

Overview of DALNET Design

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Network Objectives

- Provide a cost effective high performance network
- Provide a unified and integrated network
- Provide a gateway to Library information
- Private TCP/IP connectivity
- Provide 99.9% availability
- Adapt to change

From the Top: A DALNET Session

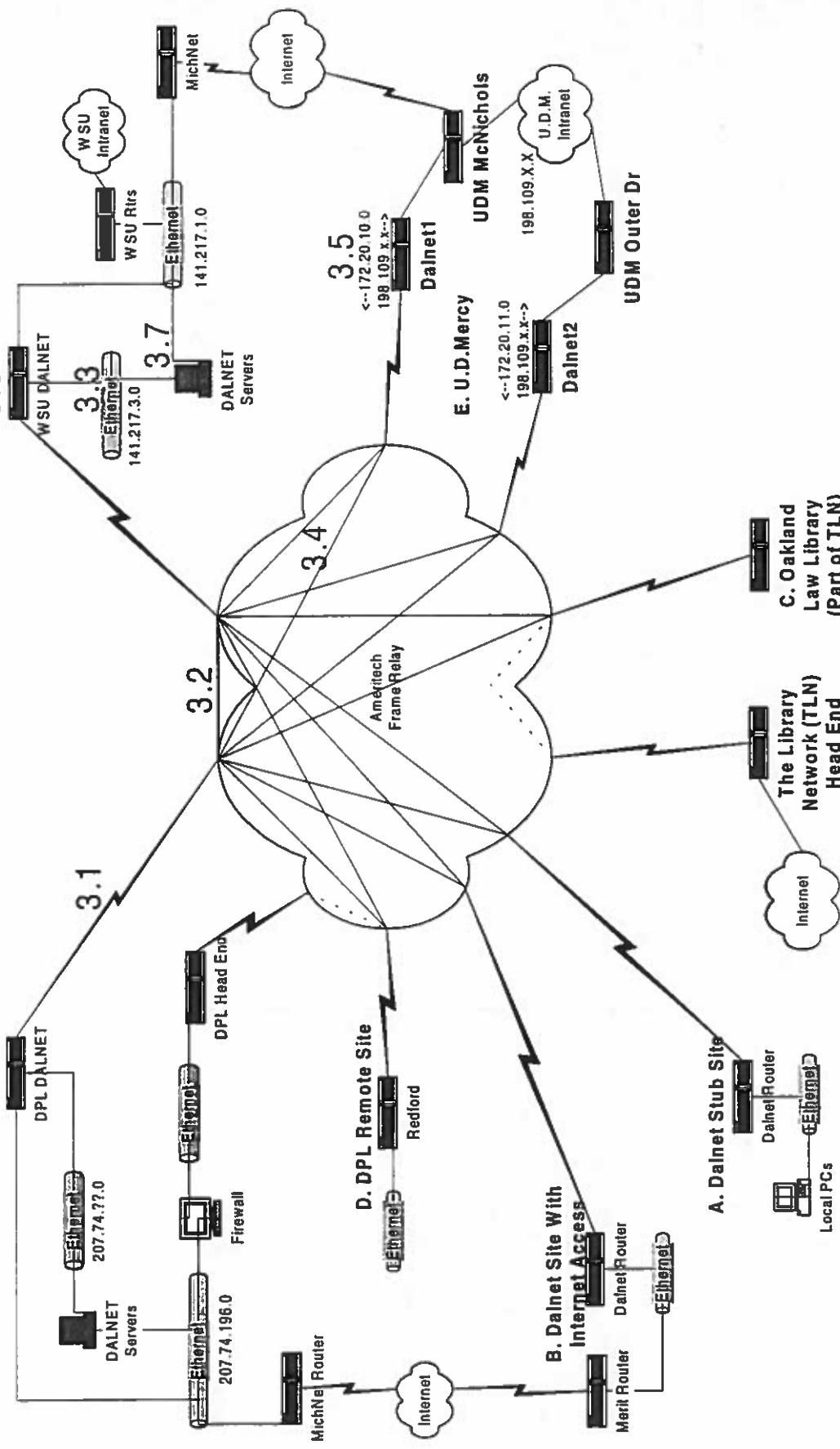
- 1) Browser is opened on a workstation.
- 2) A URL (destination) is entered.
- 3) Workstation uses its DNS server to resolve the URL to a TCP/IP address.
- 4) Workstation sees that the resolved TCP/IP address is not local so it sends it to its Default Gateway (a directly attached router).
- 5) The router accepts the packet...

...And our journey to Geekworld begins.

