

# Hargray Communications

## EFM in the Real World: A Telephone Company Perspective

IEEE

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HARGRAY

# Hargray Communications Company Profile

- Family-owned
- In business for  
50+ years
- Over 20%  
annual growth  
in major areas



# *Internet Express*

## Broadband Rollout

- Vendor selection December, 1998
- Beta testing – friendly customers February, 2000
- Deployment – March, 2000
  - ADSL on Hilton Head and Sun City
  - HFC in Bluffton and Hardeeville
- Added computer and network support
- Presently 500 lines installed

# Issues With Initial ADSL Platform

- Network Issues

- Coverage

- Some loops > 18,000 ft could not be served
    - Retired repeatered T-1's prior to implementation

- Cost

- Approx. \$800/port
    - Required truck roll for every installation

- Compatibility

- Traffic comes to gateway as ATM – had to be converted to Ethernet
    - Asymmetric speed different than HFC platform

# Issues With Initial ADSL Platform

- Vendor Issues

- CPE

- No NAT support
    - Required frequent reboots under heavy load
    - Expensive
    - Claimed G.Lite support, but 3<sup>rd</sup> party CPE didn't work

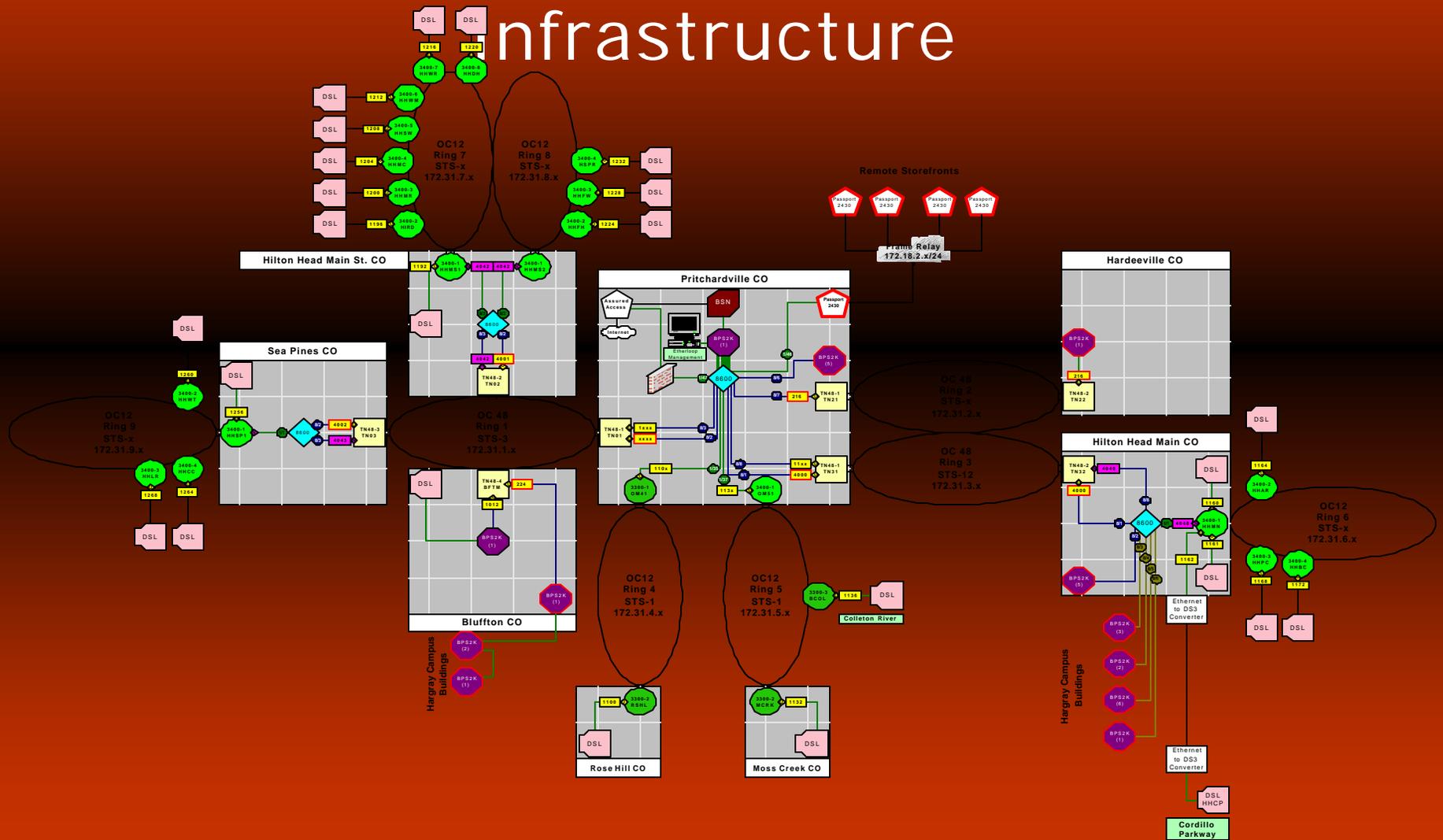
- Management

- Required multiple T-1's for backhaul
    - T-1 couldn't be multiplexed together
    - Remote management required dial-up modem

# Revised Rollout Strategy

- Cap existing vendor rollout
- Install Gigabit Ethernet transport system
- Install Ethernet DSLAMs
- Select and customize PPPoE client
- Create customer self-install kit
- New installs on new platform
- Convert existing customers as able
- Retire old DSLAMS

# Hargray's SONET Network End-to-end Ethernet Infrastructure



# End-To-Ethernet Advantages

- New network architecture
  - Flat Layer 2 network
  - Low cost Ethernet components
  - Routed / Switched network directly routes local traffic
- Expanded network coverage
  - Works on longer loops
- Unified Network Management Platform
- Supports Next-Generation Services
  - Business-class VPN's > 2 Mbps
  - Voice over IP
  - Video on demand

# Experience To Date

- Gig-E Installation complete
- DSLAMs in selected wire centers
- Initial customer installations successful
- Technician installs initially –  
transitioning to customer self-installs
- Reliability and performance  
meeting expectations