

Generative Layered Model



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Layered Segmentation and Optical Flow Estimation Over Time

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Occlusion Reasoning

[7] Weiss, Smoothness in Layers: Motion Segmentation Using Nonparametric Mixture Estimation. CVPR, 1997. [8] Xu, Jia, & Matsushita. Motion Detail Preserving Optical Flow Estimation. IEEE TPAMI to appear.



















MAX-PLANCK-GESELLSCHAFT

Toy Example

Classic+NL [4] Layers++ [5] nLayers Flow field

Multiple Frames Help



Middlebury Optical Flow Benchmark



MIT Layer Segmentation Benchmark

| HGVS [1] | nLayers | Flow field | Ground truth |
|------------------------|-----------|------------|--------------|
| | | | |
| Rand Index (RI): 0.766 | RI: 0.979 | | |
| RI: 0.689 | RI: 0.766 | | |
| RI: 0.499 | RI: 0.881 | | E |