Telecommunication Standardization Sector
Study Group 15
Experts Group for ATM Video Coding
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CODING OF MOVING PICTURES AND ASSOCIATED AUDIO

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Title : MPEG-2 / H.26X error resilience based on data partitioning

Purpose : Information

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1. Introduction

The purpose of this contribution is to summarize the results we have obtained when using the data partitioning scheme as an error resilience technique.

2. Description of the experiments

The Data Partitioning has been implemented as described in TM5. Two sequences have been processed : ***Mobcal*** and the downsampled version of ***Ski***. The simulation conditions are the following ones :

Number of pictures :	50
Value of M :	3
Value of N :	12
Bit Rate :	9 Mbit/s
Number of lines :	576
Frame rate :	25 Hz

Two types of PBP (Priority BreakPoint) combinations have been tried :

PBP=8 for MB-intra / PBP=6 for MB-inter
PBP=4 for MB-intra / PBP=3 for MB-inter

The bitstream generated is packetized at the slice level into high and low priority packets (Partition 0 to HP packets and Partition 1 to LP packets).

A cell loss rate of 10^{-3} has been selected for those simulations using a random generation of cell losses. The cell losses are assumed to affect the LP packets only.

No concealment technique has been implemented at the decoder side.

The proportion of bit rate in each partition is given in the table and figures; the picture quality can been assessed by viewing the D1 tape.

3. Results

PBP	Sequence	Part 0	Part 1
(8,6)	Mobcal	42 %	58 %
	Ski	52 %	48 %
(4,3)	Mobcal	36 %	64 %
	ski	43 %	57 %

