



PSCR

Network Planning & Design Overview

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OTA and Lab Networks

- **Stakeholders will be able to come and deploy their equipment in a neutral host network**
 - **Allows vendors to inter-operate with each other and create virtual “leveraged network models”**
 - **Allows smaller vendors and service providers to evaluate the technology**
 - **Public safety emergency responders will be able to participate actively in the project, so they do not have to potentially waste capital expenditures for evaluating a network technology**

Network Test Issues

- **Difficult network issues can be tested and evaluated**
 - MIMO issues (Multiple Input Multiple Output)
 - Inter-cell interference (ICI), FFR
 - Inter & Intra network roaming (Inter/Intra RAT)
 - Voice & SMS (Short Message Service)
 - QoS, ARP (Quality of Service, Allocation Retention Priority)
 - eMBMS, MBSFN
 - PLMN Boundaries
- **Common testing and evaluation procedures used for repeatability**

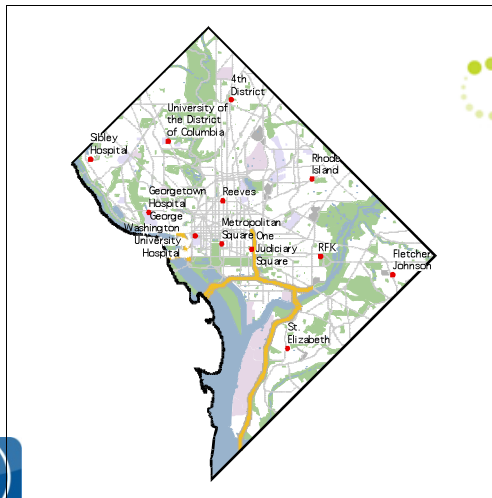
Site Locations



- The initial laboratory and demonstration network will utilize the PSCR facilities located in Boulder, CO.
 - Excellent rural and suburban test site
- Washington DC Office of the Chief Technology Office (OCTO) collaborating with PSCR
 - OCTO and PSCR have a MOU in place now
 - Common test planning and coordinated testing
 - Excellent urban test environment to evaluate MIMO*, OFDMA+ behaviours

*MIMO=Multiple Input Multiple Output

+OFDMA=Orthogonal Frequency Division Multiple Access



Site Location Information

- Both the PSCR Boulder and OCTO DC locations are **open** to all stakeholders within the parameters defined in the project.
 - Not a “network” exclusive to just PSCR and Washington DC staff
 - PSCR and OCTO are not obtaining/procuring a network for operational use but for R&D
 - Meant to be representative of the network morphologies across the US
 - Limited potential to add additional location(s) as deemed necessary and within resource constraints