

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

Document AVC-362
October, 1992

SOURCE : Japan
TITLE : Picture Header of skipped Picture
PURPOSE : Proposal

1. INTRODUCTION

The low delay adhoc group has recommended to introduce the picture skipping at the Tarrytown meeting. But one item, whether the picture header of the skipped picture should be sent or not, is still an open question. This document supports to send the picture header.

2. PROPOSAL

To send the picture header of skipped picture is preferable because

- 1) missing numbers of the temporal reference field never appear in the completely received bitstream
- 2) it becomes easy to distinguish between the case of picture skipping and the case of cell loss or reading error from some media
- 3) similarity to the MPEG-1 can be kept at the syntax level
- 4) and to get these advantages, quite a little cost is required.

And in order to explicitly declare the skipped picture, to extend the `picture_coding_type` is proposed. Specification of the coded video bit stream syntax and its semantic are described below.

```
picture() {
    picture_start_code          32  bslbf
    temporal_reference          10  uimsbf
    picture_coding_type        3   uimsbf
    vbv_delay                   16  uimsbf
    ...
    ...
    if (picture_coding_type!=5) {
        do {
            slice()
            ...
            ...
        } while(nextbits()==slice_start_code)
    }
}
```

picture_coding_type--The **picture_coding_type** identifies whether a picture is an intra-coded picture(I), predictive-coded picture(P), bidirectionally predictive-coded picture(B), intra-coded with only DC coefficients(D), or skipped picture(S) according to the following Table. D-pictures shall never be included in the same video sequence as the other picture coding types. When S-picture, there should be no data for below the slice layer.

picture_coding_type	coding method
000	forbidden
001	intra-coded(I)
010	predictive-coded(P)
011	bidirectionally-predictive-coded(B)
100	dc intra-coded(D)
101	skipped(S)
110	reserved
...	...
111	reserved

END