**Fiber Postprocessing / Visualization**

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**Fiber Tracking**

Testdaten in */home/fritzsck/MITK-DI-Testdaten****'***

* **Fiber bundle dataset: gibbs\_tracking.fib**

**Testprotokoll**

**Tester:** Sven Mersmann

**Datum:** 02.11.2011

**Git Hash/Installer version:** 31.10.2011 14:13Uhr

**Plattform:** Windows 7 64 bit

**Debug/Release:** Release

*general usage:* To Process on Fibers, you have to select the desired Fiberbundle plus the processing object (e.g. extraction ROI) in the Datamanager.

**Test 1: Extract Fibers using ROI - Circle ROI tool**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle gibbs\_tracking.fib  |  | + |  |
| 2) In 2D Renderwindow (horizontal view) navigate to Slice containing fibers  |  | - | 2D rendering does not work! |
| 3) Set ROI in 2D Renderwindow using circle planar figure tool  |  | + |  |
| 4) Disable Cross hair and check if circle is shown in 3D Renderwindow  |  | + |  |
| 5) Select both, according Fiberbundle + circle ROI in Datamanager and press the "extract Fiberbundle"  |  | + |  |
| 6) Check if new extracted fiber bundle contains fibers which are going through the ROI  |  | + |  |
| 7) Go to step 2 and test ROI in saggital and coronal 2D Renderwindow as well  |  | + |  |

**Test 2: Extract Fibers using ROI - Polygon ROI tool**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle  |  | + |  |
| 2) In 2D Renderwindow (horizontal view) navigate to Slice containing fibers  |  | + |  |
| 3) Set ROI in 2D Renderwindow using polygon planar figure tool  |  | + |  |
| 4) Disable Cross hair and check if polygon is shown in 3D Renderwindow  |  | + |  |
| 5) Select both, according Fiberbundle + polygon ROI in Datamanager and press the "extract Fiberbundle"  |  | + |  |
| 6) Check if new extracted fiber bundle contains fibers which are going through the ROI  |  | + |  |
| 7) Go to step 2 and test ROI in saggital and coronal 2D Renderwindow as well  |  | + |  |

**Test 3: Test boolean operation for fiber extraction**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle  |  | + |  |
| 2) In 2D Renderwindows navigate to Slice containing fibers  |  | - | 2D rendering does not work! |
| 3) Place ROIs in all 2D Renderwindows using circle and polygon planar figure tool (e.g. set 6 ROIs in total)  |  | + |  |
| 4) Select ROI datanodes in the data manager and combine them to boolean terms (e.g. select 2 ROIs and set an AND relation, set another ROI with a NOT relation and combine the remaining ones to an OR relation)  |  | + |  |
| 5) Disable Cross hair and check if ROIs are drown in 3D Renderwindow  |  | + |  |
| 6) Select both, fiberbundle + top of boolean-tree term in Datamanager  |  | + |  |
| 7) Press "extract Fiberbundle button"  |  | + |  |
| 8) Check if new extracted fiber bundle contains fibers which are selected in ROI  |  | + |  |

**Test 4: Test join-operation on fiberbundles**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle  |  | + |  |
| 2) In 2D Renderwindows navigate to Slice containing fibers  |  | - | 2D rendering does not work! |
| 3) Place a ROI and extract a fiber bundle  |  | + |  |
| 4) Place another ROI and extract a fiber bundle  |  | + |  |
| 5) Select both new fiber bundles and join them  |  | + |  |

**Test 5: Test Colorcoding of Fiberbundles**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle  |  | + |  |
| 2) In Diffusion-Visualization view (appears underneath data storage when selecting a fiber bundle) press color coding button and color fibers  |  | + |  |
| 3) Press the reset color button in Diffusion-Visualization view  | orientation based color coding / same as after loading fibers  | + |  |

**Test 6: Test Tube Representation of Fiberbundles**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle  |  | + |  |
| 2) In Diffusion-Visualization view (appears underneath data storage when selecting a fiber bundle) press tube representation  |  | + |  |
| 3) Adjust Tuberadius  |  | + | Reload only after pushing Tube button again (automatic Update would be nicer) |
| 4) Activate wire representation  |  | + |  |
| 5) Adjust line width  |  | + | Reload only after pushing Tube button again (automatic Update would be nicer) |

**Test 7: Test Vertex/Segment shader for 2D Fiber representation**

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| Aktion  | Erwartetes Ergebnis (wenn nicht selbsterklärend)  | OK?  | Kommentar  |
| 1) Load Fiber bundle  |  | + |  |
| 2) In Diffusion-Visualization view (appears underneath data storage when selecting a fiber bundle) press Fiberfading Effect for 2D Fiberrepresentatin button  | Fading effect shall be deactivated  | - | 2D rendering does not work! |
| 3) press Fiberfading Effect for 2D Fiberrepresentatin button again  | Fading effect shall be activated  | - | 2D rendering does not work! |
| 4) Adjust Clipping Range for 2D Fiber representation  | if fading efx is on, more than awesome shall the brain look like  | - | 2D rendering does not work! |