

CLAIMS

2 What is claimed is:

1. A wireless communication system comprising

a wireless routing device, a plurality of communication stations, and a plurality of wireless communication links;

wherein the plurality of wireless communication links establishes communication links between the wireless routing device and each of the plurality of communication stations;

wherein the wireless communication system supports audio and text-based communication between the plurality of communication stations;

wherein the wireless communication system is a private communication system;

wherein the wireless communication system supports a broadcast model of communication;

wherein by broadcast is meant that: a) any first individual communication station selected from the plurality of communication stations receives any audio or text-based message transmitted by any second individual communication station selected from the plurality of communication stations; and,

b) any audio or text-based message transmitted by

1 any first individual communication station selected
2 from the plurality of communication stations is
3 received by all the unselected individual
4 communication station remaining in the plurality of
5 communication stations.

6 2. The wireless communication system according to claim 1
7 wherein the wireless communication system supports a
8 private communication facility;
9 wherein by private communication facility is meant that
10 communications between the communication stations
11 contained in the subset of communication stations
12 selected from the plurality of communication
13 stations are broadcast on a separate communication
14 channel such that communications between the subset
15 of communication stations not accessible from any
16 communication station not contained within the
17 subset of communication stations.

18 3. The wireless communication system according to claim 2
19 wherein the wireless routing device establishes a
20 wireless communication link selected from the
21 plurality of wireless communication links with each
22 individual communication station contained in the
23 plurality of communication stations;

1 wherein the wireless routing device receives a message
2 from any first individual communication station
3 selected from the plurality of communication
4 stations and retransmits the message to each
5 unselected individual communication station
6 remaining in the plurality of communication
7 stations;

8 wherein the message is selected from the group
9 consisting of an audio message and a text-based
10 message.

11 4. The wireless communication system according to claim 3
12 wherein each of the plurality of wireless communication
13 links is a structured data exchange mechanism that is
14 established between the wireless routing device and an
15 individual headset selected from the plurality of
16 headsets.

17 5. The wireless communication system according to claim 4
18 wherein the wireless routing device terminates the
19 plurality of wireless communication links.

20 6. The wireless communication system according to claim 5
21 wherein the wireless routing device comprises a
22 plurality of routing transceivers, a logical device,
23 and a reset switch;

1 wherein the plurality of routing transceivers, the
2 logical device, and the reset switch are
3 electrically interconnected.

4 7. The wireless communication system according to claim 6
5 wherein the plurality of communication stations
6 comprises a plurality of headsets and a plurality of
7 text stations;
8 wherein each of the plurality of headsets is a hands-
9 free communication device selected from the group
10 consisting of earbuds and headphones;
11 wherein each of the plurality of headsets forms a
12 wireless communication link selected from the
13 plurality of wireless communication links with the
14 wireless routing device;
15 wherein each of the plurality of text stations is a
16 text-based communication device;
17 wherein each of the plurality of text stations forms a
18 wireless communication link selected from the
19 plurality of wireless communication links with the
20 wireless routing device.

21 8. The wireless communication system according to claim 7
22 wherein each of the plurality of routing transceivers
23 is an electrical device;

1 wherein each of the plurality of routing transceivers
2 creates and maintains the plurality of wireless
3 communication links between the wireless routing
4 device and the plurality of communication stations;
5 wherein each of the plurality of routing transceivers
6 is a multichannel device;
7 wherein by multichannel device is meant that each of
8 the plurality of routing transceivers simultaneously
9 manages and maintains each of the multiple wireless
10 communication links selected from the plurality of
11 wireless communication links formed between the
12 plurality of communication stations and the wireless
13 routing device.

14 9. The wireless communication system according to claim 8
15 wherein the plurality of headsets comprises a
16 collection of individual headsets;
17 wherein each of the plurality of headsets is a hands-
18 free communication device selected from the group
19 consisting of earbuds and headphones;
20 wherein each of the plurality of headsets forms a
21 wireless communication link selected from the
22 plurality of wireless communication links with the
23 wireless routing device;

1 wherein each of the plurality of headsets announces any
2 audio messages received over the wireless
3 communication link;

4 wherein any first individual headset selected from the
5 plurality of headsets transmits an audio message
6 over the wireless communication link to the wireless
7 routing device;

8 wherein any first individual headset selected from the
9 plurality of headsets receives any audio messages
10 transmitted over the wireless communication link by
11 the wireless routing device that were transmitted by
12 any second individual headset selected from the
13 plurality of headsets.

