

# EVS AND OPUS AUDIO CODERS PERFORMANCE EVALUATION FOR ORIENTAL AND ORCHESTRAL MUSICAL INSTRUMENTS

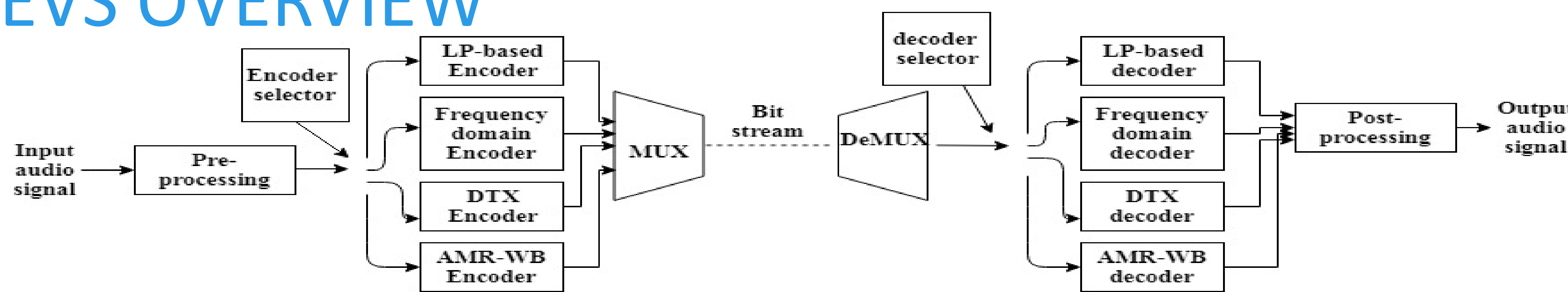
Yasser A. Zenhom, Eman Mohammed, Micheal N. Mikhael, Hala A. Mansour

Modern Academy for Engineering and Technology, Benha University, Faculty of Engineering at Shoubra, Cairo, Egypt

## Abstract

The newly audio coders such as EVS and OPUS coders designed and implemented to provide highly encoding quality with lower output bit rate. These coders operate with different input signal type. The quality performance of these coders achieved for clean orchestral and oriental musical instruments by MOS and the PEAQ evaluation methods.

## EVS OVERVIEW



The Basic block diagram of EVS audio coder.

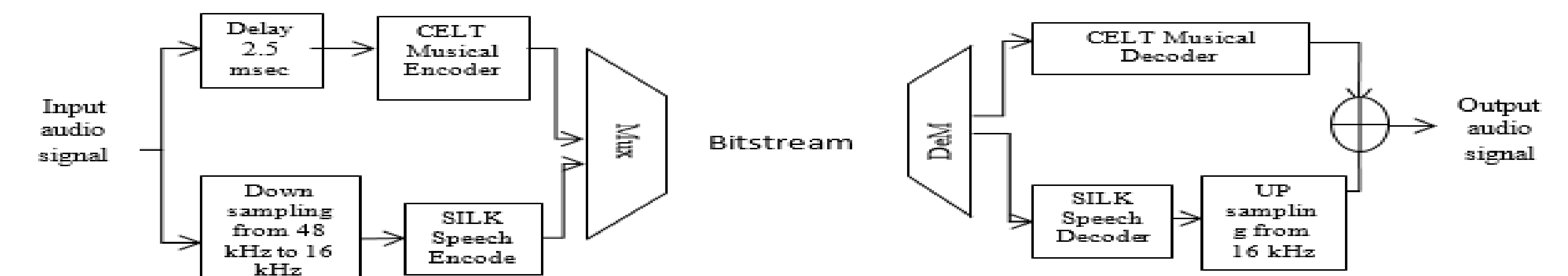
EVS audio coder includes different type of encoder schemes as illustrated in the basic block diagram to encode different input signal types. Therefore EVS provides highly encoding quality for speech, music and mixed content.

## OPUS OVERVIEW

The OPUS audio coder consists of two encoders as described in the basic block diagram uses to encode different signal types like speech, musical or mixed content signals.

## Conclusion

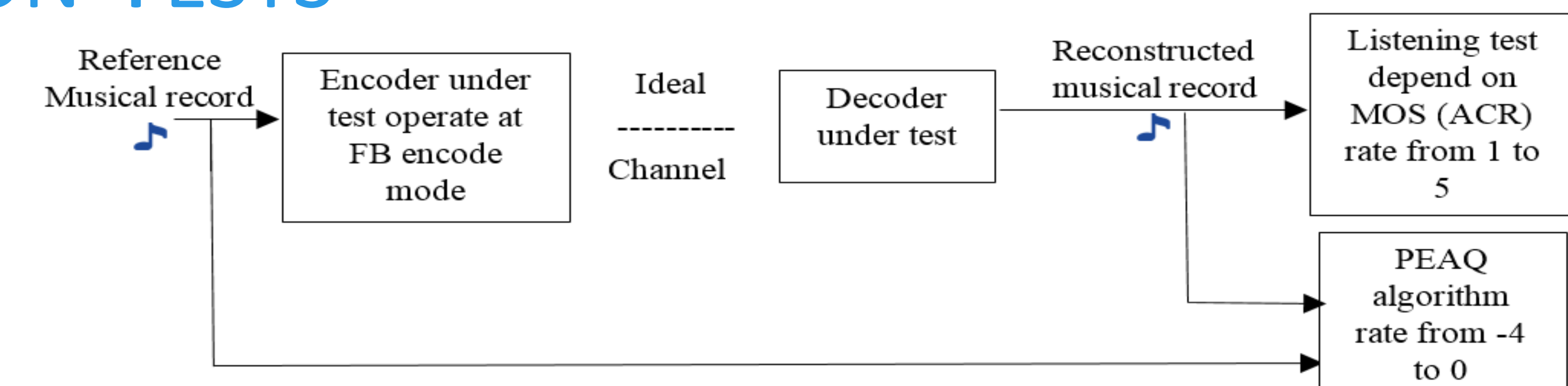
These evaluation methods proved that the EVS and OPUS audio coders provide high audio quality for various categories of musical instruments. The OPUS has the highest encoding quality than the EVS for different musical instruments at different output bitrates.



The basic block diagram of OPUS audio coder.

The down sampling operation uses to maximize the encoding gain to increase quality performance. But the 2.5 msec delay applied to input audio signal, this delay to make the output of the two encoders introduced at the same time.

## EVALUATION TESTS



Experiment procedures for Subjective and Objective Evaluation test.

The Subjective Quality Evaluation (SQE) method depends on human opinion for the synthesis signals. The Objective Quality Evaluation (OQE) method is a software algorithm, this method is easier than SQE. In this paper, the OQE achieved by PEAQ algorithm. The output bitrates of these two coders under test lie between 16.4 kbps to 128kbps.