

MICHIGAN STATE
UNIVERSITY

Beta Presentation

Dynamic Spectrum Access for
Networked Radios

[The Capstone Experience](#)

Team Raytheon

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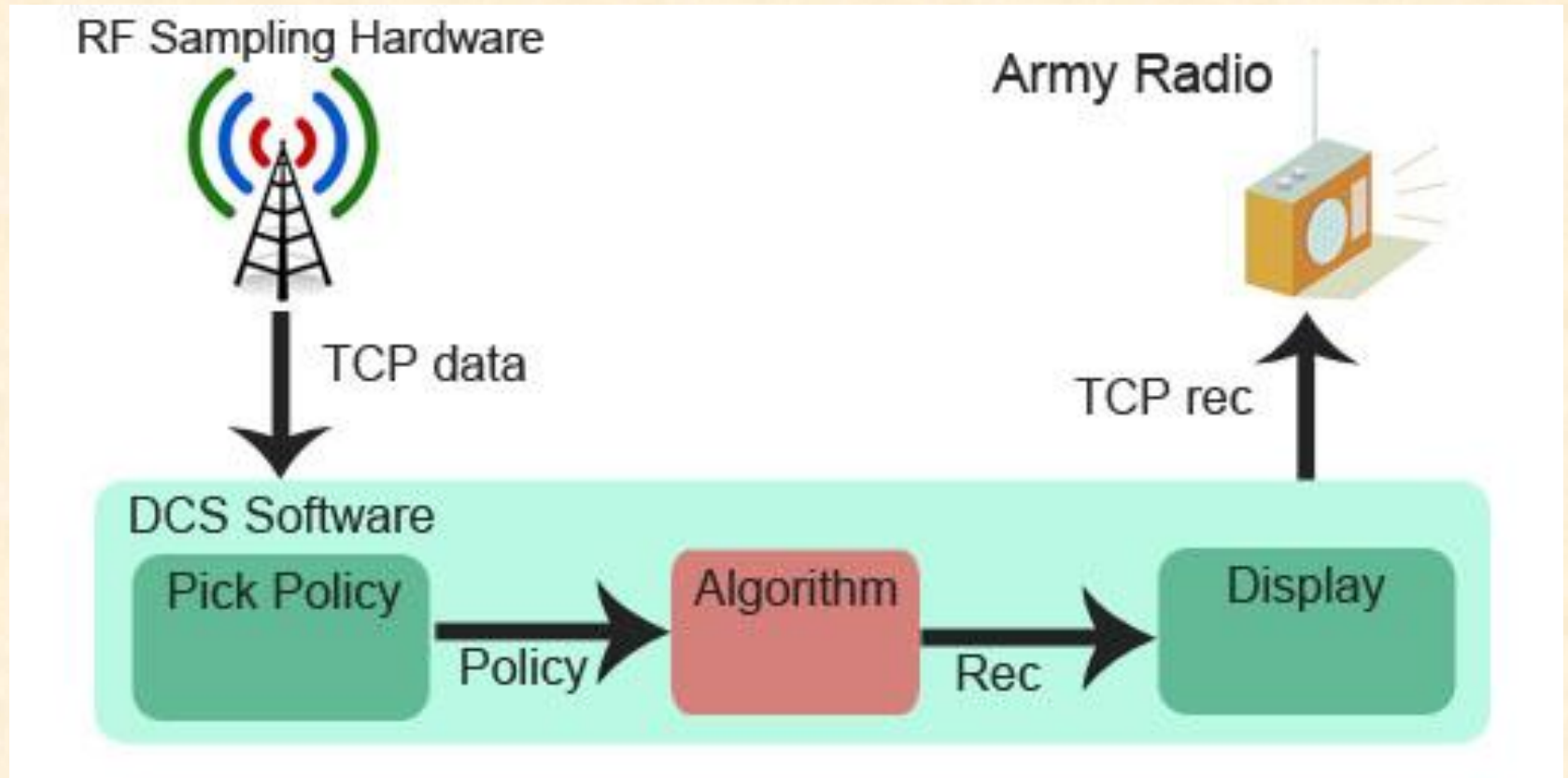
*From Students...
...to Professionals*

