Anatomy Modeling based on volumetric data

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PROBLEM

Volumetric Data

Polygon Mesh Data
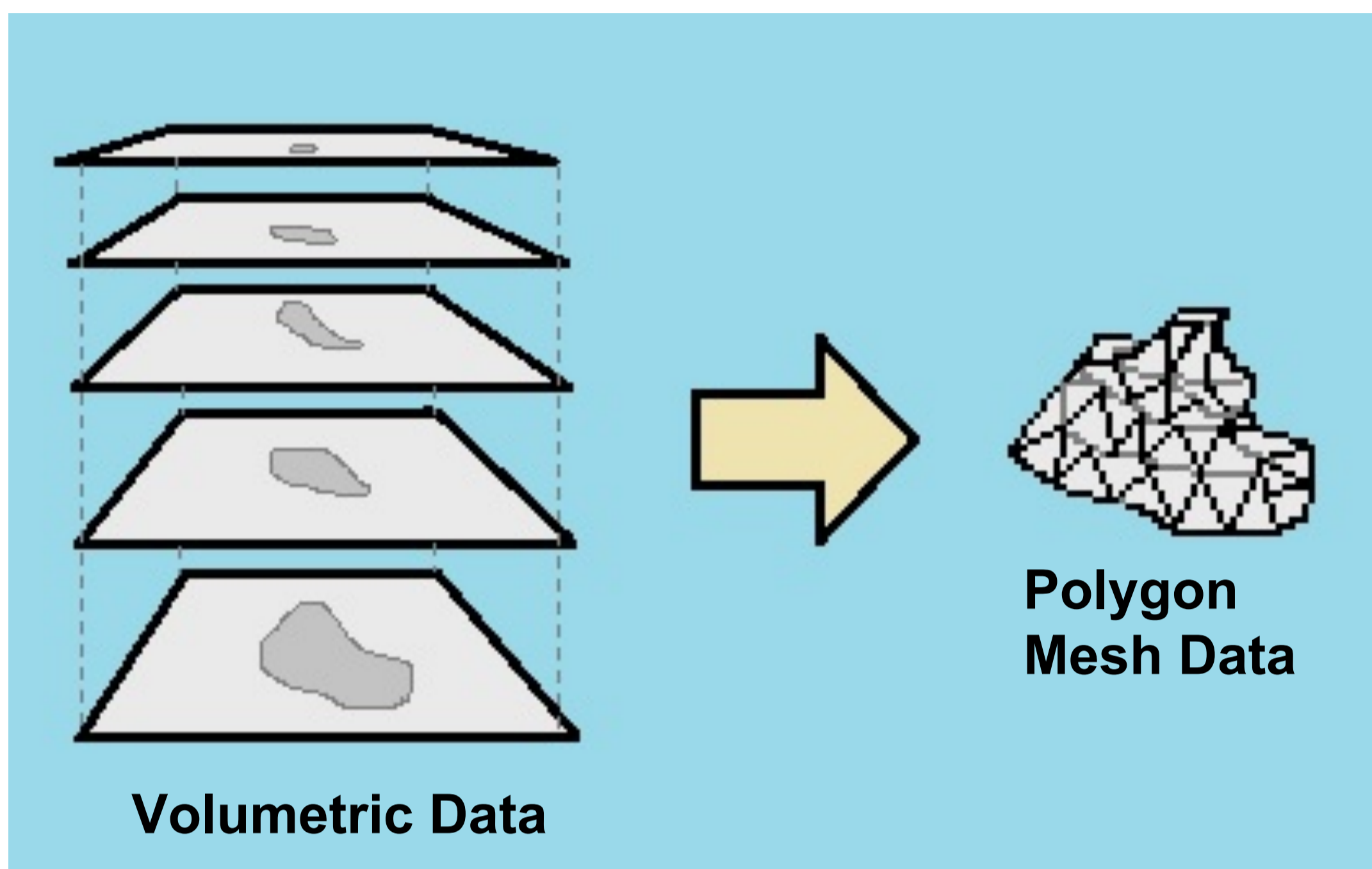
-Choosing best parameters, for rounding and deviation when converting Volumetric Data into Polygon Data Mesh

-Choosing the parameters rightly would imply into computationally cheap model without losing its fidelity

MOTIVATION

-Polygonal mesh data is the most used type in computer Graphics, it is one of the cheapest and fastest way to store 3D data, so it is useful converting a volumetric data into a polygon mesh, the problem is the number of points generated versus the fidelity of the model.

Algorithm used

- Marching Cubes with deviations and gaussian smoothing.

Framework and Data source

- Implemented using VTK
- Volumetric medical data from The Visible Human Project

SOLUTION

- An user-friendly software where you can change parameters, apply the algorithm and see the result