CLAIMS

1. A method for processing speech signals prior to encoding a digital signal comprising audio data, the method comprising:

selecting frequency domain coding or time domain coding based on

a coding bit rate to be used for coding the digital signal and

a short pitch lag detection of the digital signal; wherein the short pitch lag detection comprises detecting whether the digital signal comprises a short pitch signal for which the pitch lag is shorter than a pitch lag limit, wherein the pitch lag limit is a minimum allowable pitch for a Code Excited Linear Prediction (CELP) algorithm for coding the digital signal;

wherein the digital signal comprises a short pitch signal for which the pitch lag is shorter than a pitch lag limit, and wherein selecting frequency domain coding or time domain coding comprises:

selecting time domain coding for coding the digital signal when the coding bit rate is lower than a lower bit rate limit.

2. The method of claim 1, wherein the coding bit rate is lower than a lower bit rate limit when the coding bit rate is less than 24.4 kbps.

3. The method of claim 1, wherein the digital signal comprises a short pitch signal for which the pitch lag is shorter than a pitch lag limit, and wherein selecting frequency domain coding or time domain coding comprises:

selecting frequency domain coding for coding the digital signal when a coding bit rate is higher than an upper bit rate limit, and

4. The method of claim 3, wherein the coding bit rate is higher than the upper bit rate limit when the coding bit rate is greater than or equal to 46200 bps.

5. The method of claim 1, wherein the digital signal does not comprise a short pitch signal for which the pitch lag is shorter than a pitch lag limit, and wherein selecting frequency domain coding or time domain coding comprises:

selecting time domain coding for coding the digital signal when the digital signal is classified as unvoiced speech or normal speech.

6. The method of claim 1, further comprising coding the digital signal using the selected frequency domain coding or the selected time domain coding.

7. The method of claim 1, wherein selecting frequency domain coding or time domain coding based on the pitch lag of the digital signal comprises detecting for short pitch signal based on determining a parameter for detecting lack of very low frequency energy or a parameter for spectral sharpness.

8. An apparatus for processing speech signals prior to encoding a digital signal comprising audio data, the apparatus comprising a coding selector configured to select frequency domain coding or time domain coding based on a coding bit rate to be used for coding the digital signal and a short pitch lag detection of the digital signal, wherein the short pitch lag detection comprises detecting whether the digital signal comprises a short pitch signal for which the pitch lag is shorter than a pitch lag limit, wherein the pitch lag limit is a minimum allowable pitch for a Code Excited Linear Prediction (CELP) algorithm for coding the digital signal;

wherein when the digital signal comprises a short pitch signal for which the pitch lag is shorter than a pitch lag limit, the coding selector is configured to select time domain coding for coding the digital signal when the coding bit rate is lower than a lower bit rate limit.

9. The apparatus of claim 8, wherein the coding bit rate is lower than a lower bit rate limit when the coding bit rate is less than 24.4 kbps.

10. The apparatus of claim 8, wherein when the digital signal comprises a short pitch signal for which the pitch lag is shorter than a pitch lag limit, the coding selector is configured to

select frequency domain coding for coding the digital signal when a coding bit rate is higher than an upper bit rate limit.

11. The apparatus of claim 10, wherein the coding bit rate is higher than the upper bit rate limit when the coding bit rate is greater than or equal to 46200 bps.

12. The apparatus of claim 8, wherein when the digital signal does not comprise a short pitch signal for which the pitch lag is shorter than a pitch lag limit, the coding selector is configured to

select time domain coding for coding the digital signal when the digital signal is classified as unvoiced speech or normal speech.

13. The apparatus of claim 8, wherein the apparatus further comprising a coding unit which is configured to code the digital signal using the frequency domain coding selected by the selector or the time domain coding selected by the selector.