mitk::ImageVtkMapper2D

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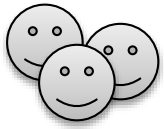
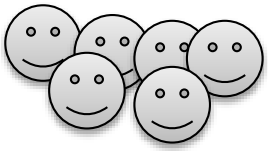
Poll about the topic

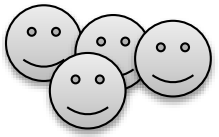
What is a mapper?



How does the image mapper work?



How to write a rendering test?

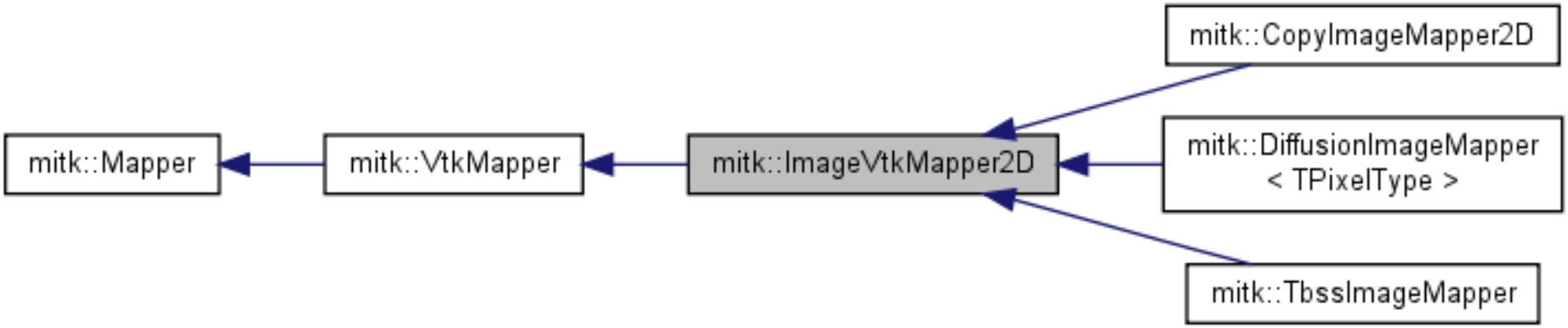


What is a mapper? (short answer)

- Prepares objects to be rendered on a 2D screen
- Defines how to render them (e.g. slice, volume, outline, Q-ball, …)
- Can be modified via properties

