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Foreword

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1 Scope

The present document describes the detailed mapping from input blocks of 160 speech samples in 13-bit uniform PCM format to encoded blocks of 95, 103, 118, 134, 148, 159, 204, and 244 bits and from encoded blocks of 95, 103, 118, 134, 148, 159, 204, and 244 bits to output blocks of 160 reconstructed speech samples. The sampling rate is 8 000 samples/s leading to a bit rate for the encoded bit stream of 4.75, 5.15, 5.90, 6.70, 7.40, 7.95, 10.2 or 12.2 kbit/s. The coding scheme for the multi-rate coding modes is the so-called Algebraic Code Excited Linear Prediction Coder, hereafter referred to as ACELP. The multi-rate ACELP coder is referred to as MR-ACELP.

In the case of discrepancy between the requirements described in the present document and the fixed point computational description (ANSI-C code) of these requirements contained in [4], the description in [4] will prevail. The ANSI-C code is not described in the present document, see [4] for a description of the ANSI-C code.

The transcoding procedure specified in the present document is mandatory for systems using the AMR speech codec.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] GSM 03.50: " Digital cellular telecommunications system (Phase 2+); Transmission planning aspects of the speech service in the GSM Public Land Mobile Network (PLMN) system".

[2] 3GPP TS 26.101 : "Frame Structure".

[3] 3GPP TS 26.094: "AMR Speech Codec; Voice Activity Detector".

[4] 3GPP TS 26.073: "Adaptive Multi-Rate (AMR); ANSI C source code".

[5] 3GPP TS 26.074: "Adaptive Multi-Rate (AMR); Test sequences".

[6] ITU-T Recommendation G.711 (1988): "Pulse code modulation (PCM) of voice frequencies".

[7] ITU-T Recommendation G.726: "40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)".

[8] ITU-T Recommendation G.712

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply: