

**Joint Video Experts Team (JVET)
of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC
29/WG 11**

Document: JVET-AH2019

MPEG: m68141

34th Meeting, Rennes,FR, 17-24 April 2024

Title: Description of algorithms and software in neural network-based video coding (NNVC) version 7

Status: Input document to JVET

Purpose: Proposal

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Abstract

This document is Neural Network-based Video Coding NNVC 9.1. It includes the coding features and encoding methods implemented in NNVC software that are under coordinated exploration study by the Joint Video Exploration Team (JVET) of ITU-T VCEG and ISO/IEC MPEG as potential neural network video coding technology beyond the capabilities of VVC. 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.

Introduction

This document provides algorithm description, encoding methods, and training methods of the neural network-based coding tools implemented in Neural Network-based Video Coding (NNVC) software. The neural network-based tools (NN-based tools) are to enhance or replace conventional modules in the existing VVC design [2]. The implementation of NN-based tools in NNVC are based on Small Ad-hoc Deep Learning (SADL) library [3]. It is recommended to refer to the software repository of NNVC [4] for the detailed information of VTM-11.0, which is the base of NNVC and the SADL documentation for the detailed usage of SADL.

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ABSTRACT

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Submitted by: Jens-Rainer Ohm

Title: Description of algorithms and software in neural network-based video cod

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CITATION

F. Galpin, Y. Li, D. Rusanovskyy, J. Ström, L. Wang, "Description of algorithms and software in neural network-based video coding (NNVC) version 7", JVET-AH2019, 34th Meeting: Rennes, FR, April 2024.