Now an example …

- … the mitk::ImageVtkMapper2D

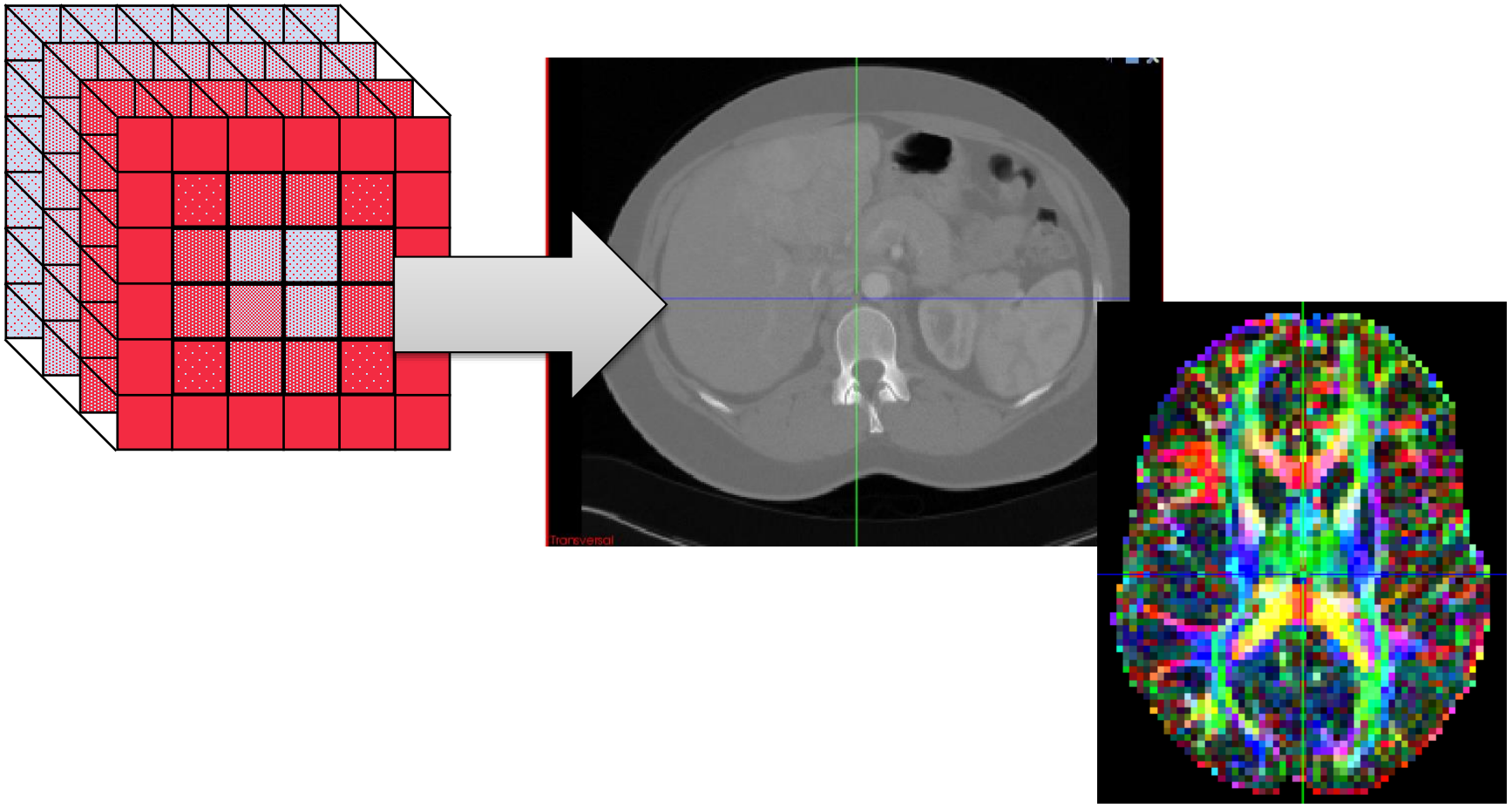


