

Internet2 Infrastructure and Services to Support GENI Projects

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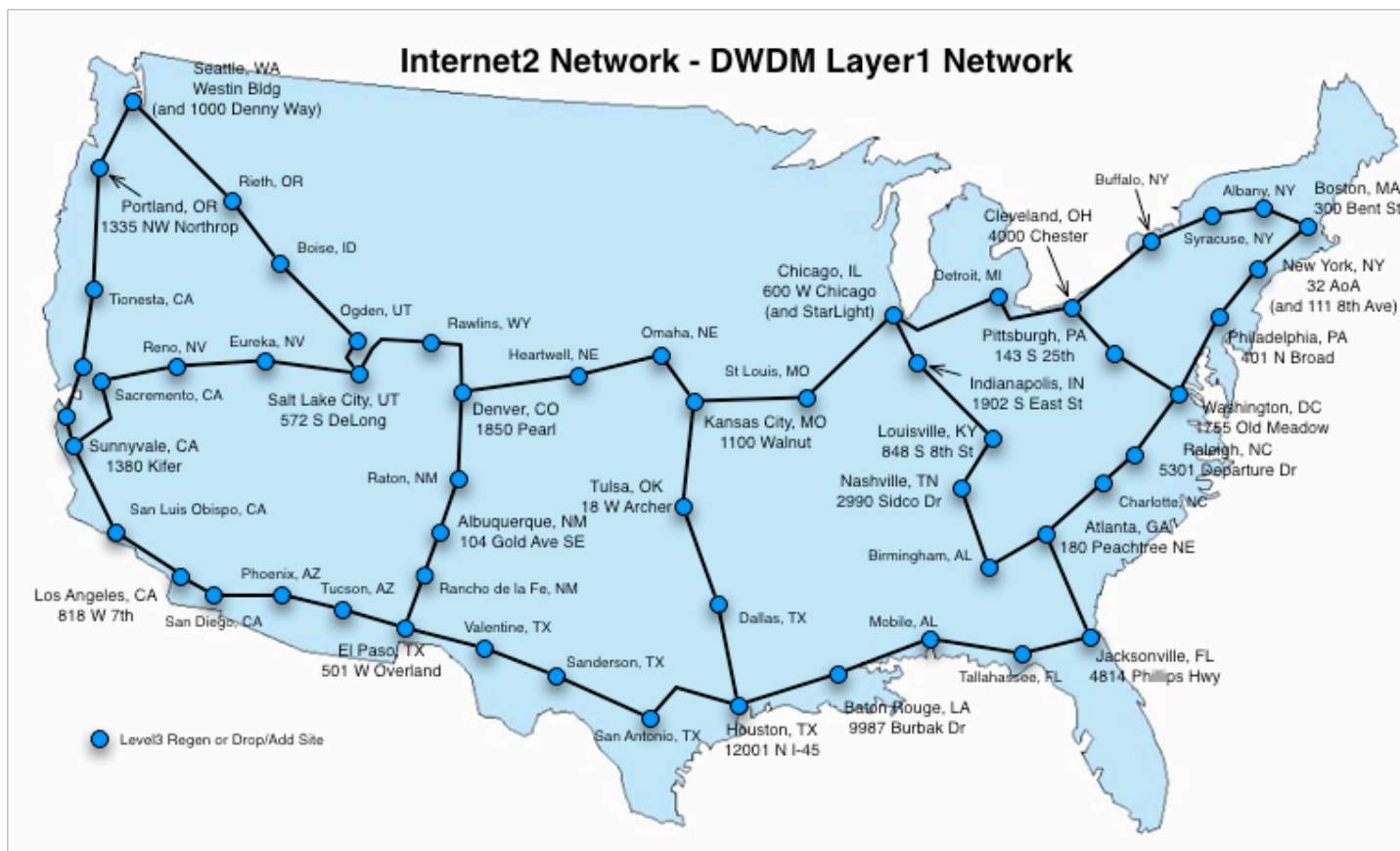
GEC3
28 October 2008
Palo Alto, CA