14 10. The wireless communication system according to claim 9

15 wherein the plurality of text stations comprises a
16 collection of individual text stations;

17 wherein the individual text station is a wireless
18 communication device;

19 wherein the individual text station establishes a
20 wireless communication link selected from the
21 plurality of wireless communication links with the
22 wireless routing device;

1 wherein the individual text station generates and
2 transmits a text-based message to the wireless
3 routing device over the wireless communication link;
4 wherein the individual text station receives the text-
5 based message that is transmitted from the wireless
6 routing device over the wireless communication link;
7 wherein the individual text station transceiver creates
8 and maintains the wireless communication link
9 selected from the plurality of wireless
10 communication links between the text station routing
11 transceiver and each individual text station
12 transceiver;
13 wherein any first individual text station selected from
14 the plurality of text stations transmits a text-
15 based message over the wireless communication link
16 to the wireless routing device;
17 wherein any first individual text station selected from
18 the plurality of text stations receives any text-
19 based messages transmitted over the wireless
20 communication link by the wireless routing device
21 that were transmitted by any second individual text
22 station;

1 wherein each of the plurality of text stations
2 generates the text-based message transmitted over
3 the wireless communication link;
4 wherein each of the plurality of text stations displays
5 the text-based messages received over the wireless
6 communication link.

7 11. The wireless communication system according to claim 10
8 wherein the plurality of routing transceivers comprises
9 a headset routing transceiver and a text station
10 routing transceiver;
11 wherein the headset routing transceiver is an
12 electrical device;
13 wherein the headset routing transceiver creates and
14 maintains the plurality of wireless communication
15 links between the wireless routing device and the
16 plurality of headsets;
17 wherein the headset routing transceiver is a
18 multichannel device;
19 wherein by multichannel device is meant that the
20 headset routing transceiver simultaneously manages
21 and maintains each of the multiple wireless
22 communication links selected from the plurality of
23 wireless communication links formed between the

- 1 plurality of communication stations and the wireless
2 routing device;
3 wherein the text station routing transceiver is an
4 electrical device;
5 wherein the text station routing transceiver creates
6 and maintains the plurality of wireless
7 communication links between the wireless routing
8 device and the plurality of text stations;
9 wherein the text station routing transceiver is a
10 multichannel device;
11 wherein by multichannel device is meant that the text
12 station routing transceiver simultaneously manages
13 and maintains each of the multiple wireless
14 communication links selected from the plurality of
15 wireless communication links formed between the
16 plurality of communication stations and the wireless
17 routing device.
- 18 12. The wireless communication system according to claim 11
19 wherein the logical device is an electric circuit;
20 wherein the logical device controls the operation of
21 the plurality of routing transceivers;
22 wherein the logical device monitors the reset switch.
- 23 13. The wireless communication system according to claim 12

1 wherein the logic module operates: a) a speech to text
2 technology; and, b) a text to speech technology;
3 wherein the logic module processes audio messages
4 received from the plurality of headset through the
5 speech to text technology such that the logic module
6 transmits a text translation of the received audio
7 message to the plurality of text stations through
8 the text station routing transceiver;
9 wherein the logic module processes text-based messages
10 received from the plurality of text stations through
11 the text to speech technology such that the logic
12 module transmits an audio transcription of the
13 received text-based message to the plurality of
14 headsets through the headset routing transceiver.

15 14. The wireless communication system according to claim 13
16 wherein the reset switch is a momentary switch;
17 wherein the actuation of the reset switch indicates to
18 the logical device that the plurality of routing
19 transceivers should terminate each individual
20 wireless communication link selected from the
21 plurality of wireless communication links such that
22 the communication network formed by the wireless
23 communication system is shut down;

1 wherein the communication network is then reestablished
2 by reestablishing each individual wireless
3 communication link selected from the plurality of
4 wireless communication links.

5 15. The wireless communication system according to claim 14
6 wherein the individual headset is a wireless
7 communication device;
8 wherein the individual headset is selected from the
9 group consisting of headphones and earbuds;
10 wherein the individual headset establishes a wireless
11 communication link selected from the plurality of
12 wireless communication links with the wireless
13 routing device;
14 wherein the individual headset generates and transmits
15 an audio message to the wireless routing device over
16 the wireless communication link;
17 wherein the individual headset receives an audio
18 message that is transmitted from the wireless
19 routing device over the wireless communication link.