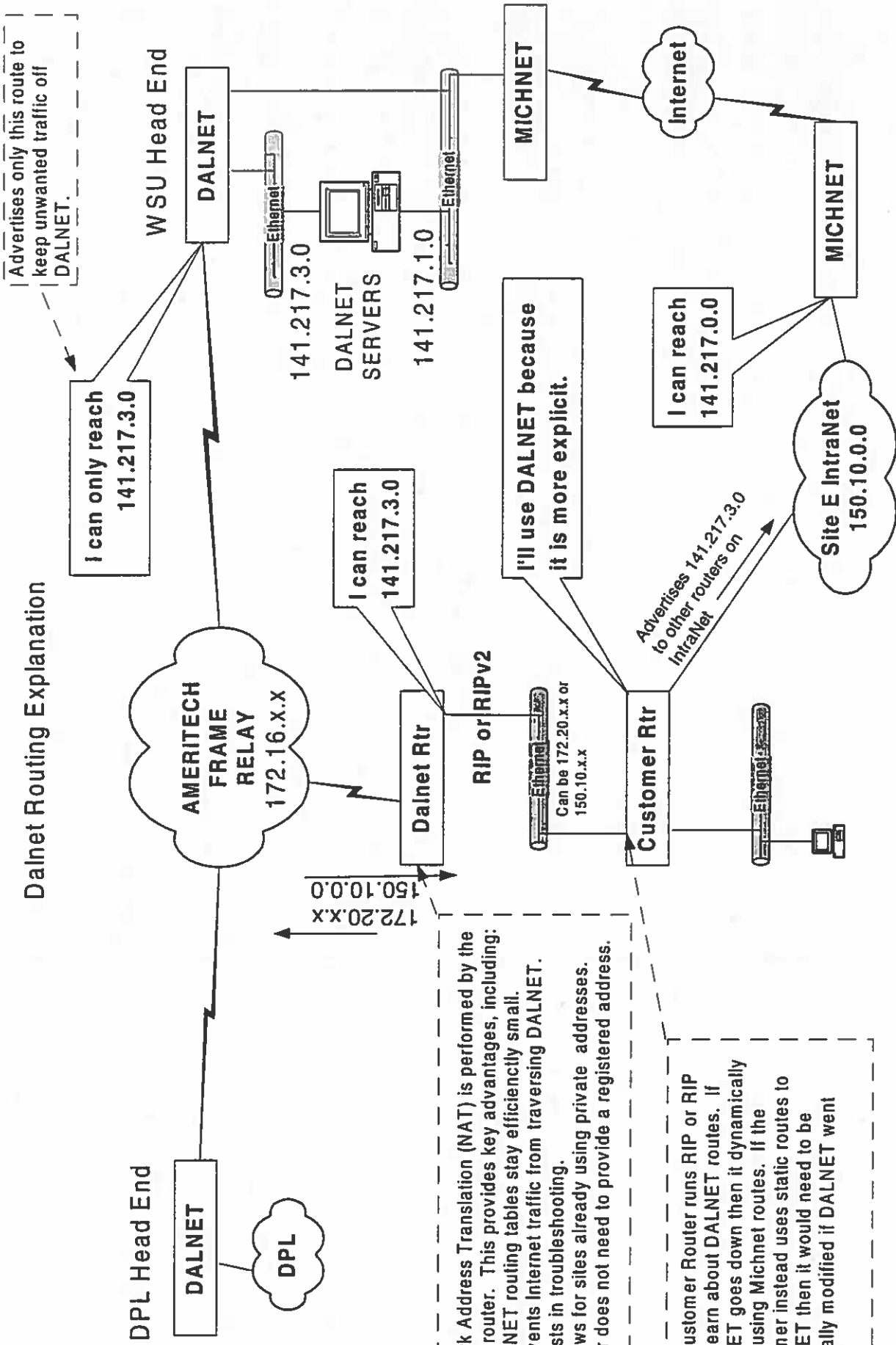
DALNET WAN - ALL SCENARIOS

DPL Head End

WSU Head End



Dalnet Routing Explanation

