



HPWREN

High Performance Wireless Research & Education Network

An interdisciplinary collaboration for research and infrastructure

University of California, San Diego:

San Diego Supercomputer Center

Scripps Institution of Oceanography

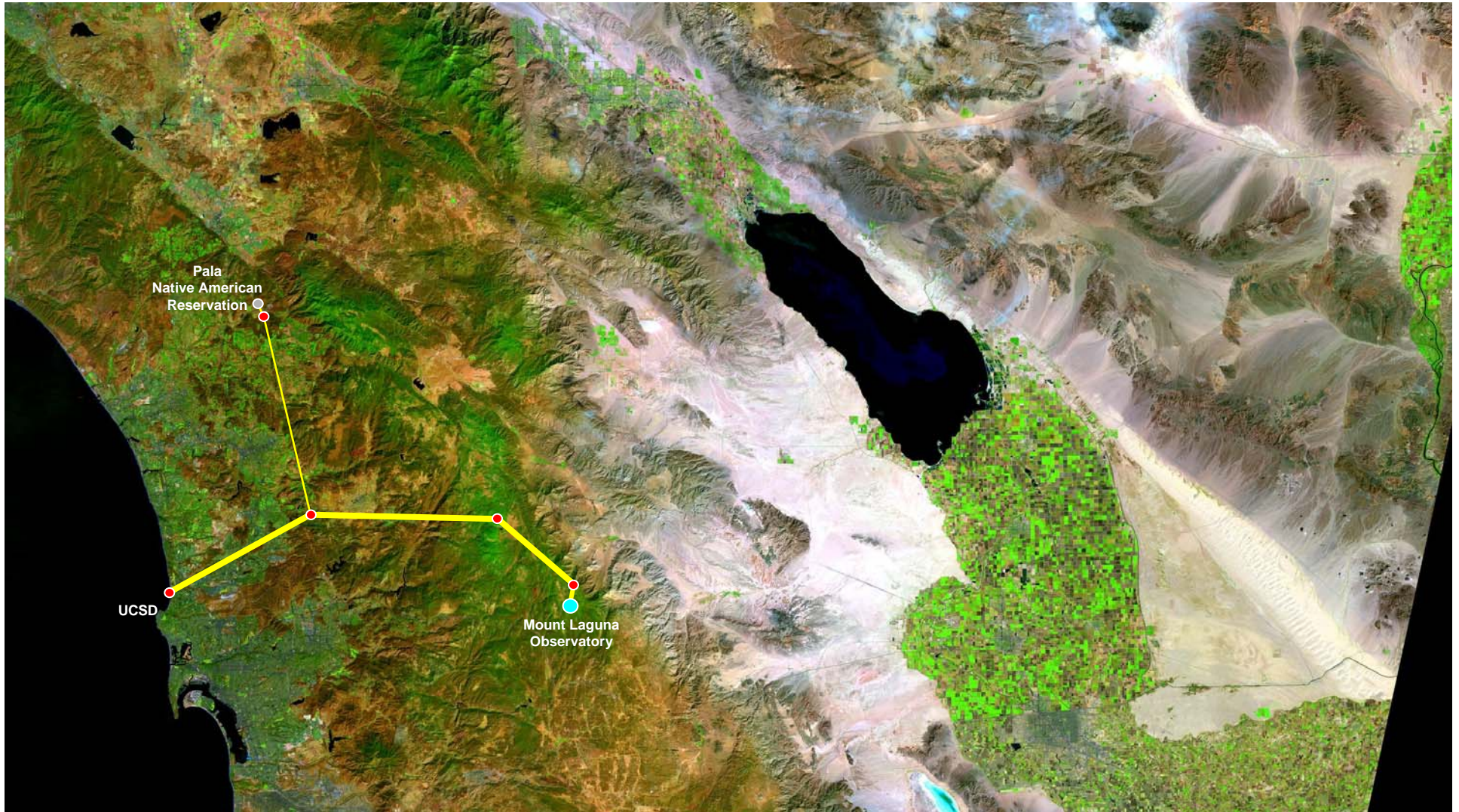
funded by the National Science Foundation

awards numbers 0087344 and 0426879

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HPWREN topology, December 2000



