Automated Quality Assurance System or Clinical CT Systems
Client: Prof. Timothy Szczykutowicz
Advisor: Prof. John Webster
Team
Leader: Heather Shumaker hshumaker@wisc.edu
Communicator: Connor Ford cjford@wisc.edu
BSAC: Sam Brenny brenny2@wisc.edu
BPAG & BWIG: Rachel Reiter rkreiter@wisc.edu

Date: April 20 - April 27

Problem Statement
  CT machines are carefully tested on a daily, weekly, monthly, and annual basis. Each time a CT machine is tested, many different components of the machine are analyzed to ensure the machine is properly calibrated and working. The complexity of the testing procedures makes CT quality assurance testing and reporting an extremely time consuming task. The results of each test are recorded manually and entered into spreadsheet-based reporting tools.
  The reports and testing procedures often vary between medical physicists making it difficult for the results to be replicated by CT repair technicians. The two main goals of this project are to create standardized testing protocols for use within the facility and to automate the reporting process. The client would like a software program capable of reading DICOM images (images produced by the CT scanner) from various quality assurance tests, evaluating the images without user interaction, generating a report from the results, and writing the results to a database to track scanner performance over time.

Summary of Team Accomplishments
- Finished poster presentation - will present tomorrow (4/28)
- Work on final report
- Make changes to program from testing feedback

Upcoming Week's Goals/Individual Goals
- Finish up final report
- Update notebooks
- Do peer evaluations

Project Difficulties
None