

C02 Software Design Review

Team

James Beasley, Andrew Greene, Sam Beals, Joseph Kelroy

Sponsors

Dr. Andrew Richardson and Dr. Mariah Carbone

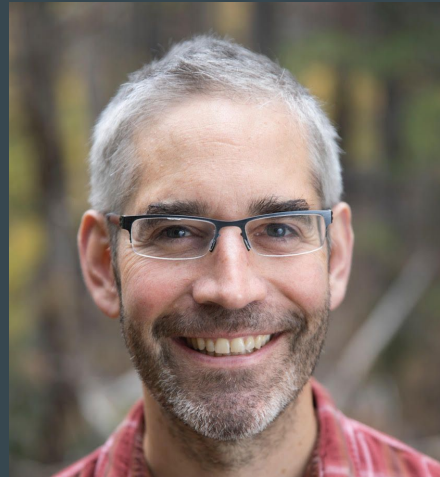
Mentor

Ana Steinmacher

Problem Statement

Dr. Richardson and Carbone's current work routine has a few outstanding issues :

- Data collection method is slow and cumbersome
- Collected data is not immediately readable
- Data analysis must be done externally

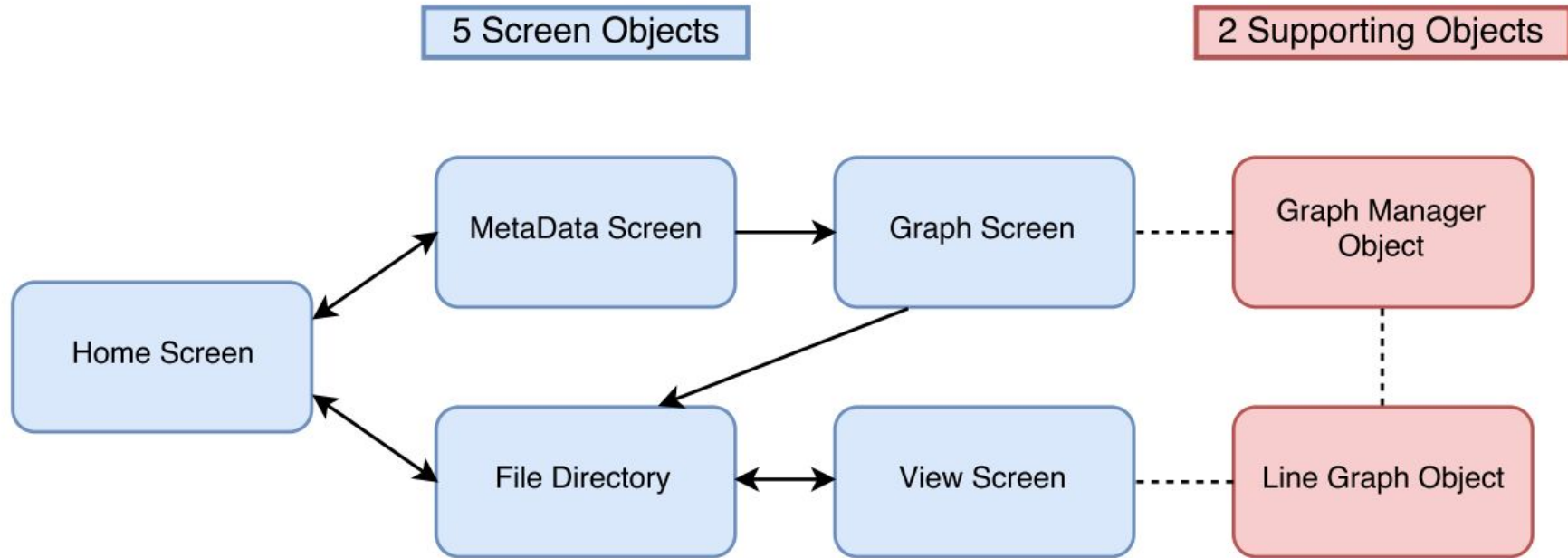


Solution Overview

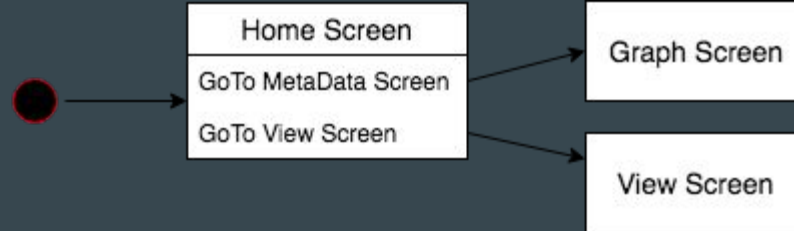
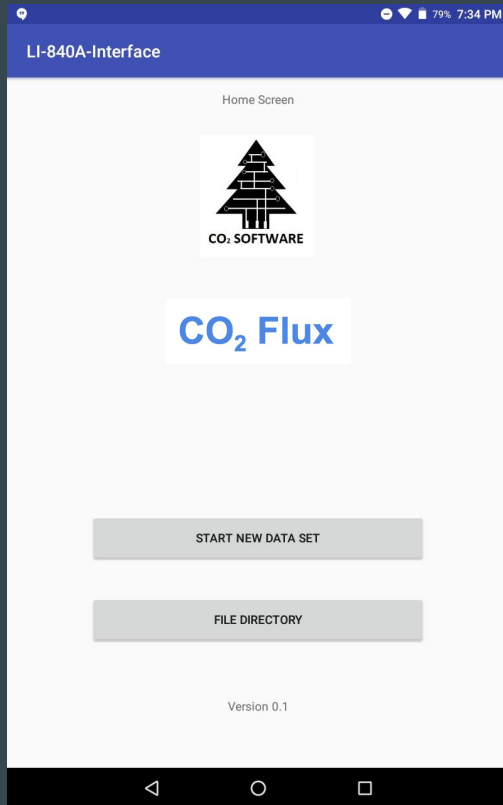
We developed a solution that :

- Is on a mobile platform that can run the software
- Has an Interface that visually communicates the data being collected
- Processes all recorded data in-app

