

Vector Quantizer Method and Apparatus

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Abstract of the Disclosure

A Vector-Sum Excited Linear Predictive Coding (VSELP) speech coder provides improved quality and reduced complexity over a typical speech coder. VSELP uses a codebook
10 which has a predefined structure such that the computations required for the codebook search process can be significantly reduced. This VSELP speech coder uses single or multi-segment vector quantizer of the reflection coefficients based on a Fixed-Point-Lattice-Technique (FLAT). Additionally, this
15 speech coder uses a pre-quantizer to reduce the vector codebook search complexity and a high-resolution scalar quantizer to reduce the amount of memory needed to store the reflection coefficient vector codebooks. Resulting in a high quality speech coder with reduced computations and storage requirements.

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FIG. 2 accompanies this abstract.