

SLO County Fiber Optics

A Broadband Discussion

*County of San Luis Obispo
Board of Supervisors*

February 1, 2011

Guy Savage – County of San Luis Obispo
Tim Williams – Digital West



Summary

- Broadband and Fiber Optics are important
- Overview of Broadband / Fiber Optics within the County
 - County infrastructure
 - Private infrastructure
- Potential future



A Brief History

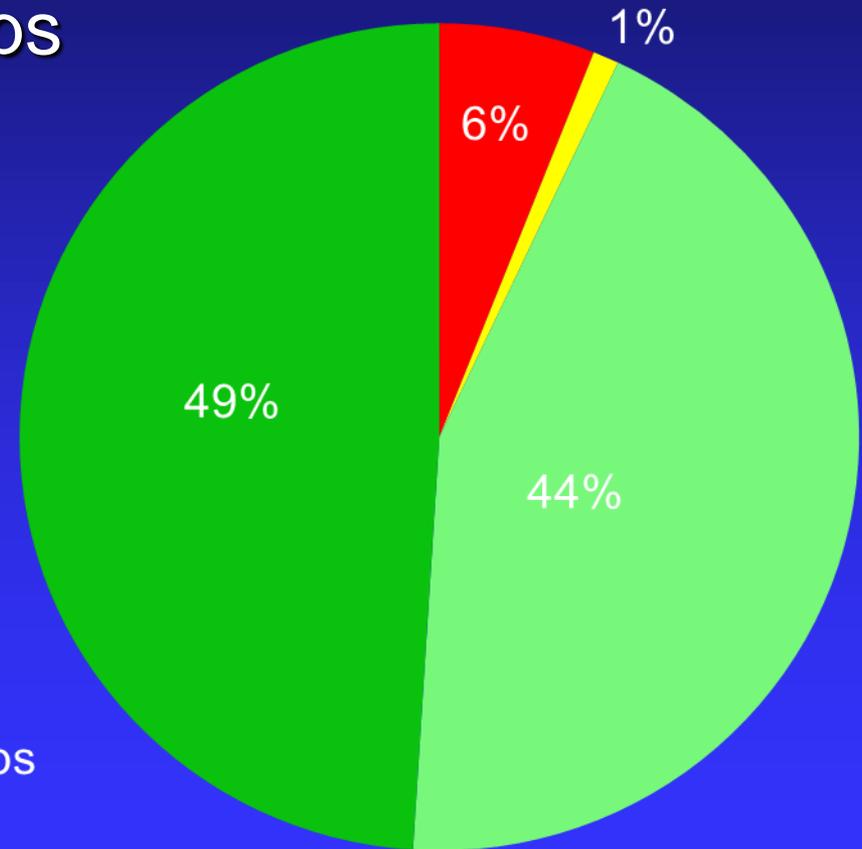
- April 18, 1775 – Historic Date
- Major strides in the 1960's
- First commercial Telephone use in 1977
- Past 20 years, networks almost exclusively fiber
- Speeds increase with advances in electronics
- “Get Connected” - August 17, 2010



What is Broadband?

- DSL, Cable, T1s, and FTTH/B
- FCC definition – 4Mbps download / 1Mbps upload
- Median in U.S. is 3Mbps
- 2 out of 3 in US have access to broadband
- Broadband access in SLO County homes*

- 0-1Mbps
- 1-5Mbps
- 5-10Mbps
- Over 10Mbps



*Based on 2005 data from California Emerging Technology Fund

Why is Broadband Important?

- Saves time and money for citizens and County
- Economic driver, public safety, education, and enhanced services
- Telemedicine – Emergency Medical Response
- Cloud computing (“SaaS” Software as a Service)
- Green technology - true remote office
 - Video conferencing
 - Free phone calls
- Americans spend more time online than TV



Fiber Optics

- More reliable than other mediums
- Immune to electrical “noise”
- Freedom from electrical shorts or sparks
- Small and light weight
- Made primarily with silica (source is sand)
- Infrastructure to support 4G and future devices
- Delivers broadband at higher speeds (100-1000Mbps)