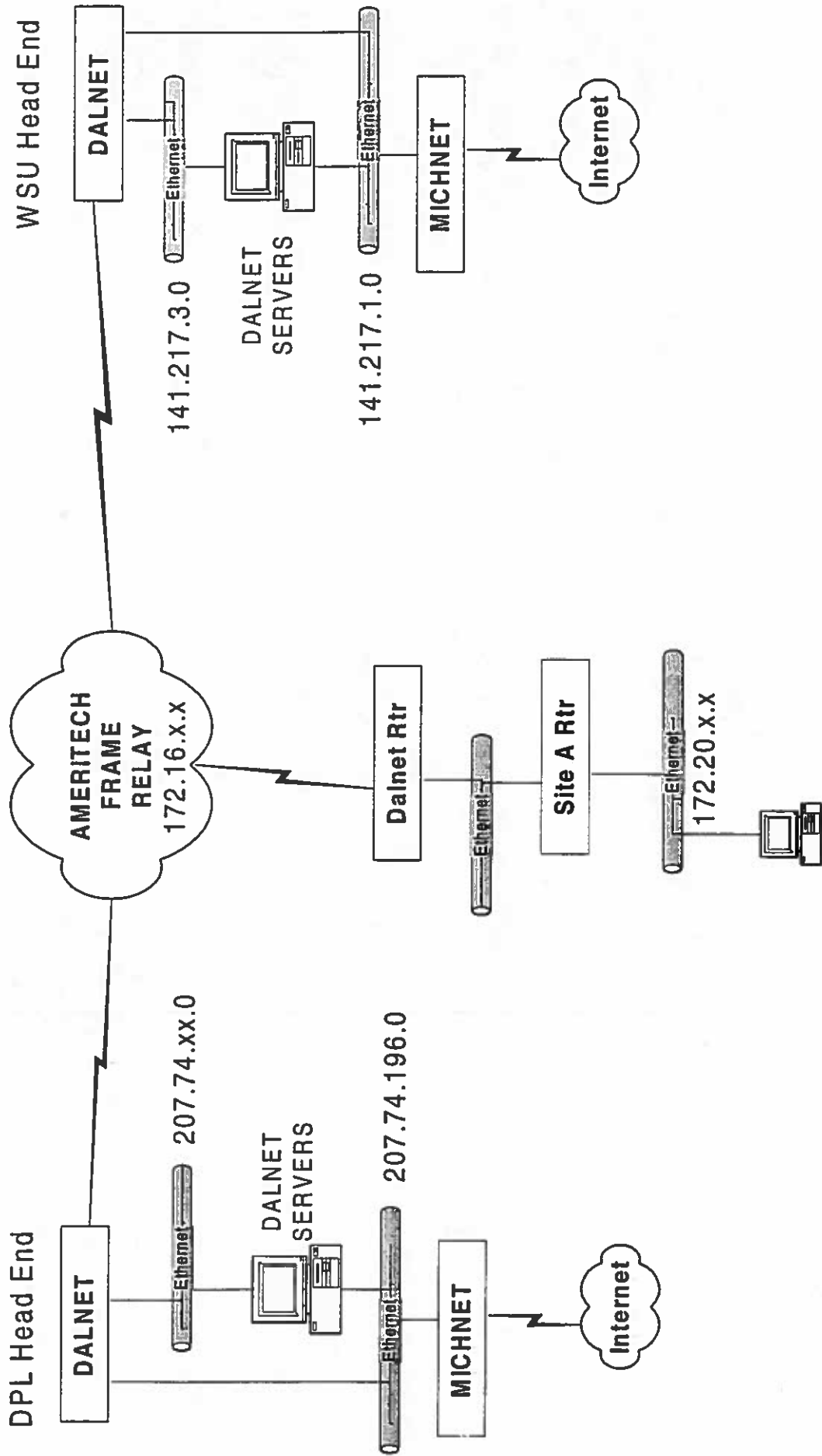


Network Address Translation (NAT) is performed by the Dalnet router. This provides key advantages, including:

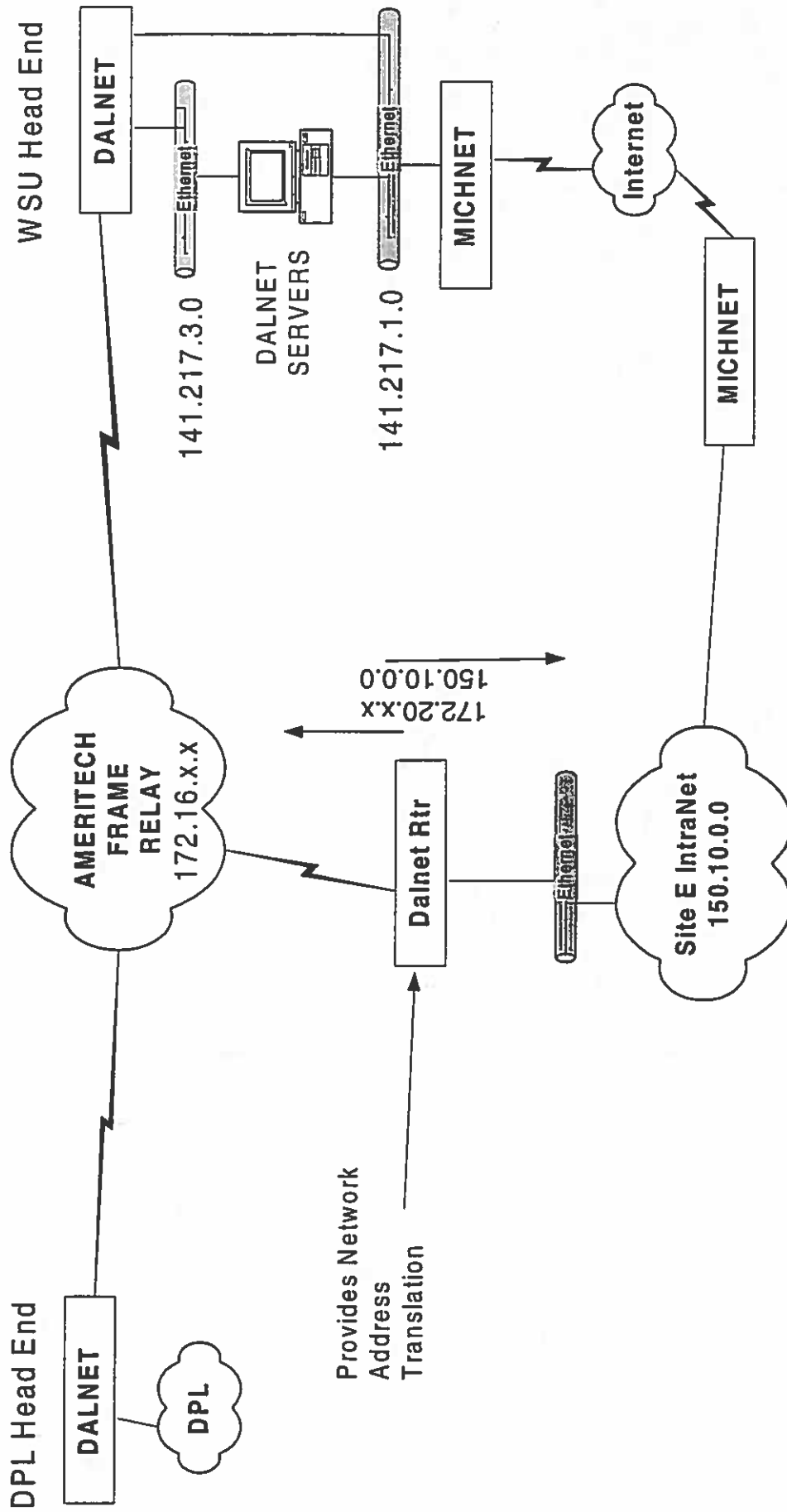
- 1) DALNET routing tables stay efficiently small.
- 2) Prevents Internet traffic from traversing DALNET.
- 3) Assists in troubleshooting.
- 4) Allows for sites already using private addresses.
- 5) User does not need to provide a registered address.

The Customer Router runs RIP or RIP v2 to learn about DALNET routes. If DALNET goes down then it dynamically starts using Michnet routes. If the customer instead uses static routes to DALNET then it would need to be manually modified if DALNET went down.

