

Ukrid Kuldiloke 2009: Region Substitution in Video Using Graph Cuts Technique.
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Frequently, a screen editor have to edit a video shot by cutting parts of a video clip and patching them onto a targeted video. Even though the cut-and-paste method is efficient for editing still images, it is not appropriate for the same purpose on editing video clips since the assigned patched area is fixed while contents continuously change. In this research, we propose an automatic video patching method that preserves continuousness at the borders of the patched area by determining appropriate cut masks of every frame using a graph cut algorithm. In our algorithm, it does the same thing as the cut-and-paste does except that the patched mask is automatically adapted to contents on new frames. We evaluate the quality of our results by generate five experimental samples and let twenty people mark the area which they believe the composition has occurred then we summarize the results such as recall, false positive and undetectable. The percentages are thirty-one, forty-two and twenty-seven respectively. We also compare our results with the same video generated from Sony Vegas, a video editing application from Sony. The percentages of recall, false positive and undetectable of Sony Vegas results are fifty-seven, thirty and thirteen respectively.

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