20 16. The wireless communication system according to claim 15
21 wherein each individual headset further comprises an
22 individual headset transceiver, an individual
23 headset speaker, an individual headset microphone,

1 an individual headset linking switch, and an
2 individual headset near field communication circuit;
3 wherein the individual headset transceiver, the
4 individual headset speaker, the individual headset
5 microphone, the individual headset linking switch,
6 and the near field communication circuit are
7 electrically interconnected;
8 wherein the individual headset transceiver is an
9 electrical device;
10 wherein the individual headset transceiver creates and
11 maintains the wireless communication link selected
12 from the plurality of wireless communication links
13 between the wireless routing device and the
14 individual headset transceiver;
15 wherein the individual headset speaker is a transducer;
16 wherein the individual headset speaker receives
17 electrical signals from the individual headset
18 transceiver;
19 wherein the individual headset speaker converts the
20 received electrical signals into acoustic energy
21 that is used to announce the received audio message;
22 wherein the individual headset microphone is a
23 transducer;

1 wherein the individual headset microphone detects
2 acoustic energy in the vicinity of the individual
3 headset and converts the detected acoustic energy
4 into an electric signal;
5 wherein the individual headset microphone transmits the
6 generated electric signal to the individual headset
7 transceiver;
8 wherein the individual headset transceiver transmits
9 the received electric signals to the wireless
10 routing device over the wireless communication link
11 as an audio message;
12 wherein the individual headset transceiver monitors the
13 individual headset linking switch;
14 wherein the individual headset linking switch is a
15 momentary switch;
16 wherein the actuation of the individual headset linking
17 switch indicates to the individual headset
18 transceiver that the individual headset should
19 establish a wireless communication link selected
20 from the plurality of wireless communication links
21 with the wireless routing device such that the
22 individual headset joins the communication network
23 formed by the wireless communication system;

1 wherein the individual headset near field communication
2 circuit establishes the private communication
3 facility.

4 17. The wireless communication system according to claim 16
5 wherein the plurality of headsets comprises a first
6 headset, a second headset, and an Nth headset;
7 wherein the first headset further comprises a first
8 headset transceiver, a first headset speaker, a
9 first headset microphone, a first headset linking
10 switch, and a first headset nearfield communication
11 circuit;
12 wherein the first headset transceiver, the first
13 headset speaker, the first headset microphone, the
14 first headset linking switch, and the first headset
15 nearfield communication circuit are electrically
16 interconnected;
17 wherein the second headset further comprises a second
18 headset transceiver, a second headset speaker, a
19 second headset microphone, a second headset linking
20 switch, and a second headset nearfield communication
21 circuit;
22 wherein the second headset transceiver, the second
23 headset speaker, the second headset microphone, the
24 second headset linking switch, and the second

1 headset nearfield communication circuit are
2 electrically interconnected;
3 wherein the Nth headset further comprises a Nth headset
4 transceiver, a Nth headset speaker, a Nth headset
5 microphone, a Nth headset linking switch, and a Nth
6 headset nearfield communication circuit;
7 wherein the Nth headset transceiver, the Nth headset
8 speaker, the Nth headset microphone, the Nth headset
9 linking switch, and the Nth headset nearfield
10 communication circuit are electrically
11 interconnected;
12 wherein the first headset transceiver is the individual
13 headset transceiver associated with the first
14 headset;
15 wherein the first headset speaker is the individual
16 headset speaker associated with the first headset;
17 wherein the first headset microphone is the individual
18 headset microphone associated with the first
19 headset;
20 wherein the first headset linking switch is the
21 individual headset linking switch associated with
22 the first headset;
23 wherein the first headset near field communication
24 circuit is the individual headset near field

1 communication circuit associated with the first
2 headset;
3 wherein the second headset transceiver is the
4 individual headset transceiver associated with the
5 second headset;
6 wherein the second headset speaker is the individual
7 headset speaker associated with the second headset;
8 wherein the second headset microphone is the individual
9 headset microphone associated with the second
10 headset;
11 wherein the second headset linking switch is the
12 individual headset linking switch associated with
13 the second headset;
14 wherein the second headset near field communication
15 circuit is the individual headset near field
16 communication circuit associated with the second
17 headset;
18 wherein the Nth headset transceiver is the individual
19 headset transceiver associated with the Nth headset;
20 wherein the Nth headset speaker is the individual
21 headset speaker associated with the Nth headset;
22 wherein the Nth headset microphone is the individual
23 headset microphone associated with the Nth headset;

1 wherein the Nth headset linking switch is the
2 individual headset linking switch associated with
3 the Nth headset;

4 wherein the Nth headset near field communication
5 circuit is the individual headset near field
6 communication circuit associated with the Nth
7 headset.