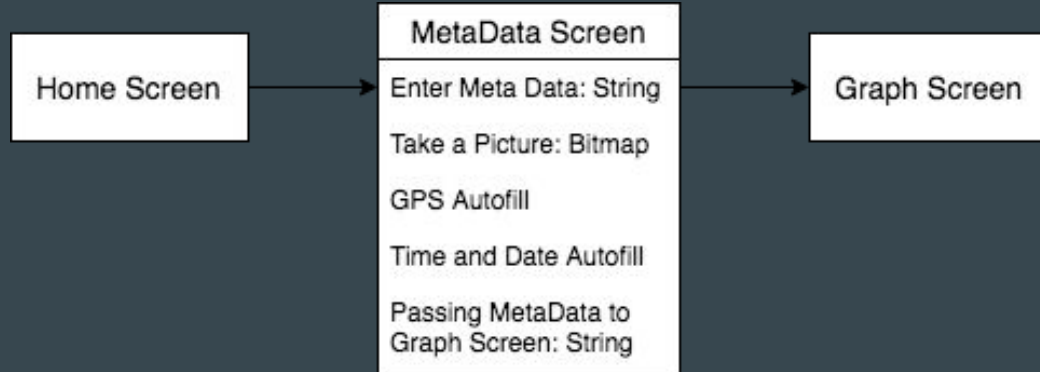
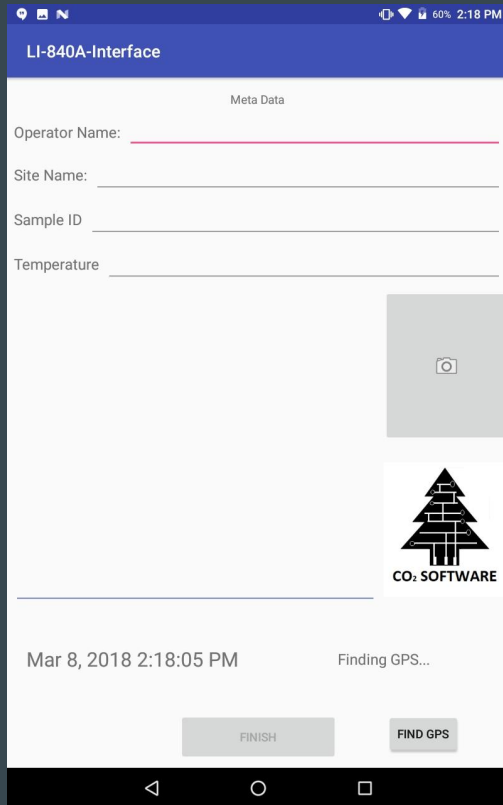
Implementation Overview



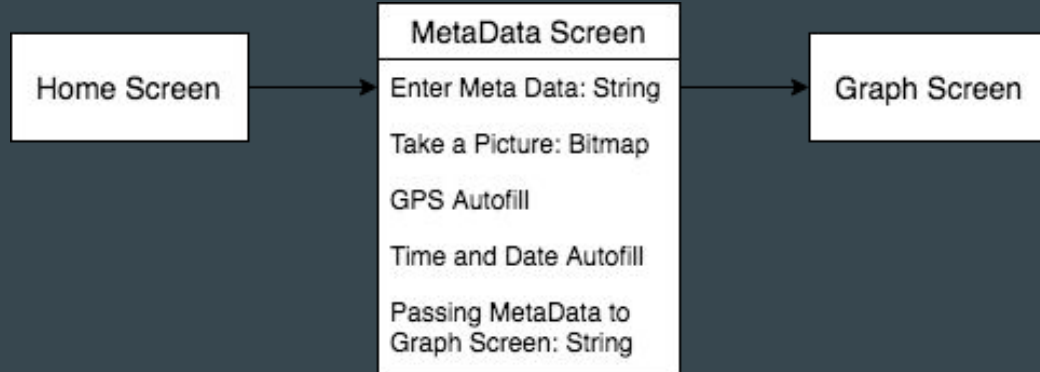
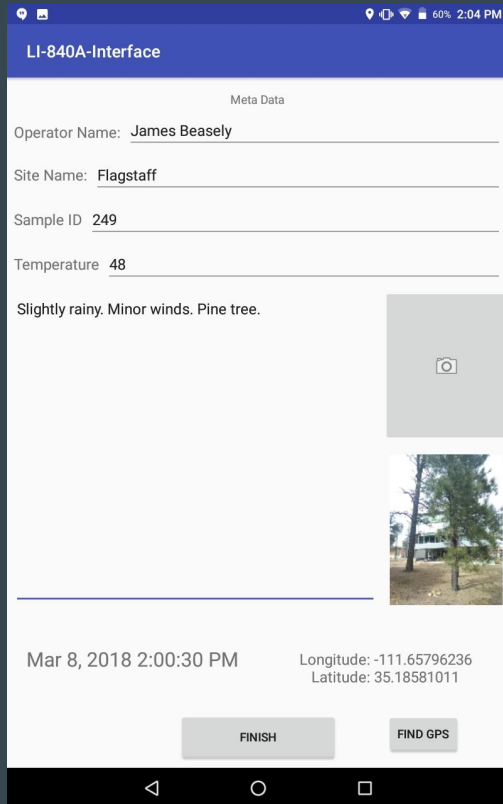
Home Screen



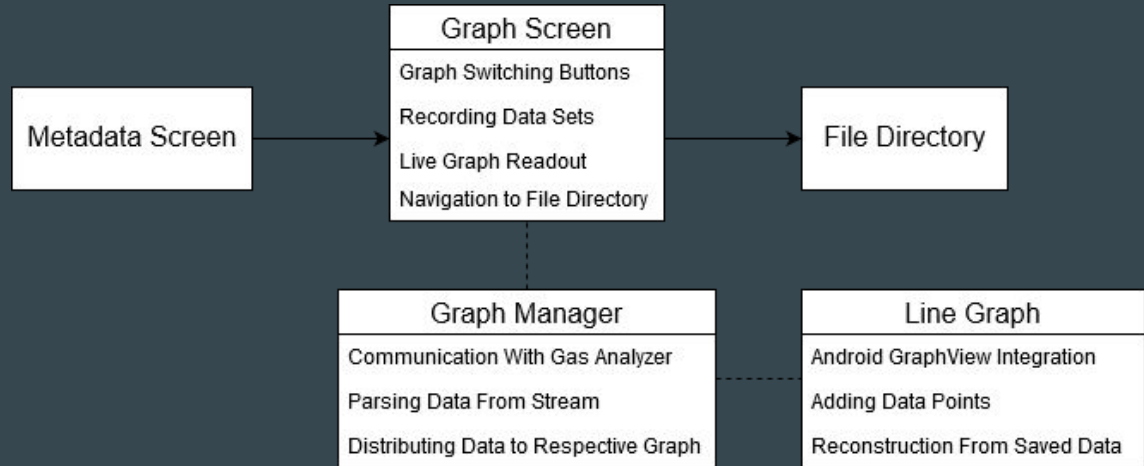
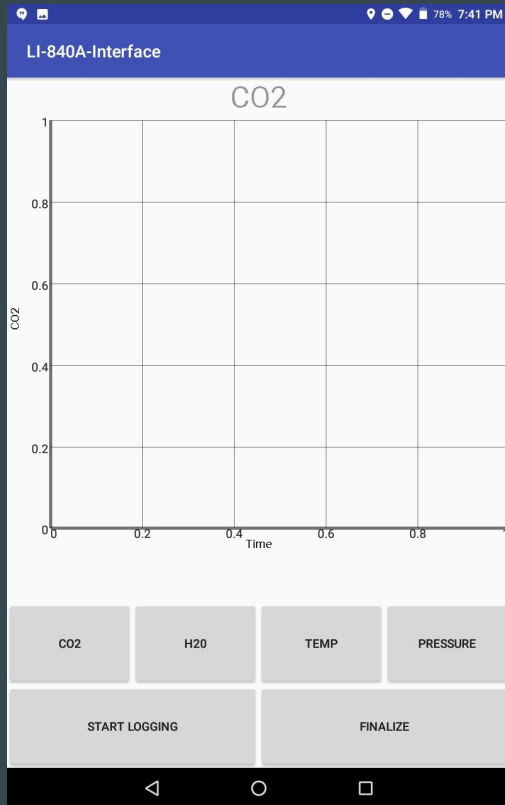
MetaData Screen