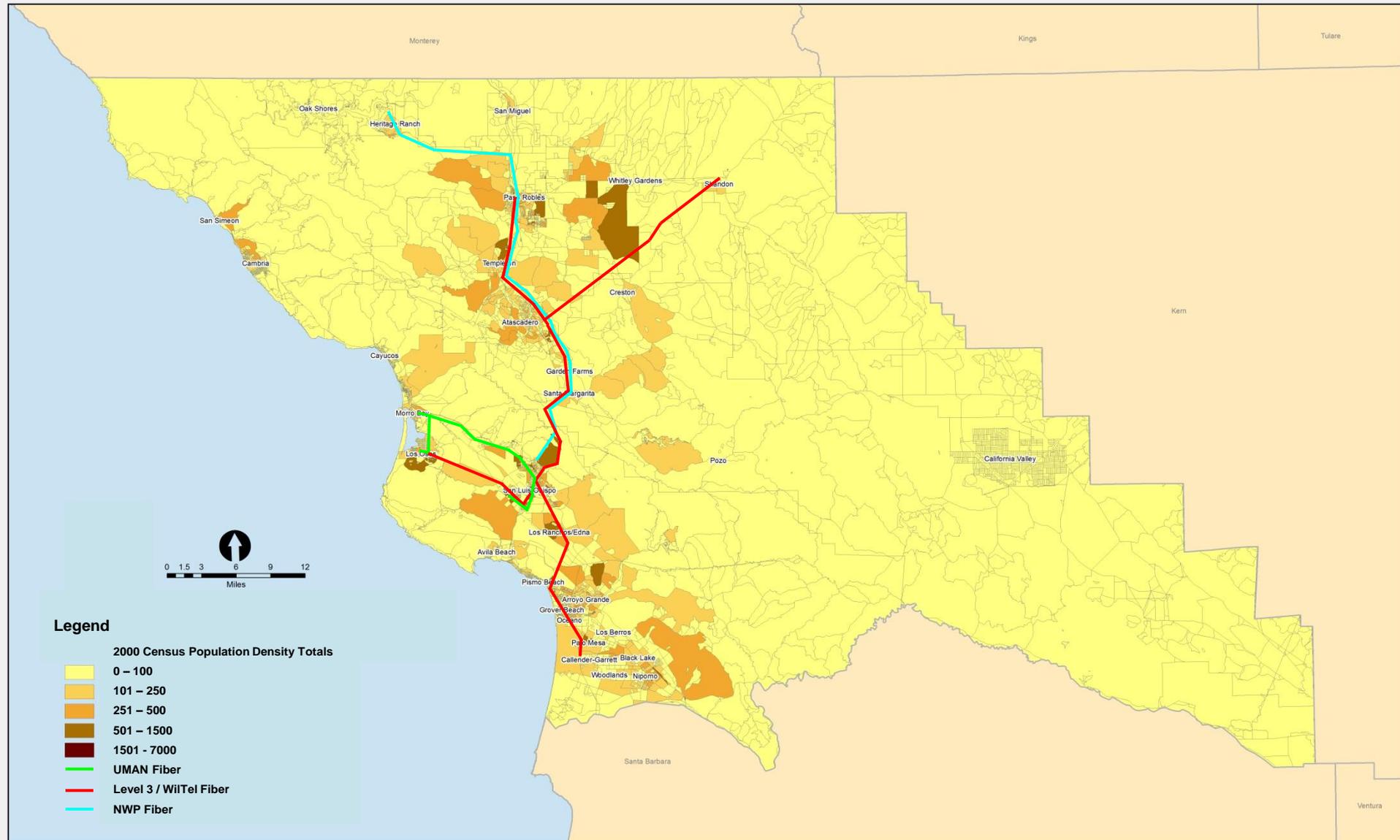


Existing County Network

- Fiber backbone built based on 3 separate approaches
 - ◆ Negotiations with private carriers (Level 3, Williams Telecommunications, AT&T, Charter)
 - ◆ Unified Metropolitan Area Network partnership
 - ◆ Nacimiento Water Project partnership
- Laterals (connections to buildings)
 - ◆ County-funded
 - ◆ Partnership with others – government and education
- Existing infrastructure limited to governmental and educational uses



County-owned Fiber Map



Why is more Fiber not available in San Luis Obispo?

