TPA 5: Tessellation of moving edges from non-restrictive videos

August 21, 2012

Problem Statement: This project is aiming at construction of a spatiotemporal volume (STV) using moving edges extracted from non-restrictive video shots and create a reasonable tessellation (triangulation) on the surface of STV.

Input: Input to the system are the following

• Arbitrary video shot

Expected Output: The developed code should be able to do the following

• Generate wireframe model of the STV surface

Hint for excellence: Special Credit will be given if the designed system could able to create smooth space-time volume from non-restrictive video shots having camera movement

References

- Meltzer, J.; Soatto, S.; , "Edge descriptors for robust wide-baseline correspondence," Computer Vision and Pattern Recognition, 2008. CVPR 2008. IEEE Conference on , vol., no., pp.1-8, 23-28 June 2008
- Susan M. Haynes, Ramesh Tain, Detection of moving edges, Computer Vision, Graphics, and Image Processing, Volume 21, Issue 3, March 1983, Pages 345-367
- Zhenhua Wang; Nan Geng; Zhiyi Zhang; , "Surface Mesh Reconstruction Based on Contours," Computational Intelligence and Software Engineering, 2009. CiSE 2009. International Conference on , vol., no., pp.1-4, 11-13 Dec. 2009
- G. Cong and B. Parvin; "Robust and efficient surface reconstruction from contours", The Visual Computer, Volume 17, Number 4 (2001), 199-208

• Hwang, T.-L.; Clark, J.J.; , "On local detection of moving edges," Pattern Recognition, 1990. Proceedings., 10th International Conference on , vol.i, no., pp.180-184 vol.1, 16-21 Jun 1990