

M29738/JCTVC-N115

On RGB to YCbCr conversion for screen contents

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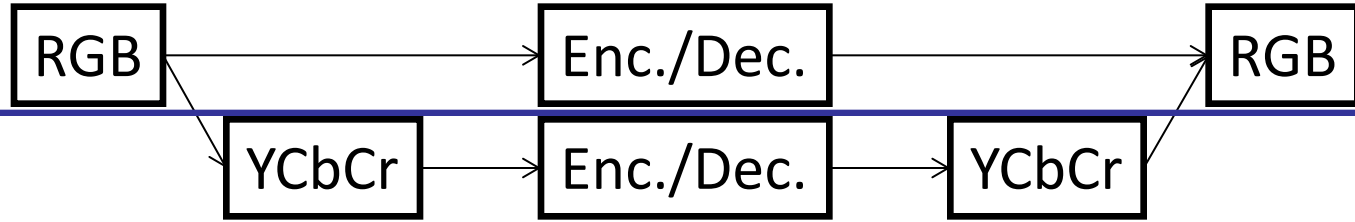
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Overall summary

- Investigate objective quality of JCT-VC RGB test sequences from a viewpoint of color space conversion from RGB to YCbCr and back to RGB
- RGB-domain PSNR of screen contents obtained by color space conversion tends to be lower than that of natural video sequences
 - Due to this, coding performance of YCbCr coding is obviously worse than that of direct RGB coding for screen contents at high bit rate
- For non-camera captured contents, direct coding with original color space could be more important than YCbCr domain coding

RGB coding or YCbCr coding?

Direct RGB coding



YCbCr coding

- PSNR:
$$PSNR_{average} = \frac{PSNR_G + PSNR_B + PSNR_R}{3}$$

- YCbCr coding is obviously worse performance than direct RGB coding for screen contents at high bit rate

