that the motion of the portable device comprises the pre-determined motion.

14. The radio communication device of claim 13,
wherein the determination circuit of the server is further configured to determine whether at least two portable devices perform the pre-determined motion at the same location at the same time.
15. The radio communication device of claim 14,
wherein the server further comprises a social network circuit configured to link users of the at least two portable devices on a social network if the determination circuit of the server determines that at least two portable devices perform the pre-determined motion at the same location at the same time.
16. A radio communication method comprising:
receiving signals in a beacon receiving device, the signals received from a portable device repeatedly transmitting signals;
transmitting an indication from the beacon receiving device to a server, based on the received signal;
wherein the server is configured to receive the indication from the beacon receiving device and further configured to transmit data to the portable device based on the indication;
wherein the portable device is configured to receive the data from the server;
wherein the server is further configured to track a location of the portable device based on the indication; and further configured to determine whether a further portable device moves jointly with the portable device based on the tracked location information.
17. A radio communication method comprising:
receiving an indication in a server, the indication received from a beacon receiving device;
transmitting data from the server to a portable device based on the indication,
tracking in the server a location of the portable device based on the indication; and

determining in the server whether a further portable device moves jointly with the portable device based on the tracked location information;

wherein the beacon receiving device is configured to transmit the indication to the server based on a received signal from the portable device;

wherein the portable device is configured to repeatedly transmit signals and further configured to receive the data from the server.

18. The radio communication method of claims 16 or 17, further comprising:

transmitting the data from the server to the further portable device if it is determined that the further portable device moves jointly with the portable device.

19. The radio communication method of any one of claims 16 to 18, further comprising:

determining in the beacon receiving device whether a motion of the portable device comprises a pre-determined motion.

20. The radio communication method of claim 19, further comprising:

determining in the portable device whether a motion of the portable device comprises the pre-determined motion;

transmitting a motion identifier from the portable device to the beacon receiving device if the portable device determines that the motion of the portable device comprises the pre-determined motion;

wherein the beacon receiving device determines whether the motion of the portable device comprises the pre-determined motion based on the motion identifier; and

wherein the indication comprises an identifier of the beacon receiving device, an identifier of the portable device and an identifier of the pre-determined motion if the beacon receiving device determines that the motion of the portable device comprises the pre-determined motion.

21. The radio communication method of claim 20, further comprising:

determining in the server whether at least two portable devices perform the pre-determined motion at the same location at the same time.

22. The radio communication method of claim 21, further comprising:

linking users of the at least two portable devices on a social network if the server determines that at least two portable devices perform the pre-determined motion at the same location at the same time.