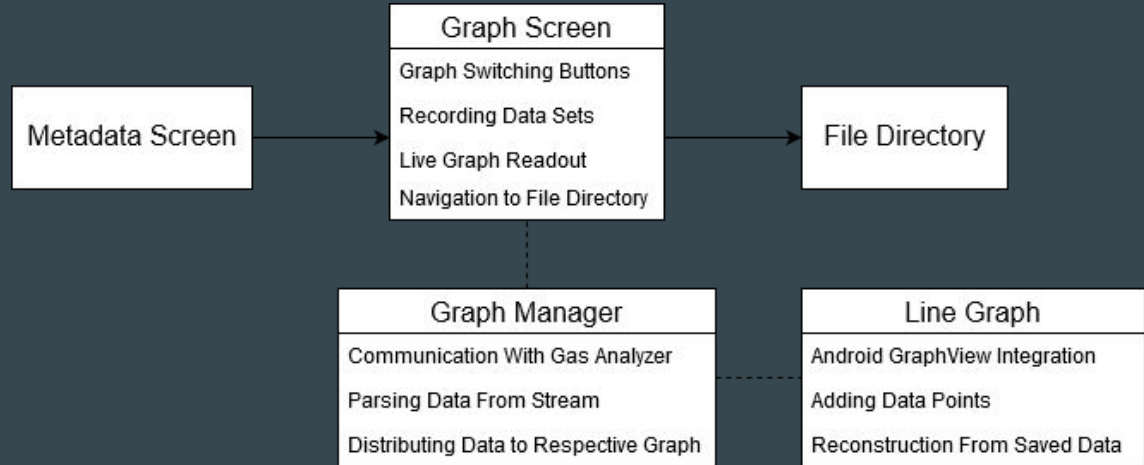
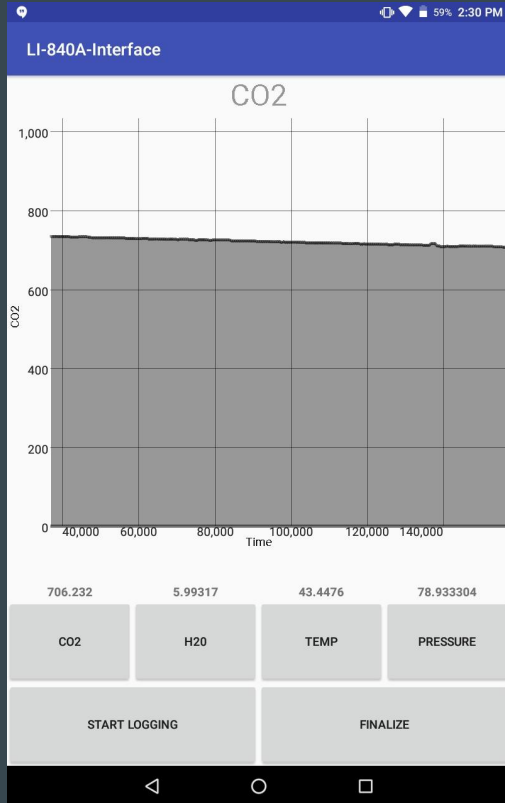
MetaData Screen



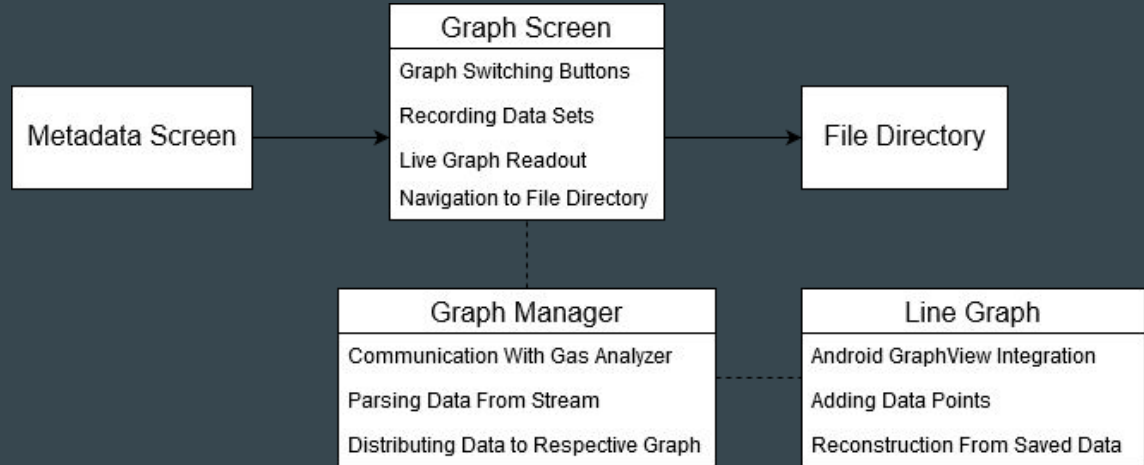
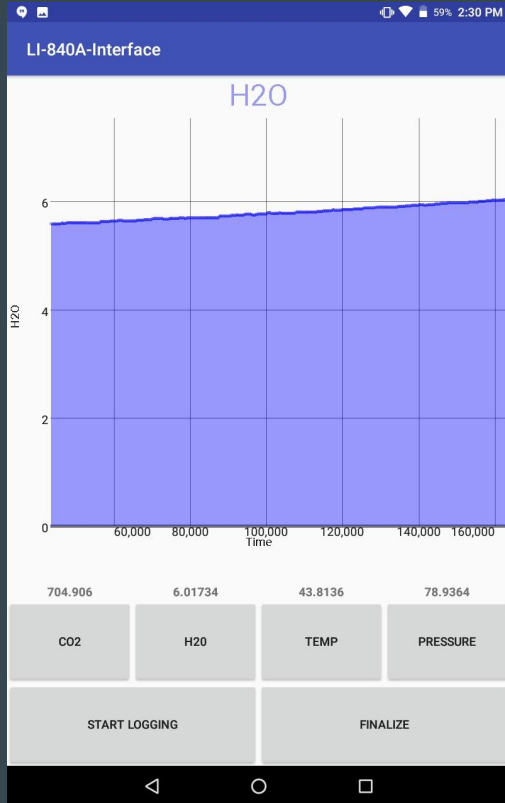
Graph Screen



