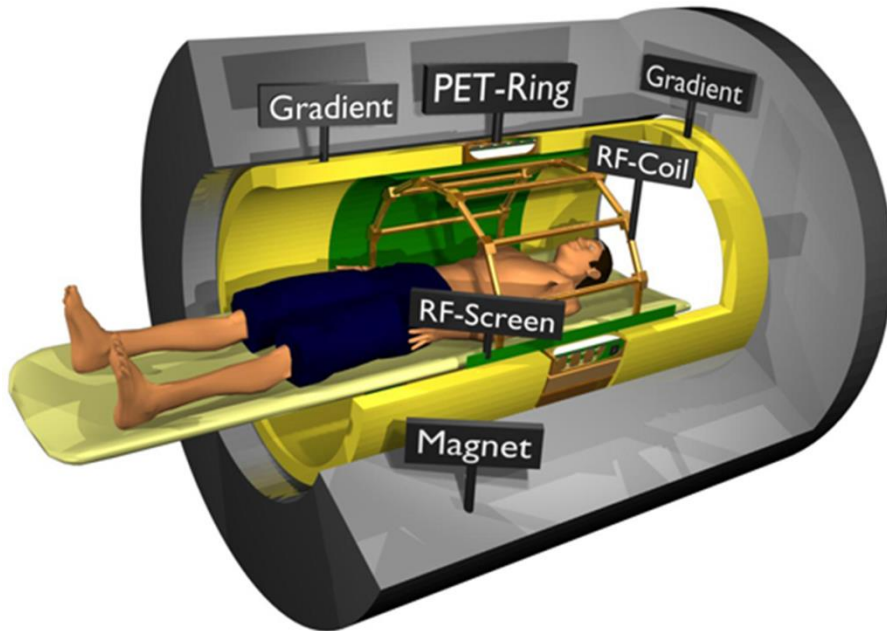


MRI Reconstruction Gadgetron / ISMRMRD

David Atkinson

Update

- ISMRMRD paper submitted.
 - Paper, code and data:
<https://github.com/ismrmrd/ismrmrd-paper>
- Ongoing discussions about waveform data.
- Personal experiences with Mac OS X installation.



Other Data

MR Raw Data

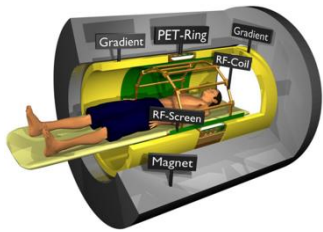
Header / labels, e.g.
k-space line number,
flags for data type – k-space,
calibration.

Raw Data

Complex k-space data

- ECG, Respiratory belt
 - Resting state analysis
 - Motion Correction
- Pulse Sequence
 - Eddy current correction
 - Maxwell corrections
 - Diffusion sensitisation

MR Raw Data (Siemens meas.dat file)