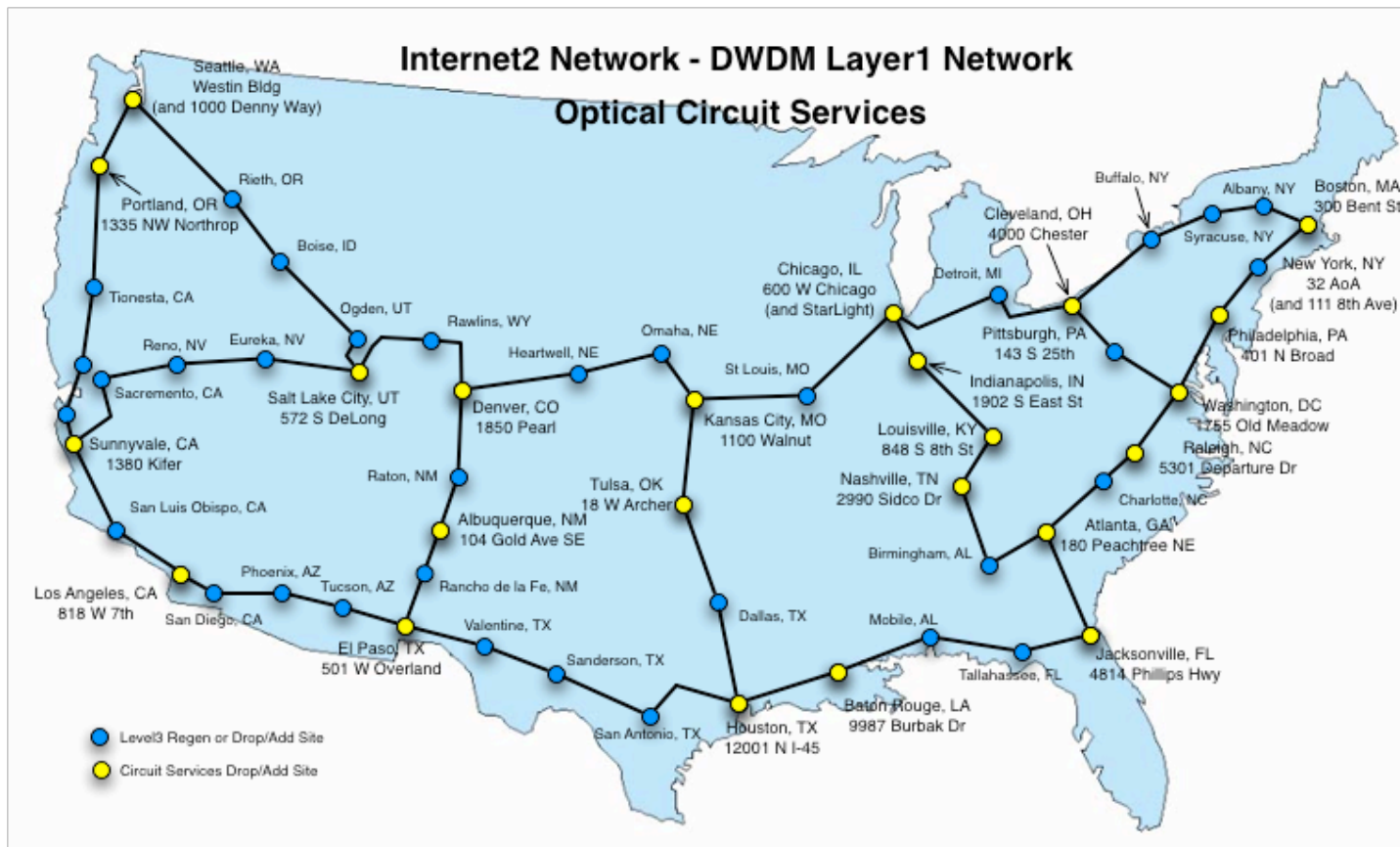
Internet2 Backbone Contribution

- A Dedicated 10 Gbps Wave on the Internet2 DWDM System
 - Participated with EMUlab / University of Utah in Recent Solicitation
 - Potential Use by Other Projects Whenever Possible
- Access is Typically through Regional and Campus Networks
 - IP Network
 - Dynamic Circuit Network (DCN)
 - Direct Connectivity for Control Framework
- Have an MoU with the GPO for Use of the Wave

