DICOM to NRRD
Conversion Tutorial

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This tutorial guides you through the process of converting DICOM files from a DWI acquisition into a NRRD volume, load that DWI volume into 3D Slicer for further processing.
Dataset

For this tutorial you will need some DICOM data files that can be found on this link:

http://hdl.handle.net/1926/1759
**Start Slicer 4**

**Linux/Mac users:**
Launch the Slicer executable located in the Slicer4 directory.

**Windows users:**
Select Start ➔ All Programs ➔ Slicer4.0.1 ➔ Slicer
Or launch the Slicer executable from Slicer4 directory
The Slicer Welcome module is the module displayed by default. This module gives an overview of the GUI of Slicer4, and data loading & saving functionality.
Left click on the menu Modules and select All Modules to display the list of modules available for image analysis and 3D visualization. Select the module Dicom to Nrrd converter.
DICOMtoNRRD Module

Select the Input DICOM directory
Select the Output directory
Choose an Output name for your Nrrd file
DICOMtoNRRD Module

Left click on Output Option to get it extended

Left click on the 3rd check box
(If you leave the mouse near it, it will display the ToolTip)

Left click on Apply button
What does this 3rd box do?

• Uses B-matrix to compute the diffusion gradient information
  – B-Matrix is the actual diffusion matrix applied during acquisition
  – Principal eigenvector of B-Matrix is the diffusion gradient direction

• Potential for incorrect/inadequate information in the diffusion gradient direction
  – B-Matrix use is safest, if present
  – Siemens DICOM provide B-Matrix information
Loading DWI NRRD Volume

Left click on file menu

Left click on Add Volume
Adding Nrrd Volume

Select your previously created Nrrd volume
Volumes

Left click on the volume icon
Volumes

Select the volume you just opened in the “Active Volume” Section
Volumes

Choose the Lookup Table that suits best your needs
Conclusion

This tutorial guided you through the conversion from DICOM to NRRD file using Slicer 4 Software
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