- County lacks the necessary population density to make it commercially viable for large carriers to invest in building the latest technologies
- Industry improvement dollars are better spent in major metropolitan areas
- After the ARRA announcement, AT&T and Verizon cut their broadband infrastructure budget by \$7 billion
- Build-out will require a local push with cooperation from the municipalities... It will benefit the Public



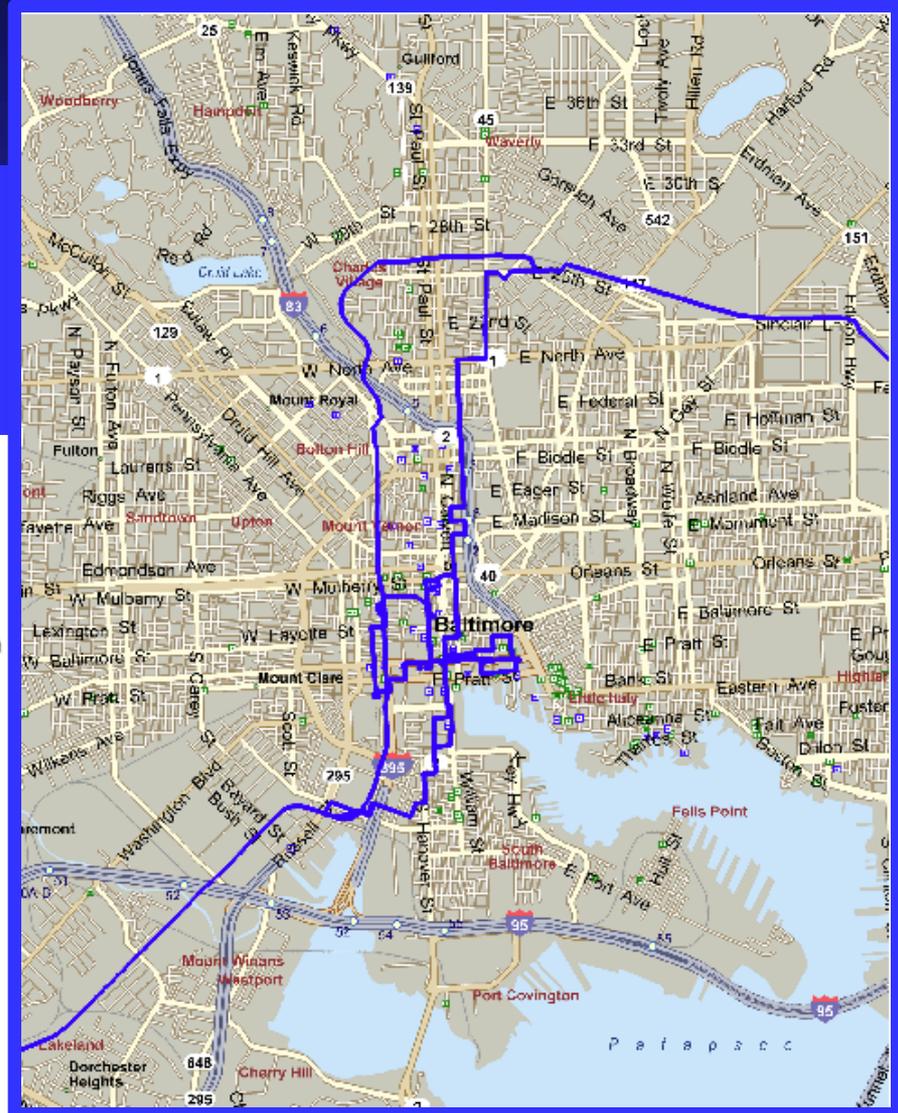
Google's Initiative

- Not developing fast enough
- Need access to their clients
- Makes their “Killer Apps” viable
- Do no evil...
- Status
- What's it done for broadband?

Google



Some Regions are Stepping Up





Network Map





An Open Access Service
Provider Since 2000

866-

[.About Us](#)

[.Enterprise Solutions](#)

[.Carrier Solutions](#)

[.Our Network](#)

:: Our Network

You're only as good as your network

We built our own fiber optic network from the ground up
and that makes all the difference.