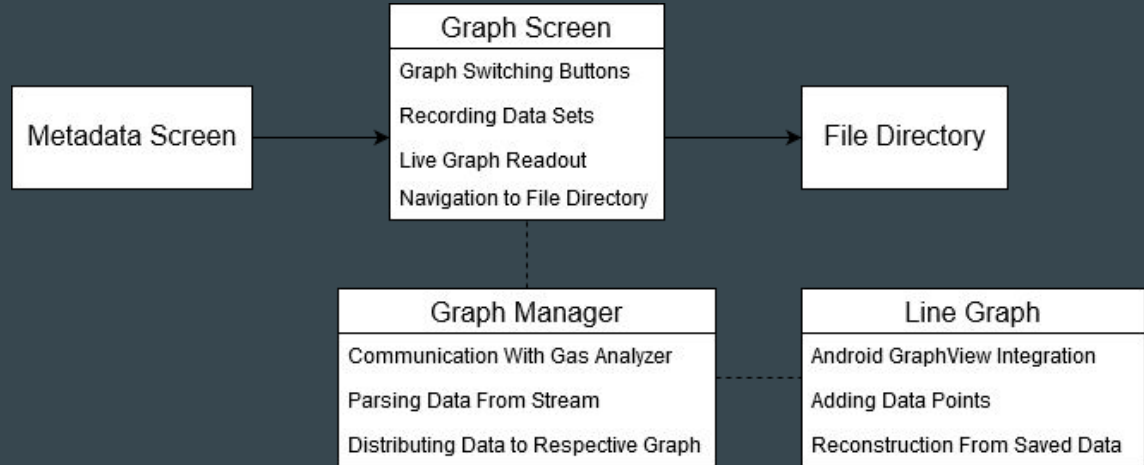
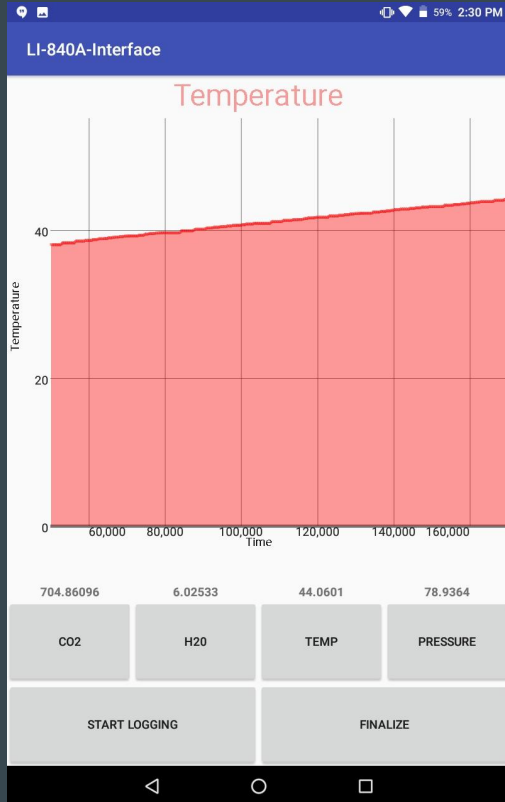
Graph Screen



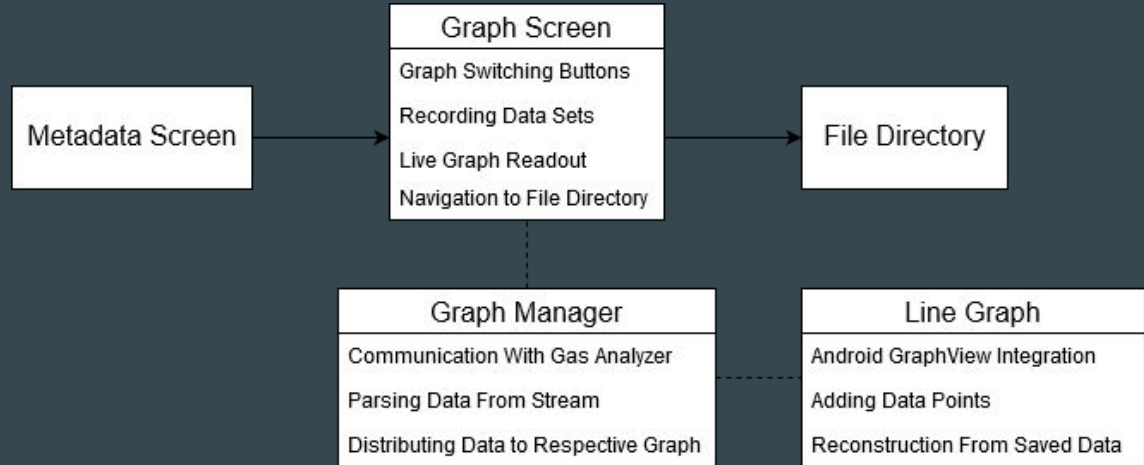
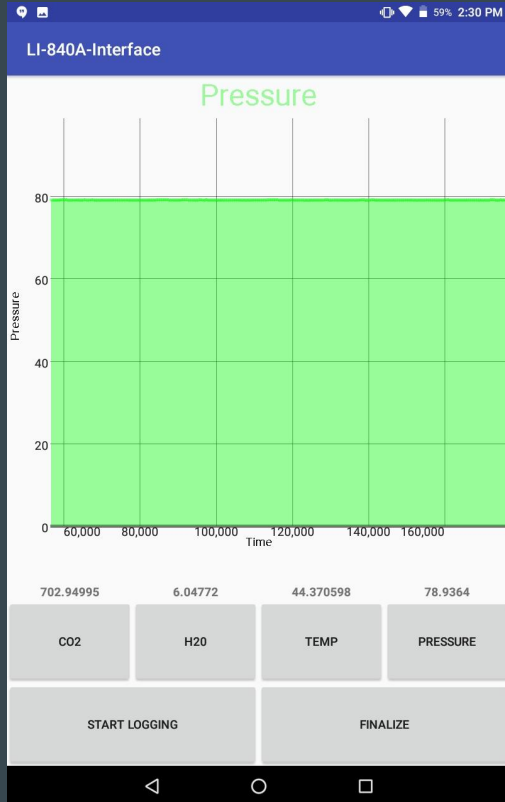
Graph Screen



