Comparison of Low-Rate Speech Transcoders in Electronic Warfare Situations: Ambe-3000 to G.711, G.726, CVSD

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Abstract

Continuous efforts are active to reduce the bit rates but maintaining channel noise tolerance, secure transmission and justified MOS (mean opinion score) among various communication networks. These networks at their end-terminals may employ variety of vocoders operating at different individual bit rates. In order to maintain fidelity, transcoders are used to map the information when traffic flows from one channel operating at one bit rate to another channel operating on another bit rate as seen in the case of channels with different capacities. Some networks (like satellite communication and some private networks) employs codecs like AMBE (Advanced Multiband Excitation), CVSD for their very low bit rate, channel noise tolerant attributes and another features. In order to interface networks accompanying the said vocoders with that of public networks containing codec like PCM, ADPCM, we have done feasibility study for justified MOS using AMBE-3000 HDK. Also, we have compared Transcoders against MOS.

References


**Index Terms**

Computer Science  
Signal Processing

**Keywords**

Low rate, Speech coding, AMBE-3000, G.711, G.726, CVSD, Transcoding