MICHIGAN STATE UNIVERSITY

Alpha Presentation

Dynamic Spectrum Access for Networked Radios

The Capstone Experience

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From Students…
…to Professionals

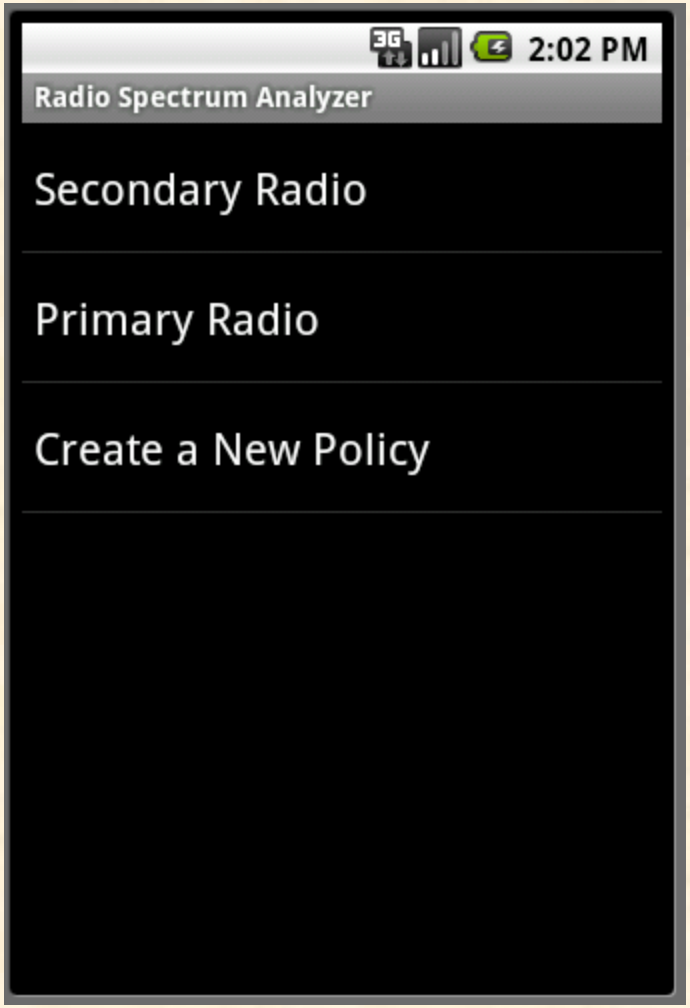
Project Overview

- Create a policy containing:
  - Frequency range, tuning bandwidth, # of segments, power, sample bandwidth, segment bandwidth, power delta, base output power, segment spacing
- Retrieve radio data
- Analyze and report recommendations
- Send chosen recommendation to radio