We don't serve L.A. or New York.
Pity for them.



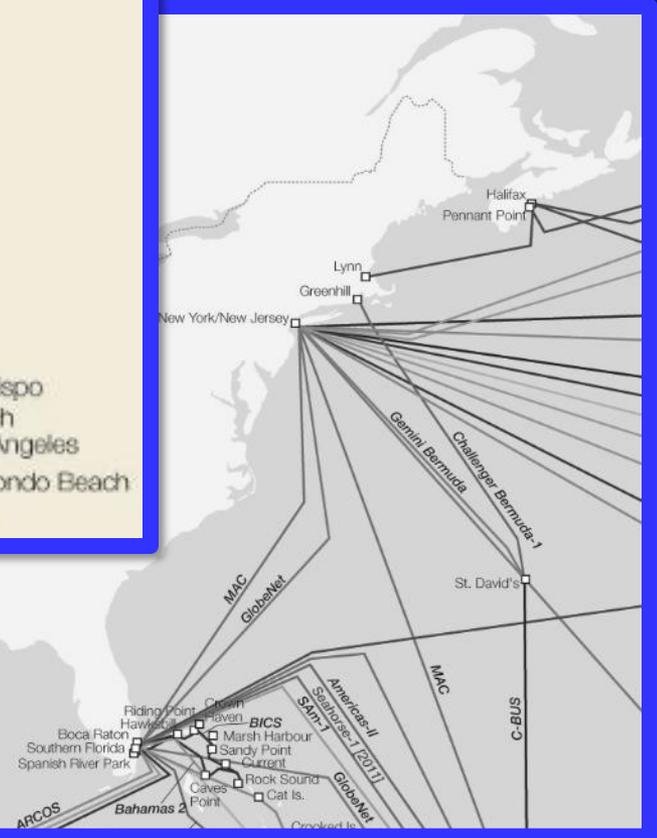
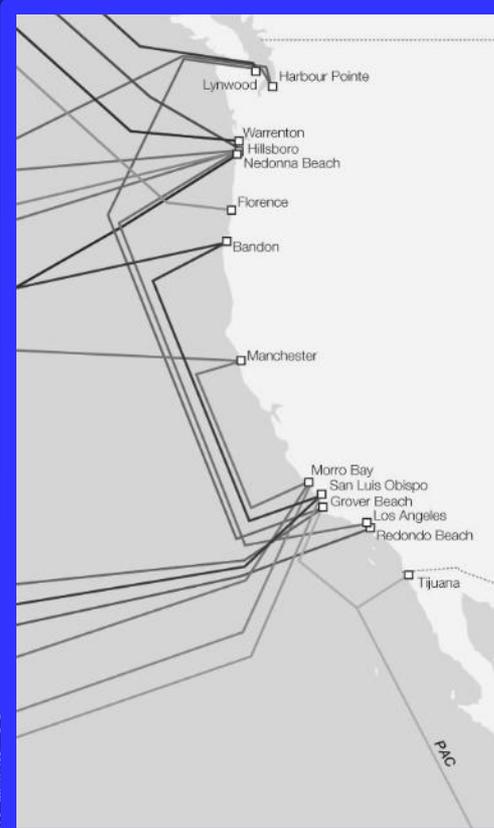
Why SLO County?

- We really are a rural area
- Population is considerably lower
BUT...
- Proven technology sector base
- Great educational 'feeder' institutions
AND...









Why we are unique

- Speed and latency
- Growing SaaS/Cloud infrastructure
- Community driven partners and supporters
- Tech industry growing
- Greatest access “West”
- Asia – a booming economy