- Alternative (deprecated) base class: GLMapper

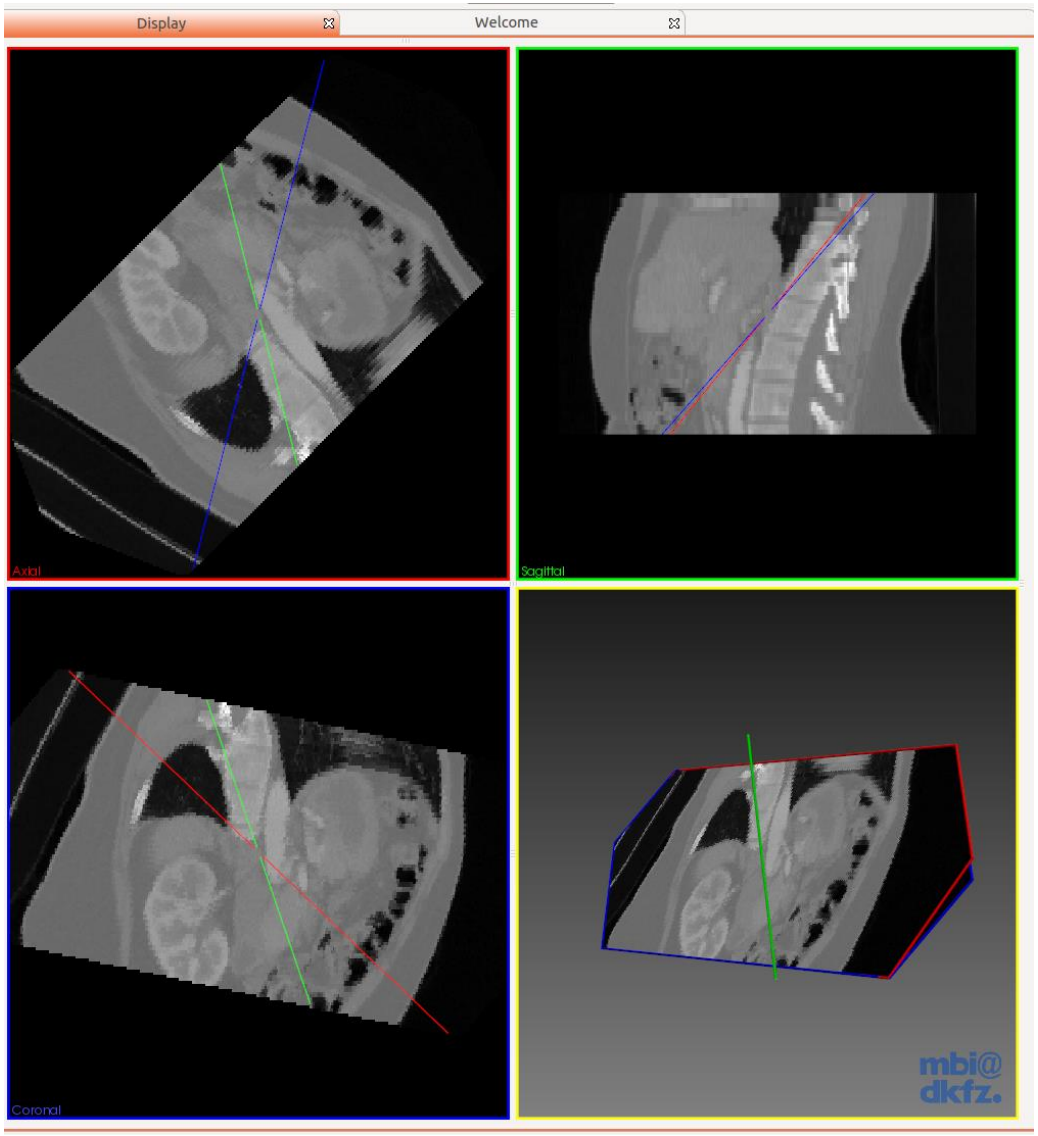
What means prepare?