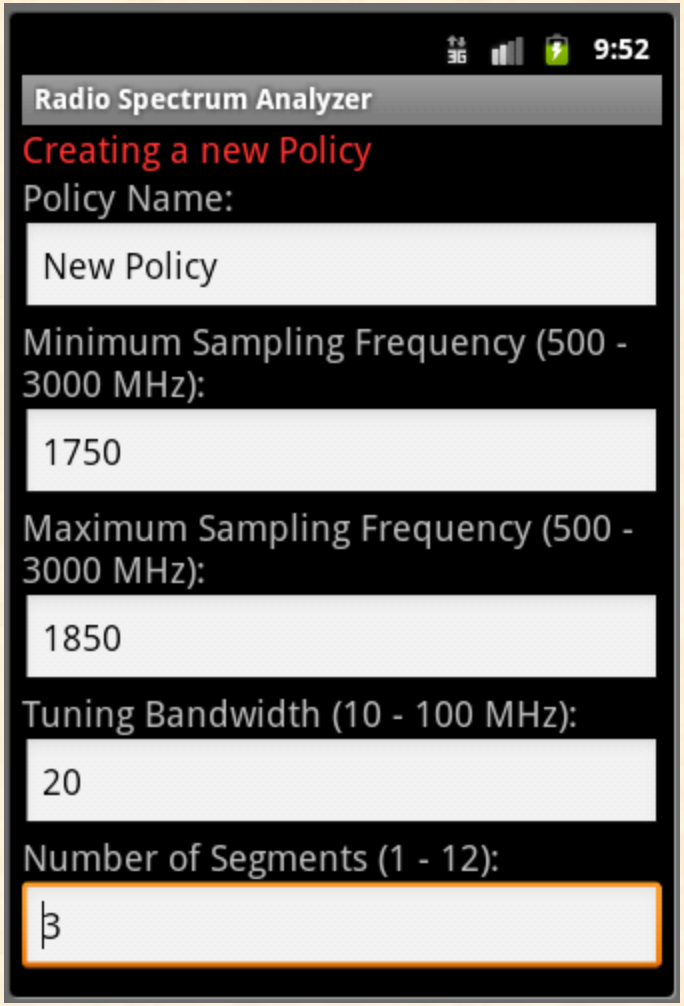
System Architecture

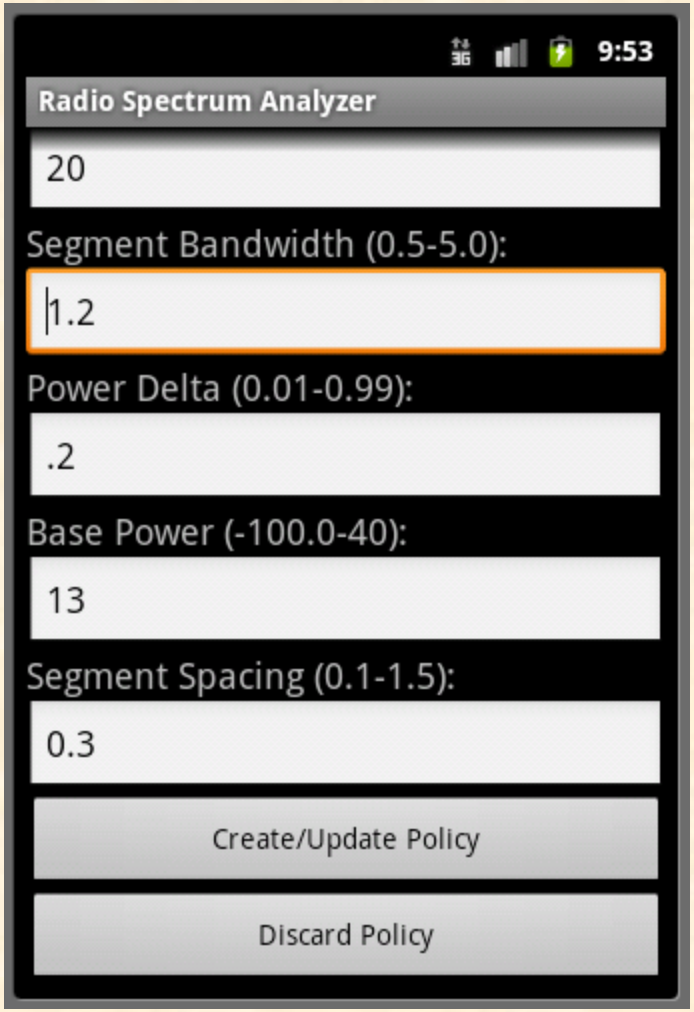
- Hardware
  - Network enabled radio
  - Android OS phone
- Software
  - NDK in C
  - Android SDK in Java
  - SQLite in Java

