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| *Title:* | **JCT-VC AHG report: Complexity of SCC extensions (AHG9)** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Report | | |
| *Author(s) or Contact(s):* | Alberto Duenas Madhukar Budagavi Rajan Joshi Seung Hwan Kim PoLin Lai Wei Wang Xiaoyu Xiu | Email: | [alberto.duenas@ngcodec.com](mailto:alberto.duenas@ngcodec.com) |
| *Source:* | Ad Hoc Group | | |

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# Abstract

This document reports on the work of the JCT-VC ad hoc group on Complexity of SCC extensions (AHG9) between the 21st JCT-VC meeting in Warsaw, Poland (June 2015).and the 22nd JCT-VC meeting in Geneva, Switzerland (October 2015).

# Introduction

At the 21st meeting of the ITU-T/ISO/IEC Joint Collaborative Team on Video Coding (JCT-VC), AHG7 on SCC extensions text editing was established with the following mandates:

* Analyze complexity characteristics of current and proposed SCC coding methods with regards to throughput, amount of memory, memory bandwidth, parsing dependencies, parallelism, pixel processing, chroma position interpolation, and other aspects of complexity as appropriate.
* Quantify and compare the average and worse case throughput (context-coded as well as bypass bins) for SCC coding methods.
* Study latency and parallelism implications of SCC coding techniques, considering multicore and single-core architectures.
* Identify criteria to determine the hardware implementability of the key hardware modules.
* Identify bottlenecks in the current design with regard to implementation complexity.

# Reflector discussions

No coordinated AhG activity took place on the JCT-VC reflector between the 21st JCT-VC meeting in Warsaw, Poland (June 2015).and the 22nd JCT-VC meeting in Geneva, Switzerland (October 2015).

# Related contributions

Document related HEVC SCC complexity are listed below. The remarks in parenthesis indicate the related area:

JCTVC-V0037: On SCC Level Limits (DPB size)

JCTVC-V0039: New High Throughput Profiles for HEVC (throughput)

JCTVC-V0040: Performance of the SCM with macro SCM\_U0095\_FAST\_INTRA\_ACT enabled (encoder speedup)

JCTVC-V0046: On the CU-level escape flag in the palette mode (parsing)

JCTVC-V0047: On the parsing process for the palette mode (parsing)

JCTVC-V0048: On bi-prediction restriction when intra block copy is enabled (memory bandwidth)

JCTVC-V0050: On Storage of unfiltered and unfiltered current decoded pictures (DPB size)

JCTVC-V0050: On intra block copy signalling and constraints (DPB size)

JCTVC-V0057: DPB considerations when current picture is a reference picture (DPB)

JCTVC-U0058: Intra block copy constraints for non-444 video (DPB size)

JCTVC-V0061: Simplification for the index of the MSB in the paletteRun binarization (throughput)

# Recommendations

The AhG recommends to review the contributions related to mandates.