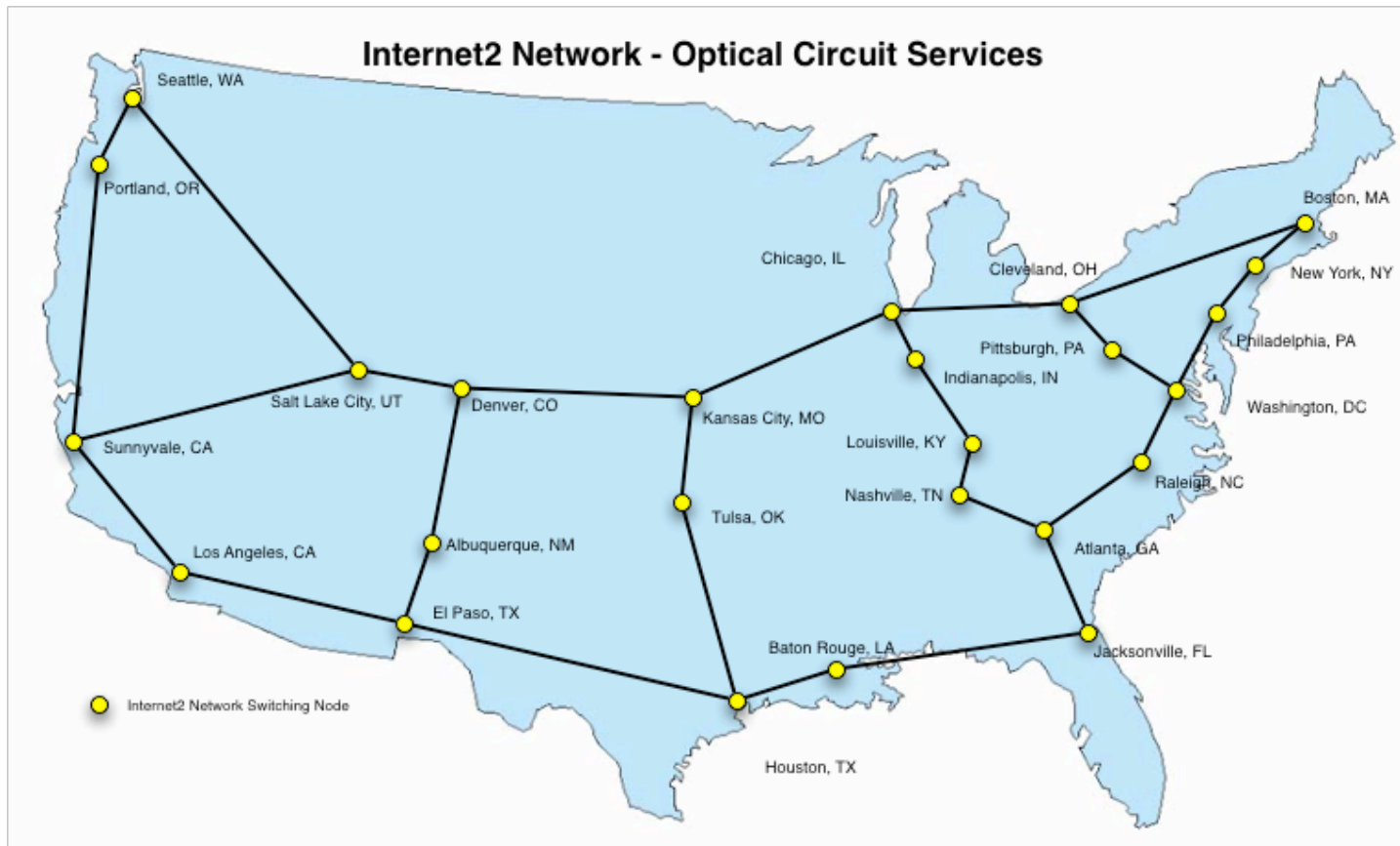
Other Services

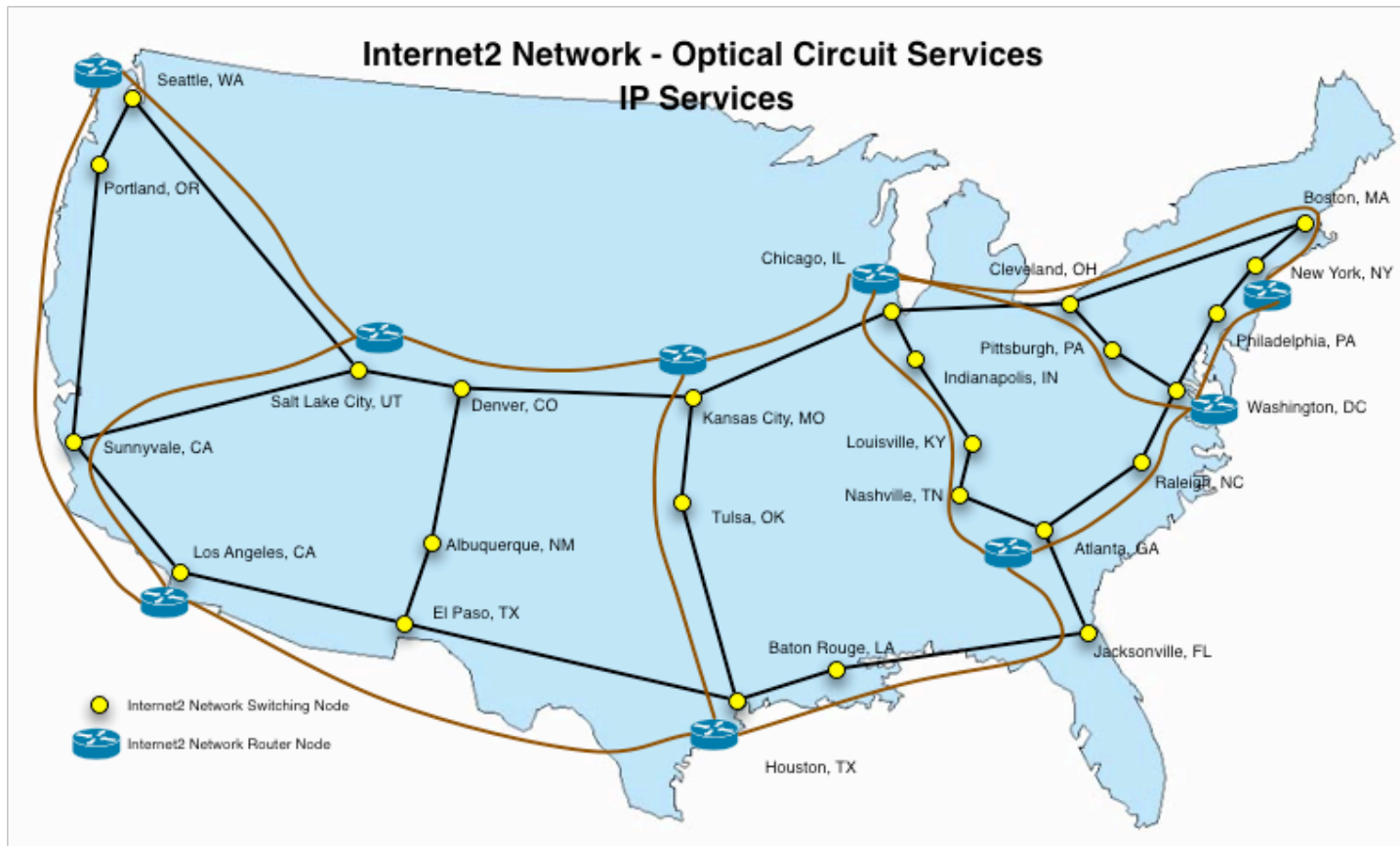
- Collocation Services
 - Internet2 Backbone Nodes
 - Depends on Availability of Power and Space
 - Geographically Diverse Set of Nodes
- Access to Internet2 Observatory
 - Data Collection Mechanisms
 - Test Points
- Support in Connecting to Backbone
 - Working with RON and Campuses to Facilitate Connectivity

