Development of a Standard DICOM File Format for Magnetic Resonance (MR) Spectroscopy

The MR Clinical Solutions Lab, part of GE Global Research – Europe, focuses on tasks from pioneering to delivering MR driven clinical solutions. Examples of these are advanced quantitative methods for metabolic, functional and microstructure neuroimaging.

GE Global Research – Europe sits on the Garching campus of the Technical University of Munich. This creates a unique blend for our scientists to be in a university setting, while performing research in a world-class industrial lab that is dedicated to bringing new technologies to market. The facility also operates closely with technology teams at GE businesses across the globe, ensuring effective transition of breakthrough innovations from the lab into advanced products and services. Within the R&D community, the center maintains close partnerships with numerous universities, research institutions and technology companies in Germany and abroad.

Task and goals

In this project, you will work closely together with our scientists and engineers in collaboration with the Image Based Biomedical Modeling group (Prof. Bjoern Menze). Your main tasks in this IDP is to create a header format for MR spectroscopy raw data that ensures compatibility between current and future software releases. Additionally, reconstructed MR spectroscopy data must be written into a standardized DICOM format that will allow archiving and sharing of clinical exams. These I/O modules will be implemented as a component of the Orchestra SDK, a C++ based reconstruction library for MR imaging.

Qualifications/Requirements

- Strong C/C++ programming skills
- Experience with Unix/Linux operating systems
- Basic knowledge of DCMTK (DICOM) is desired
- Excellent communication skills
- Open, creative & flexible
- Team-work & commitment
- Fluent in English, basic German knowledge

Contact

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