Project Overview

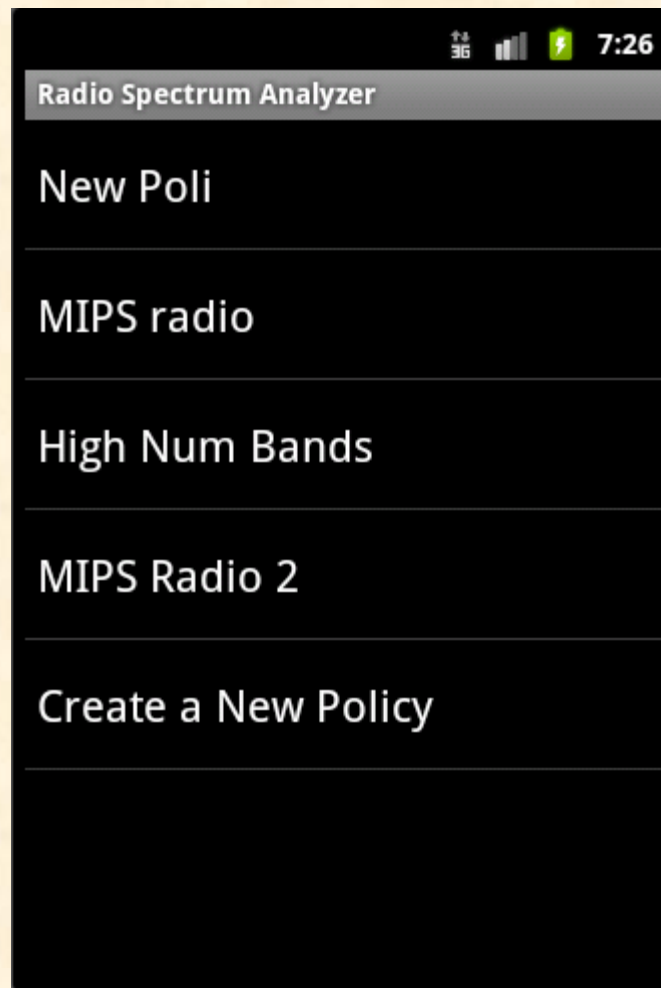
- Goal: Tune radios using Android based software.
- Radio-specific specs for broadcasting.
- Analyze radio spectra and generate broadcasting recommendations.
- Network communication
 - Retrieve radio spectrum.
 - Tune radios.



System Architecture



Choose Radio Policy



Edit and Create Radio Policies

Radio Spectrum Analyzer

Updating Policy: MIPS radio

Policy Name:

Minimum Sampling Frequency (500 - 3000 MHz):

Maximum Sampling Frequency (500 - 3000 MHz):

Tuning Bandwidth (10 - 100 MHz):

Create/Update Policy

Discard Policy

Radio Spectrum Analyzer

Updating Policy: MIPS radio

Number of Segments (1 - 12):

Power Level (1 - 50 dbm):

Segment Bandwidth (0.5-5.0):

Power Delta (0.01-0.99):

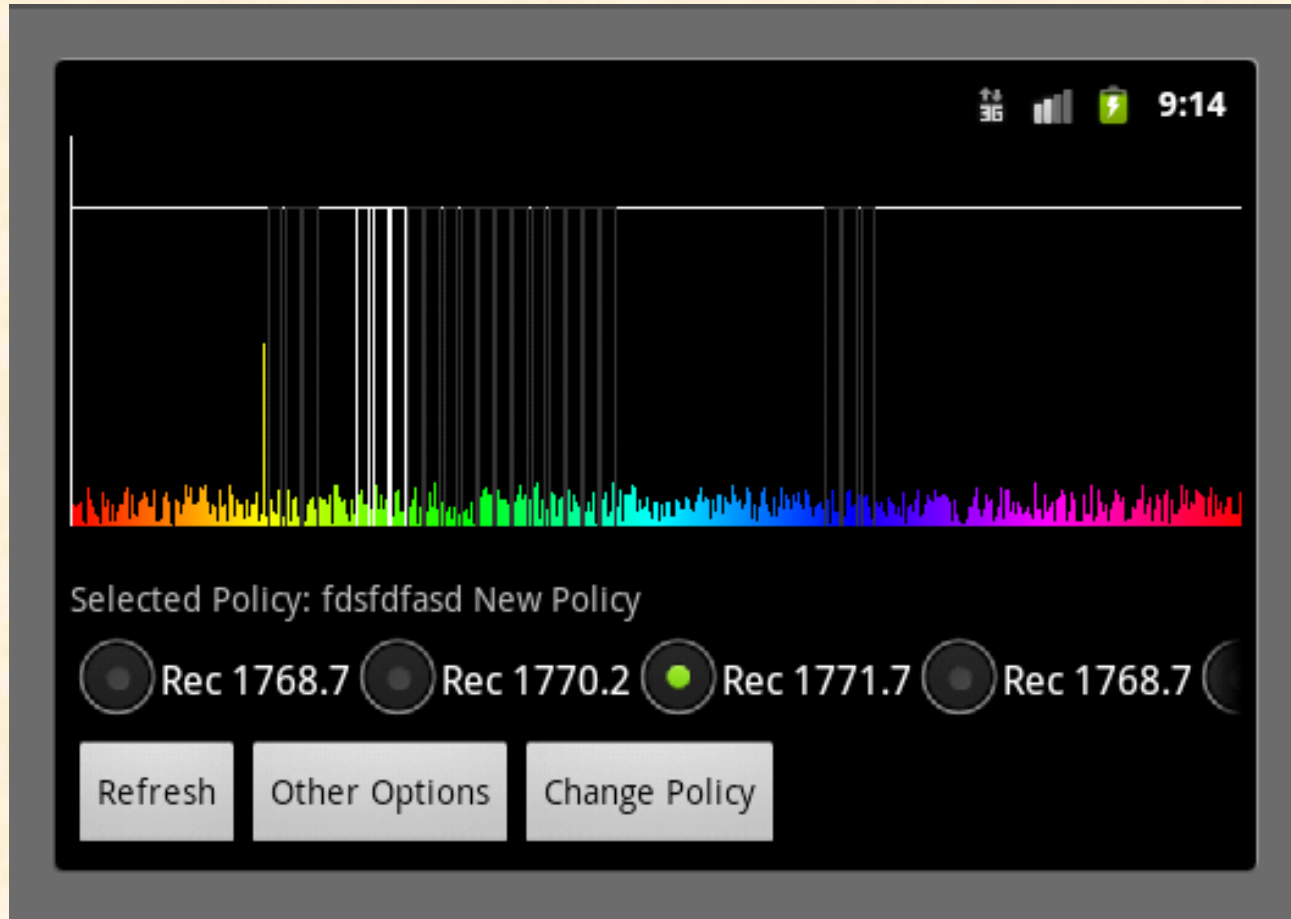
Base Power (-100.0-40):

