SOURCE: Japan
TITLE: mx64kb/s Codec Picture Format

1. Japanese Position

Japan held national meetings for confirming the picture format specification (full CIF and 1/4 CIF), which was an agreement of the Tokyo meeting. After deliberations, we confirmed to include 1/4 CIF as a format smaller than full CIF in the specification. However, we are of the opinion that it is also necessary to include a medium resolution between full CIF and 1/4 CIF in the specification. Discussed points were as follows:

1) It is reasonable that the picture format specification is determined based on the considerations described in Doc #317R page 8.

2) Including 1/4 CIF into the specification is agreeable. This format satisfies the expectations that manufacturers provide simple, small and cheap videophone terminals, and that videophone services spread out smoothly in home uses.

3) A medium resolution, e.g., 4/9 CIF, should be also included in the specification, because:

This format is considered to give the minimum acceptable spatial resolution for videoconferencing (three persons seated side by side).

A spatio-temporal trade-off of reconstructed images can be held in good balance with this format.

2. Proposal

In the last Tokyo meeting, the group discussed the spatial resolution aspect mostly and had not enough time to discuss temporal resolution and a format determination method in a session. This proposal tries to fill out the specification.

a) Spatial resolution: $576/i$ lines X $720/i$ pels, i=2,3,4.

The numbers of horizontal (and/or vertical) pixels at the input of video source coder may be adjusted by cropping a part of active area or by adding a part of blanking area to convenient numbers for video source coder, e.g., multiples of 16.

b) Temporal resolution (minimum coded frame interval): $j/29.97$ sec, j=1,2,3,4.

c) Intercommunication among the three formats is based on the concept that larger formats cover all the smaller ones. This rule ensures the connectivity among the three formats and encourages the performance evolution.

d) A format in a session is determined through a negotiation. The negotiation first determines the value of i, then determines the value of j. The negotiation details are for further study.

e) Two to one horizontal and vertical subsampling for the chrominance signal.