Volume (in memory)

Colors/gray scale (on display)

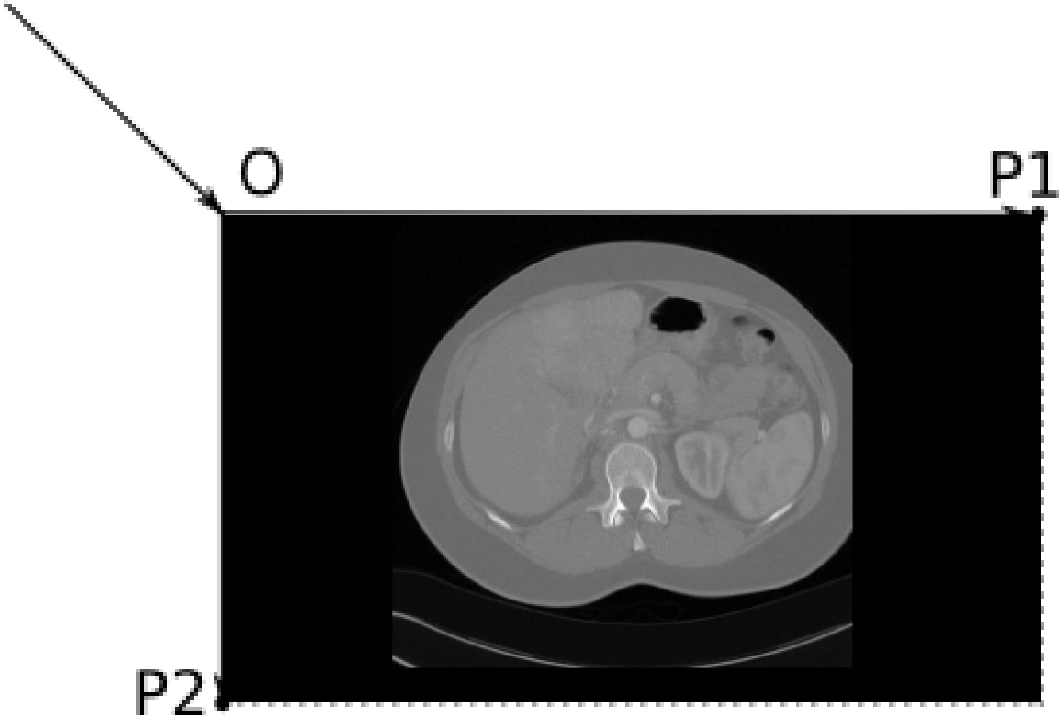


Reslicing with mitk::ExtractSliceFilter

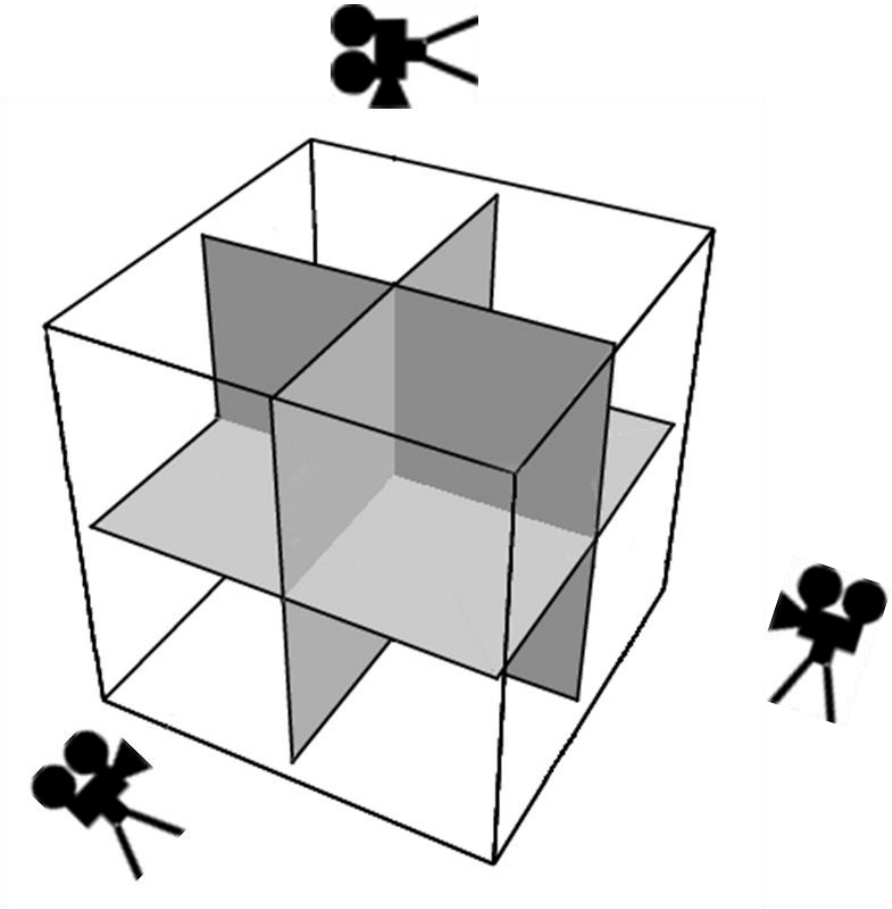


