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| *Title:* | **TDVP scaling process for AMVP in 3D-HEVC** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Proposal | | |
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# Abstract

In the current 3D-HEVC, TMVP (temporal motion vector predictor) can be found and used both in Merge and AMVP modes. In Merge mode, when both the reference picture of the current block and the reference picture of the collocated block are inter-view pictures, the TDVP (temporal disparity vector predictor) can be scaled according to the view distance. On the other hand, AMVP only refers to the HEVC v1 specification, which means it does not consider the view distance when the temporal disparity vector is derived. In order to make both TDVP aligned, it is proposed for TDVP in AMVP to be scaled according to the view distance.

# Introduction

TMVP is used in 3D-HEVC for merge candidate list construction and motion vector prediction process, like in HEVC v1. Especially, in 3D-HEVC, the predictor derived from the collocated block can be either disparity vector or motion vector. If the predictor in the collocated block is a motion vector, it may be scaled according to the temporal distance (POC distance) when necessary. Otherwise, it is desirable that the disparity vector is also scaled using the view distance if needed. In fact, when the TMVP merge candidate is derived and it is a disparity vector (TDVP), it can be scaled according to the view information. However, when the collocated motion vector is a disparity vector in AMVP process, it is not scaled and just included as a TMVP candidate.



Figure Current TDVP derivation for AMVP

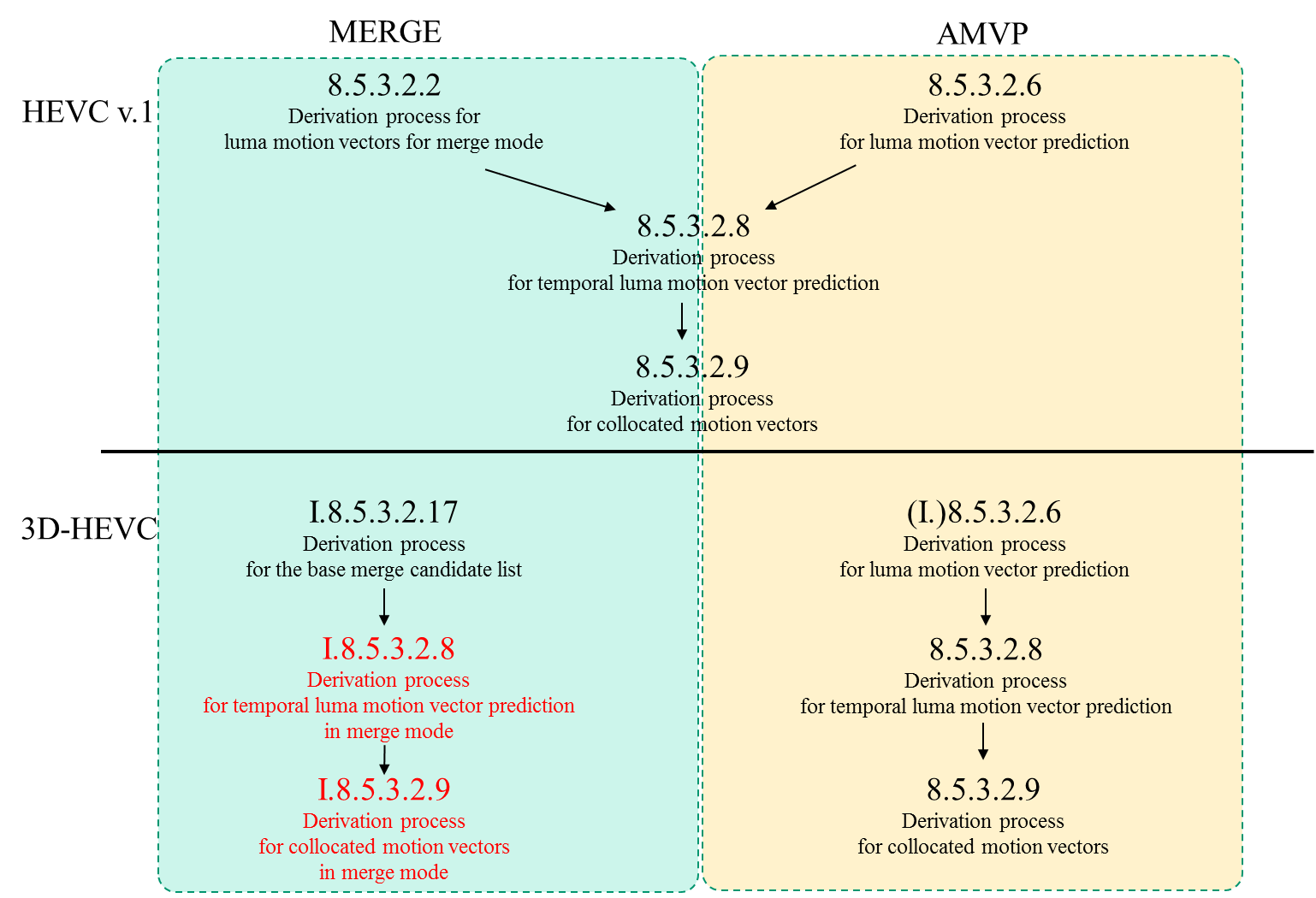


Figure Draft comparison for Merge and AMVP modes in HEVC v1 and 3D-HEVC

# Proposed method

In this document, it is proposed for the TDVP in AMVP to be scaled in order to align the TDVP handling process in both motion coding mode. As the TDVP in merge is handled, the TDVP in AMVP can be scaled using the view distance between the current picture and the reference picture of the current picture and the distance of the reference picture of the collocated picture and the collocated picture.



