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Abstract

This document contains a plan for video verification tests to be conducted to verify the coding performance of the VVC Multilayer Main 10 profile in several configurations: spatial scalability with optimized coding performance, quality ladder involving both spatial and quality scalability, and stereo coding. The three configurations involve output layer sets with maximum two layers.

Introduction

Multilayer coding capability is supported in VVC Multilayer Main 10 profile. Multilayer coding enables efficient transmission/storage of contents with different resolutions/qualities in broadcasting and streaming applications as well as additional functional features where the viewer/user can select different content according to their preference. In the verification test, several use cases relevant for multilayer coding are categorized: spatial scalability, quality ladder, content layering, and dual view (stereo). In broadcasting applications, the same contents are occasionally broadcasted simultaneously for both home TV sets and mobile terminals with different resolution. In streaming applications, the same video content is stored in the server at different qualities and resolutions; in such use case, multilayer coding can save storage space compared to coding and storing them separately. Meanwhile, personalized service in video distribution has become more important recently; multi language and sign language support are typical use cases of personalized service. Content layering makes those personalized services possible at video coding level whereas previously this functionality was only implemented at a higher system level.

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