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Algorithm description of Enhanced Compression Model 14 (ECM 14)

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Proposal

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Abstract

This document is Enhanced Compression Model 14 (ECM 14) software algorithm description. It includes the coding features and encoding methods implemented in ECM-14.0 software that are under coordinated exploration study by the Joint Video Exploration Team (JVET) of ITU-T VCEG and ISO/IEC MPEG as potential enhanced video coding technology beyond the capabilities of VVC. ITU-T VCEG (Q6/16) and ISO/IEC MPEG (JTC 1/SC 29/WG 5) are studying the potential need for standardization of future video coding technology with a compression capability that significantly exceeds that of the current VVC standard. Such future standardization action could either take the form of additional extension(s) of VVC or an entirely new standard. The groups are working together on this exploration activity in a joint collaboration effort known as the Joint Video Exploration Team (JVET) to evaluate compression technology designs proposed by their experts in this area. The first Exploration Experiments (EE) were established at the JVET meeting of 6–15 January 2021.

Introduction

This document provides algorithm description and encoding methods of the coding tools implemented in Enhanced Compression Model 14 (ECM 14) software. Tools consist of extensions of the tools in the existing VVC design and methods that were proposed but not included in the VVC standard [1], and also new coding tools beyond that.

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