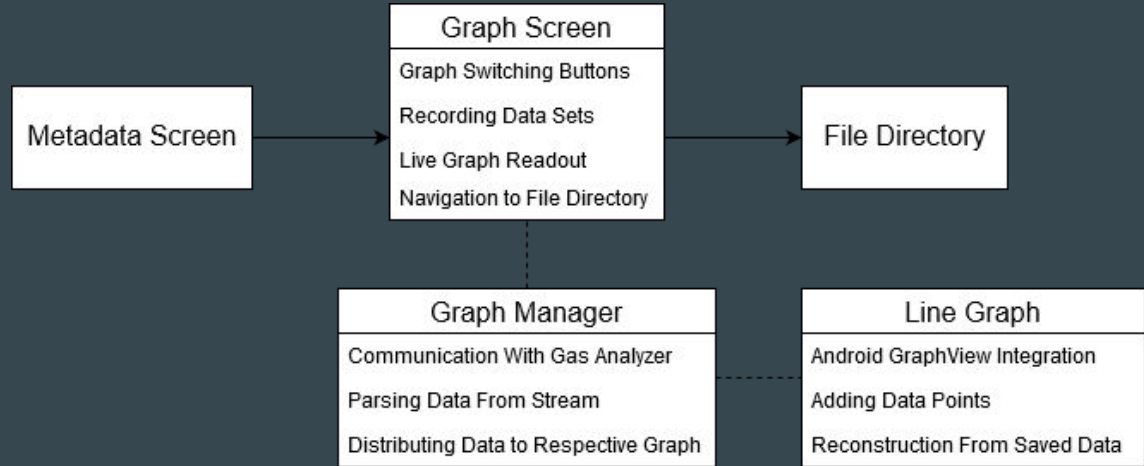
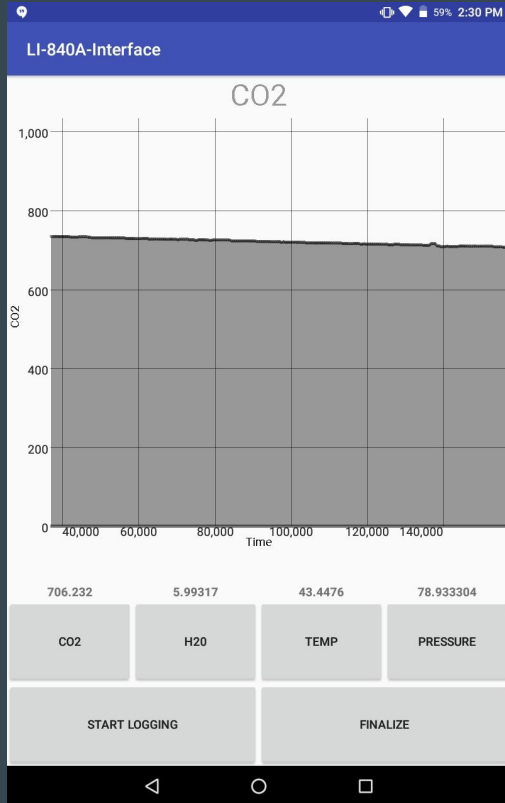
Graph Screen



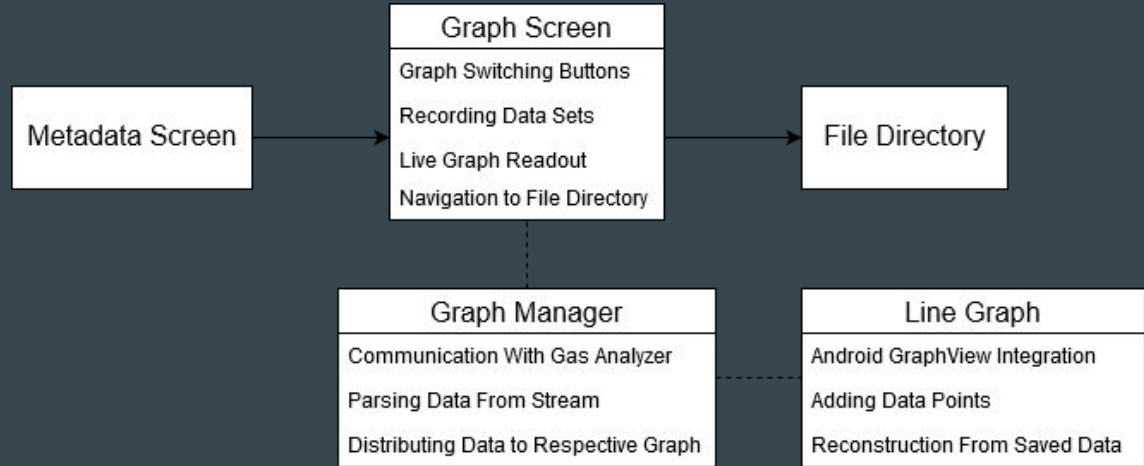
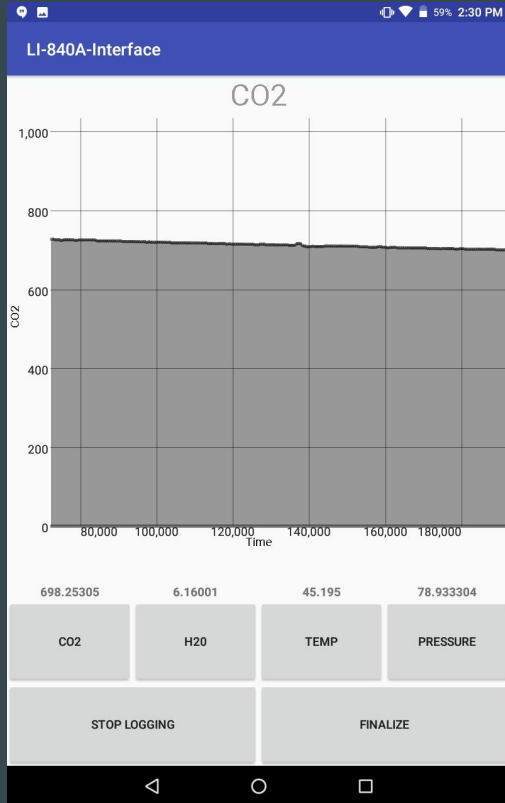
Graph Screen



