Requirements Specification (Jira)

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Table of Contents

3D Testing Model

DONE

A 3D model should be created to be a able to test the system.

It needs a relatively high level of complexity.

It should be textured in a way to showcase the coloring functionality of the Voxelizer system.

Resolution

DONE

As a user, I want to be able to set the wanted resolution of the voxelized output.

Relates	
relates to	Shell voxelization
relates to	Solid voxelization

Restructure code base

DONE

As a developer, I need the core codebase to have a good structure and be easy to maintain, so that other functionality that builds upon the core is easy to develop with high quality.

Implement a spatial index

DONE

three.js raycasting optimization

DONE

Surface voxel coloring

DONE

Blocks	
is blocked by	Shell voxelization

Voxel coloring

TO DO

MTL file format import support

TO DO

Blocks	
is blocked by	OBJ file format import support

Solid voxelization

DONE

As a user, I want to be able to produce a filled volume voxelization of a 3D model.

Relates	
relates to	Resolution
Blocks	
is blocked by	Shell voxelization

Shell voxelization

DONE

As a user, I want to be able to produce a shell voxelization of a 3D model.

Relates	
relates to	Resolution
Blocks	
blocks	Solid voxelization
blocks	Surface voxel coloring

Voxelization algorithm

TO DO

As a user, I want to be able to voxelize a 3D model.

SCHEMATIC file format export support

TO DO

BINVOX file format export support

DONE

XML file format export support

DONE

VOX file format export support

TO DO

Exporting support for various file formats and data structures

TO DO

Octree export support

TO DO

3D array export support

DONE

STL file format import support

TO DO

glTF file format import support

TO DO

OBJ file format import support

TO DO

Blocks	
blocks	MTL file format import support

Automation

TO DO

As a maintainer, I want the project to be heavily automated, so that is easy to maintain.

Automatic testing

DONE

As a repository maintainer, I want all new code changes to be automatically tested.

Automatic publishing

DONE

As a repository maintainer, I want the publishing of new modules to be automated.

3D model importing support

TO DO

As a user, I want to be able to load 3D model files of various types, so that I can voxelize the model.