

Sketch-based approaches using images and curves

Mots clés :

- **Directeur de thèse** : Anne Verroust-Blondet
- **Co-encadrant(s)** :
- **Unité de recherche** : Laboratoire Traitement et Communication de l'Information
- **Ecole doctorale** : École Doctorale Informatique, Télécommunications, Électronique de Paris
- **Domaine scientifique principal**: Divers

Résumé du projet de recherche (Langue 1)

Many sketch-based approaches have been proposed to create 3D models (see surveys [1, 2]). Some of them use sketched curves (see [3, 4, 5] for example). The goal here is to study and develop a sketch-based approach that uses both curves and images to build a 3D shape (see [6] and [7]). A variant of this approach for content-based object retrieval will be studied in a second step. [1] M. T. Cook, A. Agah, A survey of sketch-based 3-D modelling techniques, *Interacting with Computers*, Volume 21, Issue 3, July 2009, Pages 201-211. [2] L. Olsen, F. F. Samavati, M. C. Sousa, J. A. Jorge, Sketch-based modeling: A survey, *Computers & Graphics*, Volume 33, Issue 1, February 2009, Pages 85-103 [3] Eyiurekli, M., Grimm, C., and Breen, D. 2009. Editing level-set models with sketched curves. *Proceedings of the 6th Eurographics Symposium on Sketch-Based interfaces and Modeling* (New Orleans, Louisiana, August 01 - 02, 2009). [4] F. Levet, X. Granier and C. Schlick, 3D Sketching with Profile Curves, *International symposium on Smart Graphics, Lecture Notes in Computer Science*, 2006, Volume 4073/2006, 114-125, [5] F Levet, X Granier, Improved skeleton extraction and surface generation for sketch-based modeling, *Proceedings of Graphics Interface 2007* [6] Olsen, L. and Samavati, F. F. 2010. Image-assisted modeling from sketches. *Proceedings of Graphics interface 2010* (Ottawa, Ontario, Canada, May 31 - June 02, 2010). [7] Prasad, M. and Fitzgibbon, A.W. and Zisserman, A. and Van Gool, L. Finding Nemo: Deformable Object Class Modelling using Curve Matching, *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, San Francisco, 2010