



*UNITED STATES*  
**DEPARTMENT OF TRANSPORTATION**

# **Roadside Equipment Specification Overview**

Bidder's Conference  
February 22, 2011

Walton Fehr  
USDOT/RITA/ITS Joint Program Office

# Agenda

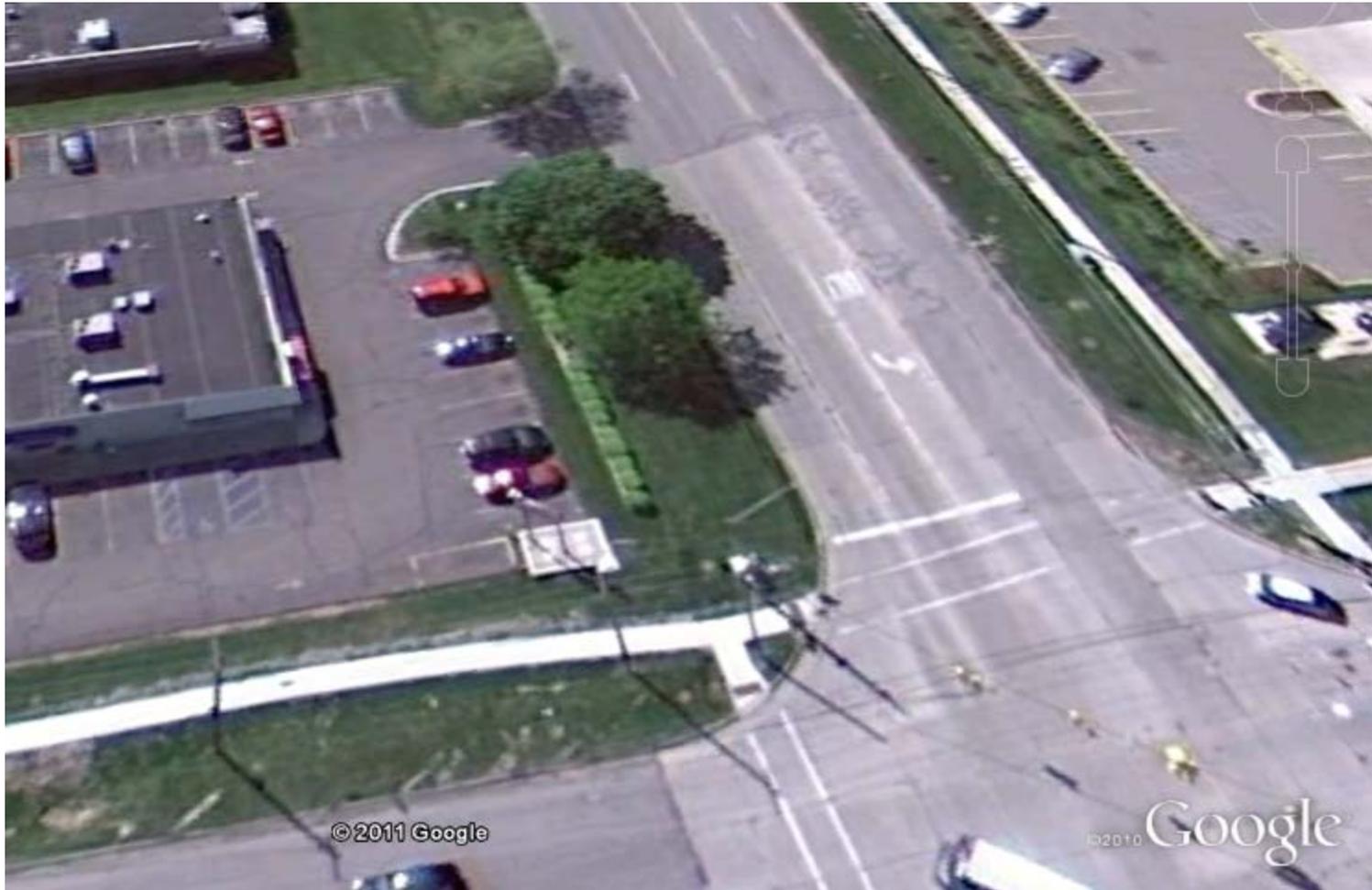
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- New items included in this solicitation
  - Two radios/multiple pairs
- Requirements
  - Appendix C – System Requirement Description, “5.9GHz DSRC Aftermarket Safety” Device Specification (Preliminary), 19Jan2011, 1.2
- Specification updates



