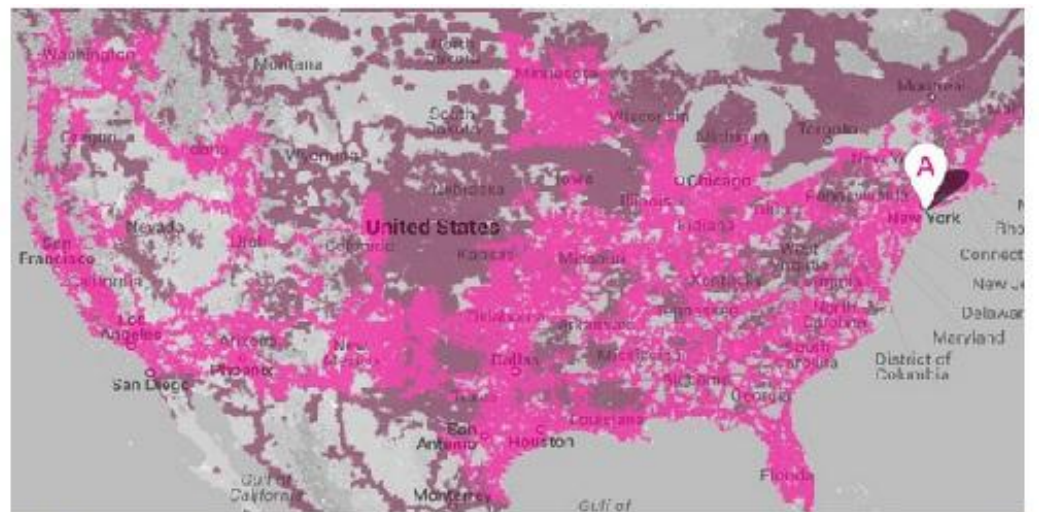
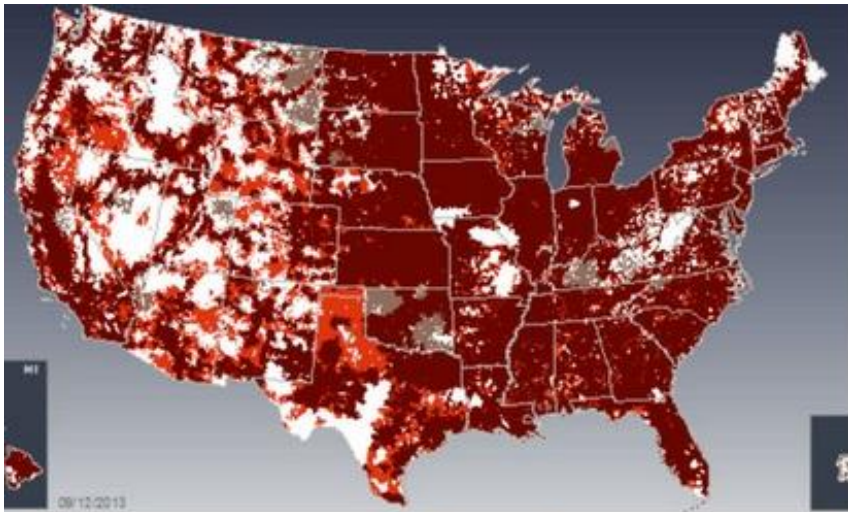


Wireless Carrier Claims versus Customer Performance

Jim Warner

University of California Santa Cruz

March 2014



Exaggerated claims might have an economic impact.

- What about over subscription reducing performance during high use?
- What is the effect of indoor v outdoor coverage?

Great questions, but not in 10 minutes.

- FCC and CPUC will employ crowd source approach to get data.