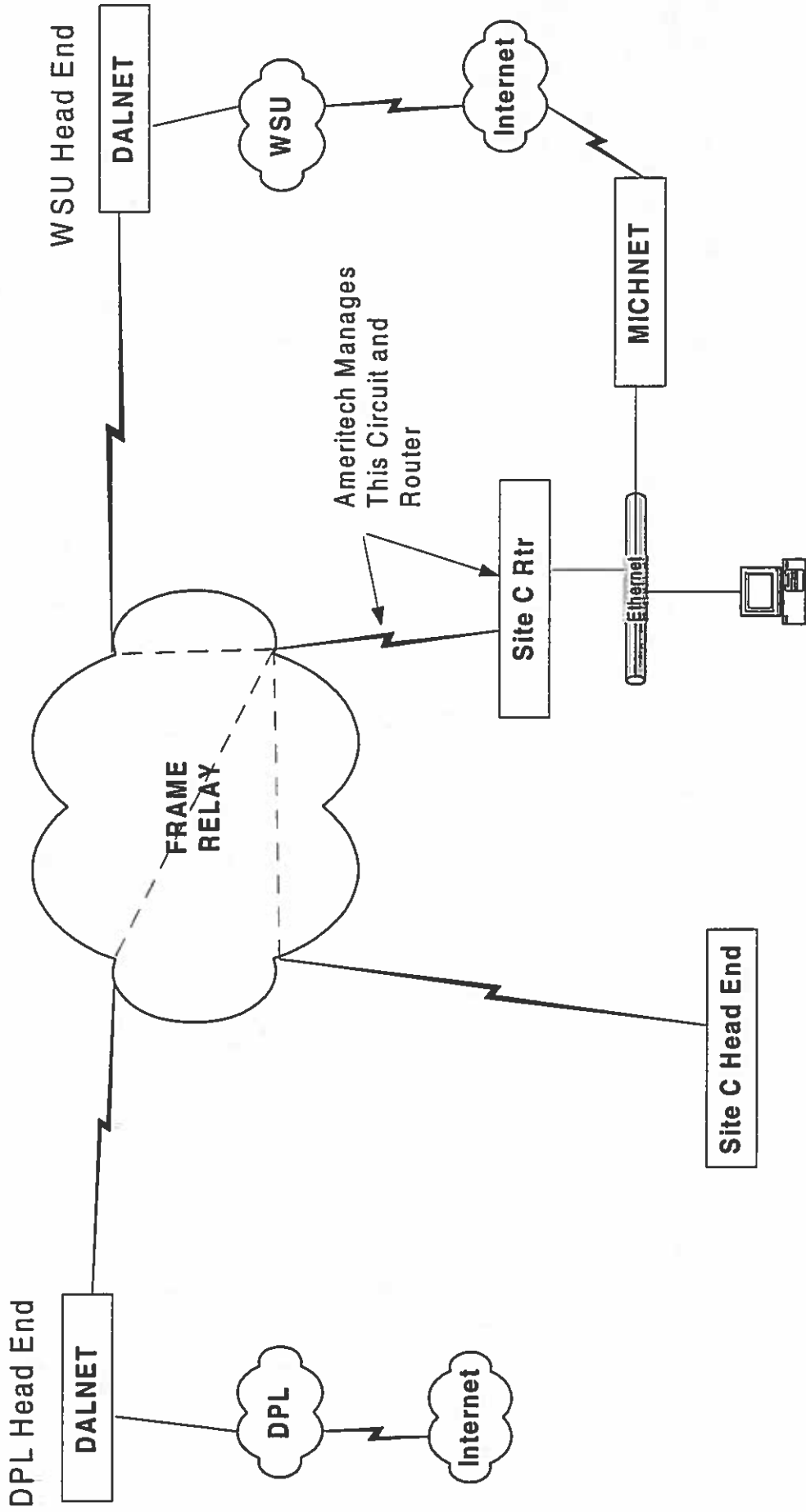
Scenario A - Standalone Site
With No Internet Access



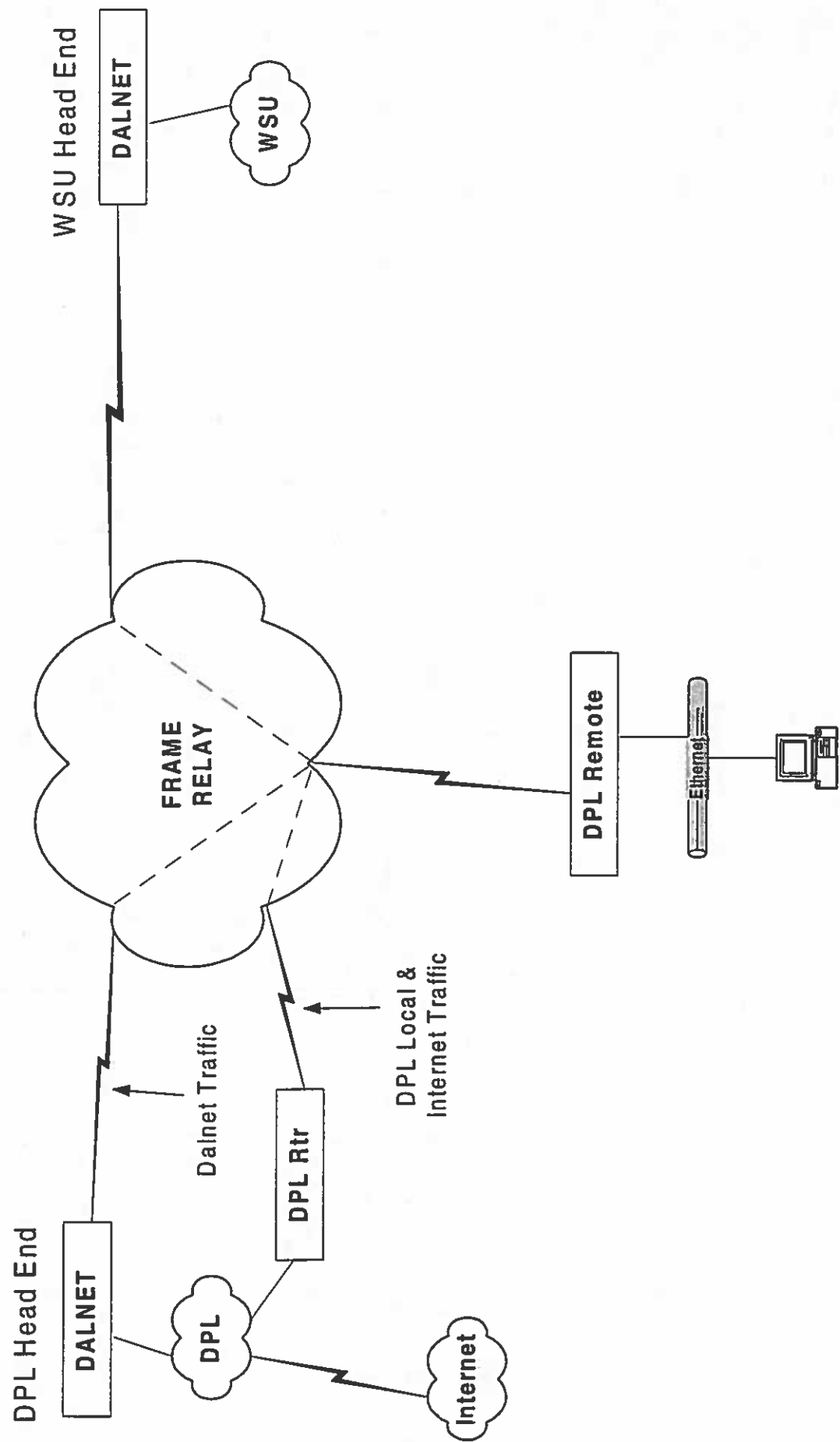
Scenario B - Standalone Site
With Internet Access



