CCITT SGXV
Working Party XV/1
Experts Group for ATM Video Coding

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SOURCE: Norway
TITLE : Simulations with very low bitrates - (8-16) kb/s.
PURPOSE: Information.

Preliminary simulations have been carried out to investigate the feasibility of compressing live video to bitrates that may be handled by modems and analog telephone lines.

Coding method.

The coding method is of type "hybrid DCT". Most of the elements are similar to H.261. The main differences from H.261 are:

- Motion compensation is performed on 8*8 or 16*16 blocks.
- Half pixel motion vectors are used instead of integer pixel MC and loop filter.
- The syntax on macro block level is simplified to reduce bits spent on overhead.
- Optimised VLC is used to code transform coefficients.
- The picture format is QCIF.
- A quantization matrix similar to that defined in MPEG is used to reduce the number of bits spent on high frequency coefficients.

Simulation results.

Simulations have been performed with the sequences CLAIRE and MISS AMERICA. The picture frequency is not fixed. The variation is part of the buffer regulation. The average picture frequency is (8-10) Hz.

Simulations are made on (8-16) kb/s. One example of 32 kb/s is also shown.