What is claimed is:

1. A method for implementing near field communication (NFC), characterized in that, the method comprises:

modulating a digital signal by utilizing a binary frequency shift keying (2FSK) modulation to generate an audio signal and playing the modulated audio signal by a transmitting device; and

sampling the audio signal and demodulating the sampled audio signal for obtaining the digital signal by a receiving device,

wherein a modulating frequency of a binary digital signal "0" is set as f1 and a modulating frequency of a binary digital signal "1" is set as f2,

wherein demodulating the sampled audio signal comprises:

transforming the sampled audio signal from a time domain signal to a frequency domain signal;

analyzing the sampled audio signal in the frequency domain by an analyzing period by comparing frequency of one point having a maximum power with f1 and f2; and

performing a statistical analysis on the result of the analysis of the sampled audio signal using a window to generate a modulated digital signal.

2. The method according to claim 1, characterized in that, ~~modulation of the digital signal to generate the audio signal by the transmitting device comprises:~~

~~modulating the digital signal by the transmitting device by utilizing a binary frequency shift keying (2FSK) modulation, a modulating frequency of a binary digital signal "0"~~f1 is set as 12 KHz, ~~a modulating frequency of a binary digital signal "1"~~f2 is set as 16 KHz, and a modulating width is set to have 1000 sampling points.

3. The method according to claim ~~2~~1, characterized in that, a sampling frequency for sampling the audio signal by the receiving device is 48 KHz, a channel number is a single channel, a quantization bit is 8 bits;

~~a method for demodulating the sampled audio signal by the receiving~~

~~device comprises:~~

~~the sampled audio signal is transformed from a time domain signal to a frequency domain signal;~~

64 points are used as ~~an~~ the analyzing period, and ~~the sampled audio signal in the frequency domain are analyzed,~~ if a frequency of one point having a maximum power is closest to ~~12 KHz~~f1, then an output result is "0"; if a frequency of one point having a maximum power is closest to ~~16 KHz~~f2, then an output result is "1"; and

16 bits are set as a length of ~~a~~ the window for performing a statistical analysis on the above-mentioned output result, if "1" in the output result of the window occurs more, then the modulated digital signal is "1"; if "0" in the output result of the window occurs more, then the modulated digital signal is "0"; the window is shifted for continuing to perform the above-mentioned statistical analysis on the above-mentioned output result until all of the digital signals are demodulated.

4. The method according to claim 3, characterized in that, the step of shifting the window comprises:

an initial count value is set as 0, the output result in the window is traversed, the count value is increased by 1 when traversing to "1"; the count value is decreased by 1 when traversing to "0"; a position of a maximum absolute value of the count value is a distance to shift the window, and the window is shifted in accordance with the distance.

5. The method according to one of claims 1-4, characterized in that, the transmitting device comprises a speaker, and the receiving device comprises a microphone.

6. A system for implementing near field communication (NFC), characterized in that, the system comprises:

a transmitting device for modulating a digital signal by utilizing a binary frequency shift keying (2FSK) modulation to generate an audio signal and playing the modulated audio signal; and

a receiving device for sampling the audio signal and demodulating the sampled audio signal for obtaining the digital signal.

wherein a modulating frequency of a binary digital signal "0" is set as f1 and a modulating frequency of a binary digital signal "1" is set as f2,

wherein a method for demodulating the sampled audio signal by the receiving device comprises:

transforming the sampled audio signal from a time domain signal to a frequency domain signal;

analyzing the sampled audio signal in the frequency domain by an analyzing period by comparing frequency of one point having a maximum power with f1 and f2; and

performing a statistical analysis on the result of the analysis of the sampled audio signal using a window to generate a modulated digital signal.

7. The system according to claim 6, characterized in that, ~~the transmitting device is specifically utilized for modulating the digital signals by utilizing a 2FSK modulation, a modulating frequency of a binary digital signal "0"~~f1 is set as 12 KHz, ~~a modulating frequency of a binary digital signal "1"~~f2 is set as 16 KHz, and a modulating width includes 1000 sampling points.

8. The system according to claim ~~7~~6, characterized in that, the receiving device samples the audio signals in a sampling frequency of 48 KHz, a channel number is a single channel, a quantization bit is 8 bits;

~~a method for demodulating the sampled audio signal by the receiving device comprises:~~

~~the sampled audio signal is transformed from a time domain signal to a frequency domain signal;~~

64 points are used as an analyzing period, ~~the sampled audio signal in the frequency domain is analyzed,~~ if a frequency of one point having a maximum power is closest to ~~12 KHz~~f1, then an output result is "0"; if a frequency of a point having a maximum power is closest to ~~16 KHz~~f2, then an output result is "1"; and

16 bits are set as ~~a~~ the length of a window for performing a statistical analysis on the above-mentioned output result, if "1" in the output result of the window occurs more, then the modulated digital signal is "1"; if "0" in the output result of the window occurs more, then the modulated digital signal is "0"; the window is shifted for continuing to perform the above-mentioned statistical

analysis on the above-mentioned output result until all of the digital signals are demodulated.

9. The system according to claim 8, characterized in that, the receiving device is utilized for setting a count value having an initial value of 0, the output result in the window is traversed, the count value is increased by 1 when traversing to "1"; the count value is decreased by 1 when traversing to "0"; a position of a maximum absolute value of the count value is a distance to shift the window, and the window is shifted in accordance with the distance.

10. The system according to one of claims 6-9, characterized in that, the transmitting device comprises a speaker, and the receiving device comprises a microphone.