



## RENoH (Houston Metro) POPs (Two Rings 12 Fibers Each)

- UofH Main Campus R1 & R2
- RICE R1 & R2
- Rice Naylor R1
- Wiltel (Now Level3) R1
- UTHSC 7000 Fannin (Due Oct 06) R1 & R2
- 1301 Fannin, (Carrier Hotel) R1 & R2
- 1000 Texas, (Carrier Hotel) R1 & R2
- 7700 Walker.(Carrier Hotel) R1 & R2





## RENoH Services Available

1. Dark Fiber, Point to Point and Ring.
2. Shared Ethernet Service (Using SETG)



## RENoH Circuits In Service

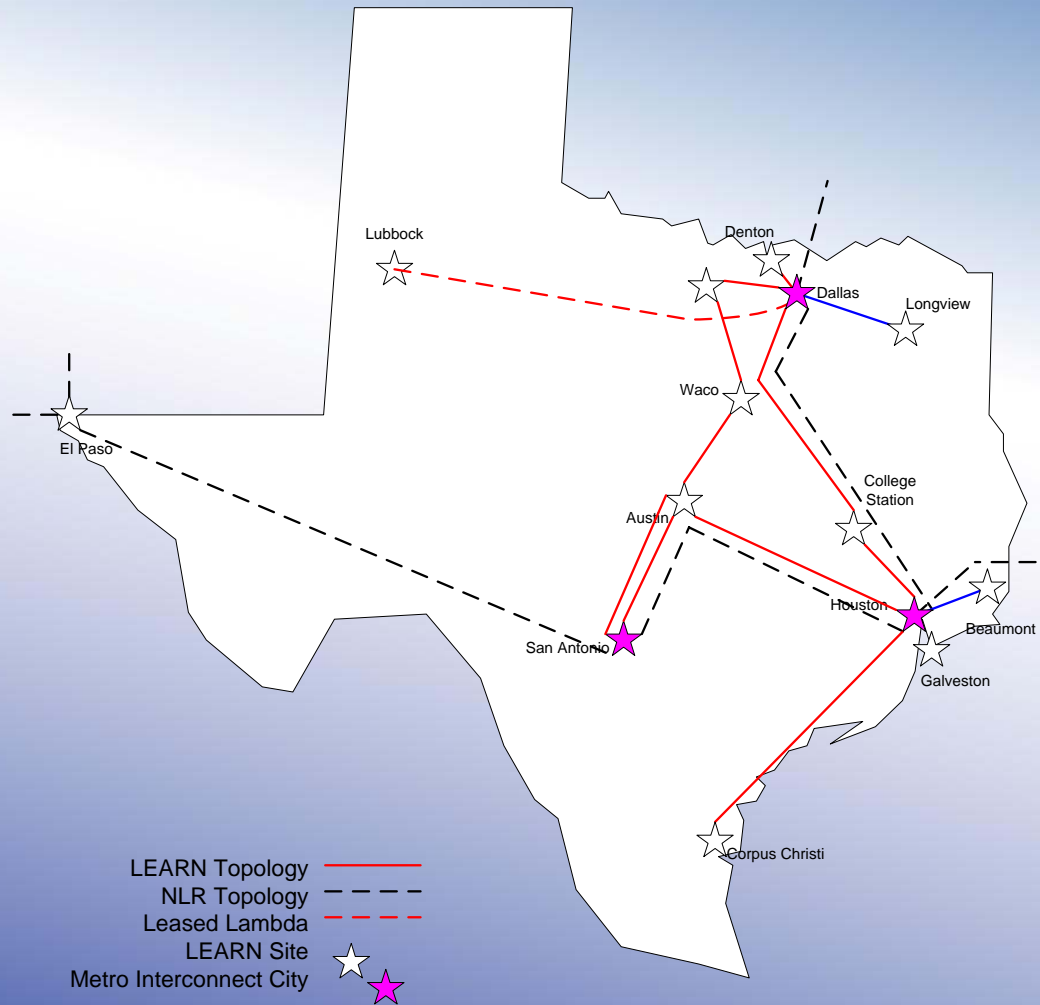
1. 10 GigE ring, 1 DF Pair, SETG (South East Texas GigaPop) at UofH, Rice, UTHSC, 1124 Hardy. Shared Ethernet Service.
2. 10 GigE Ring, 1 DF Pair, Rice to Naylor Computing Center.
3. UofH to RICE Point to Point. 1 DF Pair
4. 10 GigE UofH TLC2 Research facility to RICE Itanium cluster, 1 DF Pair.
5. 1 GigE circuit to Verio (Via 1301 Fannin) I1 internet for Uof H system (Currently being implemented.)
6. 1 GigE circuit to Abovenet (At 1301 Fannin) I1 Internet for UofH System (Currently being Implemented)





