CS25-07 RF Chamber Software Design

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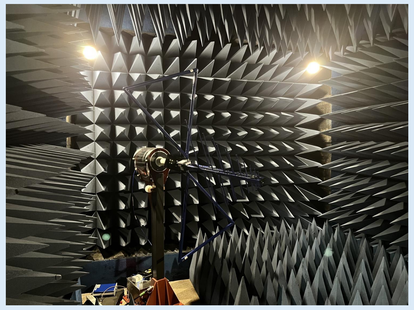
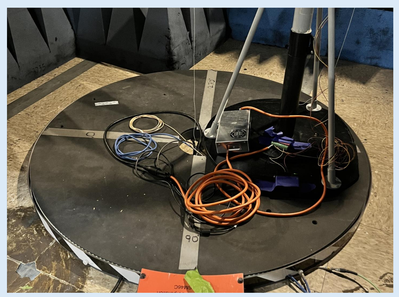
Project Goal:

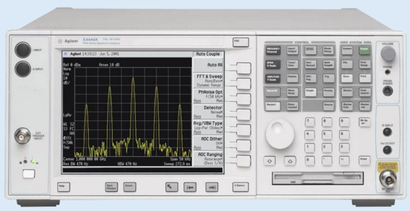
- Redesign existing software to a modern language
- Add additional functionality for 3D axis data measurement
- Export measurement data into multiple file types



Antenna



Turntable

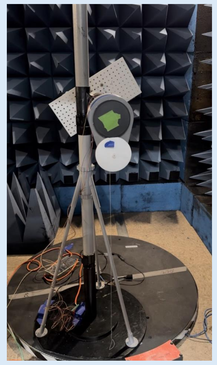


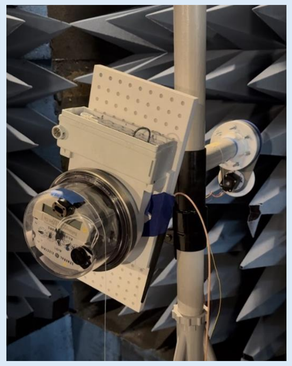
Analyzers

Our program executes radio frequency tests in an anechoic chamber via measurement instruments controlled by GBIP.

Front-End Features:

- Interactive GUI app
- Real Time data visualization
- Custom debugging info
- Instrument control

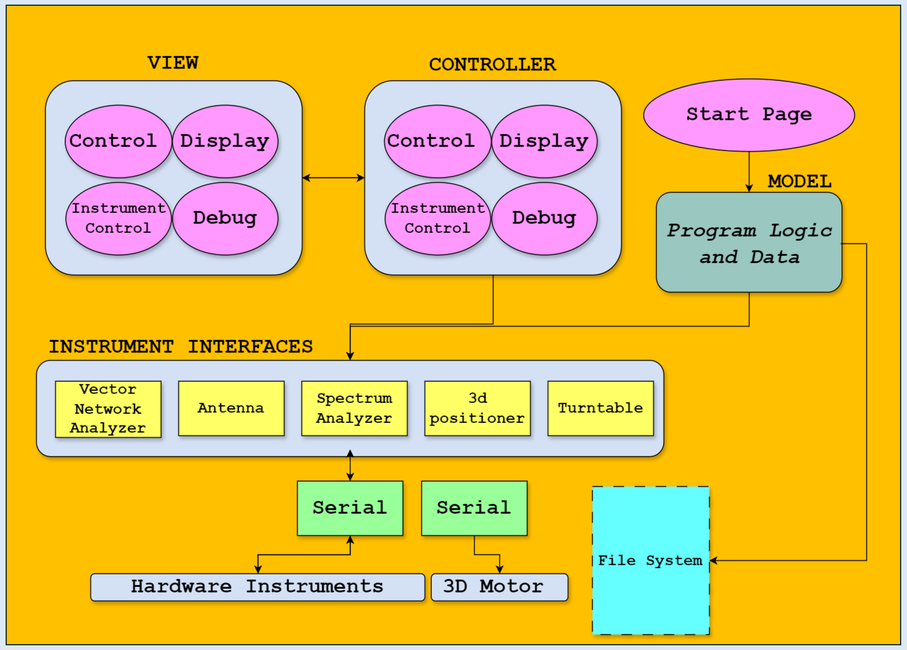




Back-End Features:

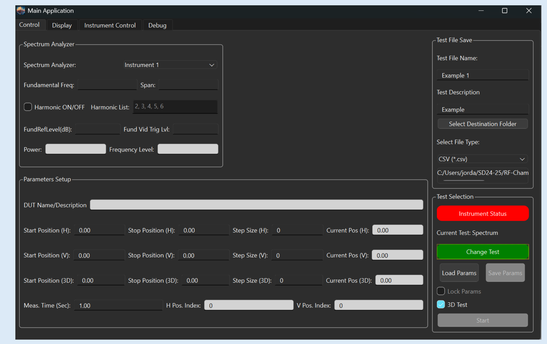
- Serial communication
- Instrument debugging
- Data collecting with 2D/3D testing
- File saving and exporting

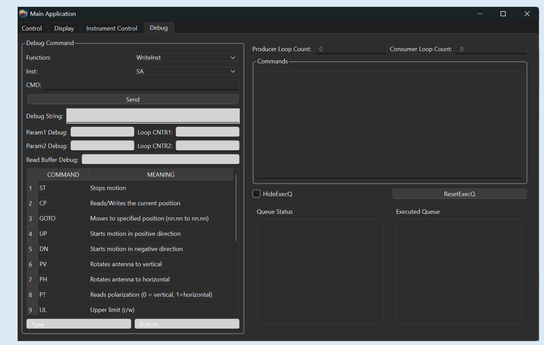
Software Architecture:



End Results:

We successfully created a new application which combined their two-legacy software's in one standalone program, including implementation for controlling their new 3D arm. The new software included a fresh look with a multitude of bug fixes and additional end user improvements that were requested.





Next Steps:

- Additional file-type support
- UI improvements
- Additional data visualization
- Support for new instruments