# Multiple Radio Pair Background, 9 Mile and Haggerty, Proof of Concept Exercise

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# Multiple Radio Pair Background, Telegraph Road Expansion

Site ID	Max range in (meters)	North bound	South bound	West bound	East bound	Comments
3101	Telegraph & 10 Mile	323	275	275	456	
3106	Telegraph & 9 Mile	282	438	219	142	
3111	Telegraph NB & Crossover/ 11 Mile Service Dr	194	150	69		Westbound road is curved. RSE is obstructed by median trees.
3113	Telegraph SB & Swanson	371	371		136	Eastbound direction is obstructed by median trees
3115	Telegraph NB & X/O S of 10 Mile	226	121			Southbound is U-turn lane, range impaired by median trees
3116	Telegraph NB & X/O S of 9 Mile	299	117	115		Southbound is U-turn lane, range impaired by median trees
3118	Telegraph SB & X/O N of 10 Mile	288	172			
3120	Telegraph SB & X/O N of 9 Mile	104	262			Northbound is U-turn lane, range impaired by median trees
3123	Telegraph SB & X/O 12 Mile - New Signal	149	288			Range may be impacted by higher wireless collisions
3130	Telegraph NB & X/O of 12 Mile/Tel 12 Dr	118	127			Range may be impacted by higher wireless collisions
3133	Telegraph SB & Crossover/Denso Dr	348	369		148	Eastbound range is impaired by trees
3134	Telegraph NB & Raleigh Office Center (N of 10 Mile)	204	308			
3140	Telegraph SB & Northwestern Service Dr	56	173	100	343	Northbound range impaired by nearby trees
3142	Telegraph SB & Garner (9 1/2 Mile)		343		94	Eastbound approach impaired by trees. Intersection does not northbound approach



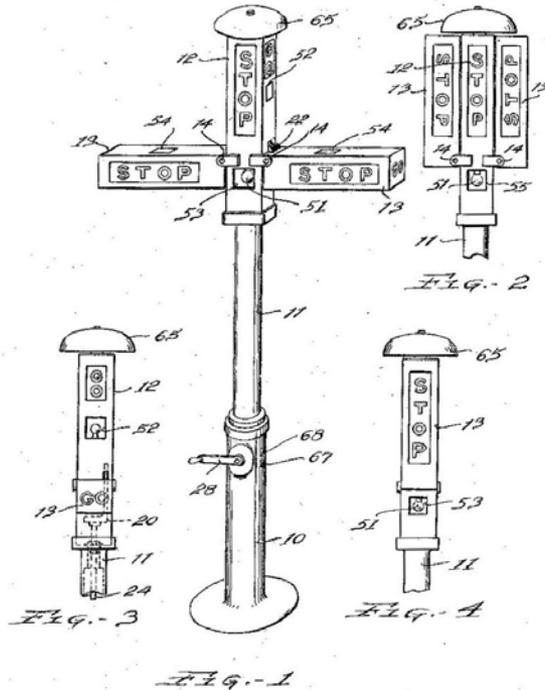
# Then and Now

Nov. 20, 1923.

