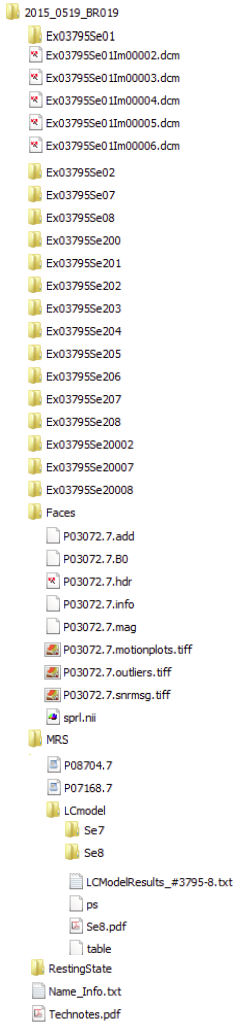
Directory structure/file naming conventions. 2015-0528

Current Structure (underline indicates directory name)	Example	New Conventions
ExamInfo DICOM Series1 DICOM Data1...n DICOM Series$_2$ DICOM Data$_{1...n}$ DICOM Series$_n$ DICOM Data$_{1...n}$ *[spiral task name* *E*.7* *P*.7.{ } {add,B0,hdr,info,mag}* *P*.7.{ }.tiff { motionplots,outliers,snrmsg}* *sprl.nii* *]* *[MRS* *P*.7$_{1..n}$* *LCModel* *Series#$_1$* *LCModelResults_ExSe.txt* *ps* *se#.pdf* *table* *Series#$_{2...n}$* *]* Ex####Se##_bvals.txt {if DTI acquired} Ex####Se##_gradOrs.txt {if DTI acquired} Name_info.txt (will be obsolete, series info) technotes.pdf (sometimes Ex#####.pdf)		Standard DICOM files will create the main directory structure. **ExamInfo:** • StudyDate_Ex#####_StudyDescription_PatientID (20150519_Ex03806_BIND1MR_BIFM011) DICOM Series: • Ex#####Se#####_SeriesDescription* (Ex03806_Se00005_ Sag_T1_BRAVO) DICOM Data: • Ex#####Se#####Im#####.dcm Spiral I/O – directory made by script, contents by MRIUnit • Retrieve Exam/Series/StudyDescription from either Pfile header or from E*.7 file to create directory name that matches the DICOM Series format; *Ex03806_Se00005_fMRI_Resting_State* • Rename P*.7.* to include exam and series (e.g., Ex#####Se#####_P03072.7.add); • change sprl.nii to read Ex#####Se#####_P03072.nii MRS • Retrieve Exam/Series/StudyDescription from Pfile header • Rename Pfile: Ex#####Se######_P#####.7 • Move to directory with matching DICOM Series information • Tech will run LCModel in the data directory Example for study 074_BIND1MR **074_BIND1MR ← Directory name in DICOM** **20150519_Ex03795_BIND1MR_BIFM011** Ex03795_Se00002_Sag_T1_BRAVO Ex03795Se00002Im00001.dcm Ex03795_Se00006_Faces **← Spiral would look like this** Ex03795Se00006_P03072.7.add (etc)** Ex03795Se00006_P03072.nii Ex03795_Se00007_MRS_pgACC_Bil **← MRS like this** Ex03795Se00007Im00001.dcm Ex03795Se00007_P08704.7 Ex03795Se00007_LCModelResults.txt Ex03795Se00007.pdf ** Ex03795Se00007.ps Ex03795Se00007_table.txt Ex03795_TechNotes.txt **20150520_Ex03799_BIND1MR_BIGJ012 ← Next study**

* "**fMRI Resting State*" should be converted to "*fMRI_Resting_State*" (drop asterisk so only one underscore, replace spaces with underscores). Most of the SeriesDescriptions we use already have underscores and not spaces or special characters.

** The spiral fMRI and LCModel output filenames will be changed by us in our scripts to match what is shown above.

Possibility: If we include the booking code in the main directory name (e.g., 20150519_Ex03806_BIND1MR_BIFM011), we do not have to have all of the booking codes listed in DICOM_InProcess or DICOM_Processed. The rsync script could point to DICOM_Processed, and move the studies into the proper directory in DICOM based on the booking code in the directory name. This would substantially declutter the workspace for the techs, and there would be no ambiguity about what still needs to be done/has been done.

I think we still need a script to move the contents from DICOM_InProcess to DICOM_Processed when the tech is ready to let it go, and then the rsync will work only from DICOM_Processed.

DICOM tags:

StudyDate = (0008,0020), numeric, 8 digits (20150519)
StudyDescription = (0008,1030), variable length, text, will generally be the booking code (text, 6 characters)
StudyID (Exam#)=(0020,0010), numeric, we are currently at 3800's, so we are good with zero-padding to 5 digits.
SeriesNumber = (0020,0011), numeric, variable, up to 5 digits (so far as we've seen), not zero-padded
InstanceNumber (ImageNumber) = (0020,0013), numeric
PatientID = (0010,0020), variable length, text
SeriesDescription = (0008,103E), variable length, text, may include spaces, special characters (e.g., '3PlaneLoc_SSFSE')
ProtocolName = (0018,1030) – variable length, text.
This field may be useful if we need the protocol number: 058.GLSZ1MR_2014_0224 (this format is used for all patient studies). TECH1U studies do not have a protocol number or saved protocol. The name here will reflect which protocol the first scan was pulled from.

MRS tags (in the DICOM spectrum that comes from the scanner as a "typical" DICOM file. A single DICOM file will be in the directory)

InternalPulseSequenceName = (0019,109E) – variable length, text. For most MRS studies, should be presscsi
PfileName = (0019,10A2) – 5 digits, will only be relevant for MRS dicom files, tag is used for other things.

Non-standard "DICOM" files – We may need to play around with series in the 200,400,700 range, the 1000 range and in the 20000 range – these are "saved" files, and may not always have the Exam/Series/ImageNumber.

Physio data – see github