Create image plane at the 3D world position

- It is actually in 3D!!!
- No it is not, because it is on a 2D screen ☺

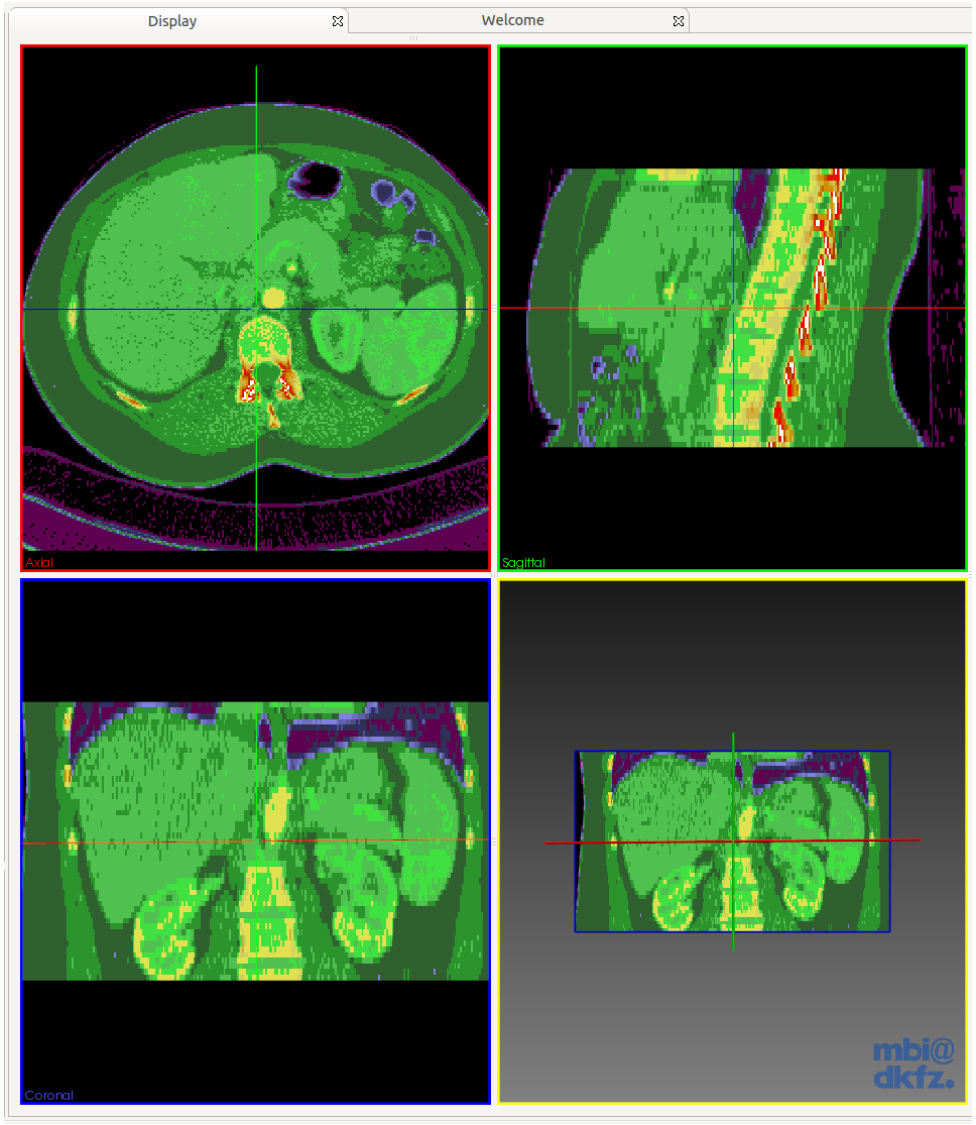


