

NLR – National LambdaRail



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National LambdaRail Architecture



For more information regarding NLR see <http://www.nlr.net> or contact info@nlr.net

KEYSTONE NLR GOAL

Create a national networking physical infrastructure to foster the concurrent advancement of:

- Network research and
- Next generation network-based applications in science, engineering, medicine and other disciplines

by enabling the implementation of multiple networks, both experimental and production, to facilitate technology innovation and discovery and sharing of new knowledge

NLR Strategies

- Promote multidisciplinary/cross organizational collaborations
- Support and facilitate experimental networking research projects at all layers
- Provide new advanced production networking capabilities

Two Drivers for NLR

- I need more bandwidth for research!
 - High-end science needs Terabits
 - Predictable quality interconnect
 - Immersive presence and the “bit rate of reality, 40Gbps” Tom Holman (USC)
- I need a breakable network for research!
 - New protocols
 - New devices
 - New architectures

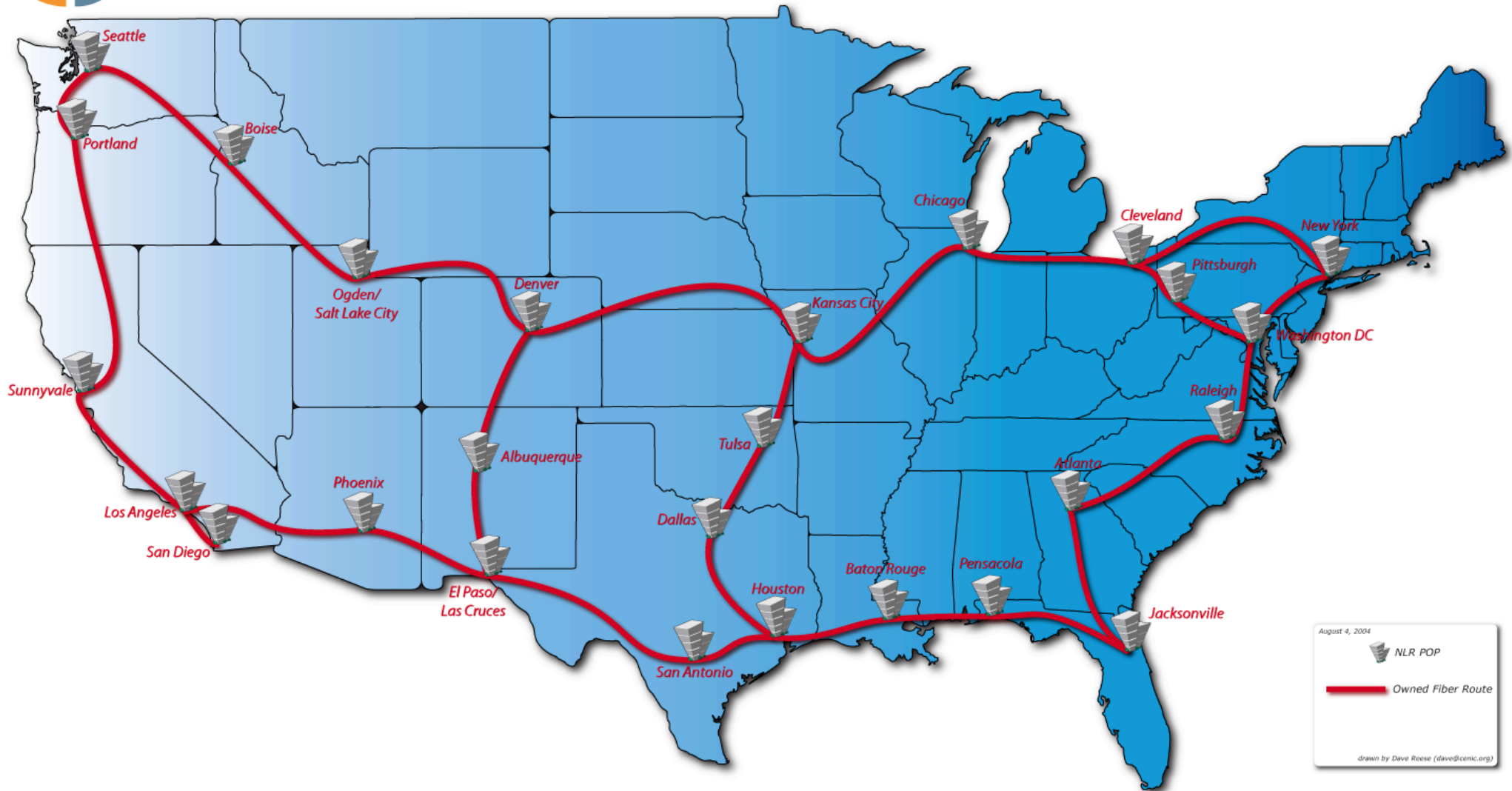
NLR Infrastructure

- Not a single network but a set of facilities, capabilities and services to build both experimental and production networks at various layers, allowing members to acquire dedicated (project specific) facilities or shared (community specific) facilities as appropriate.
- Most of the focus so far has been on the massive production DWDM network build out but that would change soon to focus on building the experimental networks





