

Speech and Audio Coding-A Brief Overview

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ABSTRACT

The historic "coding gap" between (narrow- and wide-band) high-rate and (narrow-band) low-rate coding of speech has been filled more and more during the past 15 years. The GSM coder of 1990 was a very important step right into the gap, and it caused more research towards better quality and higher compression, which, together with other activities world-wide, closed the gap. The concepts behind this are explained, with a stress on the basis of the final break-through to good quality at medium-to-low and even wide-band speech at medium rates. The same concepts followed for speech were also applied to music, with some strong differences in the results: While time-domain approaches prevail for speech, frequency-domain coding was successful for audio, and it was accompanied by much more exploitation of psycho-acoustic effects.