

Title (en)
Method for operating a hearing device and hearing device

Title (de)
Verfahren zum Betreiben eines Hörgeräts und Hörgerät

Title (fr)
Procédé de fonctionnement d'un dispositif auditif et dispositif auditif

Publication
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Application
EP 13155108 A 20130213

Priority
EP 13155108 A 20130213

Abstract (en)
[origin: EP2768246A1] In hearing devices, it is known to use sample-rate conversion to adapt the sampling rate of a received digital audio signal to the sample rate applied by the signal processing in the hearing device. The present invention aims to improve in particular the control of the latency caused by such sample-rate conversion. This is achieved in a hearing device (100, 200) comprising a receiver (101), an input buffer (102) and a sample processor (103), the receiver (101) being adapted to receive samples of a digital audio signal and feed received samples as a digital input signal $x(n)$ to the input buffer (102), the sample processor (103) being adapted to process the buffered samples $x(n)$ to provide samples of a digital output signal $y(m)$ such that the digital output signal $y(m)$ is a sample-rate converted representation of the digital input signal $x(n)$ with a predetermined target sample rate F_y , characterised in that the hearing device (100, 200) further comprises an estimator (104) adapted to estimate an average or smoothed input-buffer level $I(t)$ indicating the number N of unprocessed samples $x(n)$ in the input buffer (102) and a ratio controller (105) adapted to control the sample processor (103) in a manner aiming at minimising the difference $e(k)$ between the estimated average or smoothed input-buffer level $I(t)$ and a target buffer level L . The invention allows for efficient and robust sample rate conversion with precise control of the latency, which depending on the implementation may be achieved at the cost of only minor artefacts in the processed signal.

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US 7246057 B1 20070717 - SUNDQVIST JIM [SE], et al

Cited by
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