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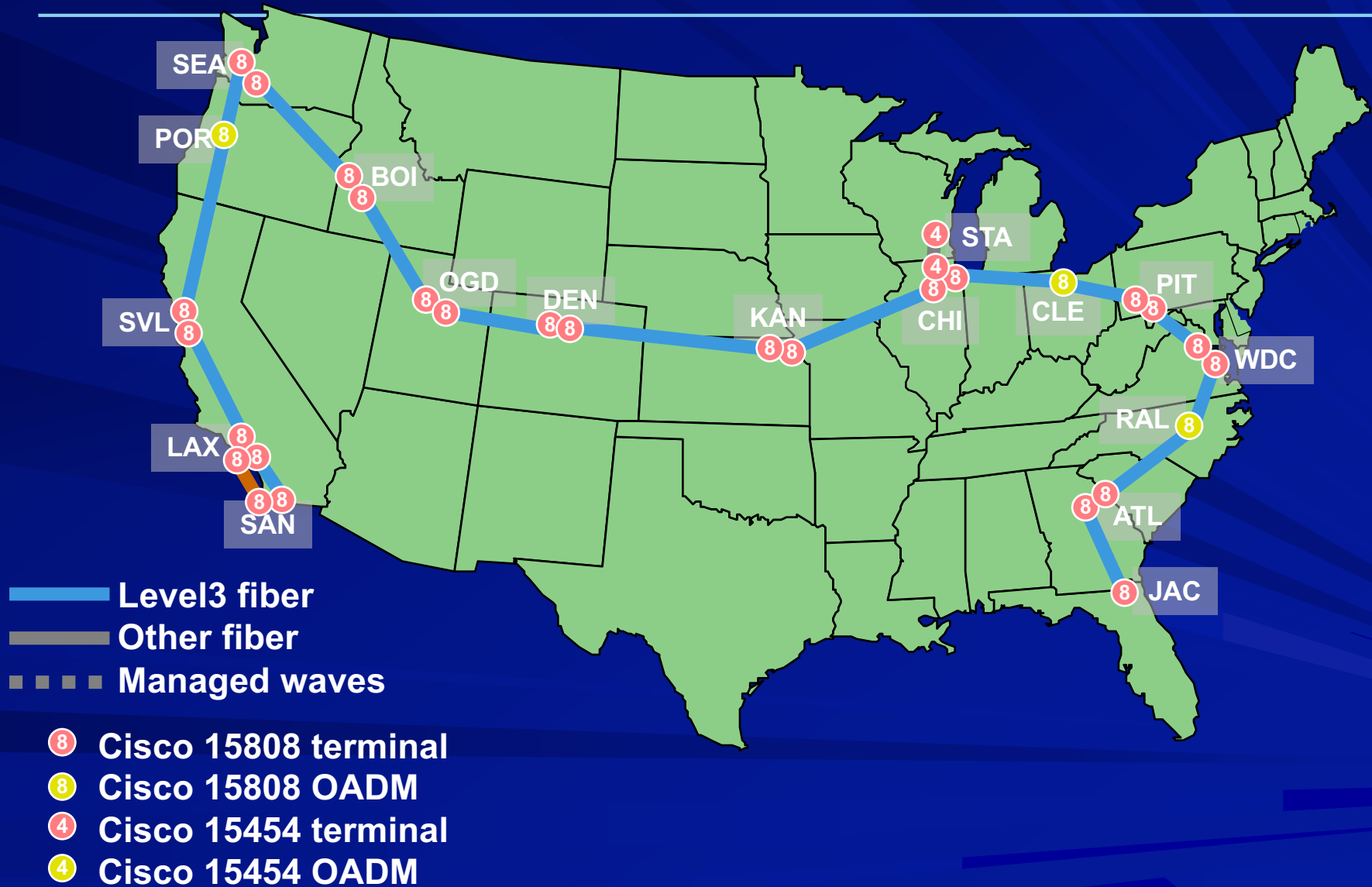


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NLR Footprint & PoP Types – Phase 1 and 2



NLR WaveNet – Phase 1



NLR WaveNet – Phase 1 and 2





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For More Information

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