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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
General audio codec audio processing functions;
Enhanced aacPlus general audio codec;
Additional decoder tools
(3GPP TS 26.402 version 14.0.0 Release 14)**

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Contents

Foreword

The present document describes tools used in the Enhanced aacPlus general audio codec for the general audio service within the 3GPP system.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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- z the third digit is incremented when editorial only changes have been incorporated in the specification;

1 Scope

This Telecommunication Standard (TS) describes the error concealment algorithm, SBR parameter downmix and output resampling for the Enhanced aacPlus general audio codec [3].

2 Normative references

This TS incorporates by dated and undated reference, provisions from other publications. These normative references are cited in the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this TS only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

[1] ISO/IEC 14496-3:2001/Amd.1:2003: "Bandwidth Extension".

[2] ISO/IEC 14496-3:2001/Amd.1:2003/DCOR1.

[3] 3GPP TS 26.401: "Enhanced aacPlus general audio codec; General Description".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of this TS, the following definitions apply:

band: (as in limiter band, noise floor band, etc.) a group of consecutive QMF subbands

envelope scalefactor: an element representing the averaged energy of a signal over a region described by a frequency band and a time segment

frequency band: interval in frequency, group of consecutive QMF subbands

frequency border: frequency band delimiter, expressed as a specific QMF subband

noise floor: a vector of noise floor scalefactors

noise floor scalefactor: an element associated with a region described by a frequency band and a time segment, representing the ratio between the energy of the noise to be added to the envelope adjusted HF generated signal and the energy of the same

SBR envelope: a vector of envelope scalefactors

SBR frame: time segment associated with one SBR extension data element

SBR range: the frequency range of the signal generated by the SBR algorithm

subband: a frequency range represented by one row in a QMF matrix, carrying a subsampled signal

time border: time segment delimiter, expressed as a specific time slot

time segment: interval in time, group of consecutive time slots

time / frequency grid: a description of SBR envelope time segments and associated frequency resolution tables as well as description of noise floor time segments

time slot: finest resolution in time for SBR envelopes and noise floors. One time slot equals two subsamples in the QMF domain