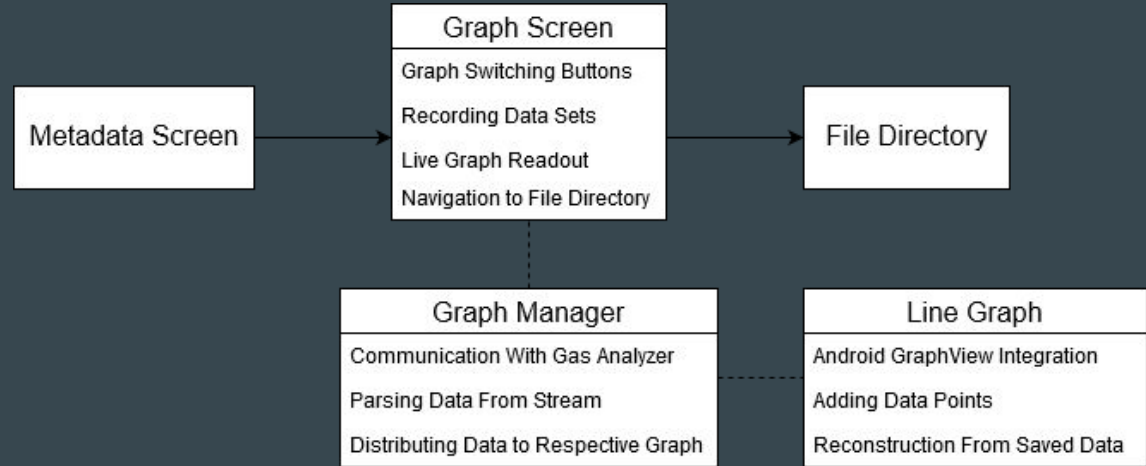
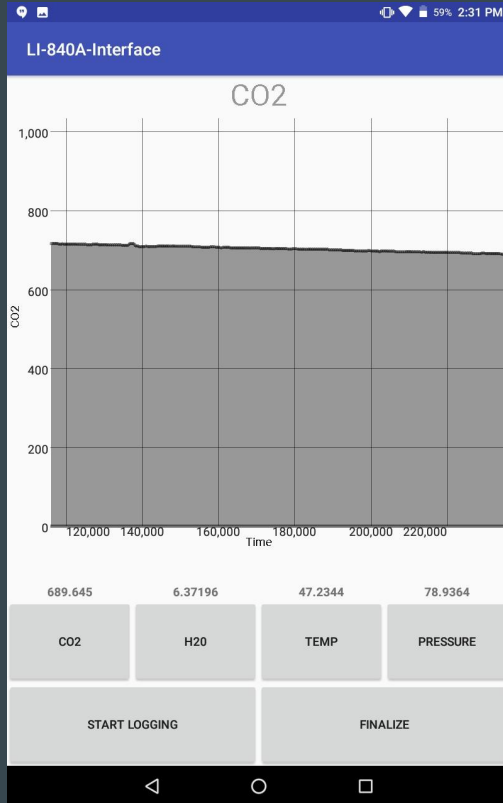
Graph Screen



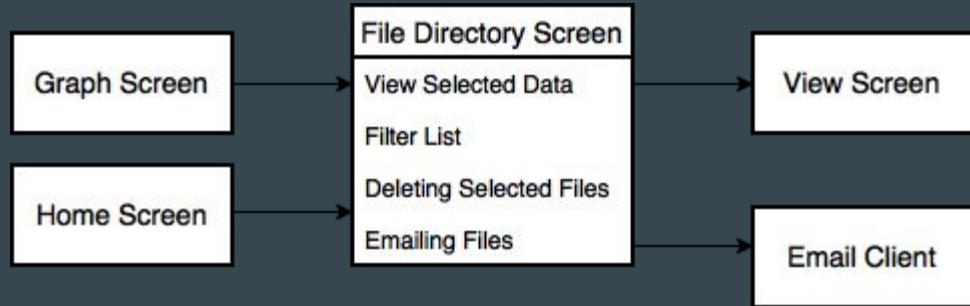
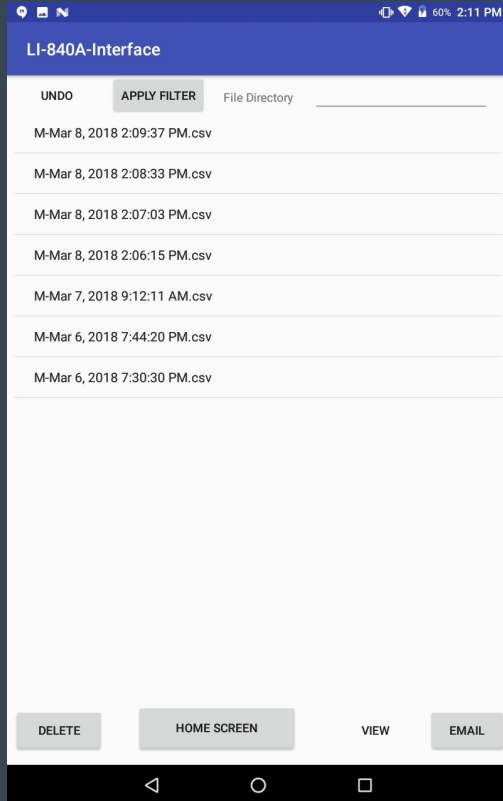
Graph Screen



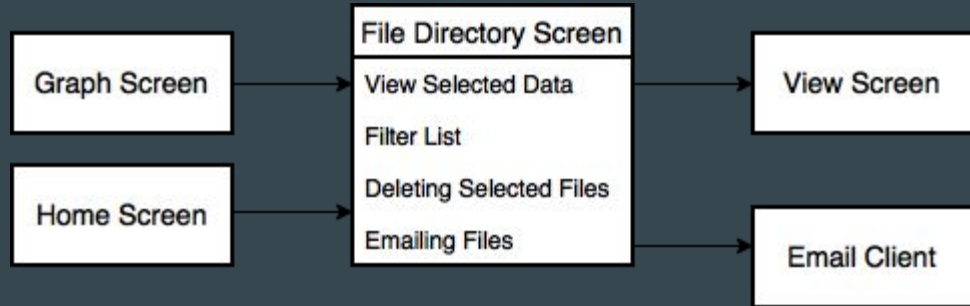
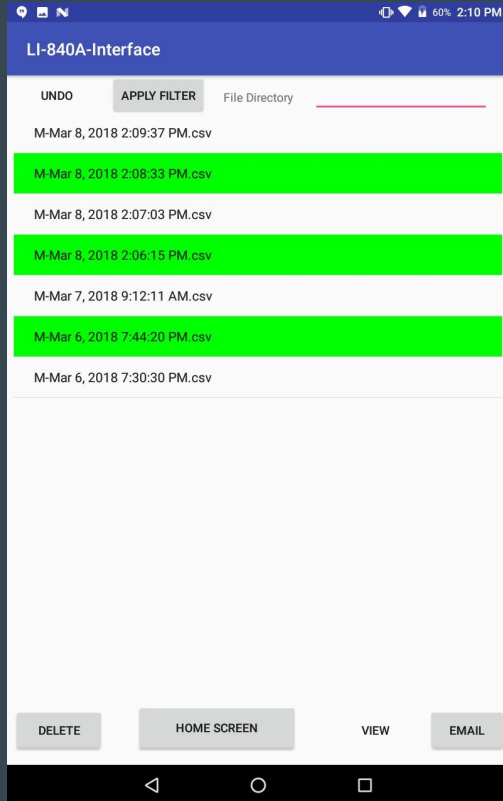
Graph Screen