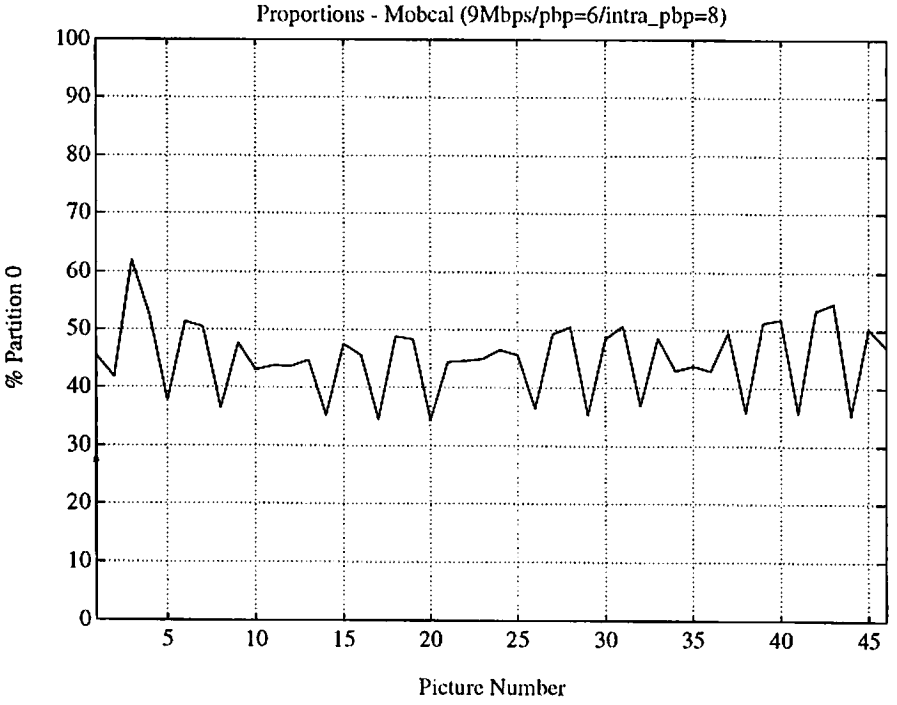

Figure 1

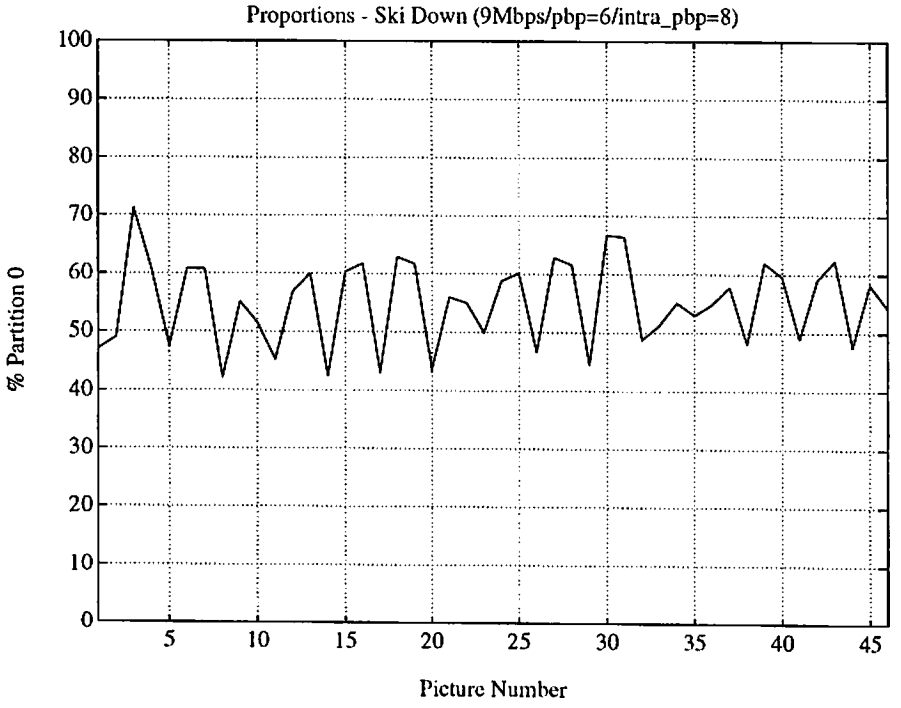

Figure 2

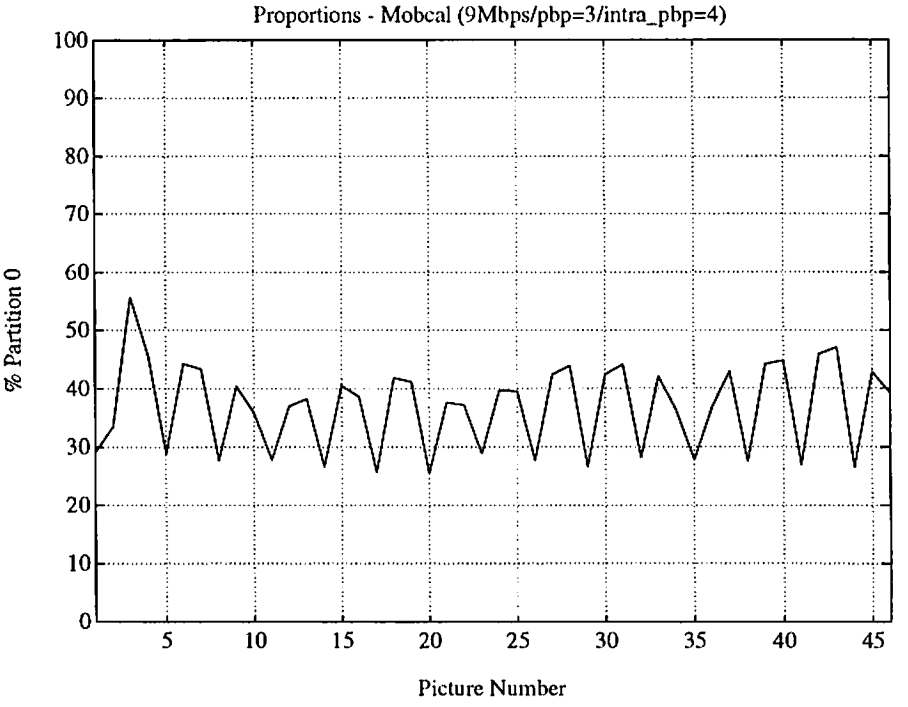

Figure 3

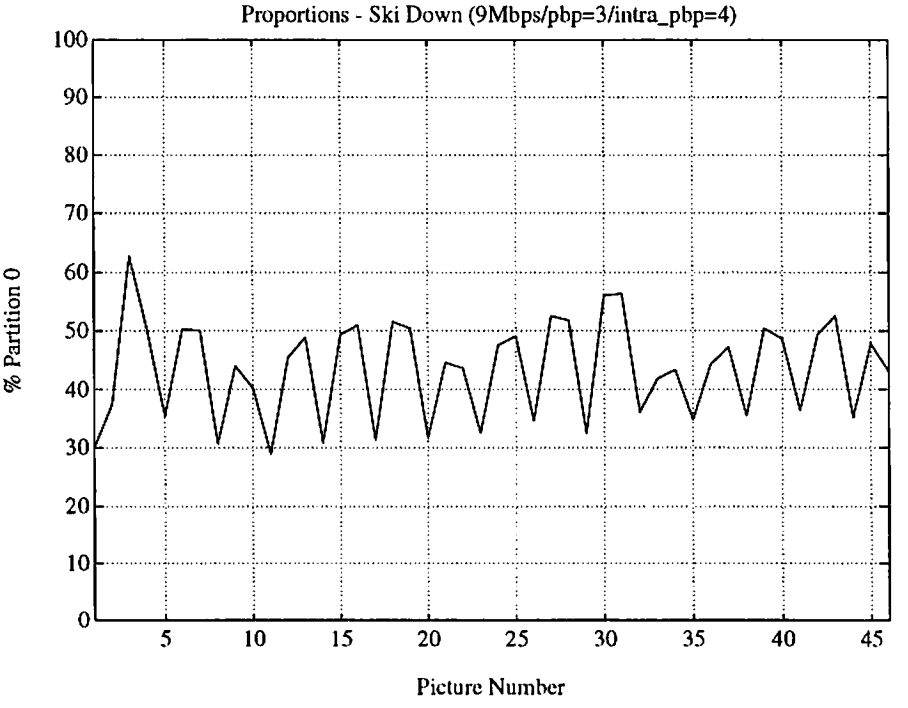

Figure 4