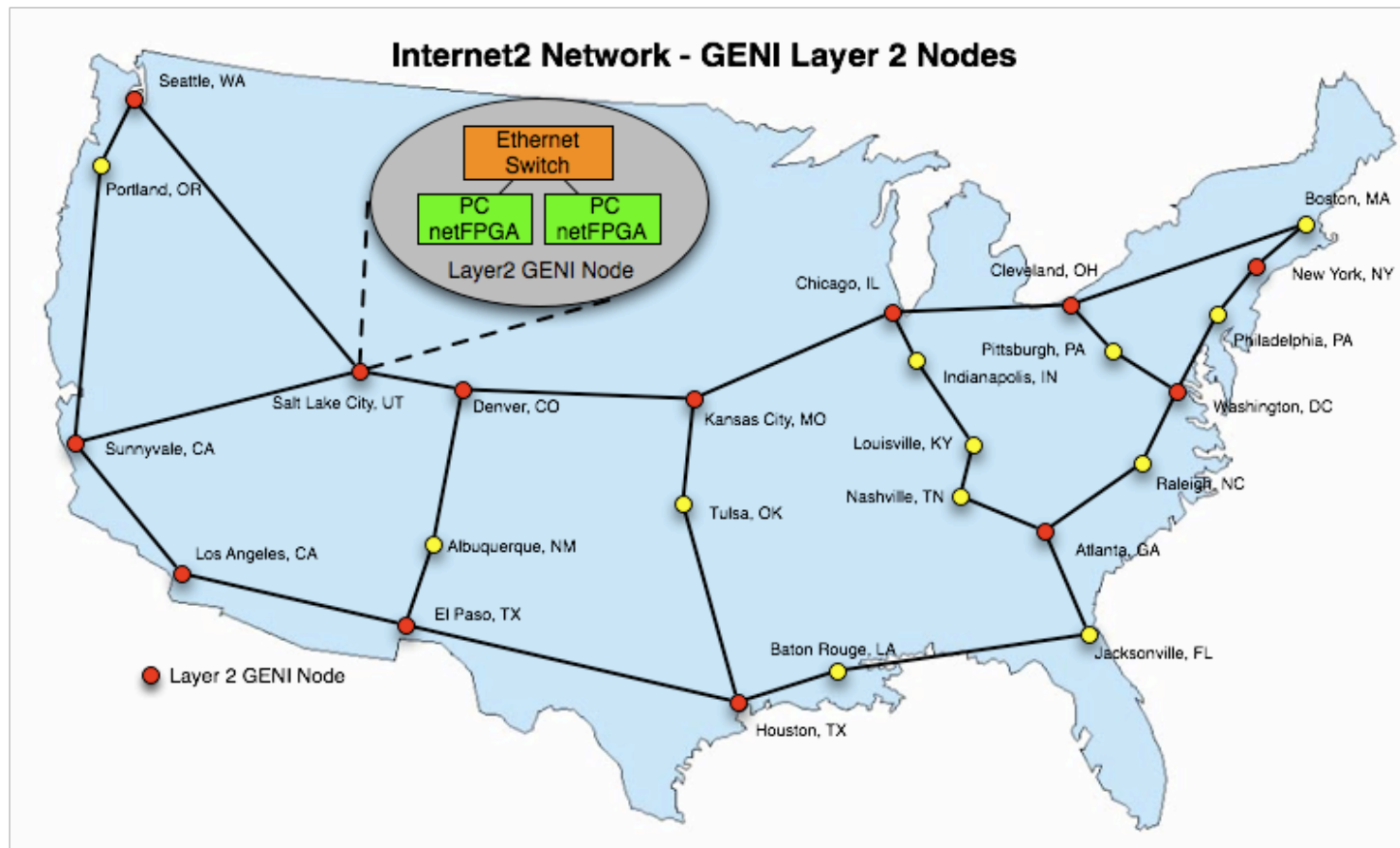




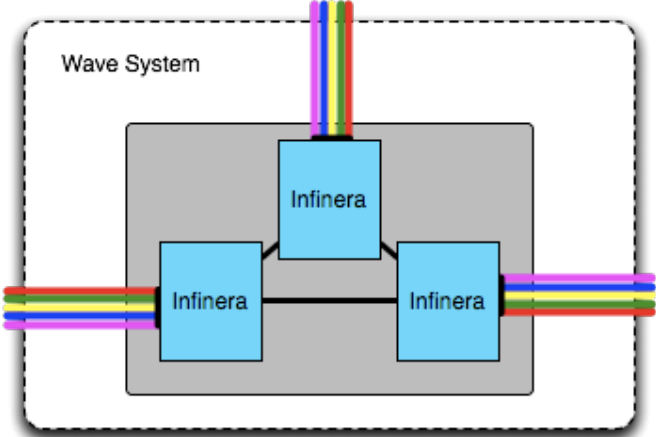
Internet2 Network - Optical Circuit Services



