

## **TITLE**

Dynamic range compression with low distortion for use in hearing aids and audio systems

## **ABSTRACT**

Dynamic range compression in the hearing aids is provided for restoring normal loudness of low level sounds without making the high level sounds uncomfortably loud. An apparatus along with a method using sliding-band compression is disclosed for significantly reducing the temporal and spectral distortions generally associated with the currently used single and multiband compression techniques. It uses a frequency-dependent gain function calculated on the basis of auditory critical bandwidth based short-time power spectrum and the specified hearing thresholds, compression ratios, and attack and release times. It is realized using FFT-based analysis-synthesis and can be integrated with other FFT-based signal processing in hearing aids and audio systems.

Patent application No. 290/MUM/2014