

*Title:* JCT-VC AHG report: Best-effort decoding with reduced decoding complexity (AHG 21)  
*Status:* Input Document to JCT-VC  
*Purpose:* Ad-hoc group report  
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*Source:* AHG 21

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## Abstract

This report summarizes the activities of Ad Hoc Group 21 on support for range extensions between the 13th and 14th JCT-VC meetings.

## Mandates

The ad hoc group was mandated to:

- Identify use cases and key functional elements for application of reduced-complexity decoding processes for decoding of bitstreams encoded for HEVC and its extensions
- Analyse trade-offs for optimization of video quality in the application of reduced-complexity decoding processes
- Particularly study characteristics of design and optimization for decoding processes with reduced bit depth
- Consider and analyse the impact of inter-picture dependencies and cross-region spatial prediction dependencies in the application of reduced-complexity decoding processes
- Study potential approaches to describe/specify the provision of best-effort decoding capabilities in the HEVC text specification

## Discussion

Motivations for such techniques were discussed on the JCT-VC mailing list, with comments made about minimum quality levels, controlling the use of such features, the relationship to scalability and a use case for still picture decoding.

## Contributions

A contribution on the topic providing use cases, a summary of an implementation of such a technique and providing additional options as to how to craft the specification is provided in JCTVC-N0291 [1]. Similar input has also been submitted to the parent bodies on possible use cases.

## Recommendations

It is recommended to –

- Present the input document

## References

- [1] D. Flynn, G. Martin-Cocher, and D. He, “[ahg21] best-effort decoding of 10-bit sequences: use cases, requirements and specification methods.” JCTVC-N0291, July 2013.