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**[V-PCC] Report of CE2.18 on patch packing**

# Abstract

This document provides a report for core experiment 2.18 on patch packing. Sony’s proposal for global patch packing was evaluated in the scope of this CE, and compared against the anchor software, which already has a global patch packing strategy. Here we show that the proposed new technique from Sony can better stabilize the patch locations, improving the results compared to the current technique.

# Introduction

In the Macao meeting (MPEG 125), a technique for global patch allocation was adopted into the current test model software. In the Geneva meeting (MPEG 126), Sony brought a proposal for global patch packing [1], and showed gains compared to the anchor. This report (and the attached documents to this contribution) analysis the code performance implemented on top of TMC2v6.0.

# Results

In the scope of this CE, we provide a software that can stabilize the entire sequence or only a limited size of the sequence. For example, 32 frame-GOF can be divided into 4 sub-GOFs, and the 8 frames can be analyzed by the proposed algorithm separately.

To obtain the results published together with this contribution, please use the following syntax:

32 frames analysis: --globalPackingStrategy=1

8 frame analysis: --globalPackingStrategy=1 --globalPackingStrategyGOF=4

The excel sheet contains the results for 32 frames and all frames.

# Conclusion

The proposed method was able to temporarily stabilize the sequences more than the current GPA method. The method may be affected by the inconsistent patch matching/generation but limiting the GOF size may help. Further improvements could be achieved by improving the patch generation and the patch matching algorithm.

# References

1. “[V-PCC] New Contribution on Patch Packing,” ISO/IEC JTC1/SC29 WG11 (MPEG) input document m47499, Geneva, CH, March 2019