# LEARN POP

LEARN Topology for State



Texas Learning & Computation Center





## LEARN Services

- Point to Point 10 GigE.
- Point To Point 1 GigE.
- Shared Ethernet.
- Layer 3 Peering being developed.

\* Services are available at and between most nodes, there may be some engineering restrictions therefore each request is engineered separately.



## LEARN Circuits in Service

- Point to Point 1 and 10 G
- Shared L2 Ethernet.



# NLR Points Of Presence

(Map is Hyperlinked)

NLR Services - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Printers

Address <http://www.nlr.net/services/map/> Go Links

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### NLR Services Map

Click on a node (orange building) in the map to find out more information about the selected node. Details about the node will show up here.

**WaveNet**  
For those who need the flexibility and control from end to end including allocation of pathways and protocols at layer 1 [more]

**FrameNet**  
For those who need a fixed high speed pathway (as low as 100 megabits) with protocol flexibility at layer 2 [more]

**PacketNet**  
For those who need a high-quality managed nationwide backbone service with a high bandwidth entry point at layer 3 [more]

**Other Services**  
For those who have special hardware and maintenance

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start 5 Internet Explorer Document1 - Microsof... 2 Microsoft Office P... Microsoft Excel 5:25 AM



## NLR Services Available in Houston (Via LEARN)

\*Awaiting confirmation of availability

- **Houston**
- NLR Core Services Available to NLR Member Organizations and Sponsored Users at the Houston Node. Any institution on LEARN.
- **NLR Service Type Provided**
- [WaveNet10-gigabit Ethernet LAN-PHY](#)
- [OC-192 Lambda](#)
- [FrameNetNational Exchange Fabric](#)
- [Dedicated FrameNet](#)
- [Non-Dedicated FrameNet](#)
- [PacketNetRouted IP Service](#)
- [Breakable IP Service](#)
- [Colocation Services](#)
- [Cross Connections](#)

Service descriptions and Points of presence available at  
<http://www.nlr.net/services/map/>





## NLR Circuits in Production

- [NLR FrameNet Proxy](#) Query NLR FrameNet (Layer 2) nodes using "show" commands. Select a NLR node, select and complete the command of your choice, and submit the form; the output of the command is displayed in another frame.
- [NLR PacketNet Proxy](#) Query NLR PacketNet (Layer 3) nodes using "show" commands. Select a NLR node, select and complete the command of your choice, and submit the form; the output of the command is displayed in another frame.
- [NLR WaveNet Weather Map](#) A map-based representation of lambda utilization on the NLR Layer 1 network
- [NLR FrameNet Weather Map](#) A map-based representation of backbone utilization on the NLR Layer 2 network
- [NLR PacketNet Weather Map](#) A map-based representation of backbone utilization on the NLR Layer 3 network
- [SNMP Utilization](#) 1-minute resolution interface utilization statistics for NLR Layer 2 and NLR Layer 3 networks.
- [NLR FrameNet Spanning Tree Map](#) Query per-VLAN spanning tree state on the NLR FrameNet network





## The Houston Exchange or “Meet Me Point” For LEARN, I2 (SETG), NLR and RENoH

- Physical exchange point is at the Wiltel/L3 POP at 1124 Hardy Street. RENoH/SETG Combined rack is Next to LEARN Assets.
- All services can be exchanged by extending Routed and switched services via point to point links.
- No L3 Peering arrangements currently in place but being developed.