CCITT SGXV
Working Party XV/1
Specialists Group on Coding for Visual Telephony

Document #286

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SOURCE : NTT, KDD, NEC and FUJITSU

TITLE : FILTER IN THE CODING LOOP

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1. Introduction

This document compares control methods and applications (luminance only or luminance and chrominance) of the loop filter by Flexible Hardware.

2. Comparison of control metheds and applications

We consider next four cases for the purpose of the comparison on the conditions described in Annex.

a) filter off
b) filter on (luminance) (MC based control)
c) filter on (luminance) (side information control)
d) filter on (luminance & chrominance) (side information control)

Pictures made by FH will be demonstrated by VCR at the meeting.

3. Conclusion

As a result , picture quality shows that there is not significant difference even if control methods and applications of the loop filter are changed.

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Conditions of demonstrated pictures are as follows

(1) Transmission rate

- 320 kbps
- Quantizer is changed in GOB unit to keep the transmission rate.

(2) Coding frame rate

- 10 frames per second (fixed).

(3) Block attribute

- VLC set of Doc.#249 is used in case of a), c), d).
- VLC set of RM3 is used in case of b).

(4) Processing area of loop filter

- Inside block.

(5) MC control of loop filter

- Loop filter is switched on if motion vector is not zero.

(6) Side information control (in case of c),d))

- Loop filter is swiched on if filterd predicton error is smaller than non-filterd prediction error.