

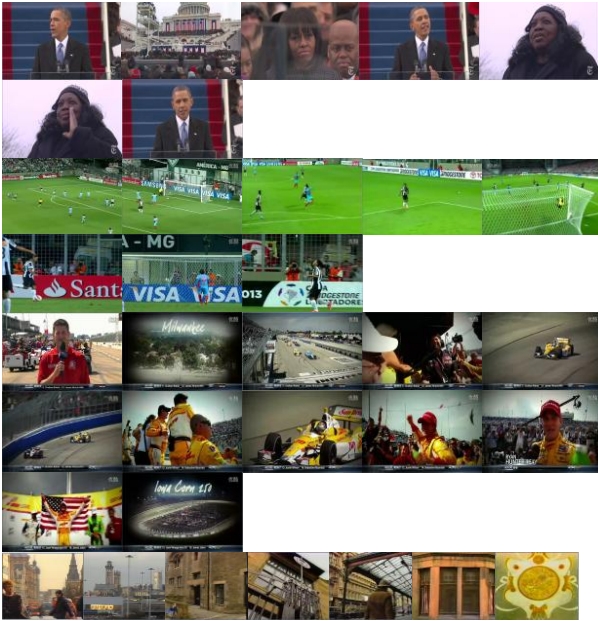








(b) SVD ( $N=15, \tau=0.25$ ) method in [6]



(c) Proposed algorithm



(d) Manual annotation

Fig. 2 Extracted key frames of four different kinds of video segments

The proposed algorithm can be used for online processing of streamed videos, since it does not require the entire video for processing. Moreover, this algorithm can extract the least number of key frames which have the most common features and not sensitive to scale, illumination change. Experimental results show that the proposed algorithm is robust to a wide range of digital effects of shot transitions, and can extract the most meaningful key frames similar with manual annotation compared with those histogram-based or SVD-based methods.

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