Camera looks orthogonal on the image plane

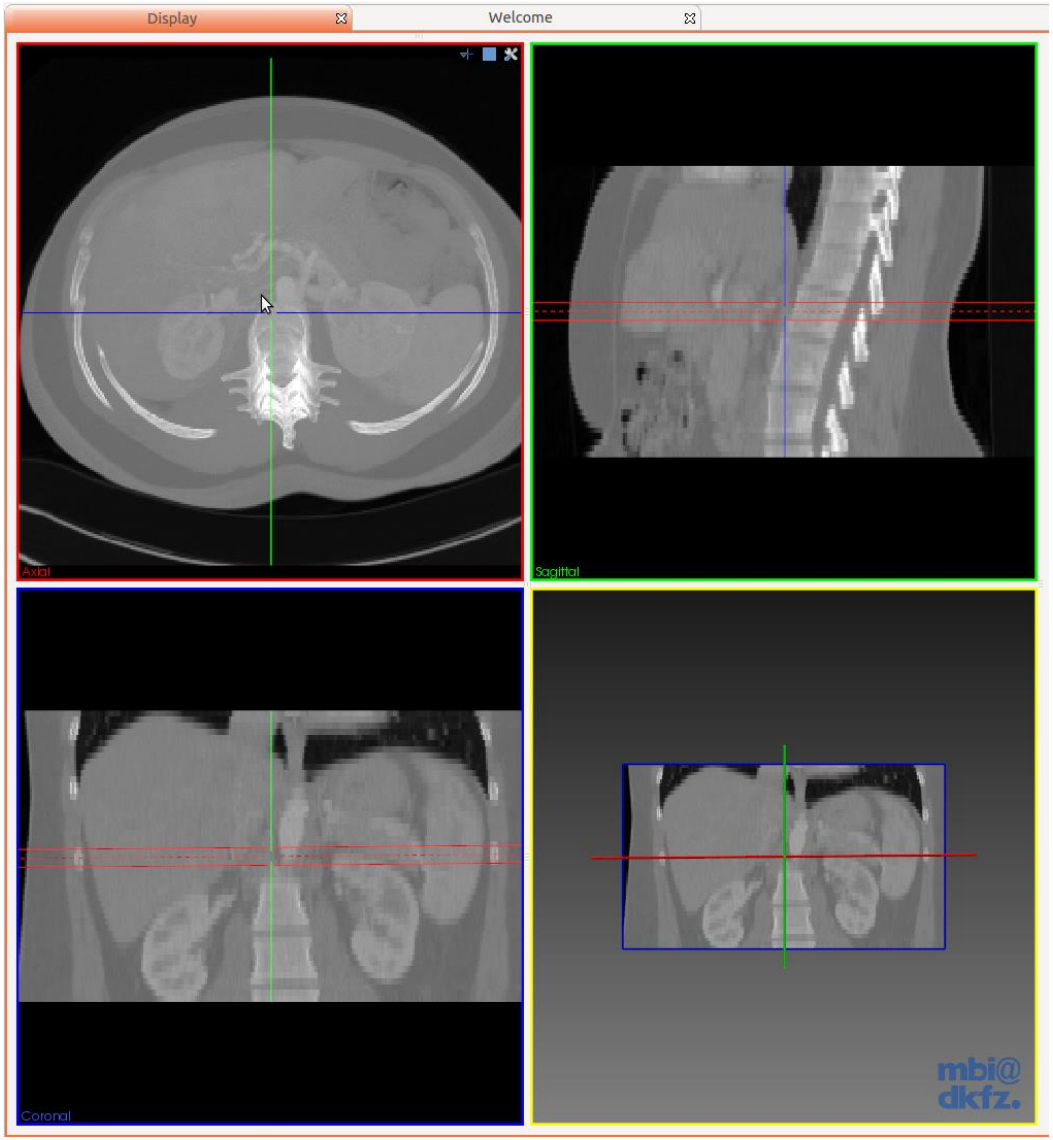


- Advantage:
  - Other objects (e.g. surfaces, Q-balls, fibers, …) can be rendered at exact position

