AttendancePlus+

Jonah Palmer, Jacqueline Thornton, Colin LaFountain, Jonathan Eisenbies
**Faculty Advisor: Prof. David Irwin**

Abstract

AttendancePlus+ is a contactless solution to automated attendance in grade schools. Normally, teachers take attendance at the beginning of their class, calling student's names one by one. However, AttendancePlus+ takes care of this burden automatically through the use of ultra-high frequency (UHF) RFID technology.

By having students wear RFID tags and placing antennas on each side of the doorway, students are automatically detected and recorded with no effort by the student. By knowing where any student is at any given time, a teacher can instantly see who is present and absent within their class.

System Overview
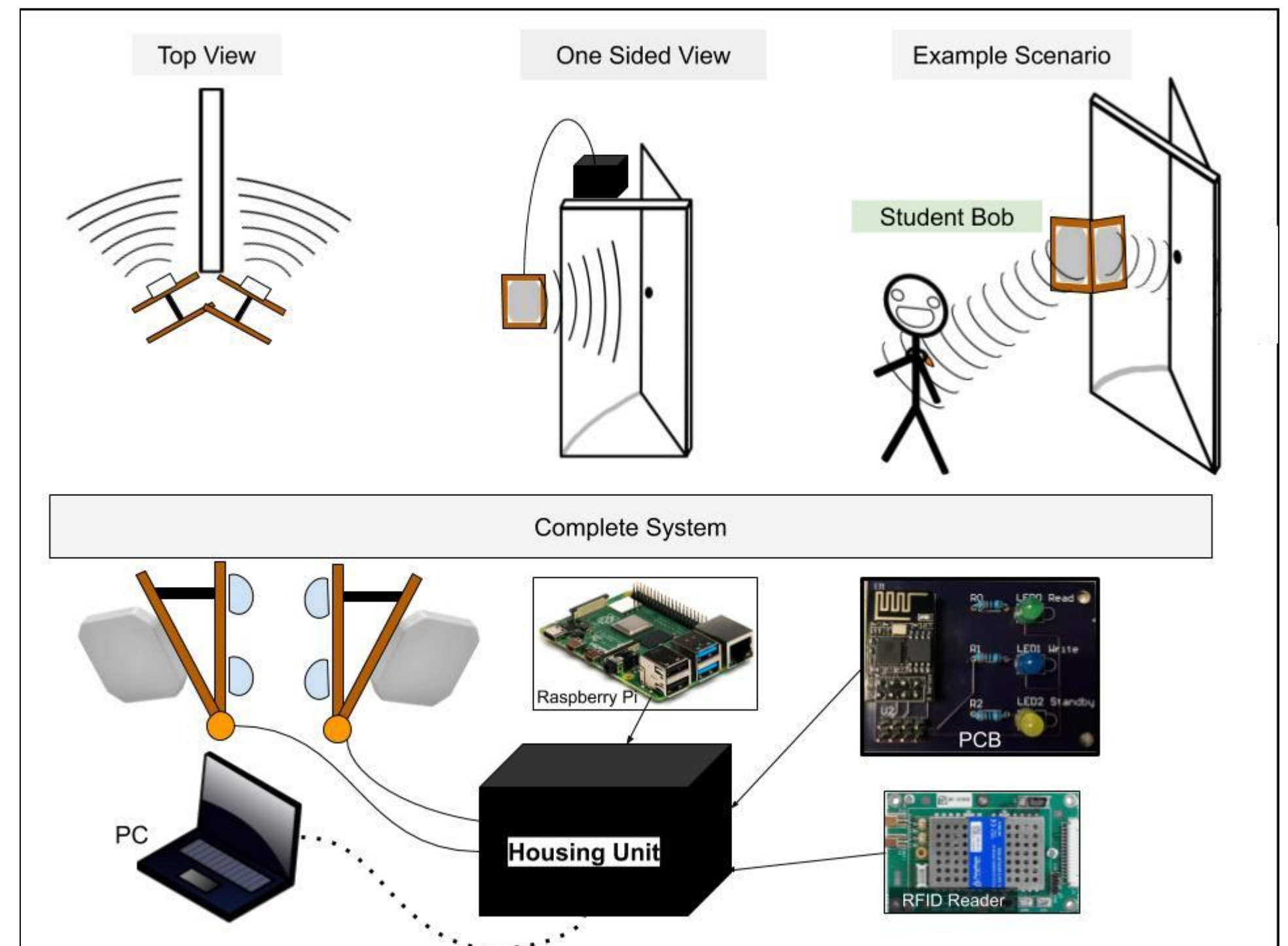
Block Diagram
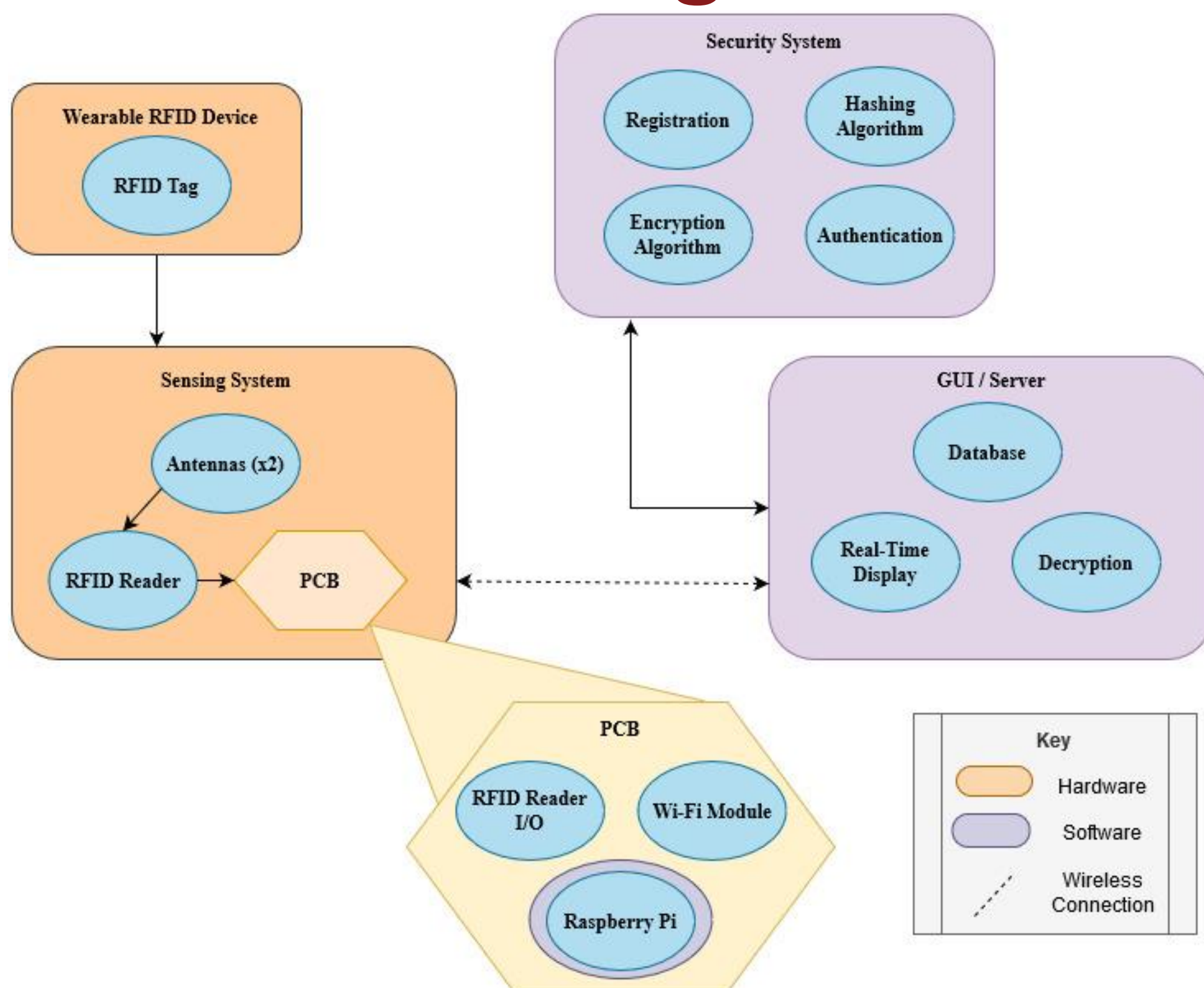
Specifications

Specification	Goal	Actual
Accuracy of location	95%	100%
Data Protection	Encrypted	Encrypted
Easy Installation	Above doorway	On sides of doorway

Results

AttendancePlus+ has created a real-time, automated, and contactless student tracking system with a built-in GUI for teachers and administrative faculty. The GUI offers a wide variety of applications for the user, including: automated attendance, student searching (by student or by room), student-tag registration, etc.

The GUI also comes with its own security suite, ensuring that no bad actors can gather personal information or exploit the system via their own RFID tag.

Lastly, the system is designed to be easily expandable; each doorway unit is independent of other units and the GUI comes in the form of a distributable executable.

Acknowledgement