

Example restriction flags for VVC

JVET-L0042

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Design principles

- ♦ Cover as much of the decoding process as possible with different restriction flags
- ♦ Make the restriction flags independent of each other
- ♦ Each restriction flag to cover as many processing steps as possible while at the same time giving as low coding loss as possible when disabled



When a tool is disabled

- ♦ Affects the decoding process
- ♦ Preferably bypassing a processing step (e.g. `disable_intra_ref_sample_filter`)
- ♦ In some cases a simple fallback method is used (e.g. `disable_intra_planar` replaces planar mode with DC mode)
- ♦ All fallback methods are existing methods so no new technology needs to be added



Why does it need to affect decoding?

- ◆ Gives much larger coding loss if "dummy bits" are sent
- ◆ Some coding tools can be avoided in the encoding process but most are part of a larger technology.
- ◆ How could an encoder avoid intra reference padding?
- ◆ Root CBF?
- ◆ Context derivation for split flags?
- ◆ Scaling of motion vector predictors?

Additional details

- ♦ The example in L0042 contains 63 restriction flags
- ♦ Many of them corresponds to restriction flags in the xvc codec
- ♦ Restriction flags for ALF are missing in L0042