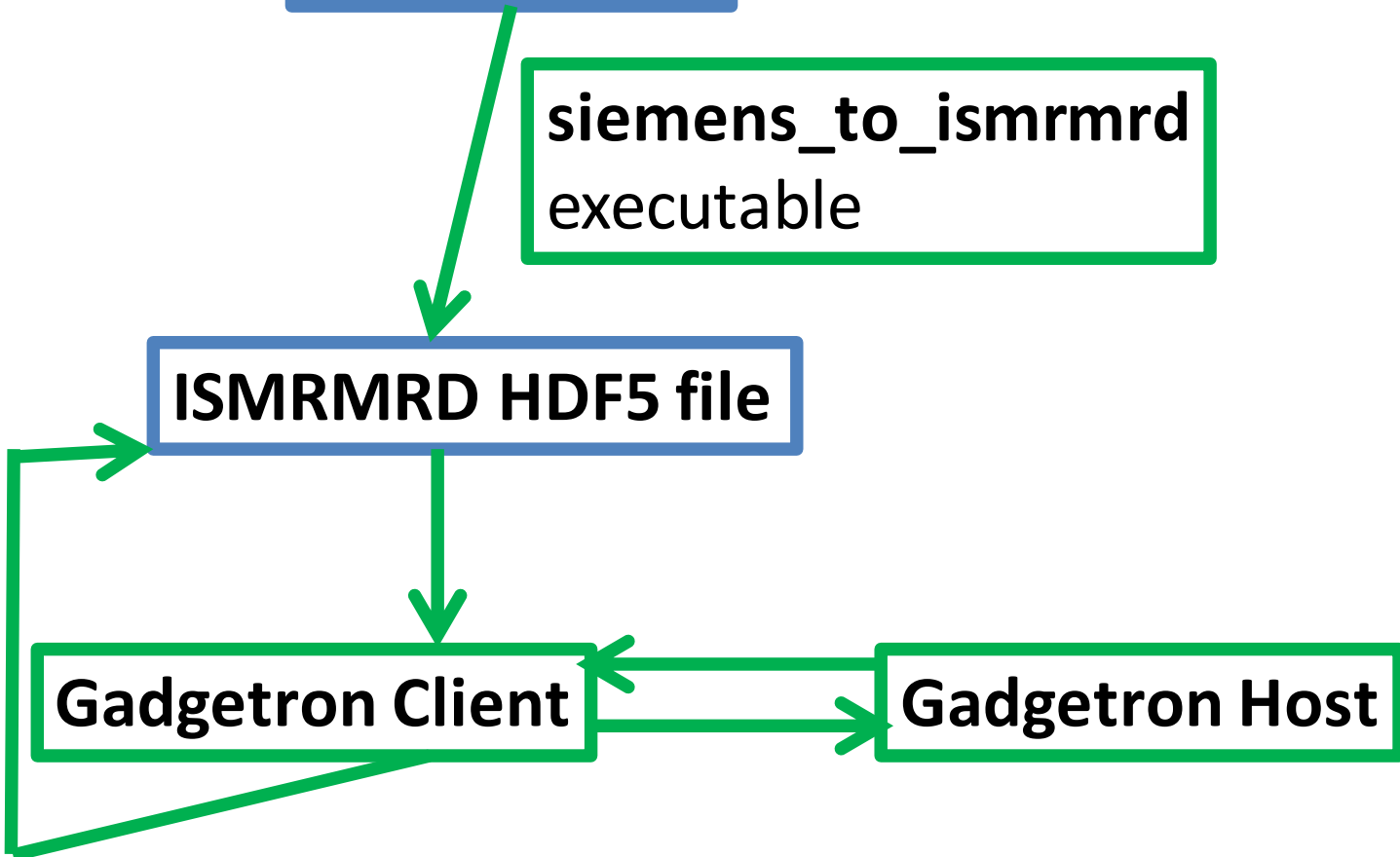
**Header &
K-Space Data**

**siemens_to_ismrmd
executable**

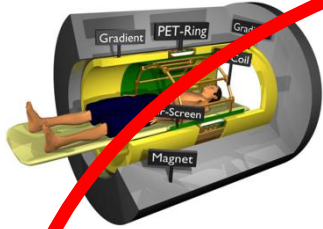
ISMRRD HDF5 file

Gadgetron Client

Gadgetron Host



MR Raw Data (Siemens meas.dat file)



Header &
K-Space Data

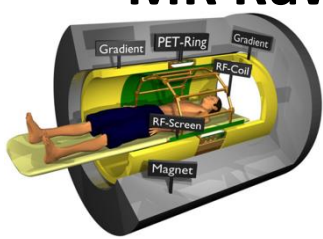
siemens_to_ismrmd
executable

ISMRRD HDF5 file

Gadgetron Client

<https://github.com/ismrmd/ismrmd-paper>

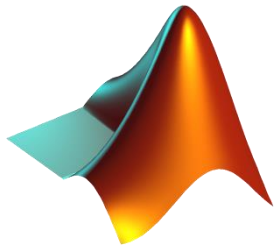
MR Raw Data (Siemens meas.dat file)



**Header &
K-Space Data**

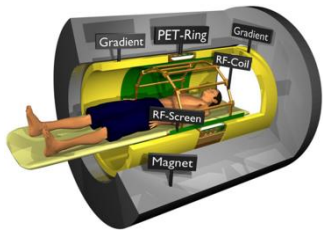
**siemens_to_ismrmd
executable**

ISMRRD HDF5 file



h5info, h5read, h5disp

ismrmd class, recon_ismrmd_hdf5



**Header &
K-Space Data**

**siemens_to
executable**

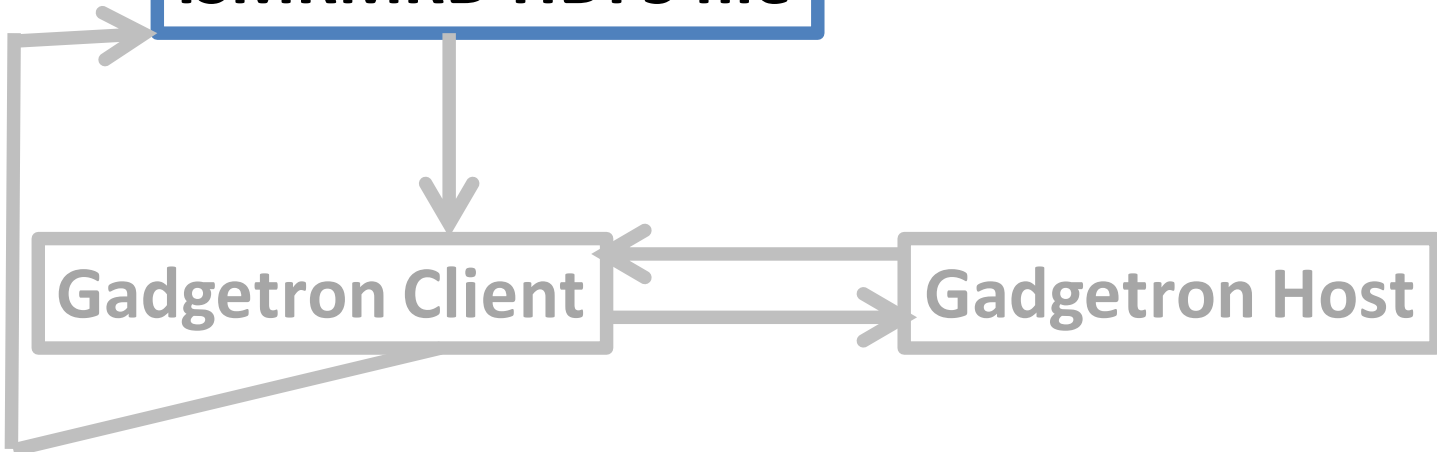
Waveform data

- ECG, Respiratory belt
 - Resting state analysis
 - Motion Correction
- Pulse Sequence
 - Eddy current correction
 - Maxwell corrections
 - Diffusion sensitisation

ISMRRD HDF5 file

Gadgetron Client

Gadgetron Host



Installation Experiences

- Linux (Clean Ubuntu VM under Windows).
 - Time consuming, easy/moderate skill.
- Mac OS X
 - Lack of clarity, primarily due to compiling with MATLAB (not Mac OS X issue).
 - Instructions being addressed.
 - Issue of needing MATLAB for full functionality?