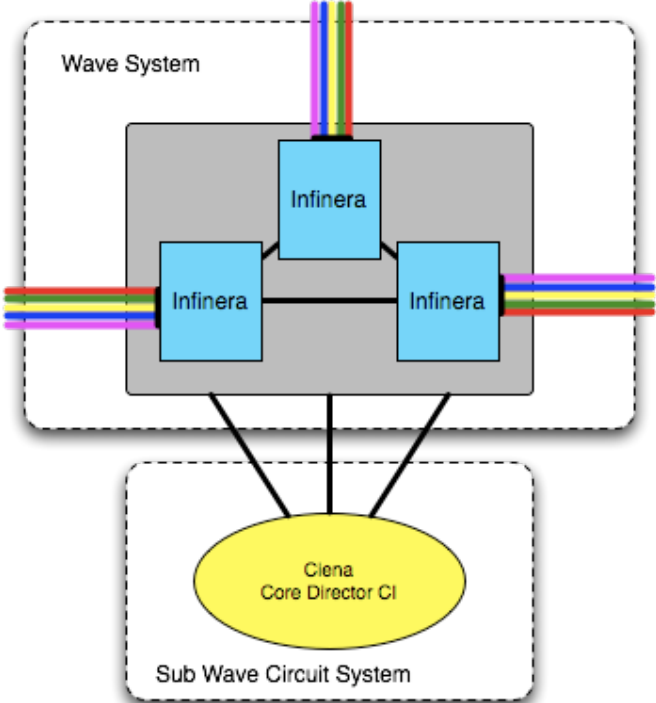




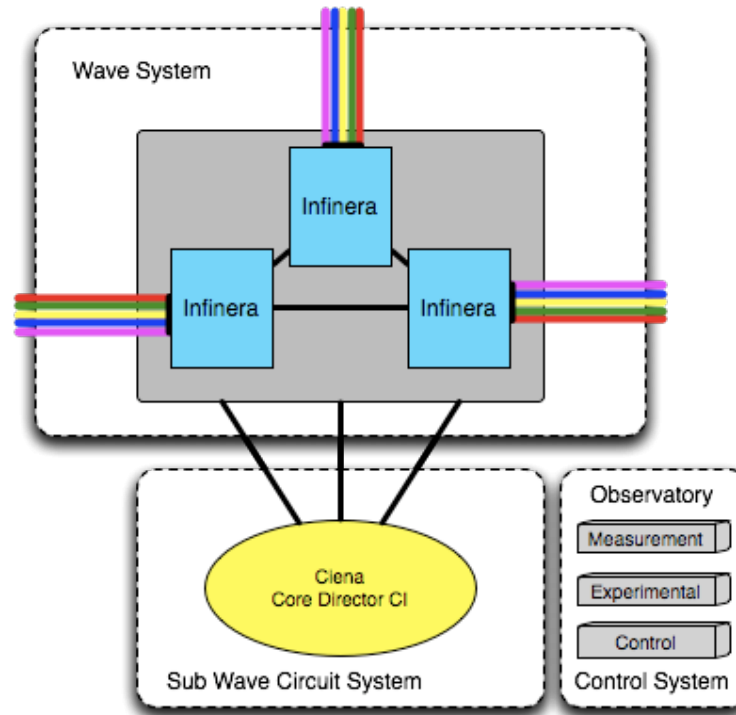
Nodes



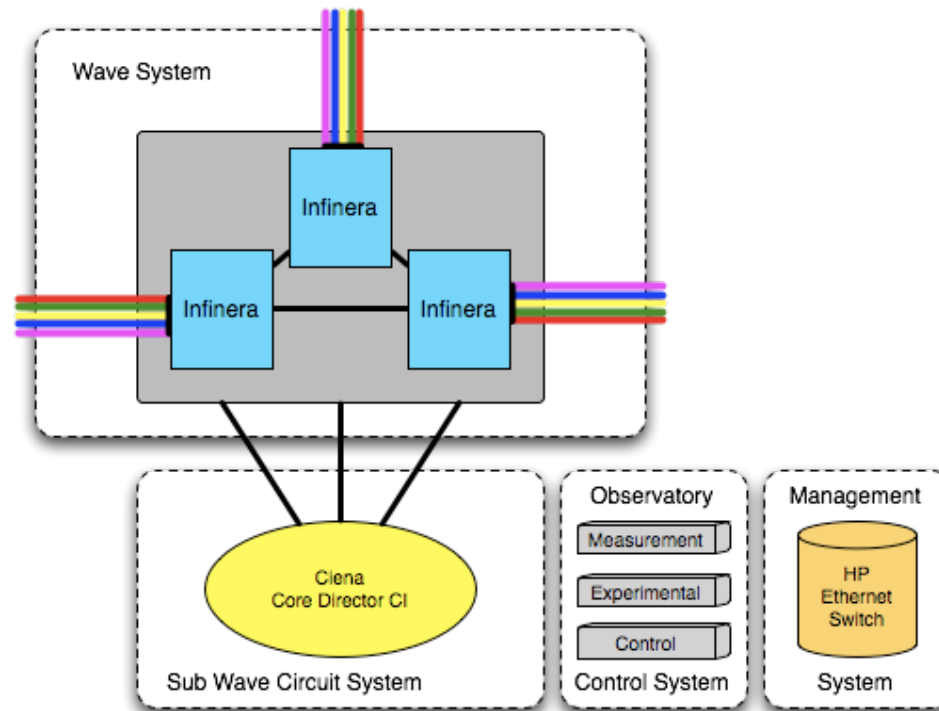
Nodes



