

# GENI WiMax @ GEC11

## *Coverage Measurements*



University of Colorado **Boulder**

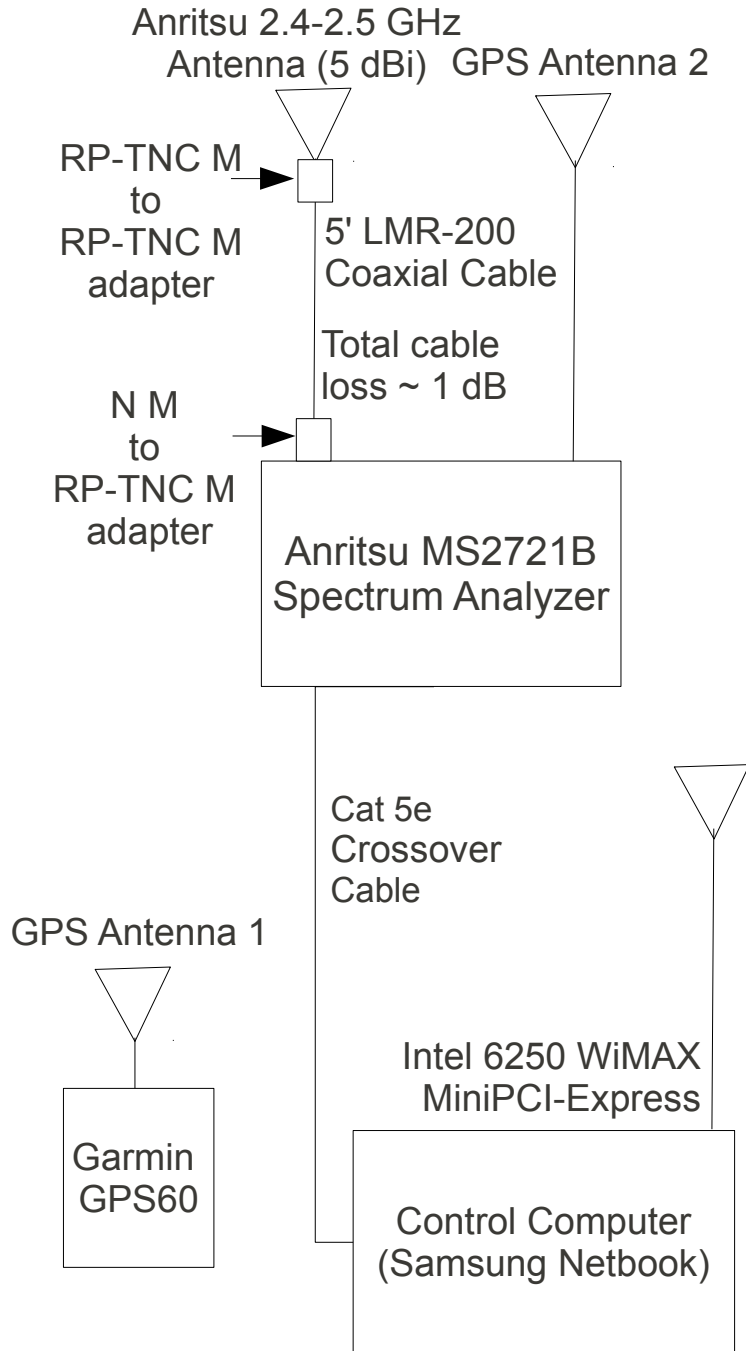
Caleb Phillips

[caleb.phillips@colorado.edu](mailto:caleb.phillips@colorado.edu)