G. A. MORGAN  
TRAFFIC SIGNAL  
Filed Feb. 27, 1922

1,475,024

2 Sheets-Sheet 1



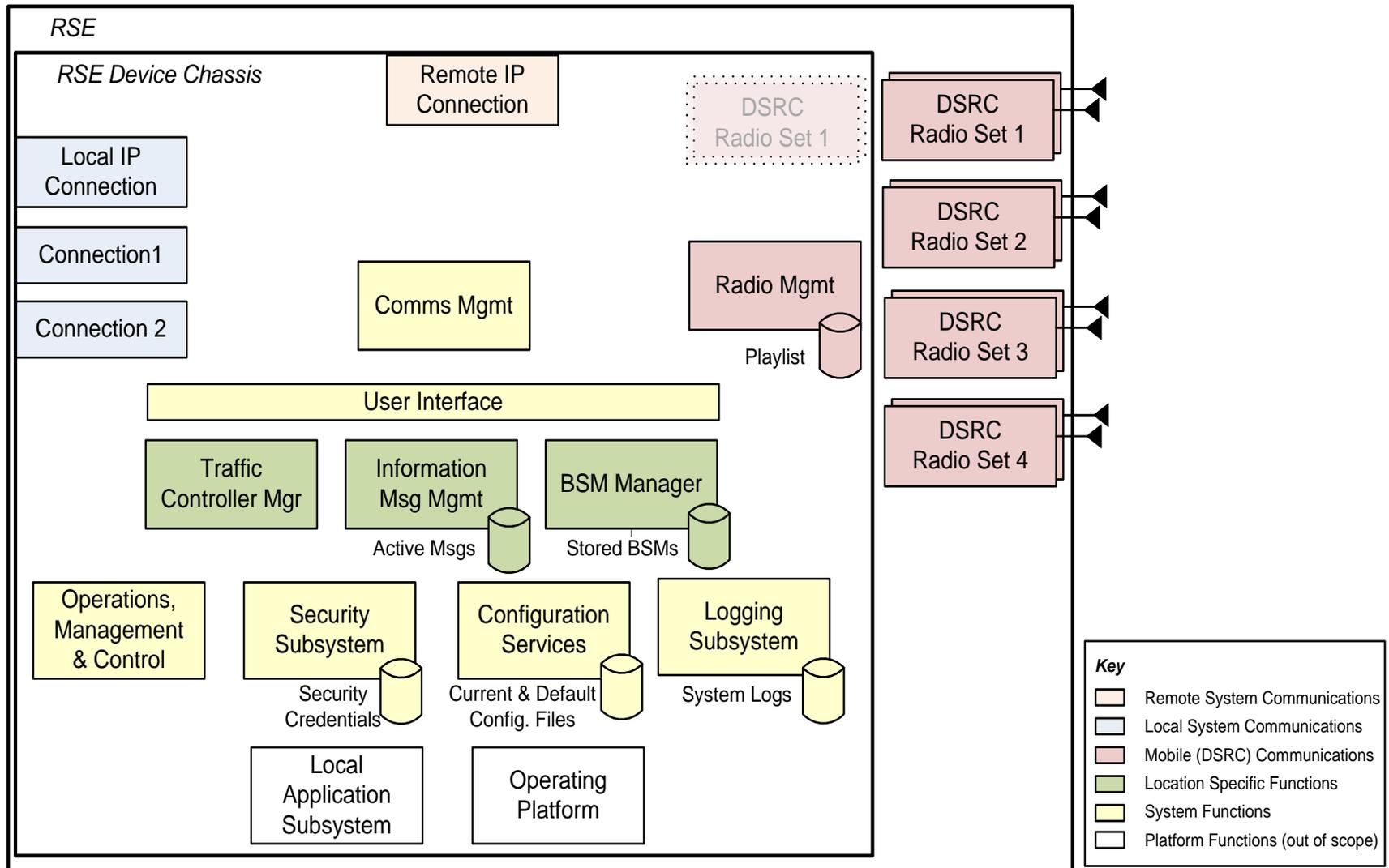
INVENTOR  
Garrett A. Morgan,  
By *Baker Macklin*,  
ATTORNEYS

