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Title: **AHG12: On tile configuration signalling**

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Abstract

This contribution proposes a method for signalling of tile partitioning where tile partitioning can be signalled based on the numbers of rows and columns or based on the width and height of the tiles. It is asserted that such flexibility provides bit saving for signalling of tile partitioning information.

Introduction

The current tile partition is defined by a set of tile columns and a set of tile rows. Tile column runs from the top of a picture to the bottom of the picture. Likewise, tile row runs from the left of the picture to the right of the picture. While such partitioning scheme makes the definition of tile simpler, the signalling of parameters of tile partitions could be more efficient.

When tile partition has uniform spacing, if a picture is partitioned into relatively high number of tile columns and tile rows, tile partition information can be signalled based on tile's width and height. Parallel processing is needed to encode and sometimes also decode large resolution video (such as 4K, 8K or even higher). To cope with the higher resolution, more processing units would need to be used so that more granulated tile partition is required. Examples of such granularity for common high resolution video are shown in Figure 1. The case a) on the figure corresponds to HEVC with minimum tile size equal to 4x4 in term of CTUs with size 64x64 pixels. It is noted that fixed signaling by width and height instead of the numbers of columns and rows is more efficient. Moreover, during MCTS extraction process updating of the number of columns and rows within tile group is required, but if width and height is used for signalling then there is no change in signaling, because the width and height of each tile are the same before and after extraction.

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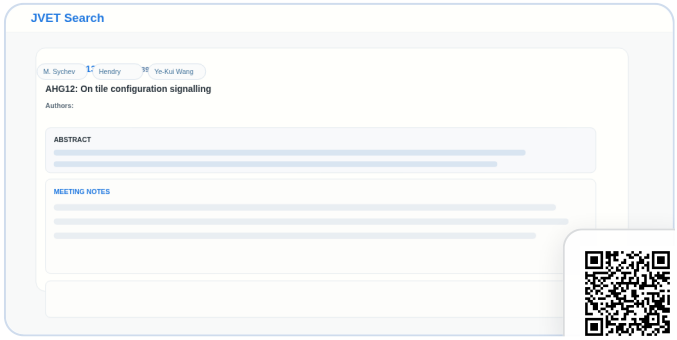

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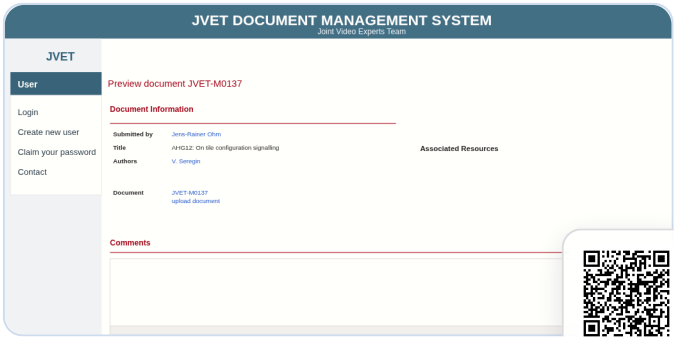

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MEETING NOTES

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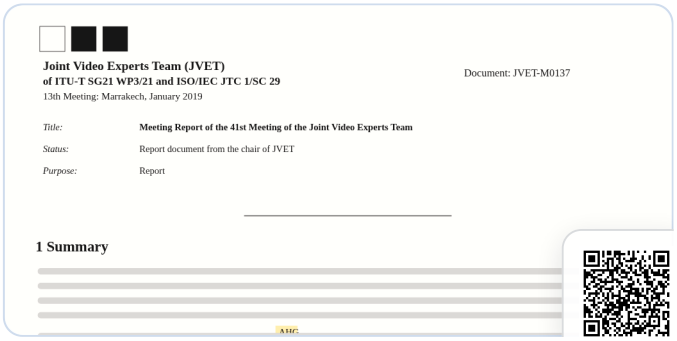

MEETING NOTES

JVET-M0137 AHG12: On tile configuration signalling [M. Sychev, Hendry, Y.-K. Wang (Huawei)]

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REFERENCES

1. Y.-K. Wang, Hendry, R. Sjöberg, S. Deshpande, "Spec text for the agreed starting point on slicing and tiling", JVET-L0686, 12th Meeting: Macao, October 2018.