Create/Update Policy

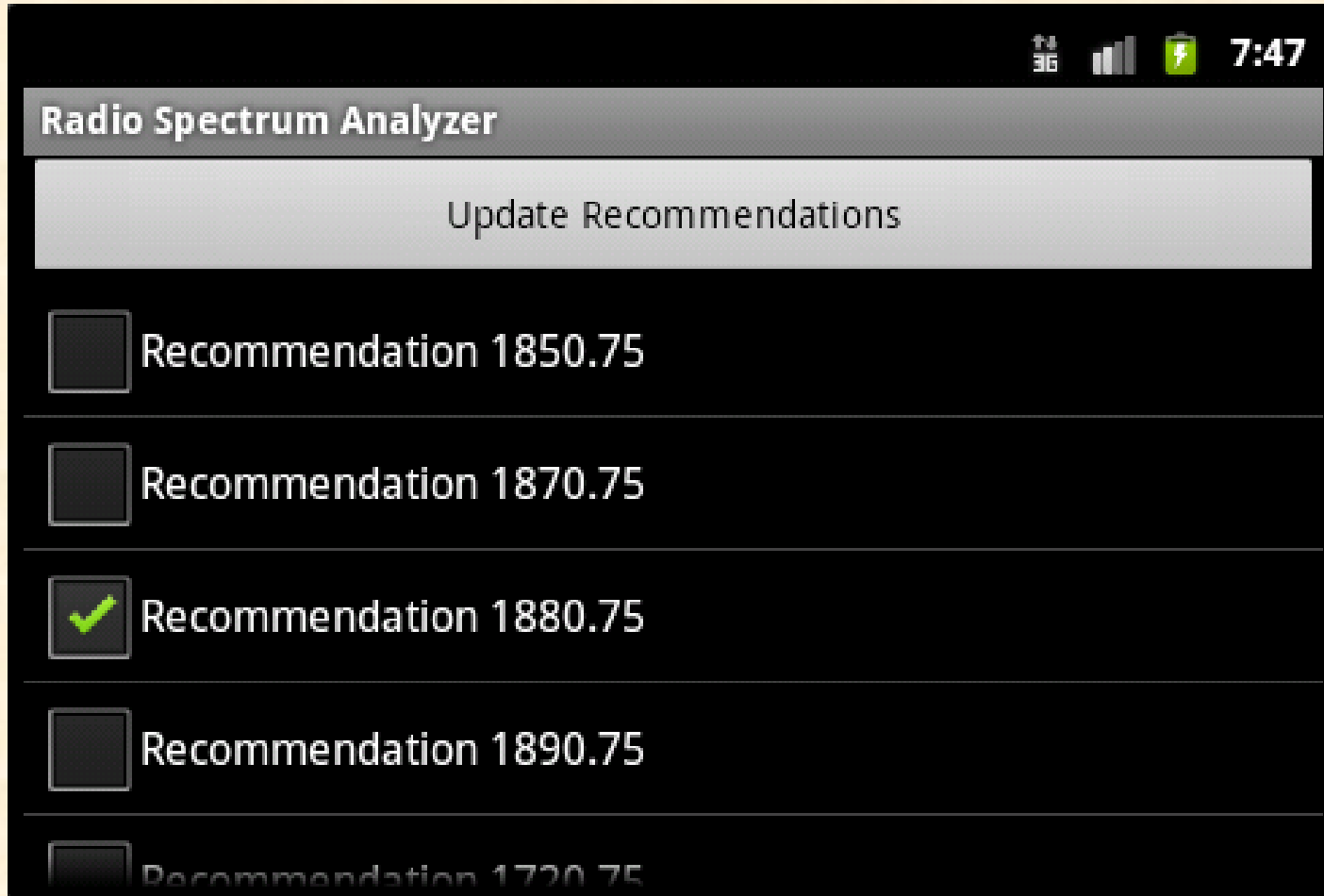
Discard Policy



View Radio Recommendation



Choose Recommendation



What's left to do?

- Finalize documentation for Raytheon
- Command line version of software
- Test software and fix any bugs
- Graph Enhancements

