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Experts Group for ATM Video Coding

Source: Daimler-Benz, Germany

Purpose: Patent Information

Title: Method of Decoding Coded Image Data

DE 39 39 136 (Germany)

EP 901 221 50 (Europe)

Filed for application in the US

Priority: 27. Nov. 1989

Inventors: Volker Eisenhardt, Georg Kummerfeldt, Franz May, Winfrid Wolf

What is claimed is a method of decoding coded image data using frame to frame prediction, where the decoding procedure is supervised and, if a not allowed situation occurs (e.g. leaving agreed paths in the decoding tree) due to transmission errors or lost cells, the decoding procedure is stopped and no more pixel values are used for updating the frame store used for prediction. The decoding procedure is started againat the next frame, field or group of block start code word.

Applied to an H.261 decoder the invention works in principle as follows: an error detector supervises the macroblock attributes, the dequantised spectral components, the displacement vectors, the EOB-markers, etc. and checks if their values are in accordance with the agreed decoding procedure. If an error is detected the decoding procedure is stopped and no more data are added to the predicted picture content until a Group of Block Start Code is detected. Now the decoding procedure starts again. This error concealment procedure protects (in most cases) the reconstructed pictures to be disturbed by annoying data produced by erroneous decoding after transmission errors or lost transmission packets (cells).