Policy Selection

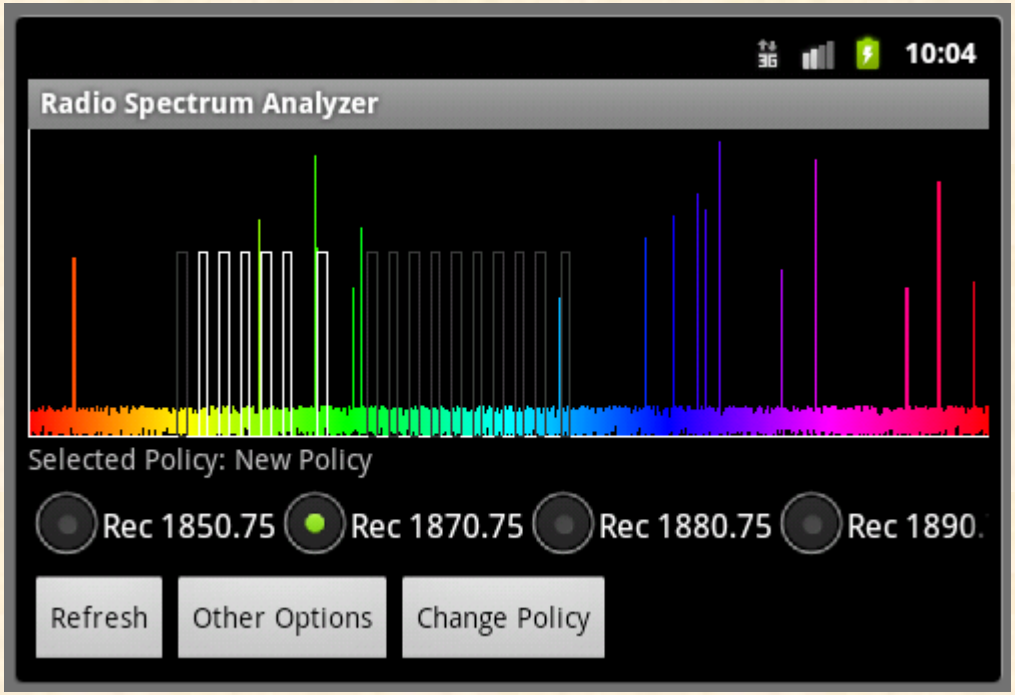


Policy Create/Edit

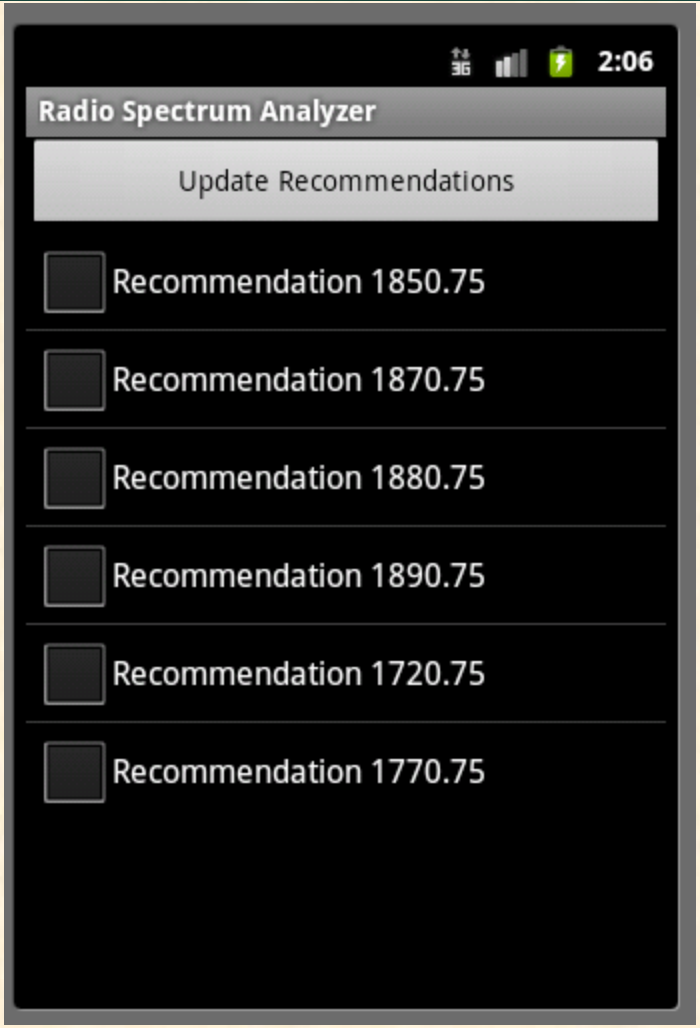




Spectrum View



Choose Recommendation



What's left to do?

- Port tcl networking code
- Improve graph usability and speed
- Improve recommendation algorithm
- EZ Connect
- Laptop command line version