Then, one  
radio module

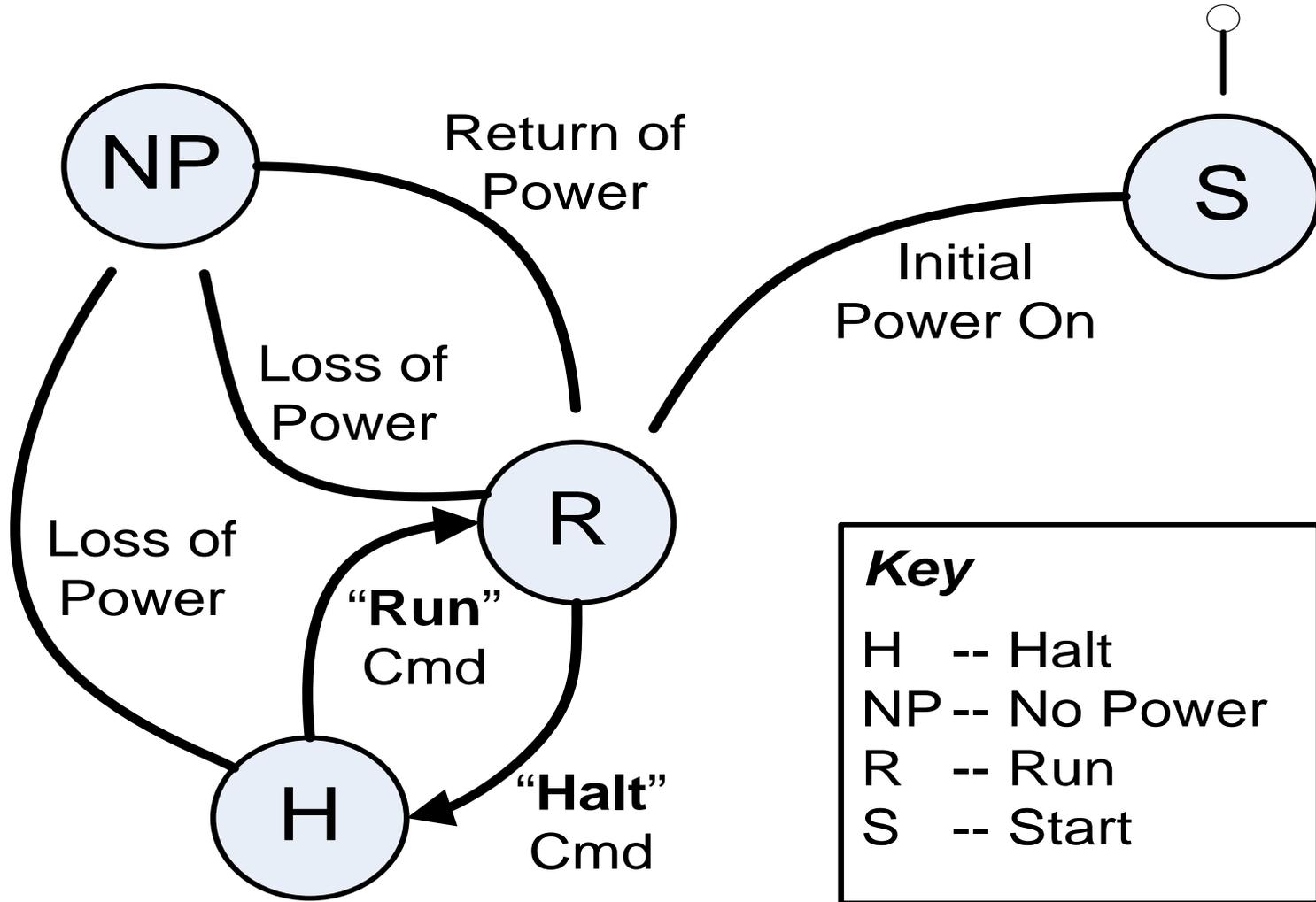
Now, multiple  
radio modules



# Block Diagram



# Operating Modes



# Requirements

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- System
  - 4.1 Mechanical Pages 11 – 14
  - 4.2 Performance Page 14
  - 4.3 Environmental Pages 14 – 21
- Functional
  - 5.1 Operations, Management, and Control Pages 21 – 43
  - 5.2 DSRC Radio Services Pages 43 – 62
  - 5.3 Other Communication Pages 63 – 64
  - 5.4 Location Specific Pages 64 – 76