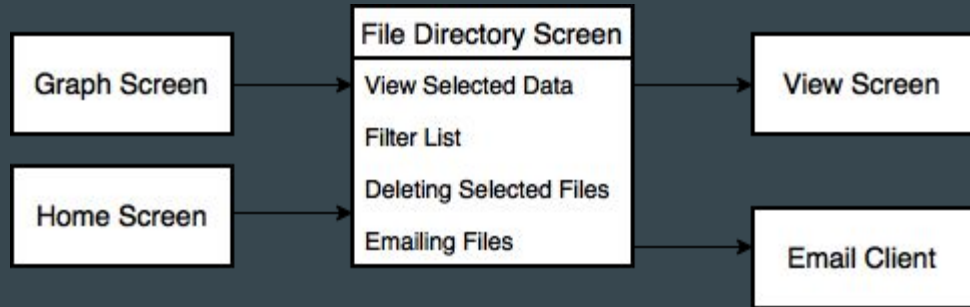
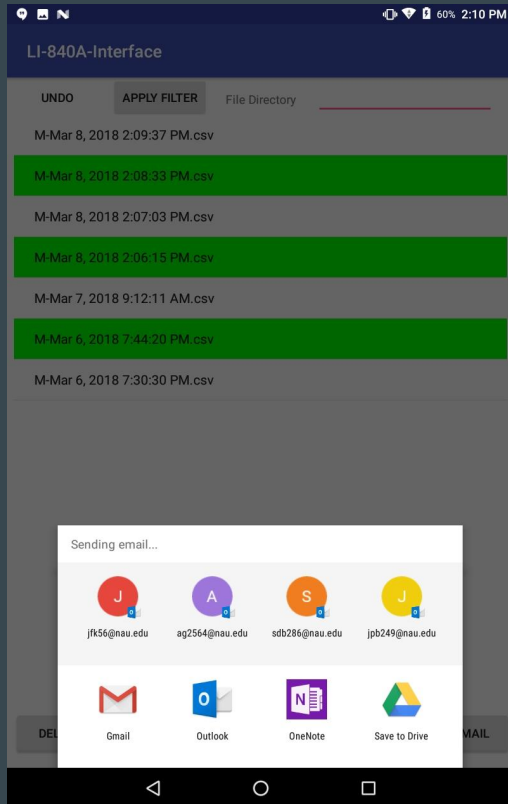
File Directory



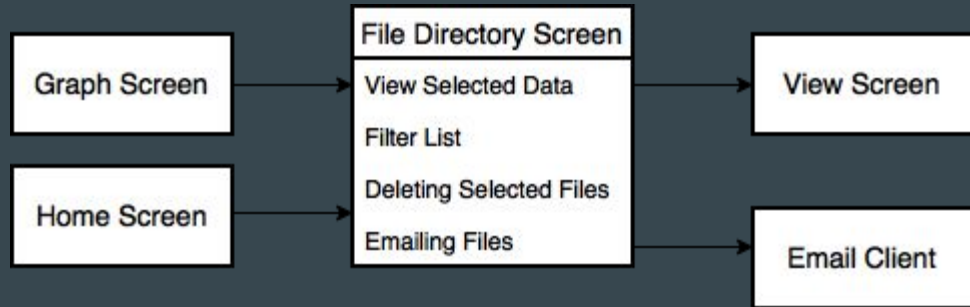
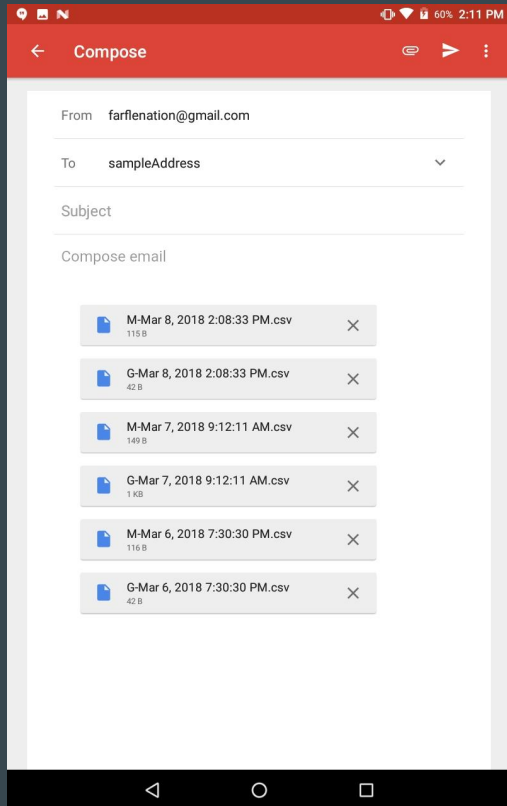
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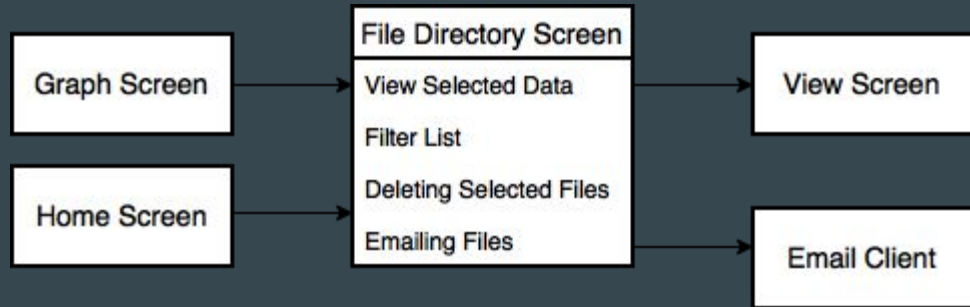
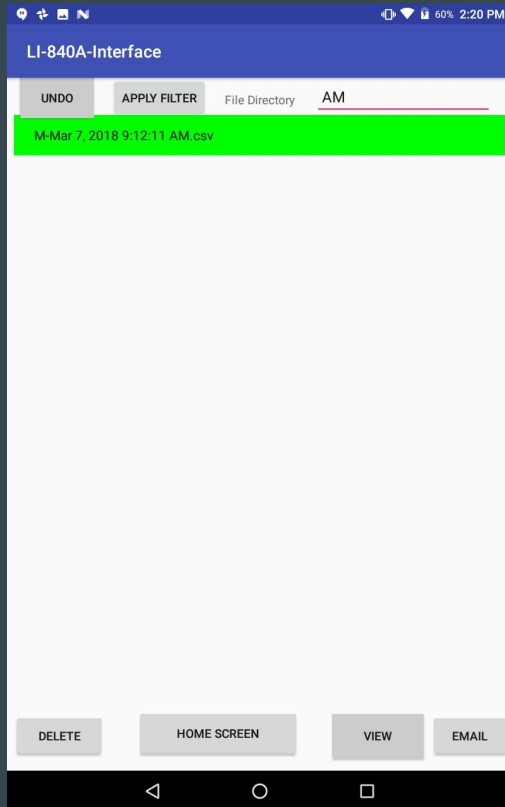
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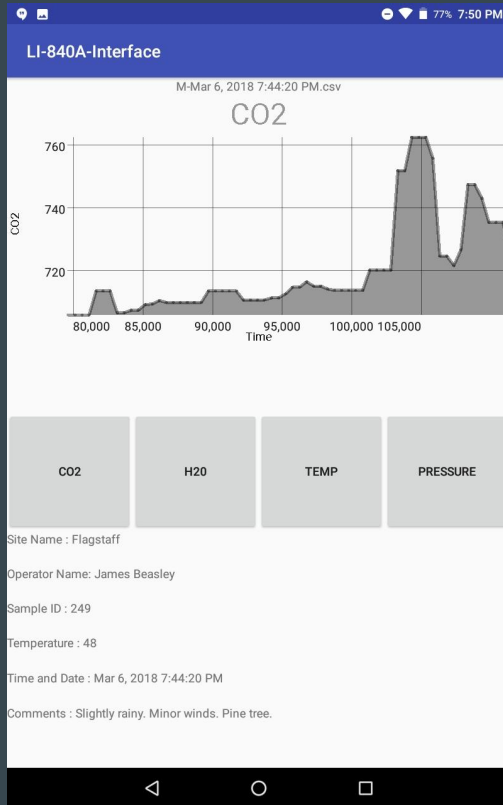
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File Directory



