3d Brain Atlas Reconstructor

Software dedicated for automatic generation of models of 3D brain structures.

Project goals

1. Creating software dedicated to automated reconstruction of 3D brain models. Key features:
    - ♦ Generating model of any combination of structures (ie. basing on structures hierarchy),
    - ♦ Arbitrary resolution of generated model (depends on source atlas quality only),
    - ♦ Exporting models in VRML format as polygonal mesh or volumetric data.
    - ♦ Modularity: One 3D model generation module, many wrappers for different input atlases.

2. Support the software with:
    - ♦ Own data (ultimate goal),
    - ♦ Existing 2D atlases (as training sets).

3. Creating special dataset format
    - ♦ Based on SVG format,
    - ♦ Adapted for handling representation of brain structures,
    - ♦ Supporting brain regions hierarchy,
    - ♦ Maximizing possibilities of atlasing systems interoperability.

4. Ultimately, 3D Brain Atlas Reconstructor would be available as an open source project and on-line service with API.

3d Brain Atlas Reconstructor workflow