

Fast Temporally Consistent 3D Video Generation for 3D Video Contents

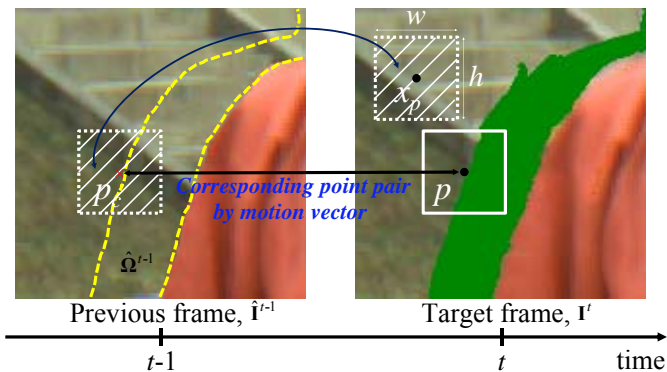
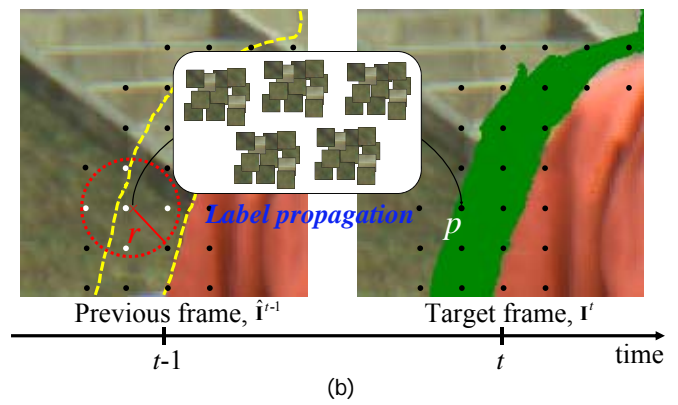
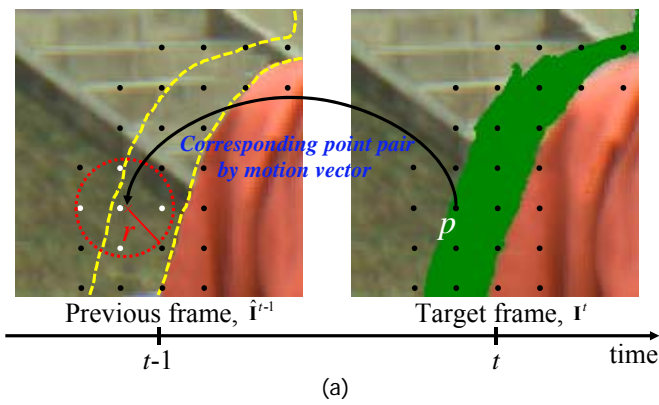
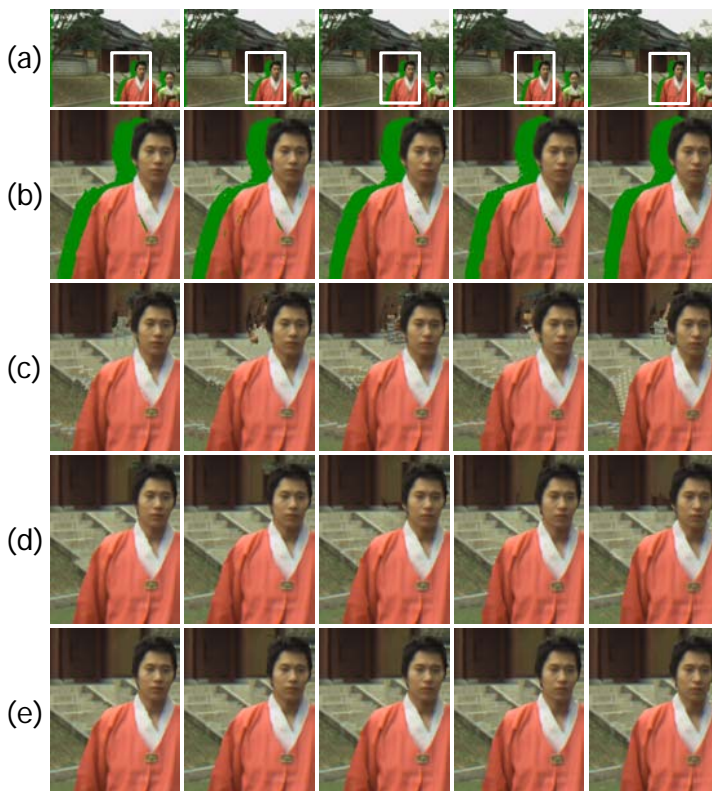


Illustration of the proposed temporally consistent 3D video generation in global optimization framework.



Proposed label propagation for reducing the computational complexity of view synthesis. (a) Finding a temporally corresponding point in the previous frame. (b) Label propagation of pruned labels in the previous frame. Note that we collect the labels stored at nodes around corresponding point of node p in (a) and they are propagated to the node p to fill the target region centered at node p .



3D video generation results for "Lovebird1" (181-185 frames).

- (a) Consecutive five frames.
- (b) Magnified parts of (a).
- (c) Local greedy based method.
- (d) Global optimization based method.
- (e) Proposed method.

Table 1. Average flicker value over frames

Methods	Ballet	Lovebird1	Newspaper
Local greedy based method	23.69	33.08	36.21
Global optimization based method	7.11	15.07	35.71
Proposed method	1.98	2.28	4.92

Table 2. Average computational gain over frames

	Ballet	Lovebird1	Newspaper
Computational gain	x 42.24	x 48.87	x 40.37