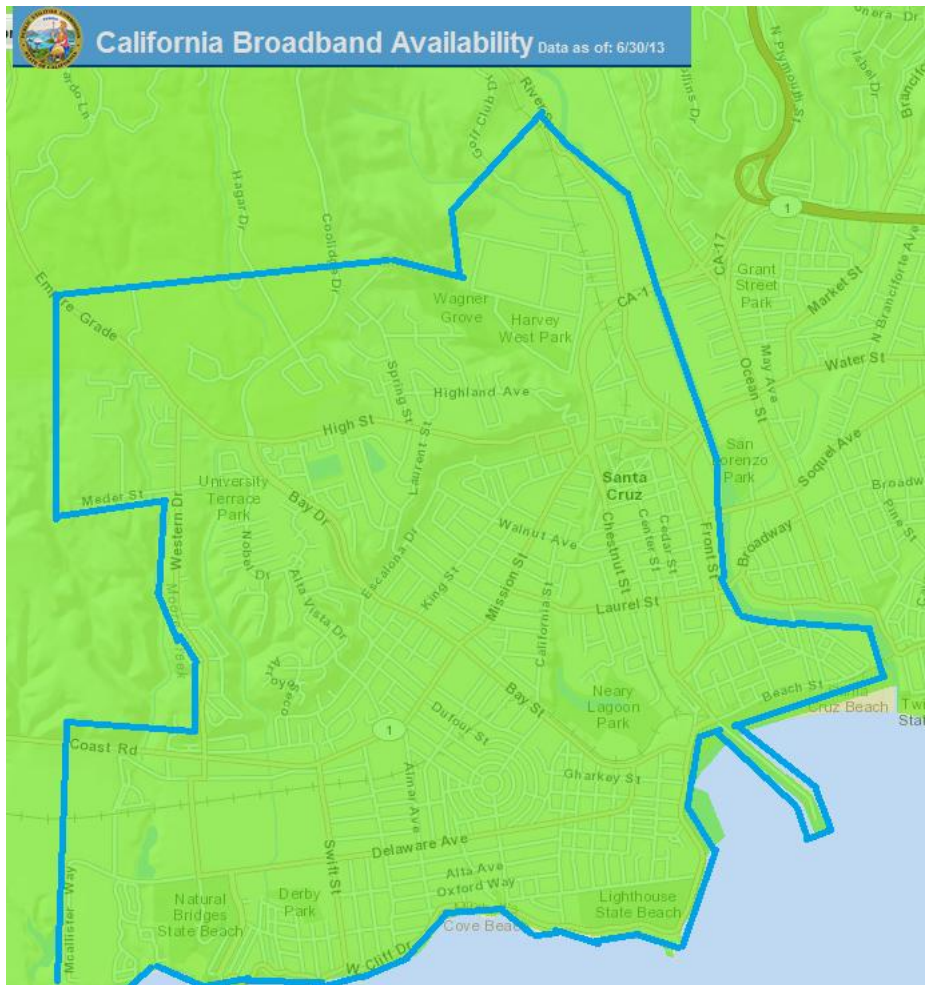
Claim: almost perfect LTE



Small LTE extended area



Verizon reports to the CPUC



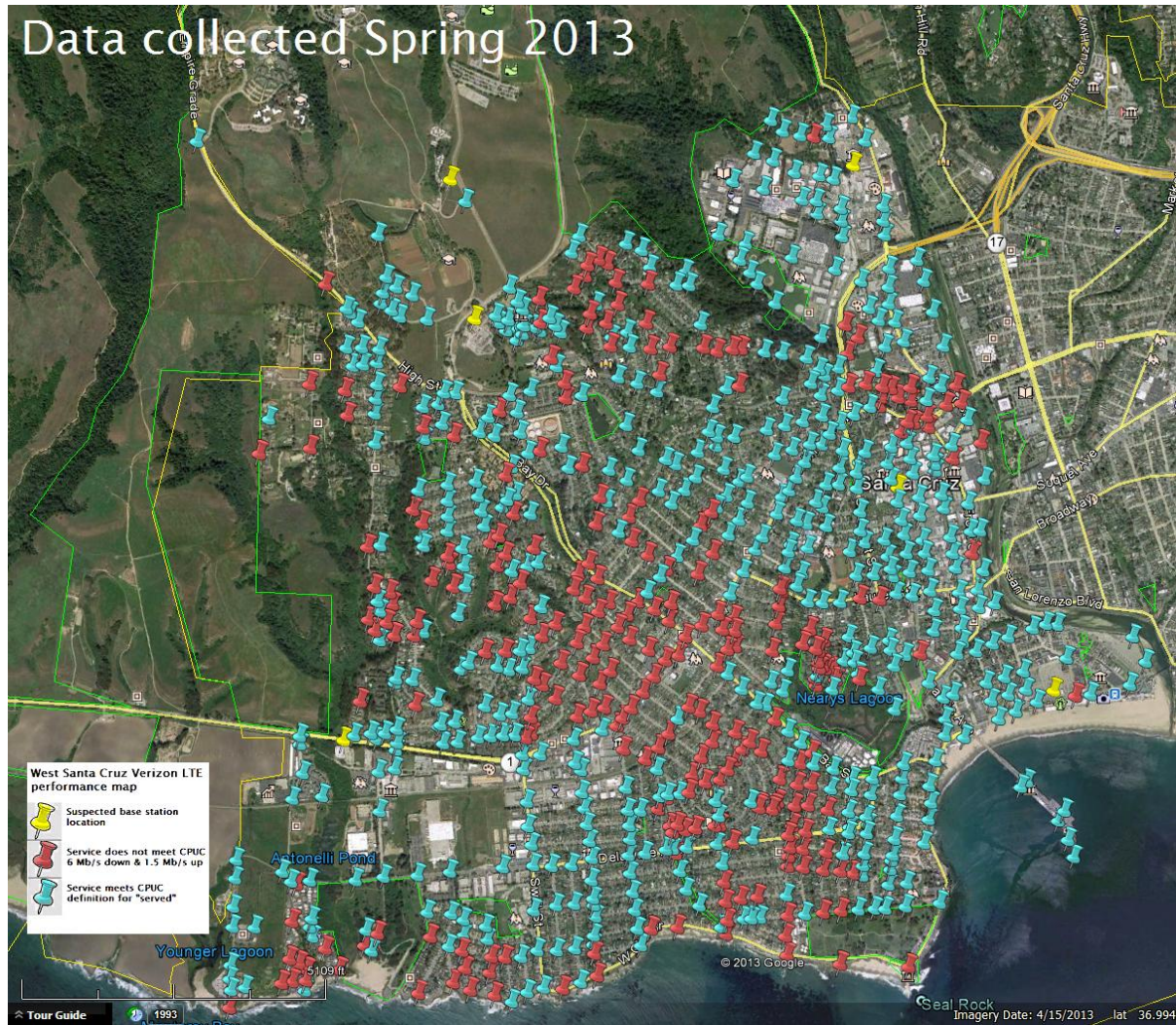
- Border shows 5 sq mile survey area
- Claim: 10-25 Mb/s up
- Claim: 3-6 Mb/s down
- Elevation: 400 ft to sea level
- Area has 6 cell sites

Survey method

- Verizon LTE 7 inch tablet
- Measurement at every street intersection
- No do overs
- Ookla speed test



Data collected Spring 2013



Links

- Data for each measured point: upload and download speed, ping time and coords

<http://people.ucsc.edu/~warner/verizon-SC.kml>

<http://people.ucsc.edu/~warner/verizon.CSV>

- Test of building envelope penetration

<http://people.ucsc.edu/~warner/in-bldg>

- CPUC data in KML format

<http://people.ucsc.edu/~warner/mobile-test>