8 18. The wireless communication system according to claim 17
9 wherein each individual text station further comprises
10 an individual text station transceiver, an
11 individual text station logic module, an individual
12 text station display, an individual text station
13 interface, and an individual text station near field
14 communication circuit;

15 wherein the individual text station transceiver, the
16 individual text station logic module, the individual
17 text station display, the individual text station
18 interface, and the individual text station near
19 field communication circuit are electrically
20 interconnected;

21 wherein the individual text station transceiver is an
22 electrical device;

23 wherein the individual text station transceiver creates
24 and maintains the wireless communications link

1 selected from the plurality of wireless
2 communication links between the plurality of text
3 stations and each individual text station
4 transceiver;
5 wherein the individual text station logic module is a
6 programmable electrical device;
7 wherein the individual text station logic module
8 receives a text-based message from the individual
9 text station transceiver;
10 wherein the individual text station logic module
11 converts the received electrical signals into a
12 text-based message that is displayed on the
13 individual text station display;
14 wherein the individual text station display is an
15 electrical device used to display the text-based
16 message transmitted from the individual text station
17 logic module;
18 wherein the individual text station interface receives
19 a text-based message from the user of the individual
20 text station and transmits the text-based message to
21 the individual text station logic module for
22 transmission to the plurality of text stations by
23 the individual text station transceiver;

1 wherein the individual text station near field
2 communication circuit establishes the private
3 communication facility.

4 19. The wireless communication system according to claim 18

5 wherein the plurality of text stations further
6 comprises a first text station, a second text
7 station, and an Nth text station;

8 wherein the first text station further comprises a
9 first text station transceiver, a first text station
10 logic module, a first text station display, a first
11 text station interface, and a first text station
12 near field communication circuit;

13 wherein the first text station transceiver, the first
14 text station logic module, the first text station
15 display, the first text station interface, and the
16 first text station near field communication circuit
17 are electrically interconnected;

18 wherein the first text station is a headset used to
19 join the communication network formed by the
20 wireless communication system;

21 wherein the first text station transceiver is the
22 individual text station transceiver associated with
23 the first text station;

1 wherein the first text station logic module is the
2 individual text station logic module associated with
3 the first text station;
4 wherein the first text station display is the
5 individual text station display associated with the
6 first text station;
7 wherein the first text station interface is the
8 individual text station interface associated with
9 the first text station;
10 wherein the first text station near field communication
11 circuit is the individual text station near field
12 communication circuit associated with the first text
13 station;
14 wherein the second text station further comprises a
15 second text station transceiver, a second text
16 station logic module, a second text station display,
17 a second text station interface, and a second near
18 field communication circuit;
19 wherein the second text station transceiver, the second
20 text station logic module, the second text station
21 display, the second text station interface, and the
22 second near field communication circuit are
23 electrically interconnected;

1 wherein the second text station is a headset used to
2 join the communication network formed by the
3 wireless communication system;
4 wherein the second text station transceiver is the
5 individual text station transceiver associated with
6 the second text station;
7 wherein the second text station logic module is the
8 individual text station logic module associated with
9 the second text station;
10 wherein the second text station display is the
11 individual text station display associated with the
12 second text station;
13 wherein the second text station interface is the
14 individual text station interface associated with
15 the second text station
16 wherein the second text station near field
17 communication circuit is the individual text station
18 near field communication circuit associated with the
19 second text station;
20 wherein the Nth text station further comprises a Nth
21 text station transceiver, a Nth text station logic
22 module, a Nth text station display, a Nth text
23 station interface, and a Nth near field
24 communication circuit;

1 wherein the Nth text station transceiver, the Nth text
2 station logic module, the Nth text station display,
3 the Nth text station interface, and the Nth near
4 field communication circuit are electrically
5 interconnected;

6 wherein the Nth text station is a headset used to join
7 the communication network formed by the wireless
8 communication system;

9 wherein the Nth text station transceiver is the
10 individual text station transceiver associated with
11 the Nth text station;

12 wherein the Nth text station logic module is the
13 individual text station logic module associated with
14 the Nth text station;

15 wherein the Nth text station display is the individual
16 text station display associated with the Nth text
17 station;

18 wherein the Nth text station interface is the
19 individual text station interface associated with
20 the Nth text station

21 wherein the Nth text station near field communication
22 circuit is the individual text station near field
23 communication circuit associated with the Nth text
24 station.

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