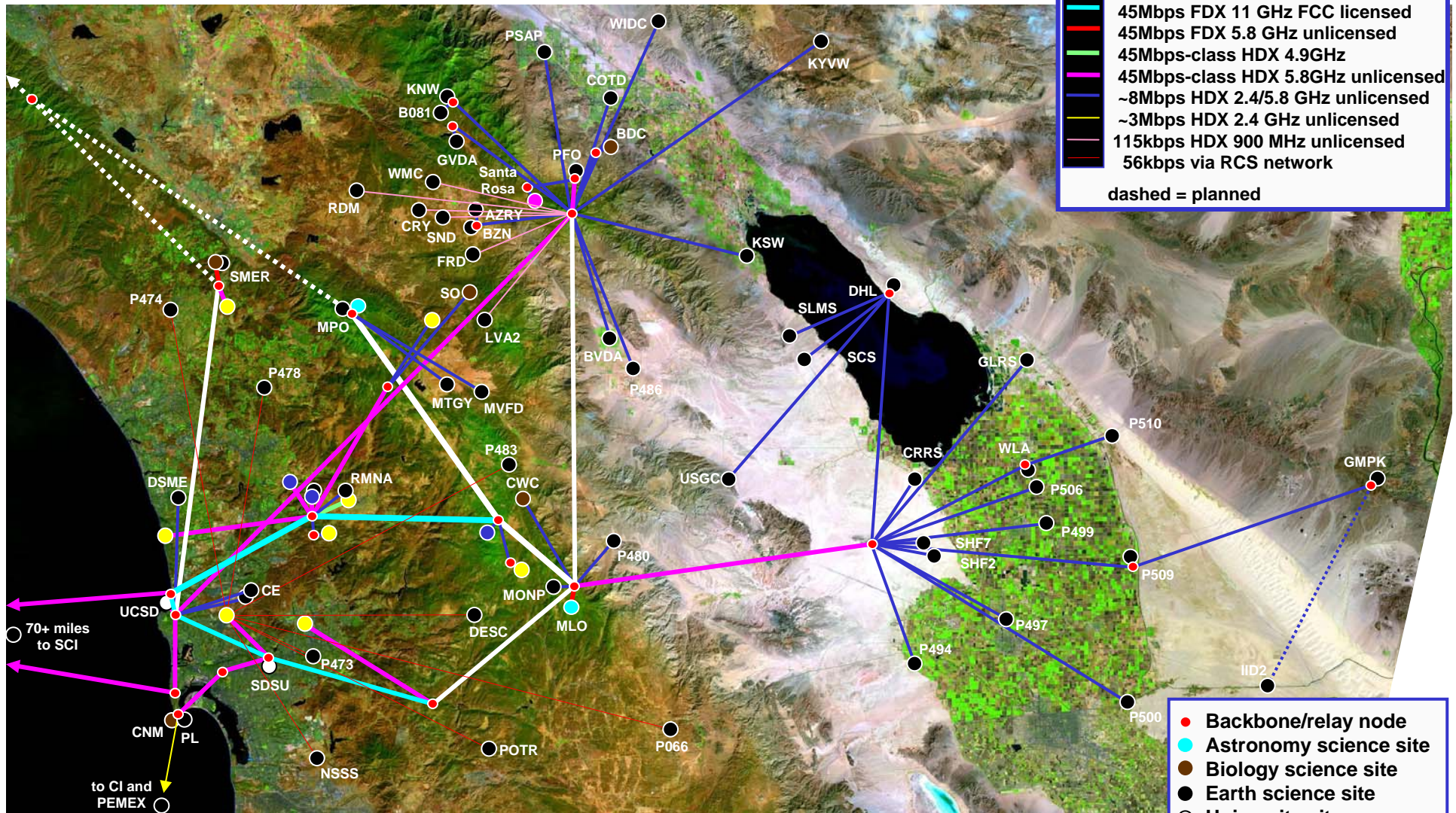
approximately 50 miles:



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HPWREN topology, August 2008



- 155Mbps FDX 6 GHz FCC licensed
 - 155Mbps FDX 11 GHz FCC licensed
 - 45Mbps FDX 6 GHz FCC licensed
 - 45Mbps FDX 11 GHz FCC licensed
 - 45Mbps FDX 5.8 GHz unlicensed
 - 45Mbps-class HDX 4.9GHz
 - 45Mbps-class HDX 5.8GHz unlicensed
 - ~8Mbps HDX 2.4/5.8 GHz unlicensed
 - ~3Mbps HDX 2.4 GHz unlicensed
 - 115kbps HDX 900 MHz unlicensed
 - 56kbps via RCS network
- dashed = planned

- Backbone/relay node
- Astronomy science site
- Biology science site
- Earth science site
- University site
- Researcher location
- Native American site
- First Responder site

