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

Document AVC-29
910429

SOURCE : B,F,FRG,I,N,NL,UK
TITLE : Common Progressive Picture Format for High Quality Applications.
PURPOSE : Proposal

Background.

For low bitrate coding, the Common Intermediate Format (CIF) has been defined. This is a worldwide format which is of great importance for communicational services with worldwide coverage.

The format is progressive and this has been recognized to be of great advantage for digital image processing.

In computer graphics, progressive picture formats are used as well.

For TV applications the digital format is defined in CCIR 601. This is an interlaced format. This format is for the time being the main format under consideration for MPEG2/CCITT Experts Group for ATM.

We recognize great advantages with using progressive scan formats for digital image compression, and would therefore propose to define a progressive format as an alternative to the existing CCIR 601 interlaced format for high quality applications (e.g. broadband communicational services and TV applications).

The main advantages of a progressive format are considered to be:

- A progressive format removes artifacts like line flicker and reduces aliasing in time.
- Simple compatibility with CIF used in H.261.
- Simple compatibility with computer graphic formats.

Proposal.

It is proposed that:

- There shall be a common, worldwide picture format also for high quality video applications.

- The format shall be progressive and have simple relations to CIF.

- It is proposed that the new format has two times as many pixels in horizontal, vertical and time dimension as CIF. This implies that the new format should be:

59.94 frames/second.
576 vertical lines for Y.
288 vertical lines for U,V.
720 horizontal pixels for Y
360 horizontal pixels for U,V.