WHAT IS CLAIMED IS:

1. A transmission apparatus for a wireless device, comprising:

an antenna for receiving an original signal and for backscattering a modulated signal containing information from the wireless device;

a variable impedance coupled to the antenna, the variable impedance having an impedance value;

a delta-sigma modulator coupled to the variable impedance for modulating the impedance value, and thereby a backscattering coefficient for the antenna, in accordance with the information to generate the modulated signal; and,

a decoder coupled to the delta-sigma modulator for generating the impedance value from the information.

2. The transmission apparatus of claim 1 wherein the information is an N-bit digital waveform that is applied to the decoder and then to the delta-sigma modulator to produce a control signal for the variable impedance that is related to the N-bit digital waveform.

3. The transmission apparatus of claim 1 wherein the information is a complex modulation signal that is offset in frequency from the original signal.

4. The transmission apparatus of claim 1 wherein the information is a complex modulation signal that alternates between an in-phase signal and a quadrature signal via a control signal, and the variable impedance switches between backscattering

coefficients that are 90 degrees offset from each other depending on whether the complex modulation signal is the in-phase signal or the quadrature signal.

5. The transmission apparatus of claim 1 wherein the information is an N-bit digital waveform that is adjusted to compensate for errors in at least one of the decoder, the delta-sigma modulator, and the variable impedance.

6. The transmission apparatus of claim 1 wherein the variable impedance includes a filter for filtering noise generated by at least one of the decoder and the delta-sigma modulator.

7. The transmission apparatus of claim 1 wherein the original signal is received from an RFID reader that is configured to correct for errors in at least one of the decoder, the delta-sigma modulator, and the variable impedance.

8. A transmission apparatus for a wireless device, comprising:

an inductor for receiving an original signal and for transmitting by mutual inductance a modulated signal containing information from the wireless device;

a variable impedance coupled to the inductor, the variable impedance having an impedance value;

a delta-sigma modulator coupled to the variable impedance for modulating the impedance value, and thereby a value of the mutual inductance, in accordance with the information to generate the modulated signal; and,

a decoder coupled to the delta-sigma modulator for generating the impedance value from the information.

9. The transmission apparatus of claim 8 wherein the information is an N-bit digital waveform that is applied to the decoder and then to the delta-sigma modulator to produce a control signal for the variable impedance that is related to the N-bit digital waveform.

10. The transmission apparatus of claim 8 wherein the information is a complex modulation signal that is offset in frequency from the original signal.

11. The transmission apparatus of claim 8 wherein the information is a complex modulation signal that alternates between an in-phase signal and a quadrature signal via a control signal, and the variable impedance switches between impedance values that are 90 degrees offset from each other depending on whether the complex modulation signal is the in-phase signal or the quadrature signal.

12. The transmission apparatus of claim 8 wherein the information is an N-bit digital waveform that is adjusted to compensate for errors in at least one of the decoder, the delta-sigma modulator, and the variable impedance.

13. The transmission apparatus of claim 8 wherein the variable impedance includes a filter for filtering noise generated by at least one of the decoder and the delta-sigma modulator.

14. The transmission apparatus of claim 8 wherein the original signal is received from an RFID reader that is configured to correct for errors in at least one of the decoder, the delta-sigma modulator, and the variable impedance.

15. The transmission apparatus of claim 1 wherein the delta-sigma modulator is one of a low-pass delta-sigma modulator and a band-pass delta-sigma modulator.

16. The transmission apparatus of claim 1 wherein the delta-sigma modulator is a single bit delta-sigma modulator.

17. The transmission apparatus of claim 1 wherein the delta-sigma modulator switches the impedance value between at least two states.

18. The transmission apparatus of claim 8 wherein the delta-sigma modulator is one of a low-pass delta-sigma modulator and a band-pass delta-sigma modulator.

19. The transmission apparatus of claim 8 wherein the delta-sigma modulator is a single bit delta-sigma modulator.

20. The transmission apparatus of claim 8 wherein the delta-sigma modulator switches the impedance value between at least two states.