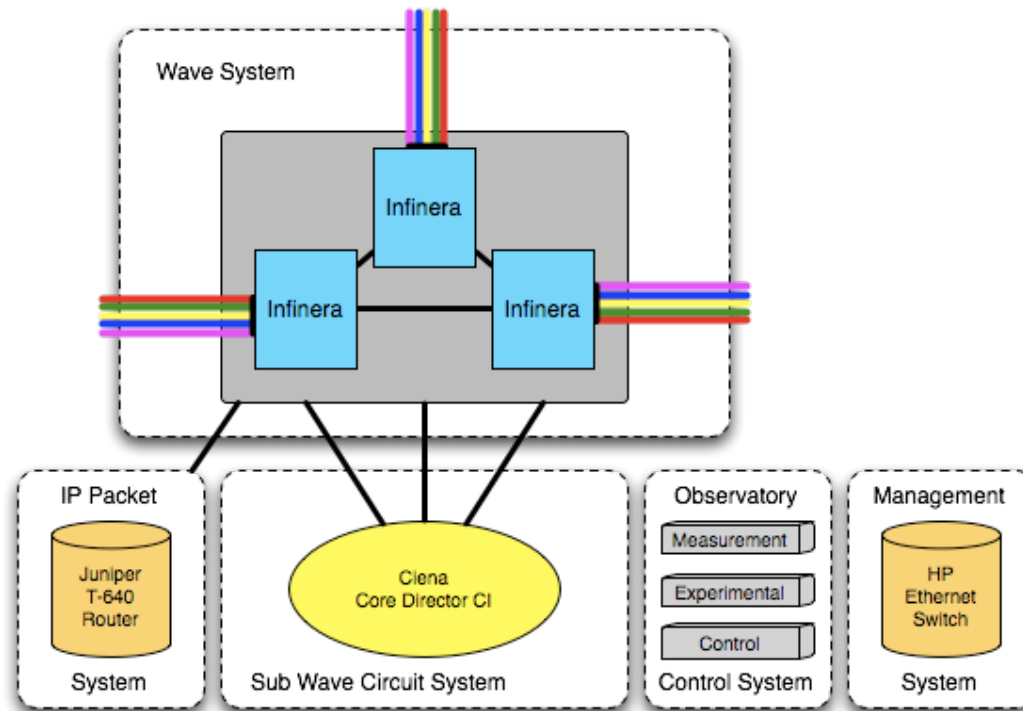
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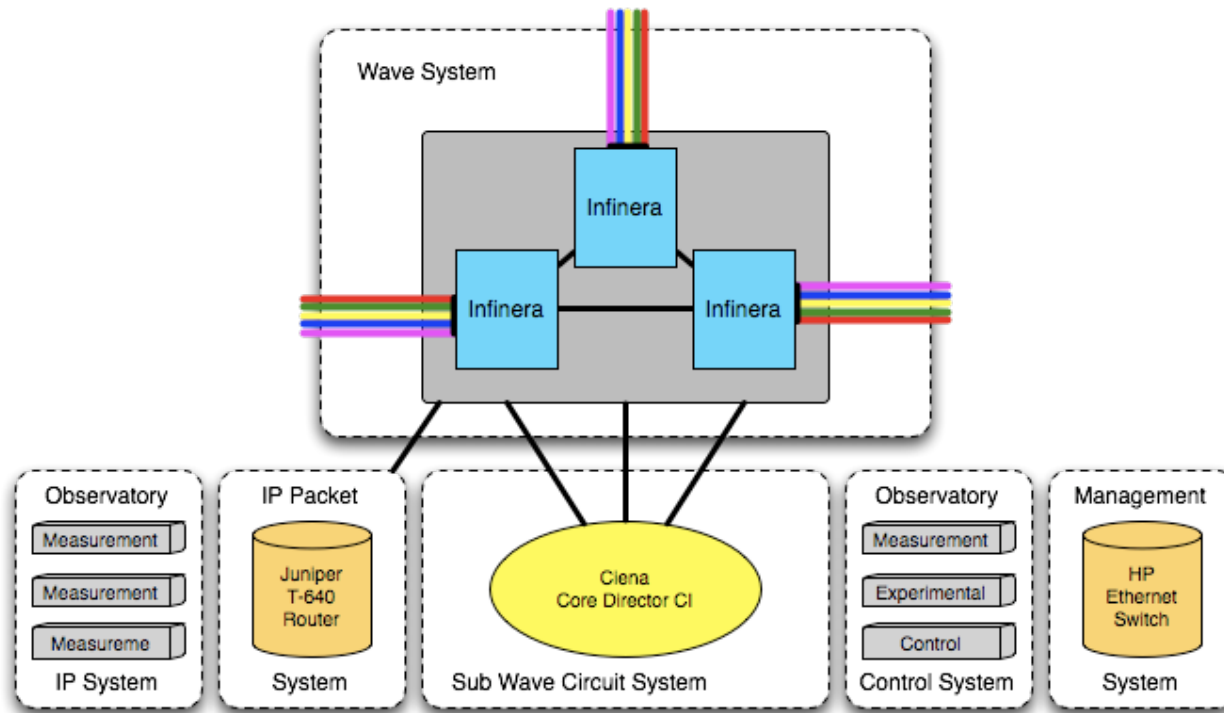
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