

Abstract

The purpose of this application is to allow SRS Distribution to securely store ordered roofing materials for customers to pick them up at their convenience. The locker computer interfaces with the SRS' internal order/employee database to keep track of stocked orders and notify customers of their unlock code.

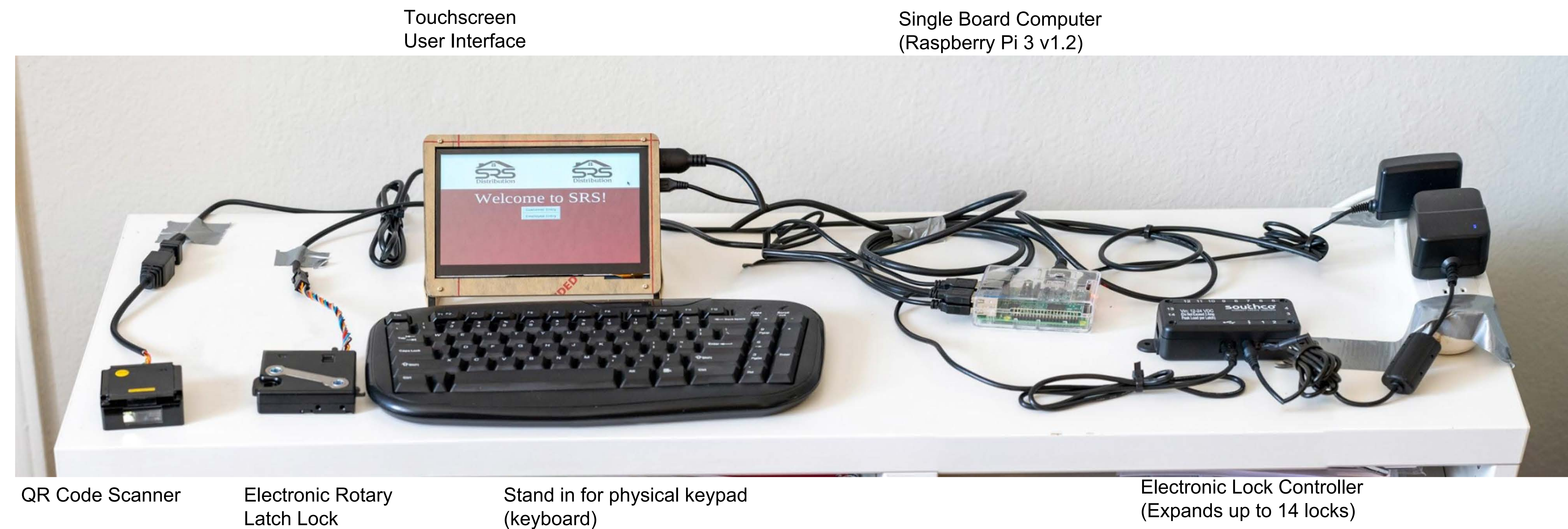
- Phase 1 included building the software GUI with mock MySQL database interconnectivity, along with proof of concept lock/controller hardware.
- Phase 2 will include industrial grade lock/controller hardware with a secure physical locker box and integration into production SRS' production systems.

Future improvements/revisions

- Implement a better GUI
- Industrial Grade Hardware
- Connection to Production Databases
- Full Size, Metal Locker Integration

Sponsors

- SRS Distribution's Dept. of Innovation
- UNT Professor David Keathly



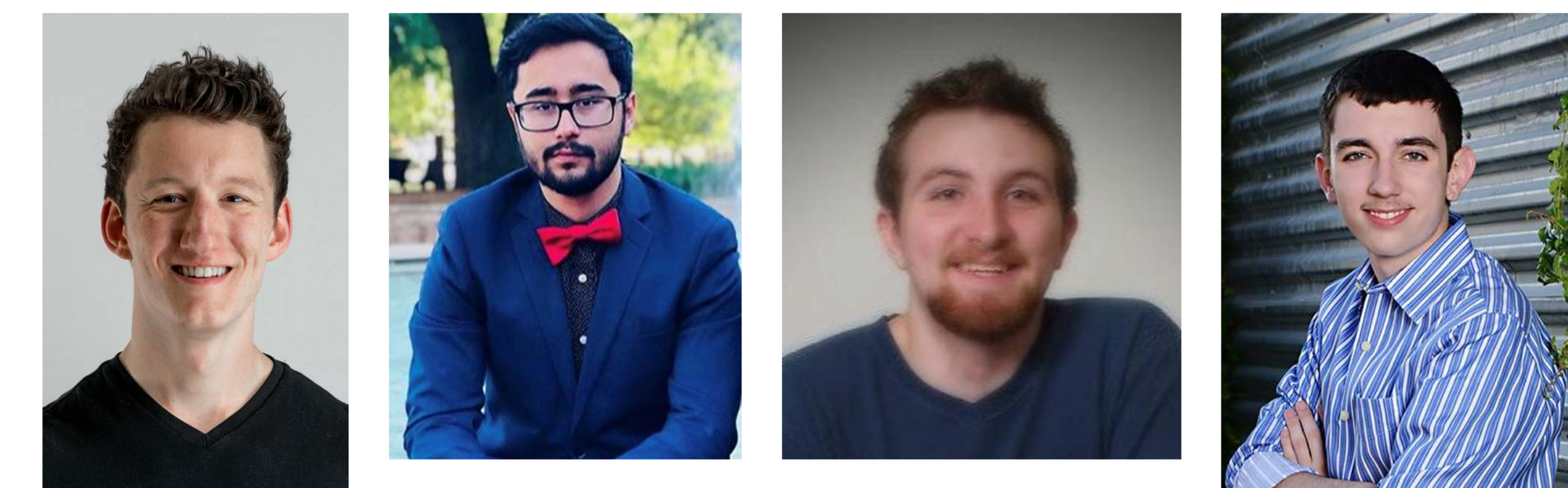
QR Code Scanner Electronic Rotary Latch Lock Stand in for physical keypad (keyboard) Electronic Lock Controller (Expands up to 14 locks)

- The employee scans an employee pin card, scans an order form, the lock pops open, and the customer gets send an unlock code.
- The customer gets an email with the unlock QR code which opens the lock when scanned.
- This system will allow for minimal human interaction when fulfilling orders, providing increased safety during the pandemic along with reducing labor and shrinkage costs.

Challenges, Skills Developed, Tools Learned, Other Experience Gained

- Tkinter GUI Development
- Technical Documentation for Software Development
- Hardware / Software Integration
- Connecting MySQL Database and Python
- Remote Teamwork

The Team



R. Cooper Snyder, Animesh Siwakoti, Ryan Heckmann, Colton Butler