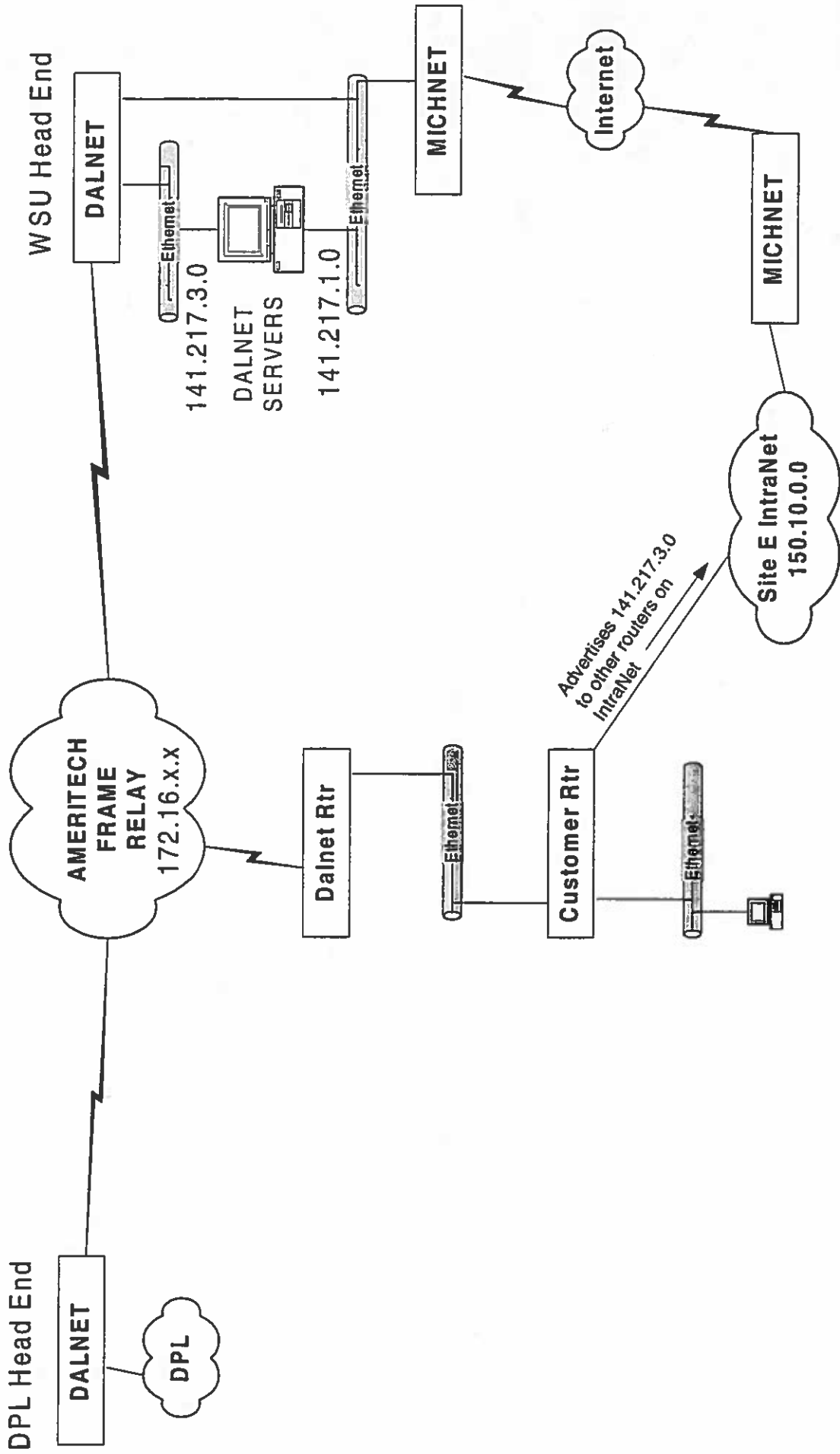
Scenario C - Remote Site With PVCs to Other Sites