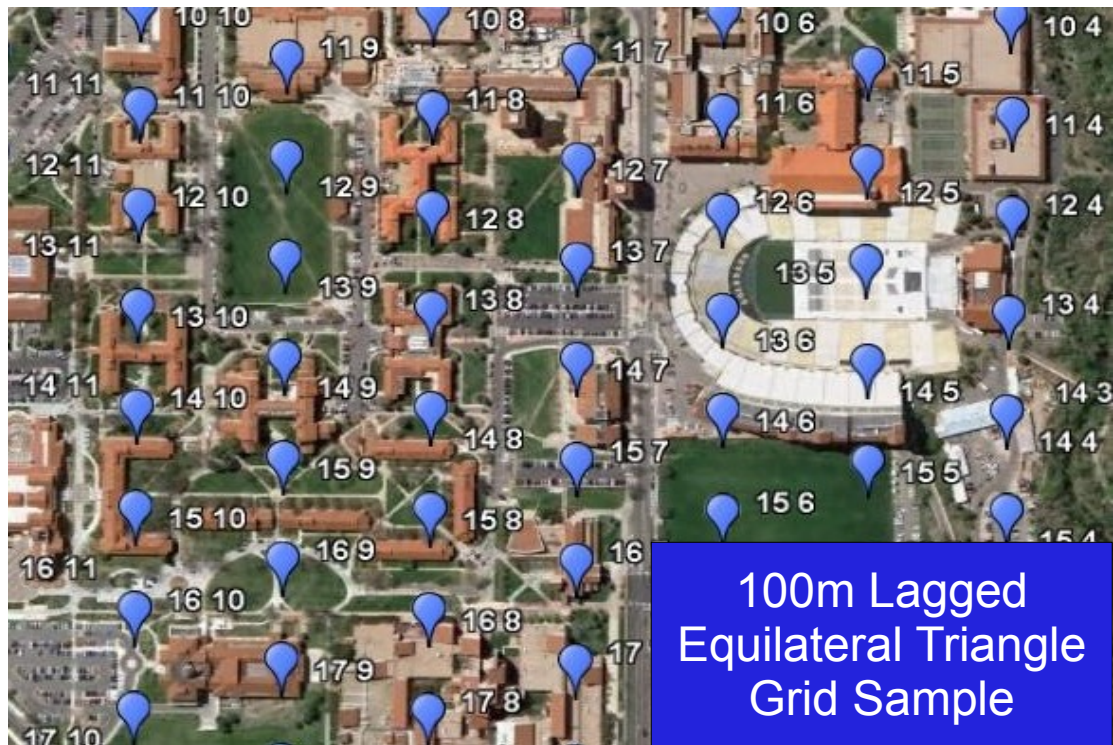
Dirk Grunwald

[grunwald@cs.colorado.edu](mailto:grunwald@cs.colorado.edu)

