Sensor Configuration and Calibration Setup Assistant

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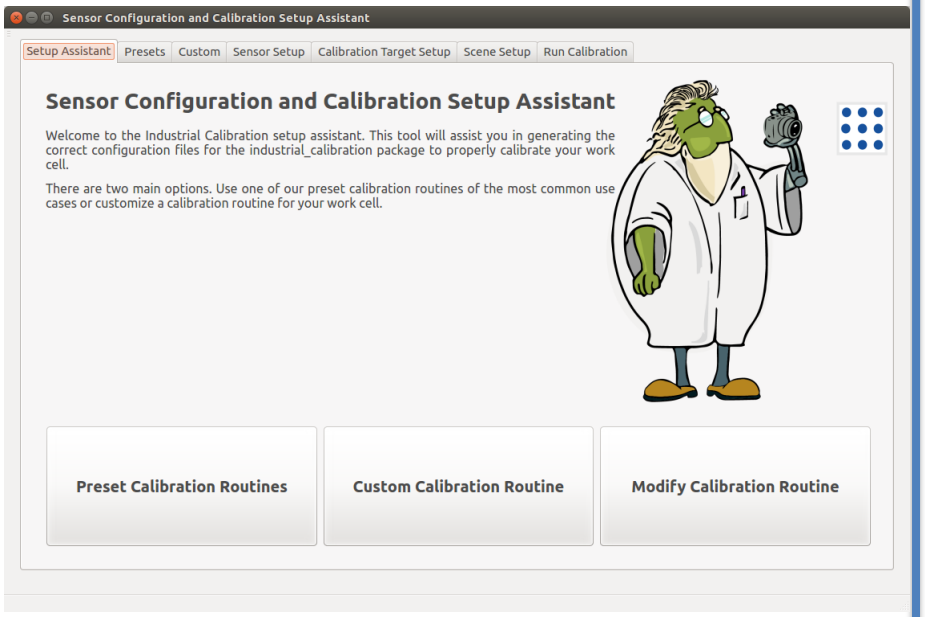
Overview



Approach

- Create a graphical library to allow drag and drop 2D and/or 3D imaging sensors and calibration targets into the 3D environment
- Add preset calibration cases of the most common scenarios
- Allow a person whose name isn't Dr. Chris Lewis to calibrate their work cell without getting a headache.

Metrics for success:

- Library populated with existing sensor configuration packages and target models.
- Demonstrate the intrinsic calibration of an individual sensor.
- Demonstrate the extrinsic calibration of a single sensor and target
- Demonstrate the extrinsic calibration of a multiple sensors with a robot holding the target.

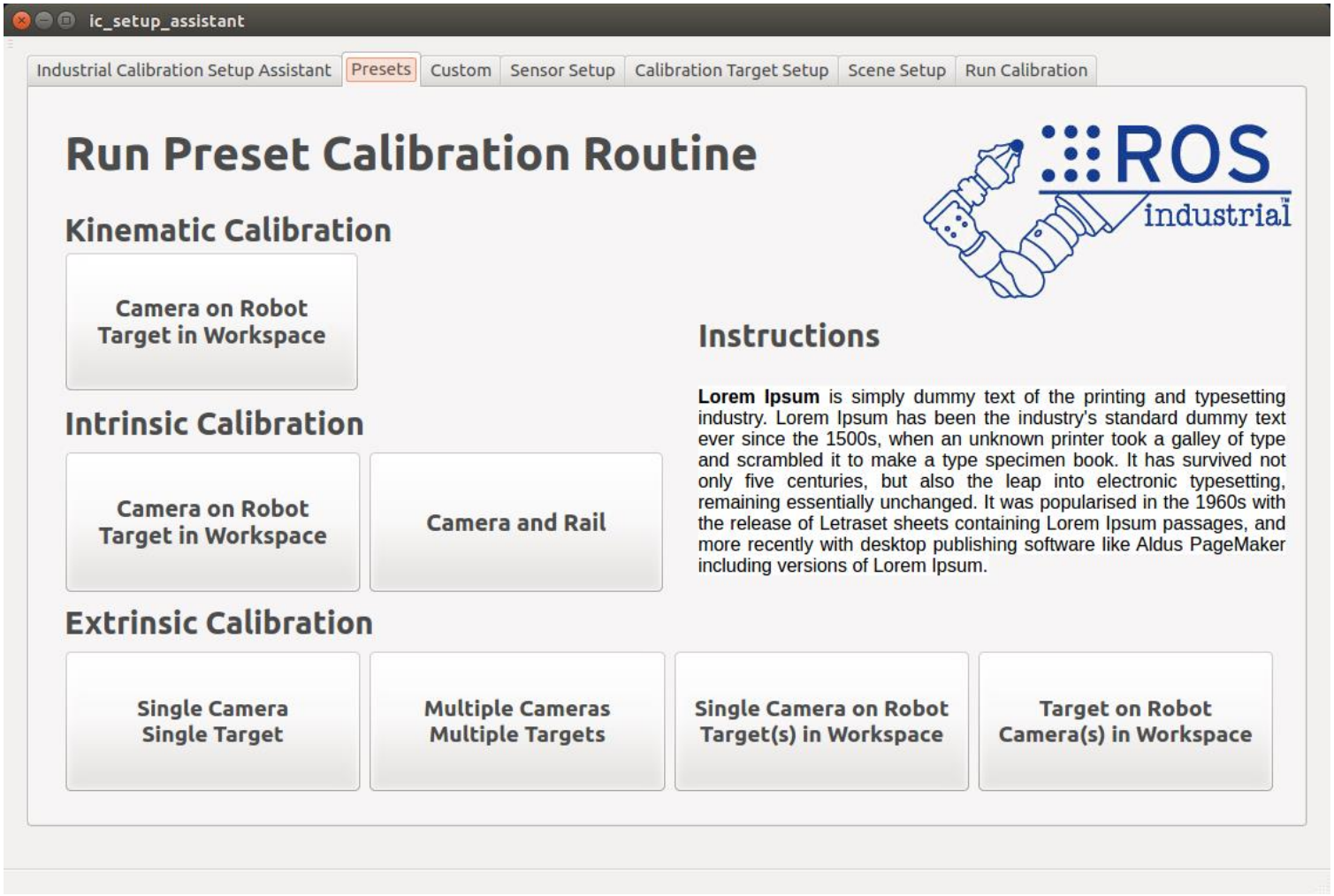
Motivation/Objective

- **Motivation**: The current industrial calibration package is extremely difficult to use. Setting up a calibration routine involves manually editing multiple YAML files and understanding which cost functions to pick for each type of calibration.
- **Objectives**: Create a graphical user interface for the *industrial_calibration* package with preset configurations for the most common calibration cases to simplify the calibration process.

Schedule

	M1	M2	M3	M4
Clean Codebase				
Add Kinematic Calibration Features				
Setup Assistant GUI				
Testing				

Common Use Cases



Calibration Setup Assistant

Features	Current	Proposed
2-D Camera Calibration	✓	✓
3-D Camera Calibration	✓	✓
MoveIt Motion	✓	✓
Simulated Calibration	✓	✓
Software Triggering of Sensors	✓	✓
Kinematic Calibration		✓
Updated Tutorials		✓
Simple GUI		✓
Detailed Documentation		✓

Contact Info.

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