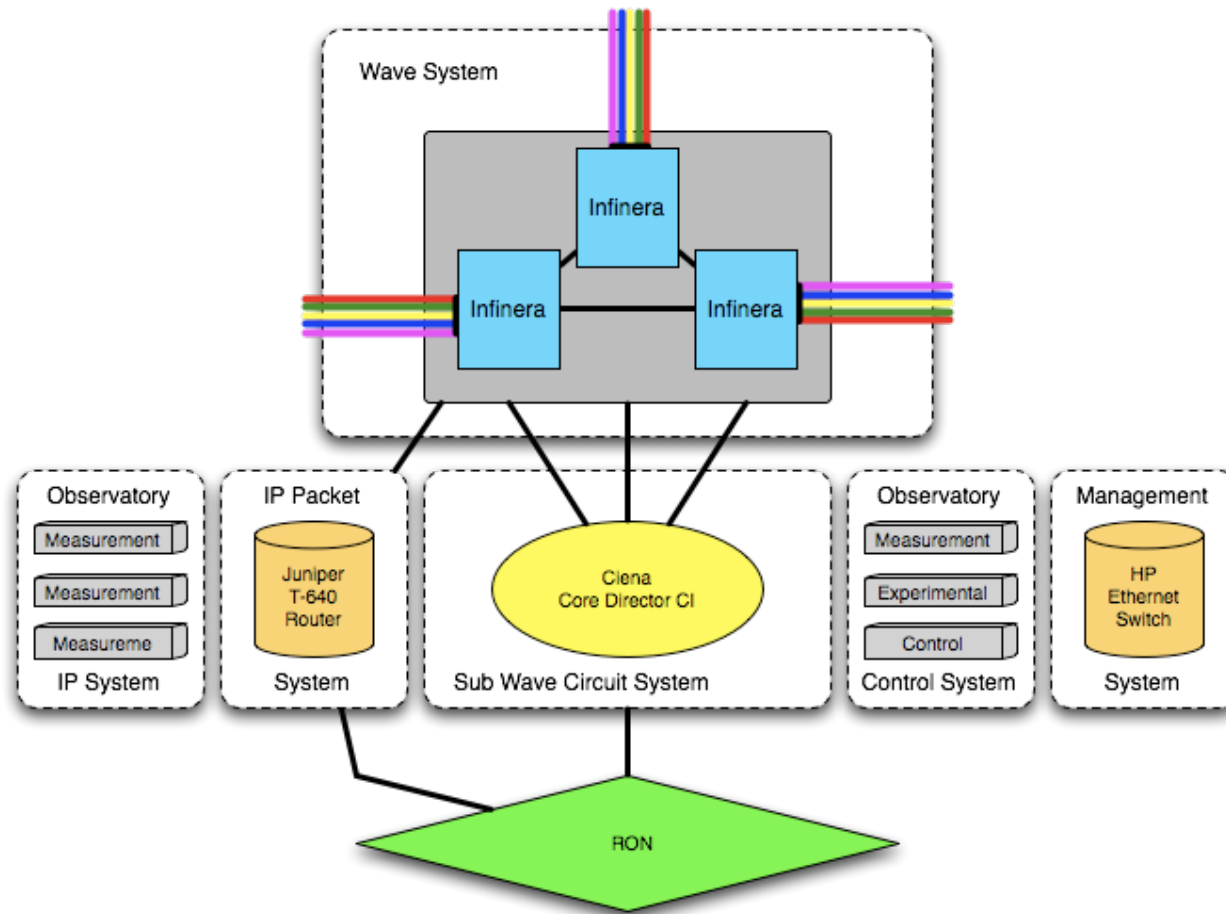
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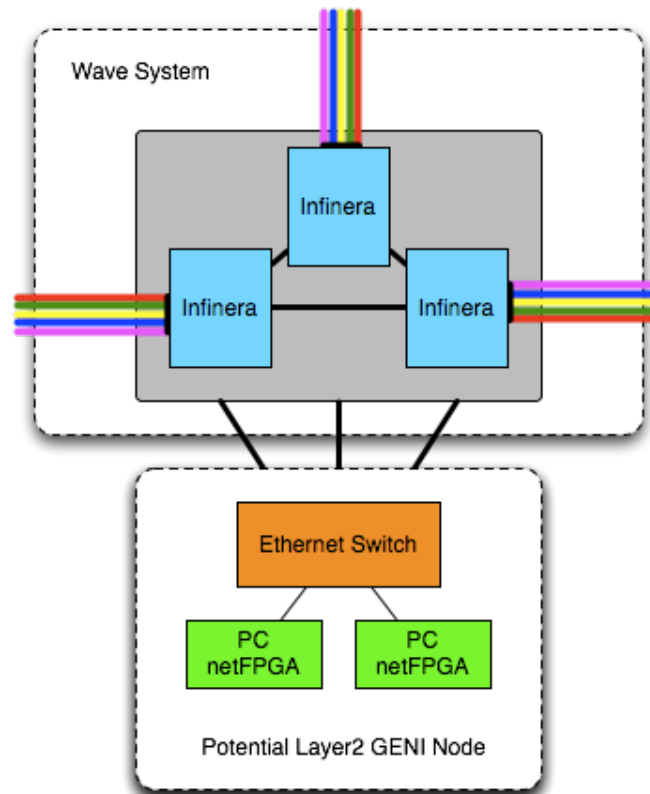
Nodes



