WHAT IS CLAIMED IS:

1. A method for wireless data communication, the method comprising the steps of:

assembling a message frame, the message frame including a synchronization word, an address word and a data word;

repeatedly transmitting the message frame from a wireless transmitter for a minimum transmission duration;

at a receiver, periodically searching for a predetermined synchronization word in the transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of one synchronization word minus one symbol;

at the receiver, determining if a transmitted message frame includes a synchronization word that corresponds to the predetermined synchronization word; and

at the receiver, decoding the transmitted message frame only if the predetermined synchronization word is found.

2. The method for wireless data communication according to Claim 1, wherein the step of assembling a message frame comprises removing address words that in combination with the synchronization word and the data word have a correlation with the synchronization word higher than a preset minimum value.

3. The method for wireless data communication according to Claim 2, wherein the step of assembling a message frame further comprises generating the synchronization word utilizing a Gold code sequence.

4. The method for wireless data communication according to Claim 2, wherein the message frame is encoded utilizing Manchester coding for each bit in the message frame.

5. The method for wireless data communication according to Claim 1, wherein the step of periodically searching for a predetermined synchronization word

in the transmitted message frame has a period of less than the minimum transmission duration.

6. The method for wireless data communication according to Claim 1, wherein the address word corresponds to a device address.

7. The method for wireless data communication according to Claim 1, wherein the address word corresponds to a register address.

8. The method for wireless data communication according to Claim 1, further comprises the step of adding a parity bit at the end of a message frame.

9. A method for wireless data communication, the method comprising the steps of:

assembling a message frame, the message frame including a synchronization word and a data word;

repeatedly transmitting the message frame from a wireless transmitter for a minimum transmission duration;

at a receiver, periodically searching for a predetermined synchronization word in the transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of one synchronization word minus one symbol;

at the receiver, determining if a transmitted message frame includes a synchronization word that corresponds to the predetermined synchronization word; and

at the receiver, decoding the transmitted message frame only if the predetermined synchronization word is found.

10. A wireless communication system comprising:

a transmitter, including transmitter circuitry and encoding circuitry, the encoding circuitry being configured to assemble a message frame having at least a synchronization word and a data word, and the transmitter being configured to repeatedly transmit the message frame for a minimum transmission duration;

a transmission channel; and

a receiver, including receiver circuitry and decoding circuitry, the decoding circuitry being configured for periodically searching for a predetermined synchronization word in the transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of the synchronization word minus one symbol, wherein the period of searching for a predetermined synchronization word in the transmitted message frame is less than the minimum transmission duration.

11. The wireless communication system according to Claim 10, wherein the transmitter circuitry is configured to specifically transmit a message over the transmission channel.

12. The wireless communication system according to Claim 11, wherein the receiver circuitry is configured to specifically receive a message over the transmission channel.

13. The wireless communication system according to Claim 10, wherein the transmitter may be incorporated in a hand held device.

14. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in a hand held device.

15. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in a medical device.

16. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in an implantable medical device.

17. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in an ophthalmic lens.

18. The wireless communication system according to claim 10, wherein the transmission channel comprises a high frequency electromagnetic propagation channel.

19. The wireless communication system according to claim 10, wherein the transmission channel comprises a low frequency electromagnetic coupling.

20. The wireless communication system according to claim 10, wherein the transmission channel comprises a visible light electromagnetic propagation channel.

21. The wireless communication system according to claim 10, wherein the transmission channel comprises an infrared light electromagnetic propagation channel.

22. The wireless communication system according to claim 10, wherein the transmitter is configured to modulate and transmit a carrier signal over the transmission channel.

23. The wireless communication system according to claim 22, wherein the transmitter modulates at least one of phase, frequency or amplitude of the carrier signal.

24. A wireless transmitter comprising:

encoding circuitry, the encoding circuitry being configured to assemble a message frame having at least a synchronization word and a data word; and

transmitter circuitry, the transmitter being configured to repeatedly transmit the message frame for a minimum transmission duration over a transmission channel.

25. A wireless receiver comprising:

decoding circuitry, the decoding circuitry being configured for periodically searching for a predetermined synchronization word in a transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of the synchronization word minus one symbol, wherein the period of searching for a predetermined synchronization word in the transmitted message frame is less than the minimum transmission duration; and

receiving circuitry for receiving a transmitted message from a transmission channel.