# Measurement Platform



Bicycle  
"Cart-o-Science"  
Measurement Rig

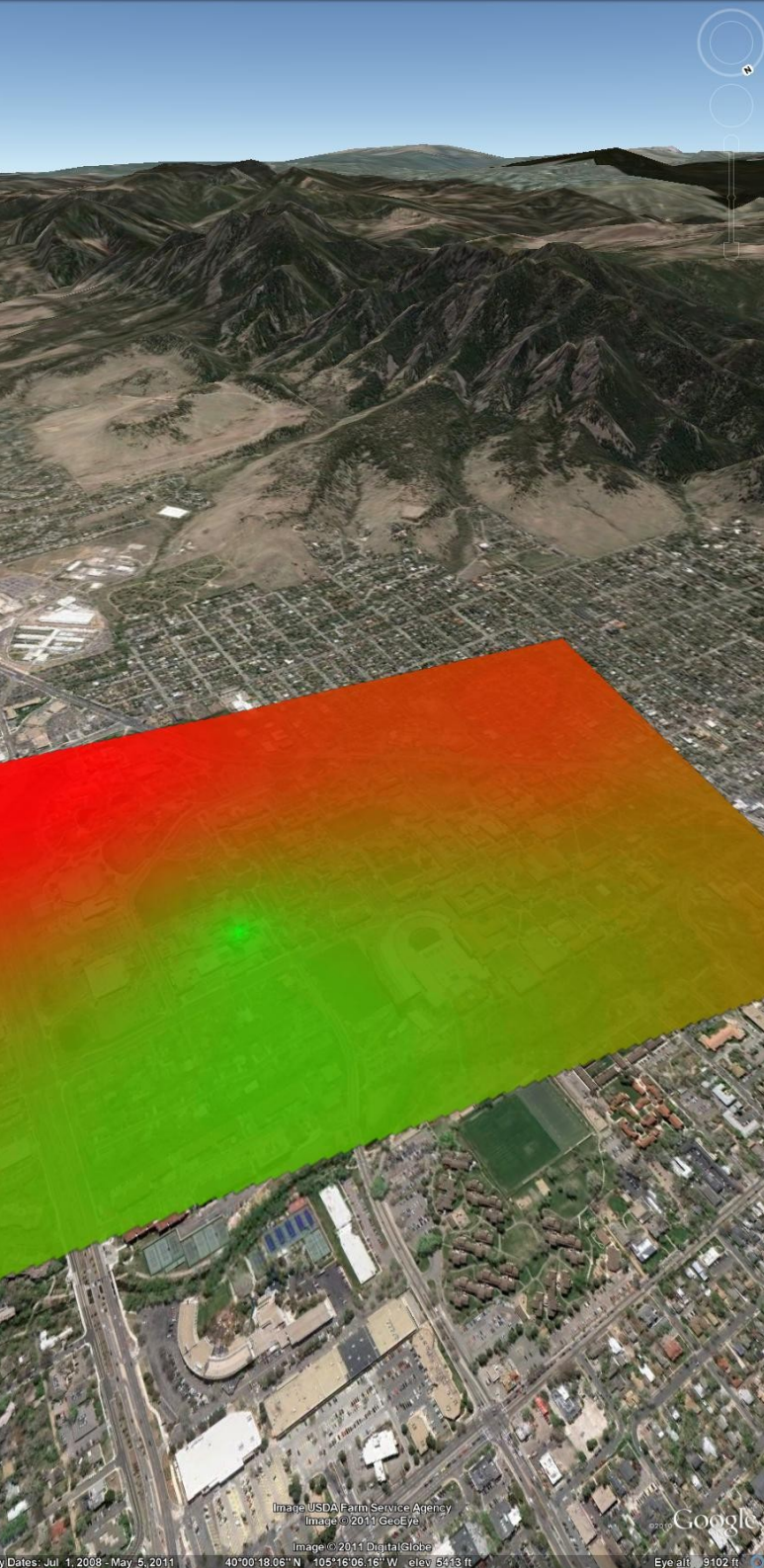


100m Lagged  
Equilateral Triangle  
Grid Sample

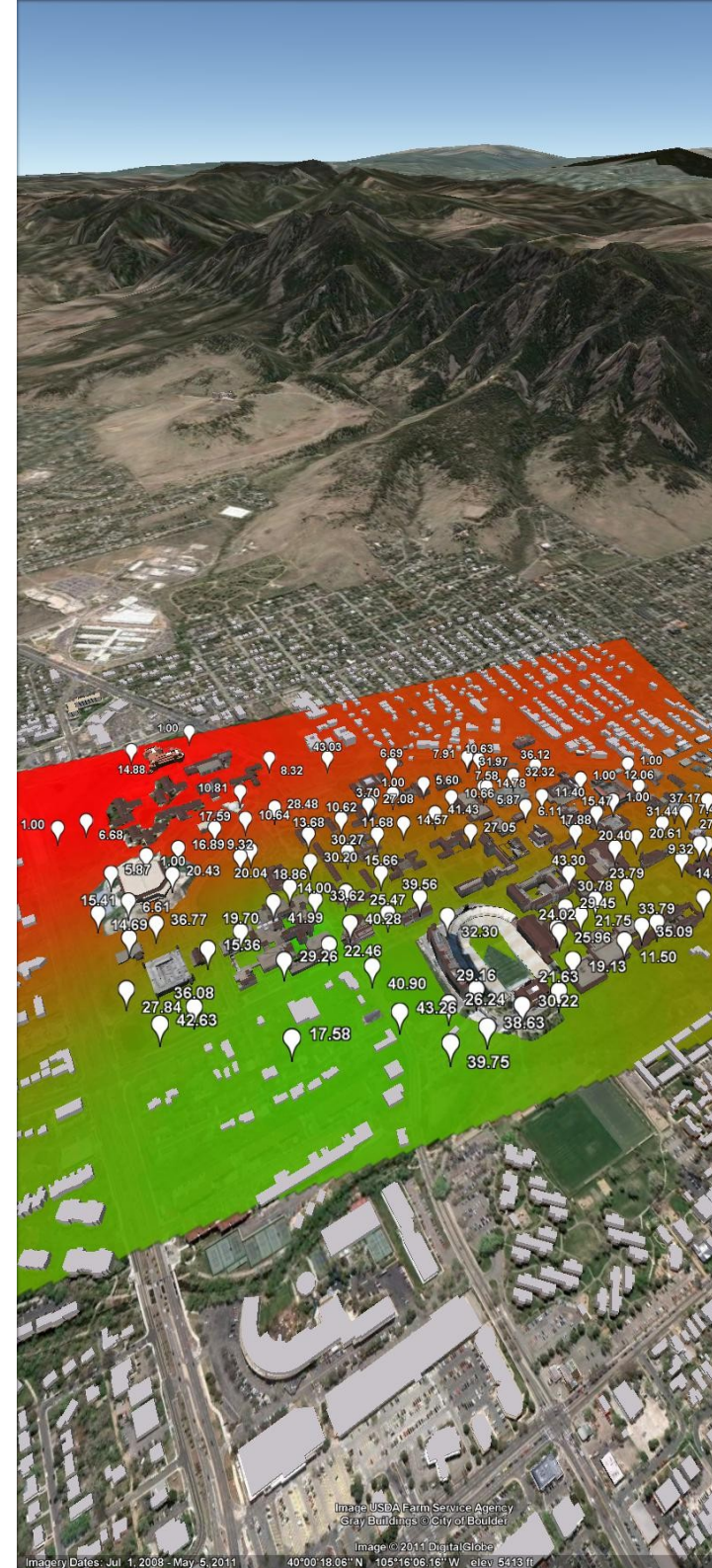


# Preliminary Mapping Results

Kriging-Interpolated