

The Physics Educational Information Hub

Peter Gimby

University of Calgary

June 5th, 2018



**UNIVERSITY OF
CALGARY**

Overview

- The Original Problems
- The Solutions
- Use Cases
- Moving Forward

The Original Problems

- Educational laboratory resources are restricted, disorganized, and disappearing from memory.
- Significant risk that a significant amount of intellectual resources could be lost permanently.
- Limited physical storage space.

The Solutions

- Organized Lab Documents - Archive.
- Department Wide Access to Information.
- Transferable Knowledge.
- Platform for Collaboration.
- Foundation for Future Development.
- Created Room to Grow.
- Tools for Ease of Upkeep.
- Mobile friendly.

Use Cases

► New Education Labs Website

Developing a new Experiment

- Download templates.
- Build new experiment.
- Save papers used in development.
- Save sample data.
- List topics covered, and math skills required.
- List equipment.
- Final product is added to repository.
- Experiment is now available for next developer.

Keeping it Relevant

- Built with popular languages (javascript, html, xml, python, css, php).
- Built back-end tools for updating and validating?
- Requires buy in from all stakeholders?
- Requires that documents are added before the lab runs?

Future Work

- Continue to populate disciplines and topics.
- Authentication.
- Administration manual.
- Host simulations.
- Host demonstrations.