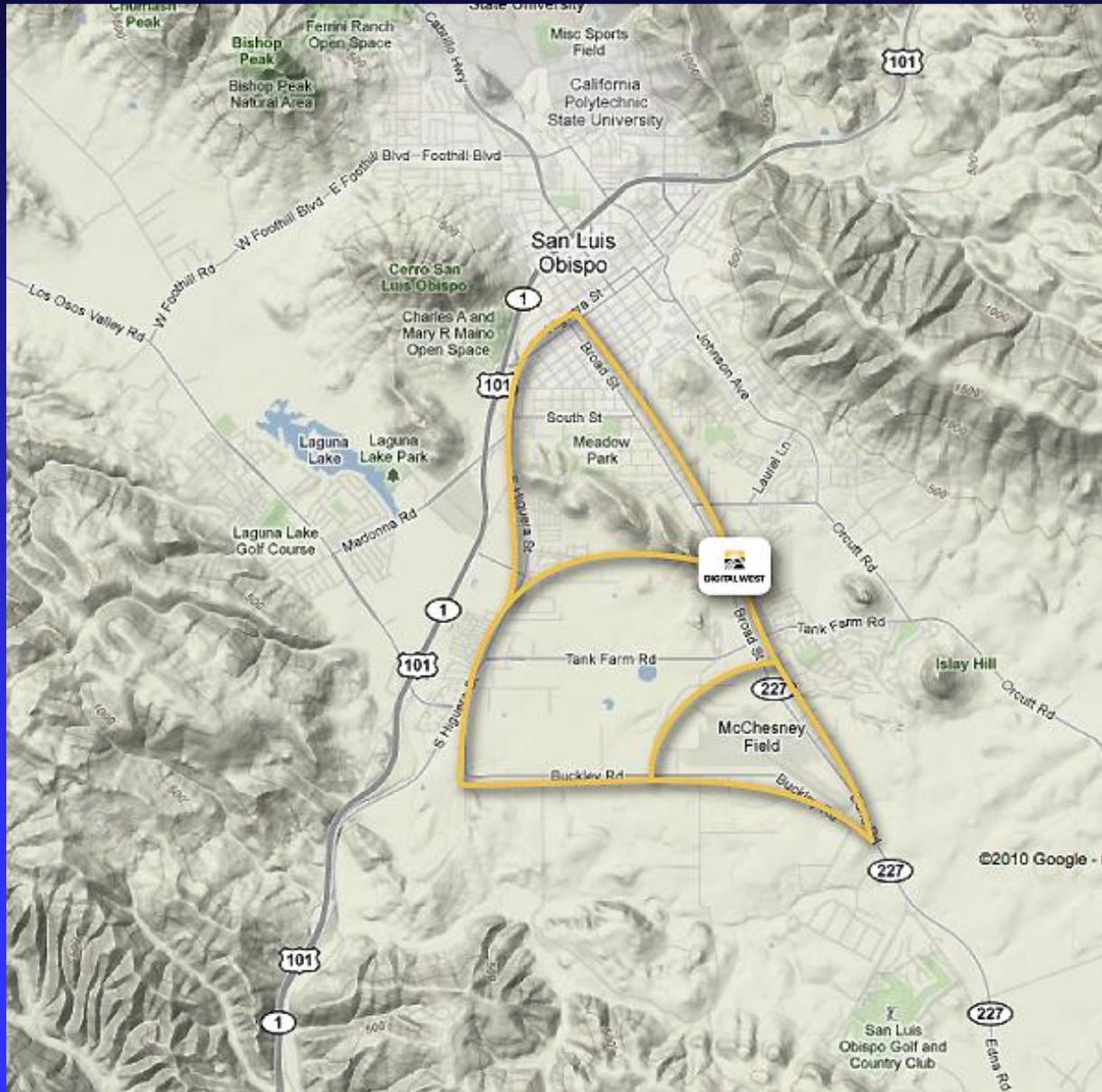


Digital West Network Progress

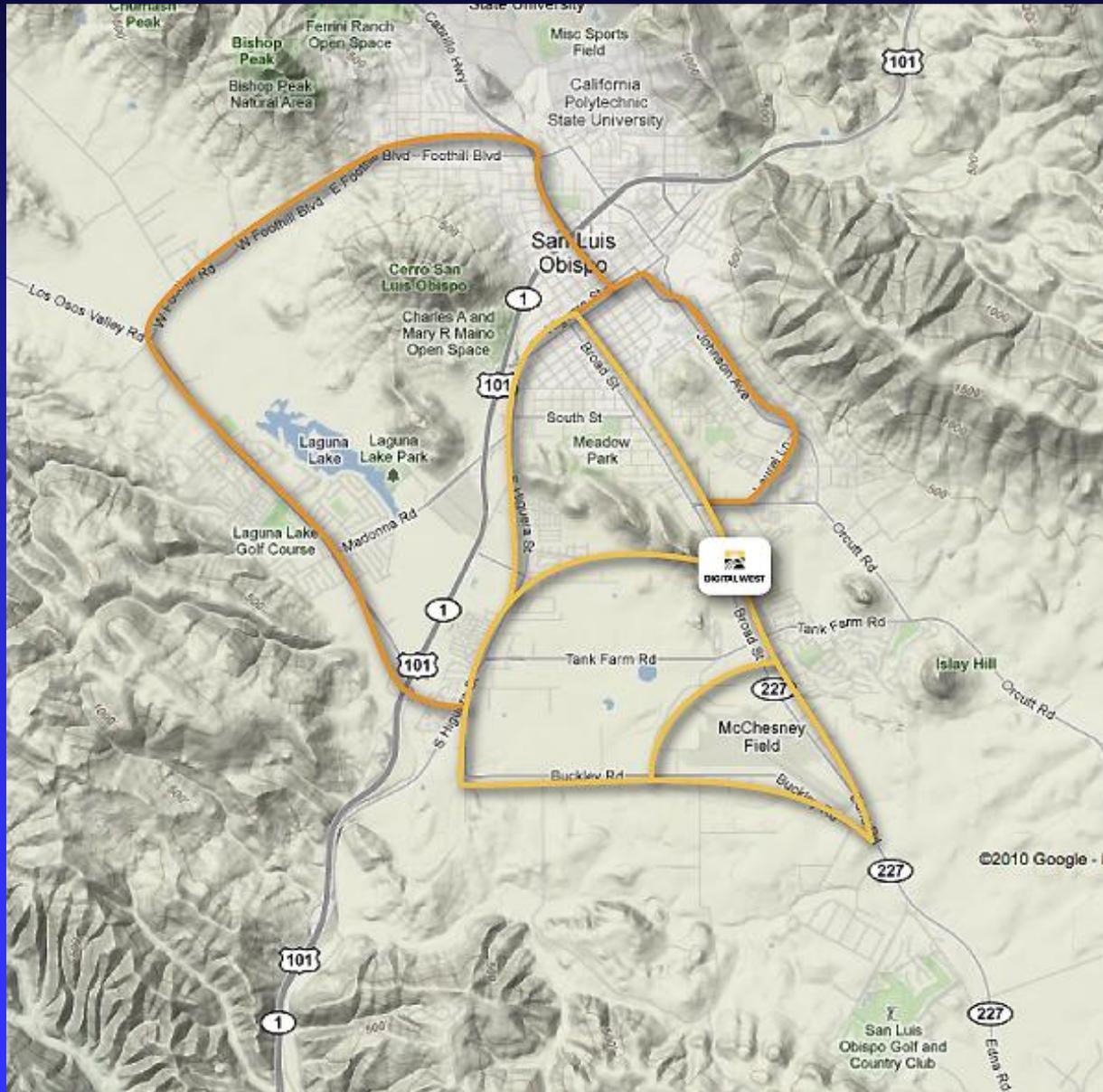
- Digital West and the County fiber are already linked
- Commercial Customers are online using Digital West's current 4 miles of Fiber Optics
- Potential customers have been identified and have signed letters of intent to proceed when facilities become available
- Cal Poly fiber and California Central Coast Research Park (C3RP) build-out complete
- Plans include 8 miles of Fiber Optics by year end



