

A Factorization Approach to Structure from Motion with Shape Priors

Alessio Del Bue

Institute for Systems and Robotics – Instituto Superior Técnico
Av. Rovisco Pais 1 – 1049-001 Lisboa – Portugal

<http://www.isr.ist.utl.pt/~adb/>

1. Experiments supplemental material

The file `delbue_additional_material.zip` includes videos showing the 3D reconstructions of the image sequences presented in the experimental section. The videos are compressed using a Cinepack and Microsoft Video 1 (msvc) codecs. Better video quality is obtained with the latter. In the following you can find a list of the filenames with their content.

1.1. Deformable face with ground truth

- `vicon_2dsequence.avi` shows the 2D data used for the synthetic sequence. The subject is mainly moving mouth and eyebrows (160 frames, 37 points).
- `vicon_no_priors.avi` shows front, side and top views of the experiment using the method without priors. The reconstruction is quite poor, depth and shape orientation are varying erratically.
- `vicon_with_priors.avi` shows front, side and top views of the experiment using the shape priors.

1.2. Image data with motion degeneracy

- `sequence_rigid.avi` shows the image sequence used to reconstruct the rigid shape of the first subject (75 frames, 65 points). This 3D shape will then be used as a shape prior.
- `degenerate_cvpr08_withpriors.avi` shows the image sequence with the tracked points (upper left), front (upper right), side (bottom left) and top (bottom right) views of the experiment real image data. The subject is mainly talking with almost no head motion (45 frames, 65 points).

1.3. Articulated shape with priors

`asfm_measurements_3d.avi` shows the image sequence (Left) used to reconstruct the two articulated bodies linked by a universal joint. On the right, the video shows

the corresponding 3D reconstruction with the joint position in green.

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