Electronic ID for Inventory

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Overview

- Introduction
- Filter
- Software
- Demo
- Questions
Introduction

- Continuation from Fall ’12 / Spring ’13
- Solution for Lab Animal Resources
- RFID reader / tag selection
- Trial runs
- Proof of Concept

- Fall ‘13
  - Fine tune power / filter levels
  - Improve software
Filter and Power Levels

- Balance between reliability and performance
- Initially set using histograms created from trial runs

- Metal
  Power: 17 dBm
  Filter: -57 dBm

- Plastic
  Power: 15 dBm
  Filter: -45 dBm
Power and RSSI Profiles

Average RSSI over a 5 sec interval

Distance = 6"
Performance

Tag reads over a 5 sec interval

Distance = 6"

Count

Power (dBm)

Metal
Plastic
Distance Profile

Power = 22 dBm for metal
Power = 18 dBm for plastic
Software Enhancements

• Refactor
  o Modularity
  o Extensibility
  o Reusability
  o Readability

• Error Handling
  o User Input
  o System Input

• Bug Fixes

• Additional Features
XML Extensions

- Storing Settings
- User Profiles

```
<staff id="1">
  <first>Justin</first>
  <last>Fritzler</last>
</staff>
```

- Room Tags

```
<room rfid="22302D87" dirty="0">
  <id>1</id>
  <name>LSC 228 A</name>
</room>
<room rfid="22302D8B" dirty="0">
  <id>2</id>
  <name>LSC 228 B</name>
</room>
```

- Synchronize
Software Demo
Questions?