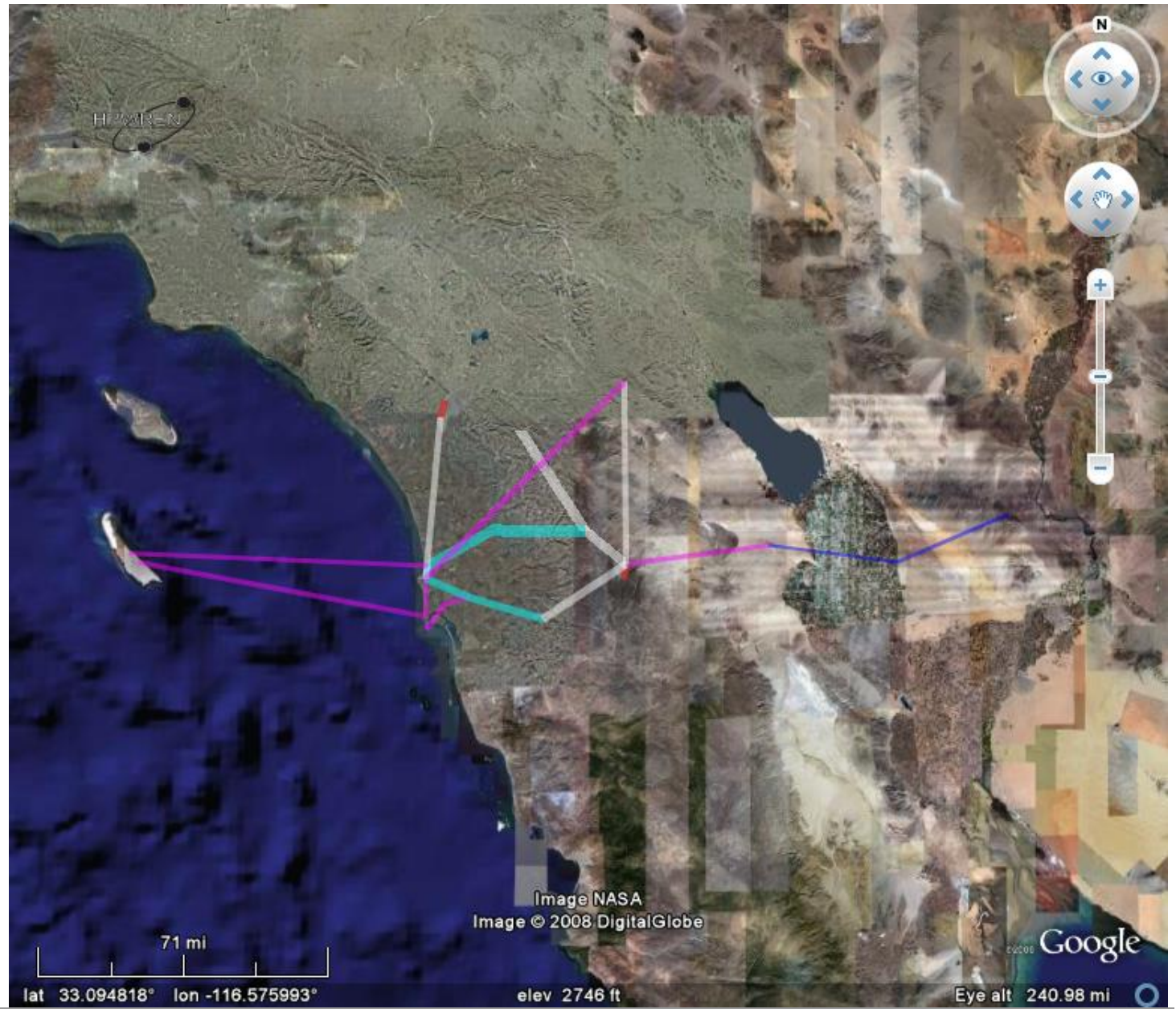
← approximately 50 miles: →

Note: locations are approximate



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Topo



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Some significant activities since last year's meeting

- All primary HPWREN backbone links are FCC-licensed now!
- High-traffic path upgraded from 45Mbps to 155Mbps
- Palomar Observatory (Caltech) paid for their 155Mbps access link
- Progress made via another backup link, via Santiago Peak
- Implementation of QoS and PBR
- Created ~6 minute HPWREN High Definition video for NSF in March
- Progress on Live Virtual Interactive Explorations, distance education
- Deployment of two inexpensive acoustics sensors (SMER and CNM)
- High resolution and collated images at CNM
- NPS Technology Transfer Workshop



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Funding

- Current award originally expired by the end of September 2008
- Currently in a no-cost extension for up to a year
- Probably have enough leftover funds until September/October 2009 or so
- Submitted an HPWREN-upkeep follow-on proposal -- many HPWREN partners helped with material for the proposal
- May know more in a few weeks
- Need NSF or other funding agencies to hear from HPWREN collaborators
- Please help by contributing HPWREN news updates and telling NSF that this cyberinfrastructure is useful and needed



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