

ABSTRACT OF THE DISCLOSURE

ADAPTIVE DISPLAY CONTROLLER

[0036] A multi-function display controller that includes a source detector unit for determining if the source of an input stream is either film originated source originated or video source originated. A source converter unit for converting the input image stream to a common signal processing format is coupled to the source detector unit. Once converted to the common signal processing format, a determination is made if the input image stream is interlaced or non-interlaced (progressive scan). If the input image stream is interlaced, a de-interlace unit converts the interlaced signal to progressive scan using either motion adaptive or motion compensated de-interlacing techniques. It should be noted that in the described embodiment, motion vectors generated for use by the motion compensated de-interlace can be optionally stored in a memory unit for use in subsequent operations, such as motion compensated frame rate conversion or noise reduction (if any).