CCITT
Specialists Group on Coding for
Visual Telephony

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Title: Compatibility between n x 384 kbit/s and
m x 64 kbit/s-Codecs

Source: F, FRG, NL, UK

An intensive discussion in Europe has shown, that there is a strong interest in a coding scheme that operates from n x 384 kbit/s down to 64 kbit/s.
The coding scheme of RM4 and of the flexible hardware specification contains all relevant elements, e.g. MC, DCT, quantizer and classifier, to satisfy this requirement.

As shown in former documents No. 234 and 266, related papers for this meeting and corresponding tape demonstrations, the "macro block technique" can solve this task by adding minor elements to RM4 and to the current hardware specification to allow for reasonable good picture quality at 64 kbit/s. The additions mainly concern the video multiplex structure and the allocation of motion vectors to blocks.

We consider the "macro block technique" as one candidate to solve the compatibility problem between n x 384 and m x 64 kbit/s codecs by providing a coding algorithm capable for the whole range p x 64 kbit/s (p = 1, 2, ..., 30) and encourage further consideration of this problem. We propose to incorporate flexibility (e.g. for the video mux) or further study items into the final recommendation of an n x 384 kbit/s codec to allow for operation down to 64 kbit/s, which is considered as a mandatory item.