MICHIGAN STATE UNIVERSITY Beta Presentation Dynamic Spectrum Access for Networked Radios <u>The Capstone Experience</u>

Team Raytheon

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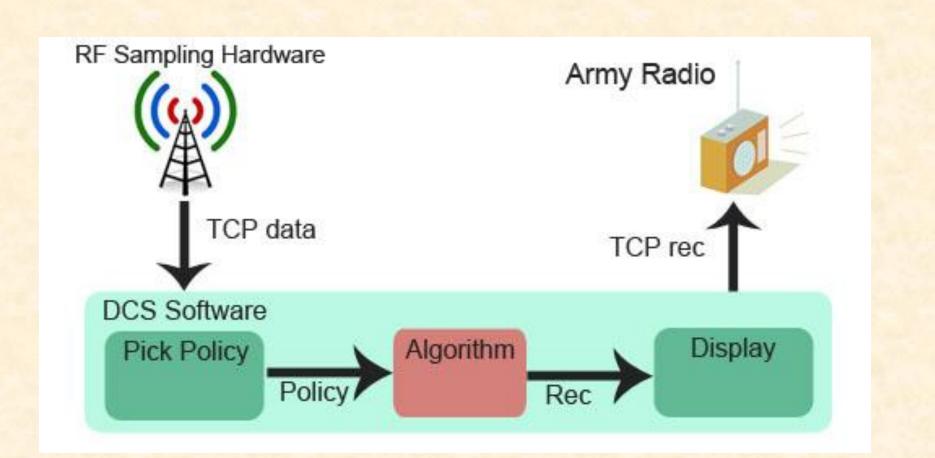


...to Professionals

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.

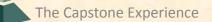
System Architecture





Choose Radio Policy

👬 💵 🦻 7:26
Radio Spectrum Analyzer
New Poli
MIPS radio
High Num Bands
MIPS Radio 2
Create a New Policy



Edit and Create Radio Policies

👬 💵 🔽 7:31	ŝ
Radio Spectrum Analyzer	Radio Spectrum Analyzer
pdating Policy: MIPS radio	Updating Policy: MIPS radio
olicy Name:	Number of Segments (1 - 1
MIPS radio	6
nimum Sampling Frequency (500 -	Power Level (1 - 50 dbm):
000 MHz):	Contraction of the second s
1750	20
	Segment Bandwidth (0.5-5.
aximum Sampling Frequency (500 - 000 MHz):	1.2
	Dower Dolta (0.01.0.00);
850	Power Delta (0.01-0.99):
ning Bandwidth (10 - 100 MHz):	0.2
0	Base Power (-100.0-40):
Create/Update Policy	Create/Update Policy
Discard Policy	Discard Policy

View Radio Recommendation

ing and a second secon	1
Selected Policy: fdsfdfasd New Policy Rec 1768.7 Rec 1770.2 Rec 1771.7 Rec 1768.7 Rec	
Refresh Other Options Change Policy	



Choose Recommendation

	++ 35	7	7:47
Radio Spectrum Analyzer			
Update Recommendations			
Recommendation 1850.75			
Recommendation 1870.75			
Recommendation 1880.75			
Recommendation 1890.75			
Perommandation 1720 75			

What's left to do?

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