MPEG Video Decoder with Integrated

Scaling and Display Functions.

Abstract

A digital video decoder system (40), method and article of manufacture are provided having integrated scaling capabilities for presentation of video in full or predetermined reduced size, while allowing for reduced external memory requirements for frame buffer (53) storage. An existing decimation unit (82) is used to scale the decoded stream of video data when the system is in scaled video mode. Display mode switch logic (52) oversees switching between normal and scaled video mode, without perceptual degradation of a display of the decoded stream of video data. Scaled decoded video frames are buffered in a frame buffer which is partitioned depending upon whether the digital video decoding system is in normal video mode or scaled video mode. In scaled video mode, the frame buffer accommodates full size I and P frames, and scaled I, P & B frames.

Fig. 4