BIT-SPLITTING FOR PULSE WIDTH MODULATED SPATIAL LIGHT MODULATOR

ABSTRACT OF THE DISCLOSURE

A method of implementing pulse-width modulation in a display system (10, 20) that uses a spatial light modulator (SLM) (15). Each frame of data is divided into bit-planes, each bit-plane having one bit of data for each pixel of the SLM and representing a bit weight of the intensity value to be displayed by the pixels. Each bit-plane has a display time corresponding to a portion of the frame period, with bit-planes of more significant bits having longer portions. Then, the display times for one or more of the more significant bits are segmented so that the data for those bits can be displayed in segments rather than for a continuous time. (FIGURE 3A). The segments are distributed throughout the frame period to reduce visual artifacts. (FIGURE 3B).

FIGURE 1

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