CLAIMS:

1. A method for wireless data communication, the method comprising the steps of:

assembling a message frame, the message frame including a synchronization word, an address word and a data word;

repeatedly transmitting the message frame from a wireless transmitter for a minimum transmission duration;

at a receiver, periodically searching for a predetermined synchronization word in the transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of one synchronization word minus one symbol;

at the receiver, determining if a transmitted message frame includes a synchronization word that corresponds to the predetermined synchronization word; and

at the receiver, decoding the transmitted message frame only if the predetermined synchronization word is found.

2. The method for wireless data communication according to Claim 1, wherein the step of assembling a message frame comprises removing address words that in combination with the synchronization word and the data word have a correlation with the synchronization word higher than a preset minimum value.

3. The method for wireless data communication according to Claim 2, wherein the step of assembling a message frame further comprises generating the synchronization word utilizing a Gold code sequence.

4. The method for wireless data communication according to Claim 2, wherein the message frame is encoded utilizing Manchester coding for each bit in the message frame.

5. The method for wireless data communication according to Claim 1, wherein the step of periodically searching for a predetermined synchronization word

in the transmitted message frame has a period of less than the minimum transmission duration.

6. The method for wireless data communication according to Claim 1, wherein the address word corresponds to a device address.

7. The method for wireless data communication according to Claim 1, wherein the address word corresponds to a register address.

8. The method for wireless data communication according to Claim 1, further comprises the step of adding a parity bit at the end of a message frame.

9. A method for wireless data communication, the method comprising the steps of:

assembling a message frame, the message frame including a synchronization word and a data word;

repeatedly transmitting the message frame from a wireless transmitter for a minimum transmission duration;

at a receiver, periodically searching for a predetermined synchronization word in the transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of one synchronization word minus one symbol;

at the receiver, determining if a transmitted message frame includes a synchronization word that corresponds to the predetermined synchronization word; and

at the receiver, decoding the transmitted message frame only if the predetermined synchronization word is found.

10. A wireless communication system comprising:

a transmitter, including transmitter circuitry and encoding circuitry, the encoding circuitry being configured to assemble a message frame having at least a synchronization word and a data word, and the transmitter being configured to repeatedly transmit the message frame for a minimum transmission duration;

a transmission channel; and

a receiver, including receiver circuitry and decoding circuitry, the decoding circuitry being configured for periodically searching for a predetermined synchronization word in the transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of the synchronization word minus one symbol, wherein the period of searching for a predetermined synchronization word in the transmitted message frame is less than the minimum transmission duration.

11. The wireless communication system according to Claim 10, wherein the transmitter circuitry is configured to specifically transmit a message over the transmission channel.

12. The wireless communication system according to Claim 11, wherein the receiver circuitry is configured to specifically receive a message over the transmission channel.

13. The wireless communication system according to Claim 10, wherein the transmitter may be incorporated in a hand held device.

14. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in a hand held device.

15. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in a medical device.

16. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in an implantable medical device.

17. The wireless communication system according to Claim 10, wherein the receiver may be incorporated in an ophthalmic lens.

18. The wireless communication system according to Claim 10, wherein the transmission channel comprises a high frequency electromagnetic propagation channel.

19. The wireless communication system according to Claim 10, wherein the transmission channel comprises a low frequency electromagnetic coupling.

20. The wireless communication system according to Claim 10, wherein the transmission channel comprises a visible light electromagnetic propagation channel.

21. The wireless communication system according to Claim 10, wherein the transmission channel comprises an infrared light electromagnetic propagation channel.

22. The wireless communication system according to Claim 10, wherein the transmitter is configured to modulate and transmit a carrier signal over the transmission channel.

23. The wireless communication system according to Claim 22, wherein the transmitter modulates at least one of phase, frequency or amplitude of the carrier signal.

24. A wireless receiver comprising:

decoding circuitry, the decoding circuitry being configured for periodically searching for a predetermined synchronization word in a transmitted message frame, the duration of each synchronization search being at least as long as the length of the message frame plus the length of the synchronization word minus one symbol, wherein the period of searching for a predetermined synchronization word in the transmitted message frame is less than the minimum transmission duration; and

receiving circuitry for receiving a transmitted message from a transmission channel.