Metro Fiber – SLO Inner Loop



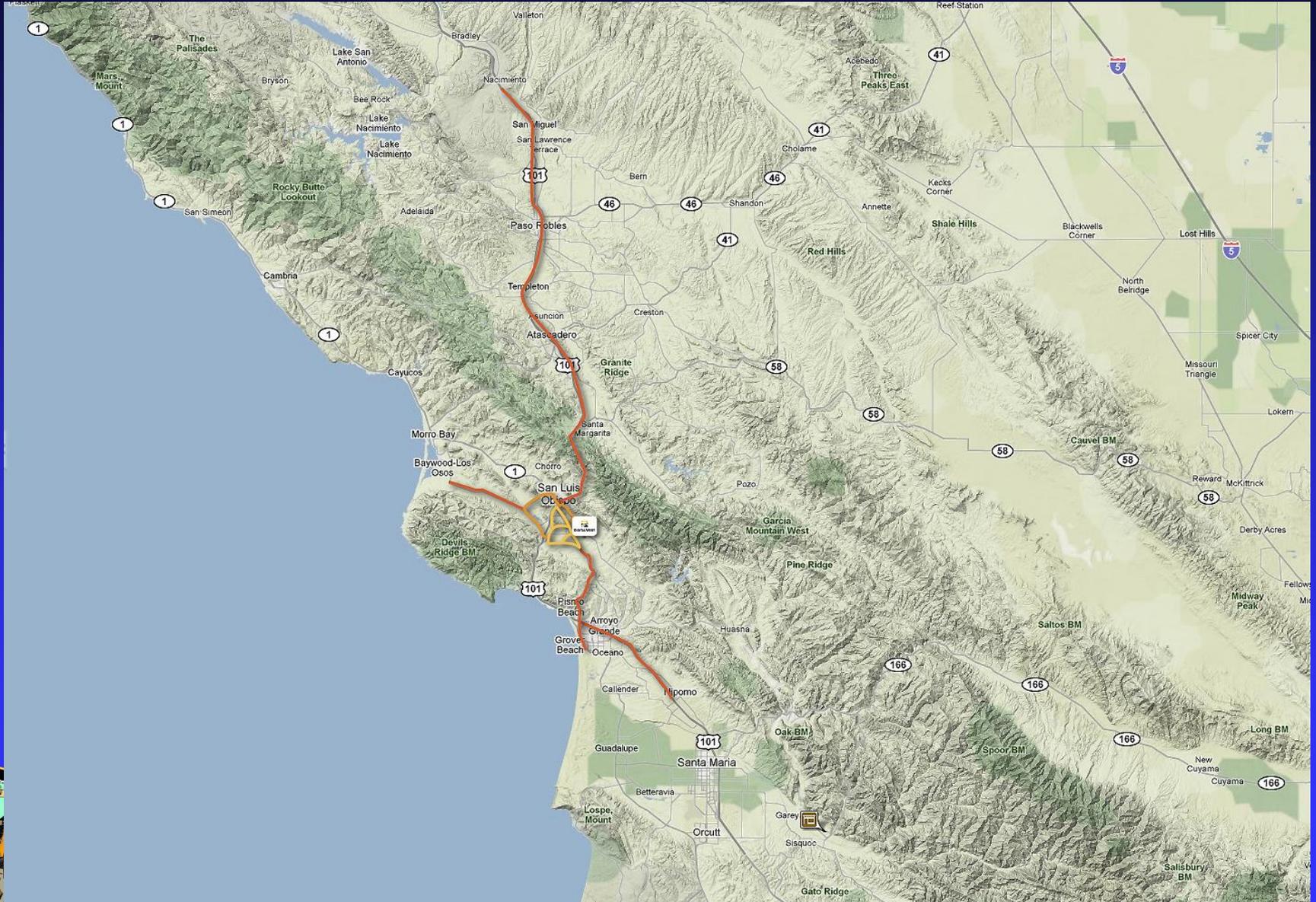
Metro Fiber – SLO Outer Loop



Metro Fiber – Cable Landing Station



Metro Fiber – North County



Metro Fiber – Trans-Pacific



What can we do?

- Understand what we have – and market it
- Work with Landing Stations to localize benefits
- Support Executive Order S-23-06

“IT IS FURTHER ORDERED that State Agencies shall cooperate in the implementation of this Order. Other entities of State government not under my direct executive authority, including the CPUC, the University of California, the California State University, California Community Colleges, constitutional officers, and legislative and judicial branches are requested to assist in its implementation.”

- Support the FCC National Broadband Plan
- Be proactive – it’s a slow process so start now



Questions & Answers

