Highlights:

* The WORLD Vocoder is extended by adding a Rosenberg++ pulse as glottal excitation signal
* Vocal Quality is modified in real-time by using the proposed extended WORLD Vocoder
* Six simulated qualities are achieved: modal, breathy, rough, vocal fry and dysphonia
* A perceptual experiment shows that the synthethic modified voice is natural
* An objective assesment shows that voice quality is successfully modified