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

doc no. #207
March 1987.

Source: NL

Title : POST PROCESSING (for information only).

INTRODUCTION

Simulation results are shown in order to illustrate that the subjective quality achieved by the RM3 can be improved through post processing.

Two post processing algorithms have been examined:
- a filter based on a minimum variance algorithm.
- a filter which applies a lineair least square error algorithm.

EXPERIMENTAL RESULTS

statistics for the 15th frames:

SPLIT-SCREEN coded RM3 at 300 KBIT/S: SNR = 35.69 dB.
SPLIT-SCREEN filtered (M.V.A.): SNR = 36.52 dB.
SPLIT-SCREEN filtered (L.L.S.E.A.): SNR = 36.49 dB.

MISS AMERICA coded RM3 at 300 KBIT/S: SNR = 40.64 dB.
MISS AMERICA filtered (M.V.A.): SNR = 41.46 dB.
MISS AMERICA filtered (L.L.S.E.A.): SNR = 41.27 dB.

CONCLUSION

During the last CCITT SGXV Specialists Group on Coding for Visual Telephony working periods, members tried to optimize the coder with different VLC codes. The results were inconclusive in the sense that the improvements where not that better.
Post-processing however gives a significant objective and subjective improvement. This gain in performance is greater than many of the "improvements" proposed for the reference model. Therefore one could wonder if we are not focussing too much on saving a few bits at the cost of greatly increased complexity in the source coding and the video multiplex. Therefore the results can be more significantly influenced by post-processing.