VESA DSC v1.2a Guidance on Deriving DSC Rate Control Parameters

Application Note

Revision 1.0

04 February, 2019

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DSC v1.2a Standard (*DSC v1.2a*) and related support tools provide several methods that list or deterministically generate valid rate control (RC) parameters for use within a DSC Picture Parameter Set (PPS). The PPS structure is normative; which method is chosen to generate the RC values is implementation-specific. Any of the following methods are valid and have been shown to provide visually lossless quality:

1. *Annex E, "Derivation of Rate Control Parameters (Informative),"* of any in-force *DSC Standard*
2. .cfg files included with the in-force *DSC C model*
3. *DSCParameterValuesVESA V1-2* spreadsheet
4. *VESA DSC 1.2a DSC Tools Application Note*
   (provides the same PPS values as *DSCParameterValuesVESA V1-2* spreadsheet)

The PPS values that are generated using any of these methods are typically the same for a given configuration. Methods 1 and 2 provide empirically determined parameters for each supported configuration. Methods 3 and 4 use a common formula to derive values for any combination of DSC variables. The formula approach may yield slight differences in the derived PPS parameters from the original parameter sets. These differences are not consequential to the coding performance because all parameter sets have been shown to produce visually lossless quality.

Deviating from the recommended PPS values generated by these methods could result in visually lossy compression or errors; thus, care should be taken if the recommended methods are **not** used.

Revision History

Date	Revision	Description
February 4, 2019	1.0	Initial release.

Support for this Application Note

If you have a product that incorporates DSC, ask the company that manufactured your product for assistance. If you are a manufacturer, VESA can assist you with any clarification you might require. Submit all comments to support@vesa.org.

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