Figure Proposed TDVP scaling for AMVP

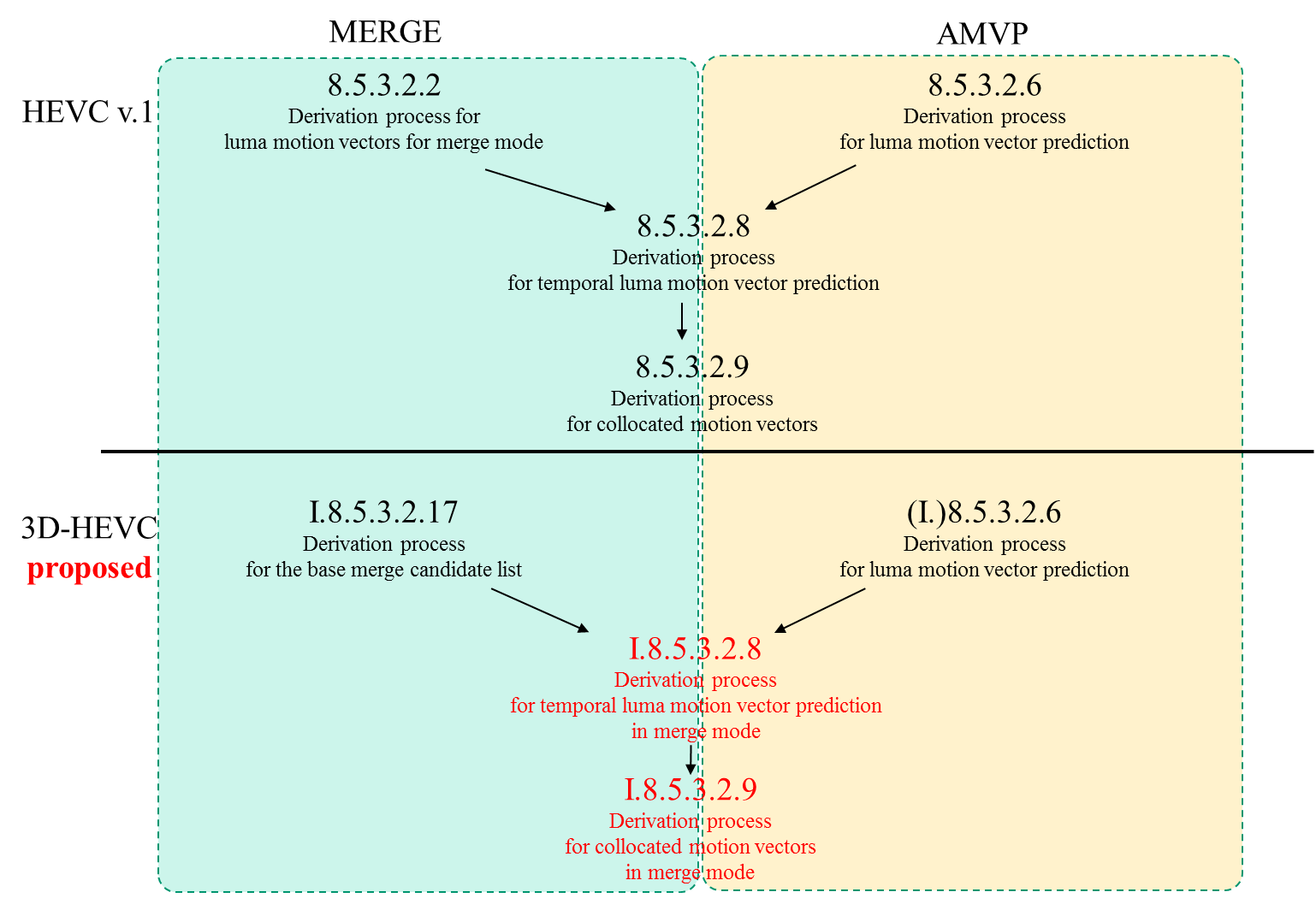


Figure Proposed draft structure for Merge and AMVP

# Proposed draft

The newly added parts compared to working draft are highlighted in yellow and the removed parts are marked with ~~strikethrough~~ for the proposed method.

I.8.5.3.2.6 Derivation process for luma motion vector prediction

The specifications in clause 8.5.3.2.6 apply, with the following modifications:

All invocations of the process specified in clause 8.5.3.2.8 are replaced with invocations of the process specified in clause I.8.5.3.2.8.

# Patent rights declaration

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