

عنوان مقاله:

Bit-width Optimization of CS-ACELP Speech Coder by SIMULINK: Core Layer of the New G.729.1 Standard

محل انتشار:

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خلاصه مقاله:

In this work, we present SIMULINK bit-true modeling of the conjugate structure-algebraic CELP (CS-ACELP) speech coder which has been chosen as the core layer of speech coder standard ITU-T G.729.1. The optimum bit numbers of the computational blocks are defined as the minimum word-widths that maintain the quality of the output with minimum chip area and power. Such optimum bitwidth of the coefficients and the internal computations are extracted. As a result, a golden model of the codec which best suits as a reference for its hardware implementation is developed. The power and area improvements are estimated in two blocks of CSACELP speech coder.

کلمات کلیدی:

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