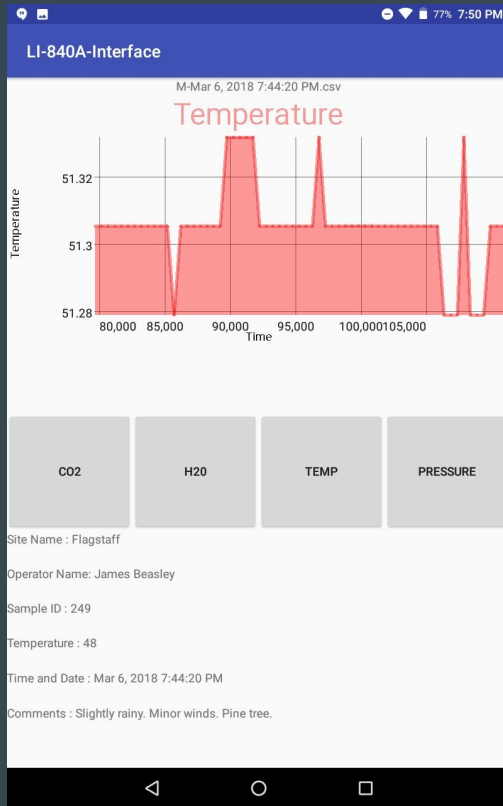
View Screen



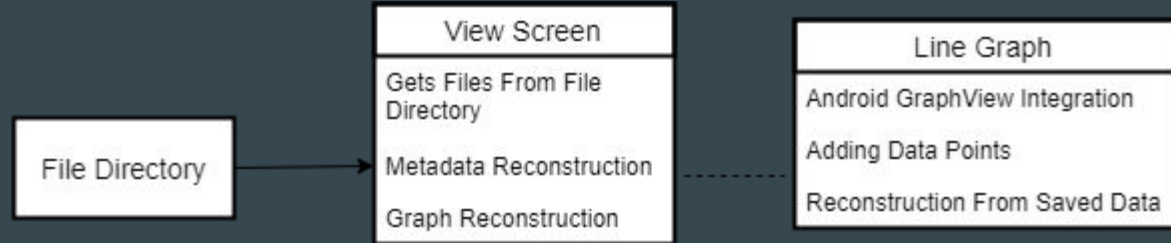
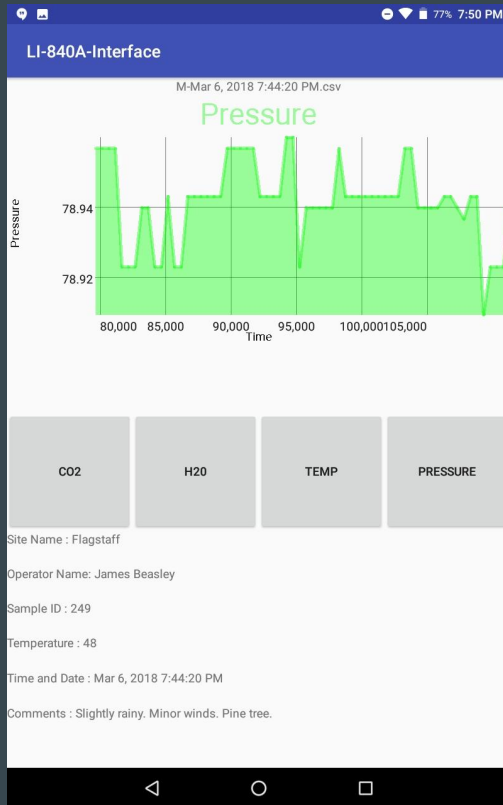
View Screen



View Screen



View Screen



Challenges

- Connection
- Android application
- Overall design

Schedule

Task Name	Start Date	End Date	Jan			Feb				Mar								
			Dec 31	Jan 7	Jan 14	Jan 21	Jan 28	Feb 4	Feb 11	Feb 18	Feb 25	Mar 4	Mar 11	Mar 18				
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Home Screen	01/21/18	01/24/18																
Application Navigation	01/21/18	01/31/18																
Buttons	01/21/18	01/31/18																
MetaData Screen	01/21/18	03/16/18																
Date, Time, and GPS Functionality	02/14/18	02/23/18																
GPS AutoFill	03/07/18	03/12/18																
Data Fetching	02/14/18	02/26/18																
Passing MetaData	02/21/18	02/26/18																
Graphing Screen	01/21/18	03/16/18																
Simultaneous Graph Readout	02/14/18	02/20/18																
Live Switching Between Graphs	02/14/18	02/20/18																
Live Number Displays	02/21/18	02/26/18																
File Directory Screen	01/21/18	03/16/18																
Array List of Files	02/07/18	02/14/18																
List View Object	02/07/18	02/14/18																
File Saving System	02/07/18	02/20/18																
View Screen	01/21/18	03/16/18																
Data Reconstruction	02/26/18	03/05/18																
Graph Reconstruction	02/26/18	03/05/18																

Conclusion

- CO2 Flux: A Mobile Application for Ecological Data Collection
- Improves the CO2 data collection process
 - Mobile
 - Visual
 - Faster
- All the functionality of the previous system and more

Questions?



Contact Information
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