Coverage Map using Effective SNR @ 6Mbps

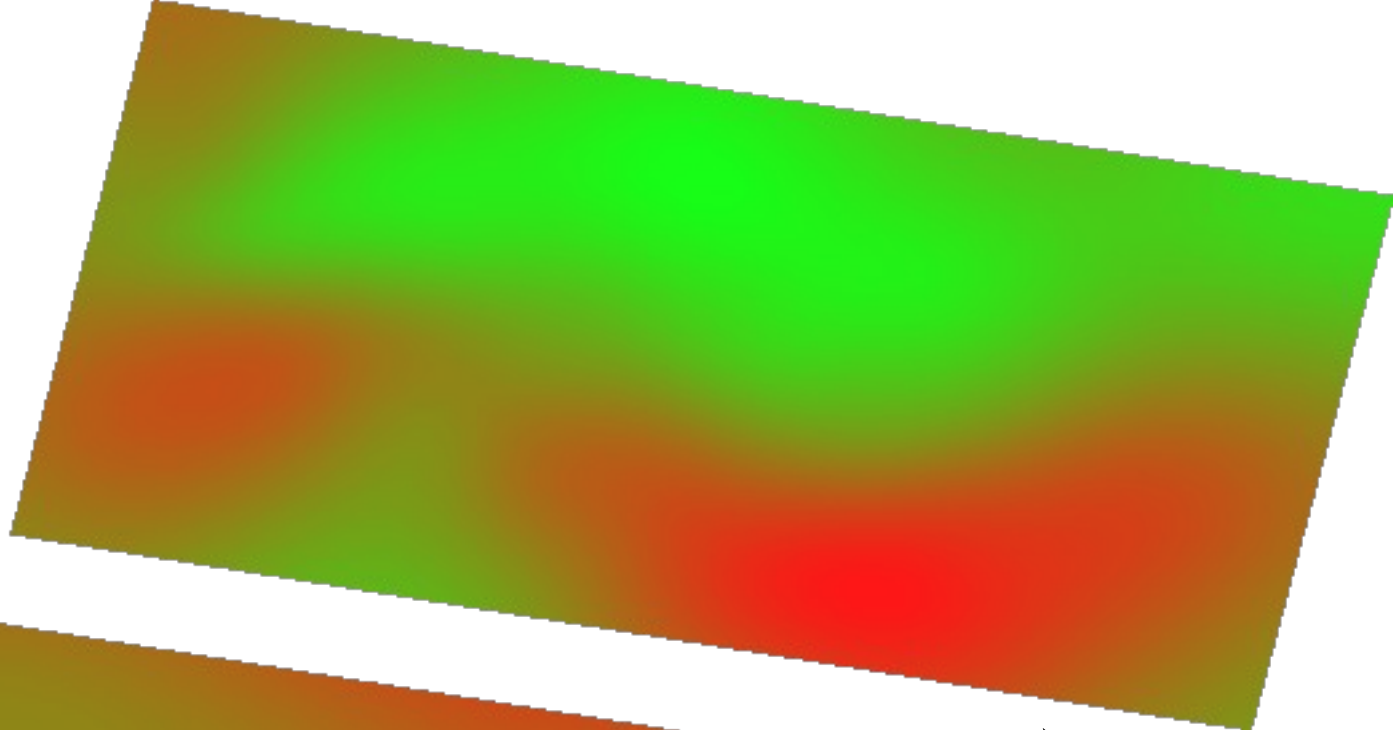


Including measurements and "pop through" 3D building models

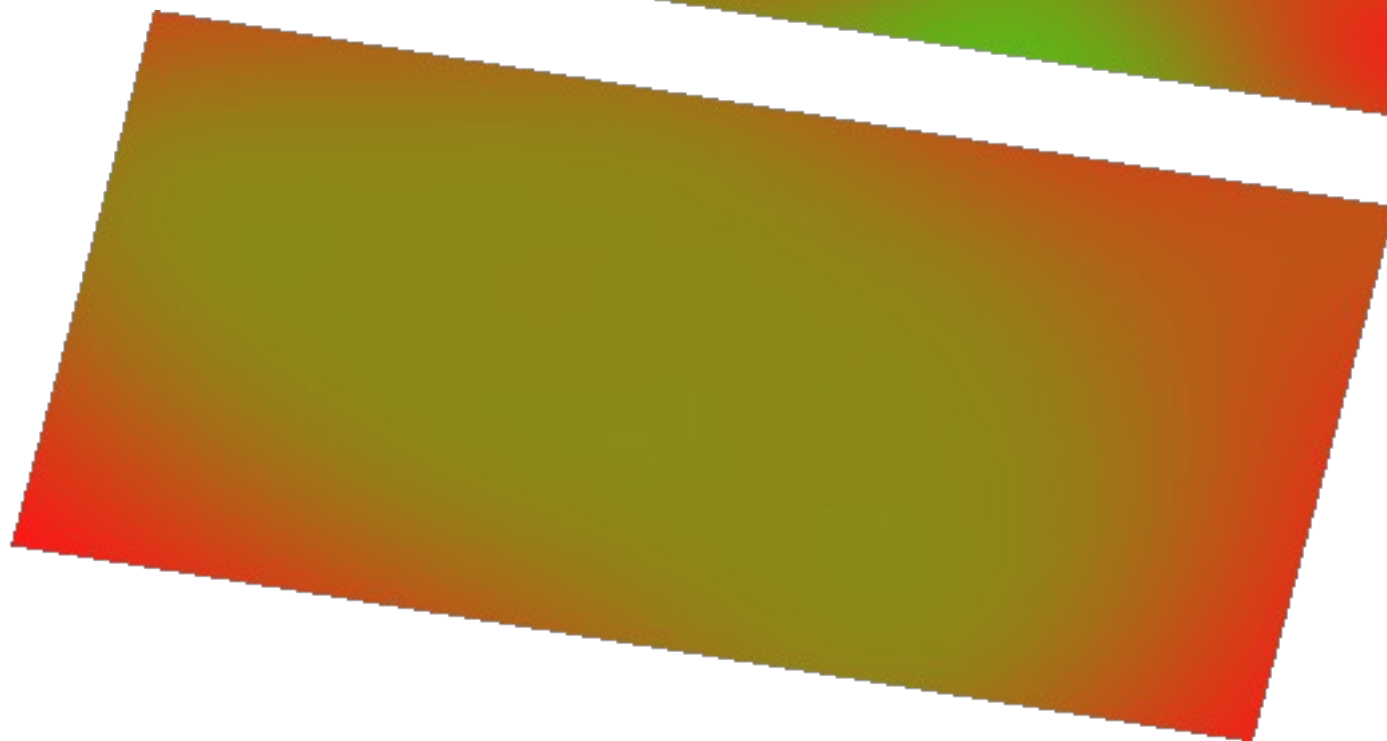


Multiple Metrics Mapped:

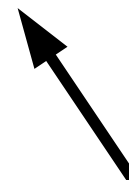
- ESNR
- CINR
- EVM
- RCE
- Spectral Flatness



Error Vector  
Magnitude Map  
(for instance)



Residual Map Uncertainty  
(Kriging Variance)  
For Effective SNR Map



Interpolation technique  
(Universal Kriging)  
Produces plot of map's  
Residual uncertainty...