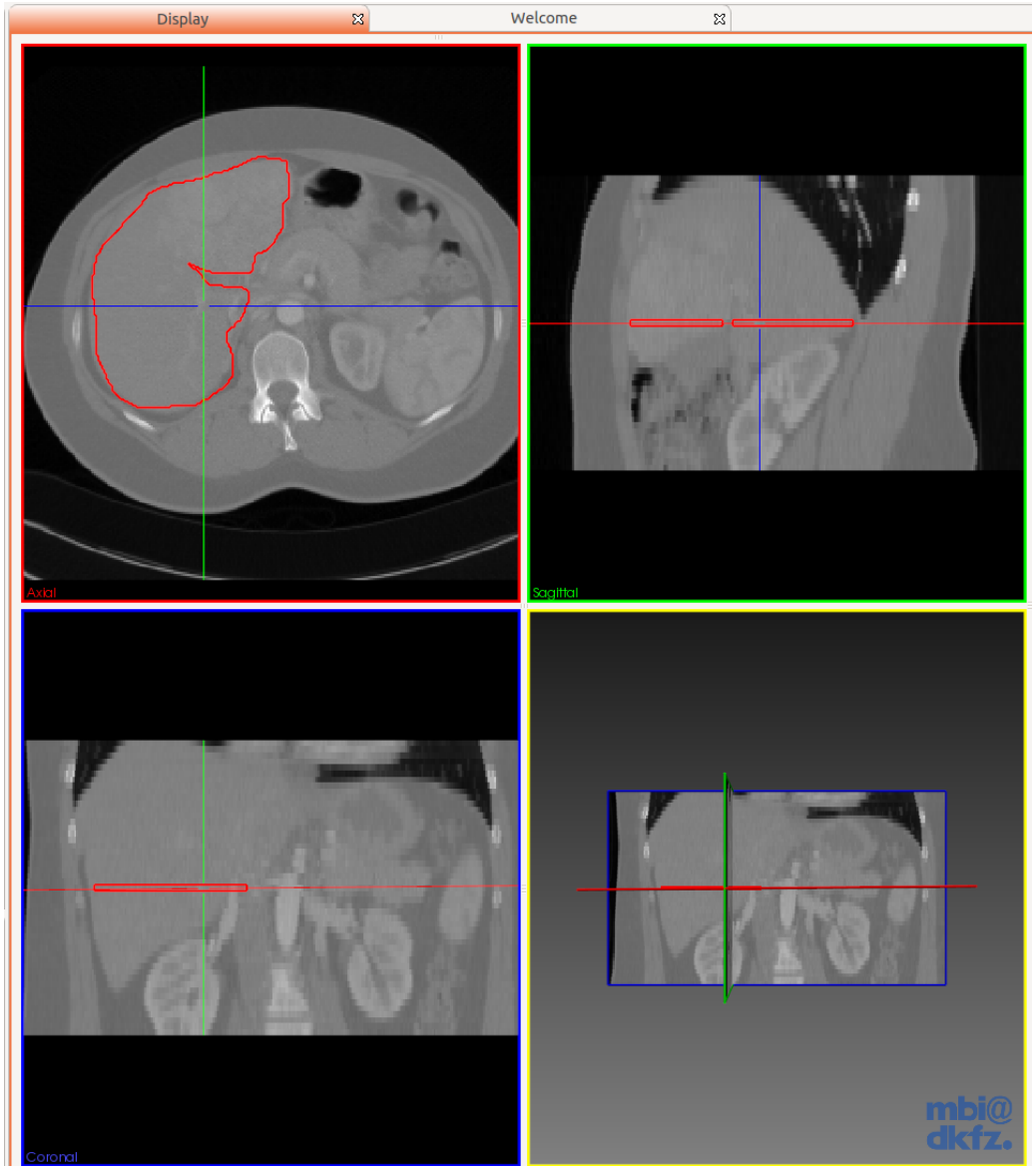
Property: Lookup table and level window



Property: Thick slice

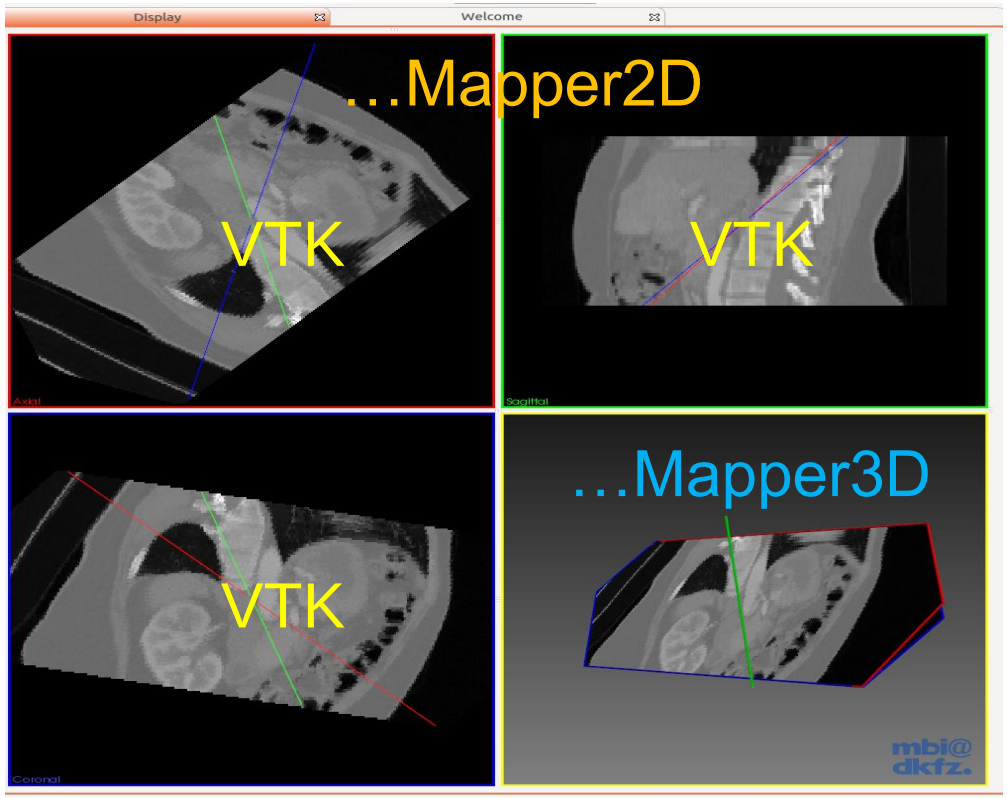


Property: Binary



How many instances do we have?

- 1x mitkImageVtkMapper2D manages a local storage with:
  - 3x vtkPolyDataMapper
- 1x Geometry2DDataVtkMapper3D
  - re-uses the 2D texture for performance



How to test such a (ridiculous) class?

- How to write a rendering test:
- http://docs.mitk.org/nightly-qt4/RenderingTests.html

- Example tests in Core\Code\Testing\:
  - mitkImageVtkMapper2DColorTest
  - mitkImageVtkMapper2DLevelWindowTest
  - mitkImageVtkMapper2DSwivelTest