Three-dimensional Printing and 3D Slicer

Powerful Tools in Understanding and Treating Structural Lung Disease

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e-Appendix 1.

Glossary of Terms

Voxel: Analogous to a pixel in 2D space (ie. a pixel on a computer screen), a voxel defines the value of a point in 3D space.

.STL: A file format originally developed by 3D systems to use for stereolithography CAD software. It is now one of the most popular software formats for 3D printing.

GrowCut volume segmentation: It is a region-growing algorithm where user input foreground and background color for a selected area of interest on the image. The algorithm will then seek out adjacent pixel that best match the user input example.

Airway segmentation: Using chest CT images the algorithm segment all the pixels with an intensity below a threshold, output volume is also automatically created.

Region-growing: an umbrella terms incorporate different segmentation technique.

Fiducial/seed: this is a user selected pixel where it serves as a reference value for the segmentation algorithms to work.

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