Nodes



Nodes



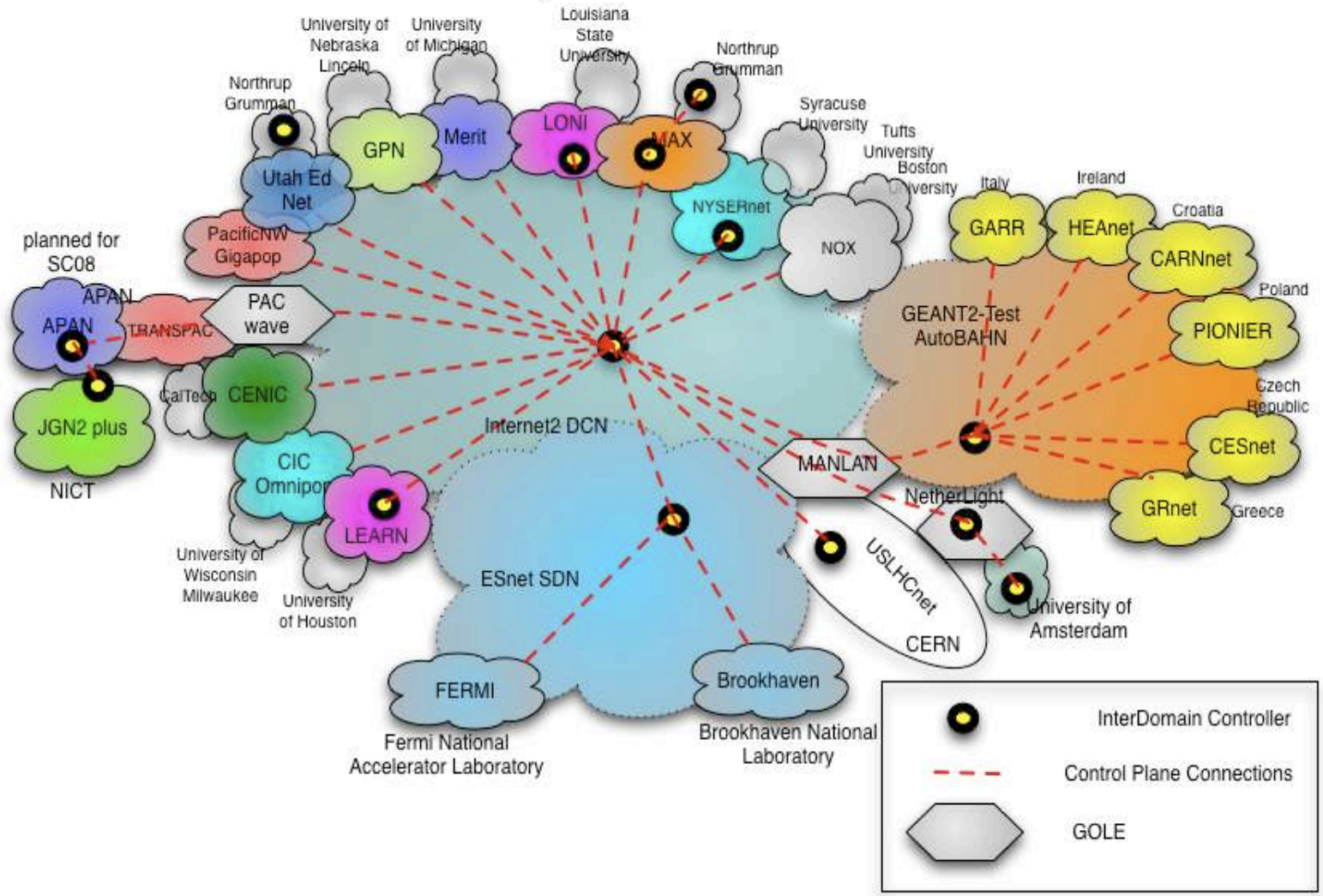
Internet2 Observatory

- Collocation for Network Research Projects
 - PlanetLab / VINI Nodes at Router Nodes
 - 100x100 Nodes (NetFPGA) Nodes
- Data Collections
 - Routing, Netflow, Latency, Bandwidth, Usage, Router, Logging

DCN

- Dynamically Setup Circuits across Multiple Administrative Domains
 - Intra-domain – On Cienas at this time, Uses DRAGON Based Code
 - Inter-domain – Inter-Domain Controller (IDC) Protocol
 - Joint Work done with GEANT, Esnet, and Internet2
- Has Grown to have a World-Wide Footprint

Global Dynamic Circuit Network



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Questions?

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