Scenario D - DPL Remote Sites



Scenario E - Sites with Intranet and Internet Access



Why Internet Access?

- Users can access DALNET from their local ISP.
- Provides redundancy to the private DALNET frame relay network.
- Provides alternative access for local administrators.

Managed Router Service

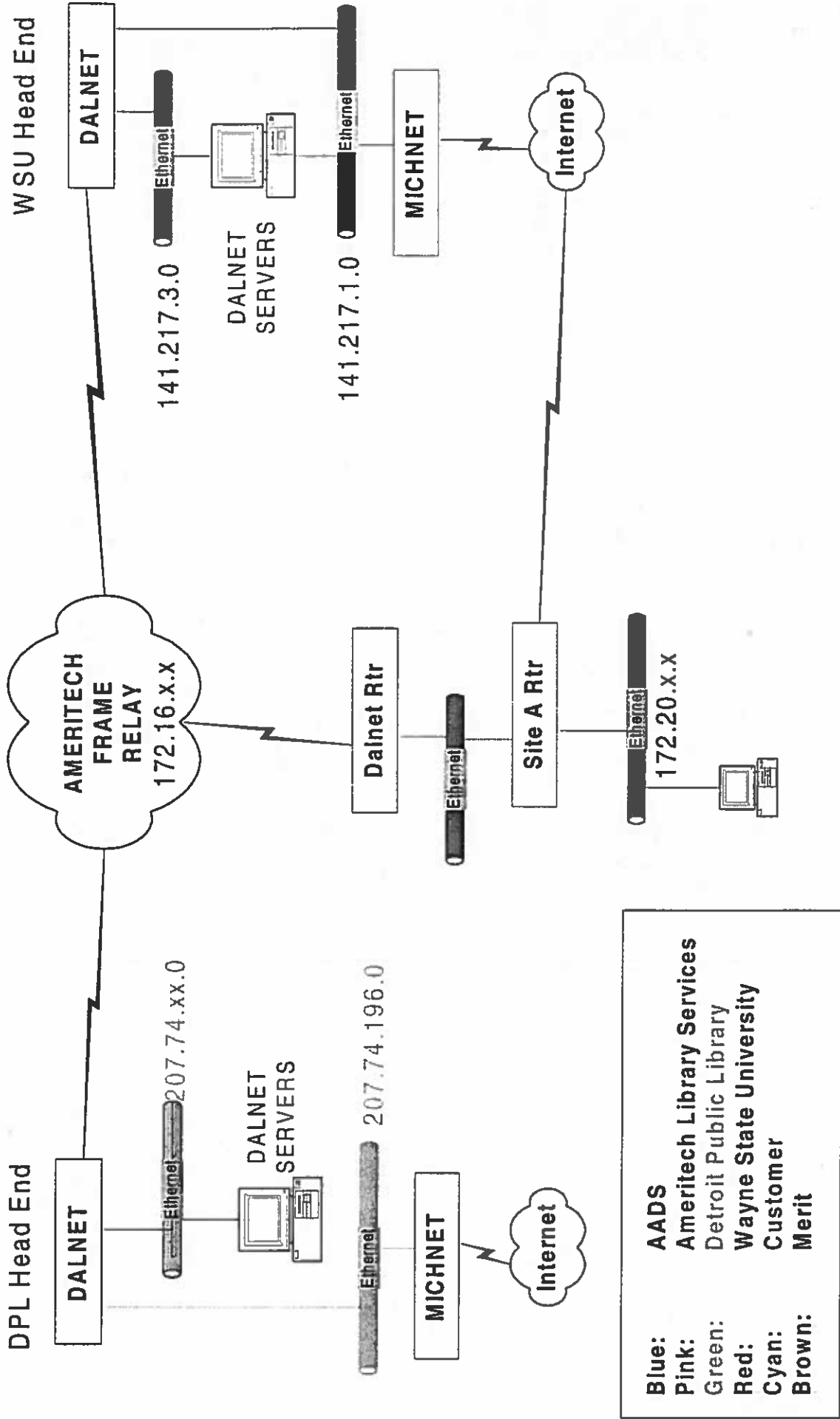
Includes:

- **Router, CSU/DSU Frame Relay Circuit**
- **Installation and Configuration**
- **Project Management**
- **24 x 7 x 365 Monitoring**
- **24x 7 x 365 Maintenance**
- **Technical Support**
- **Network Design and Consulting**

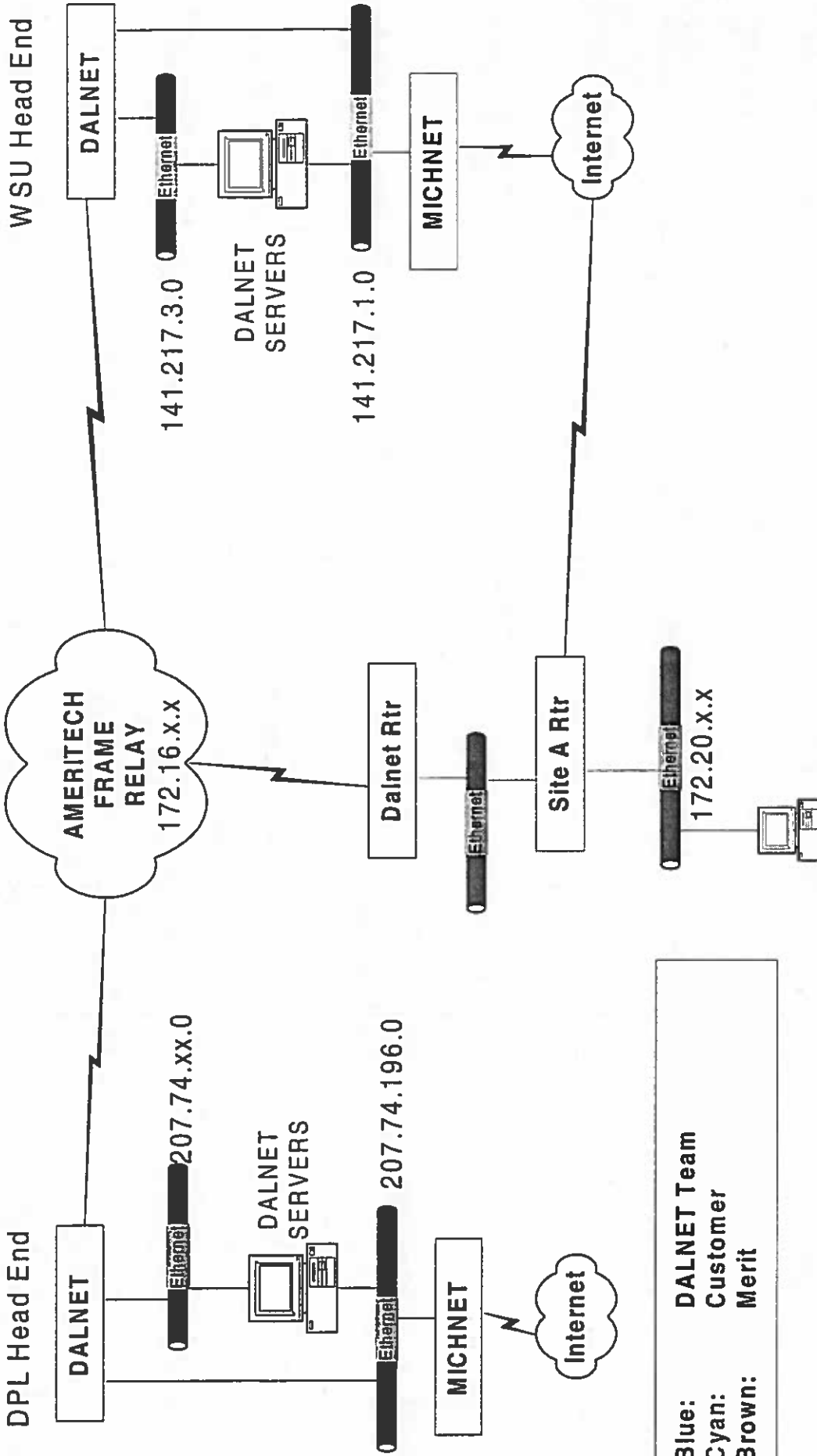
Frame Relay versus Internet

- **Mission Critical Data**
- **Manageable**
- **Dependable**
- **Reliable**
- **Dedicated**

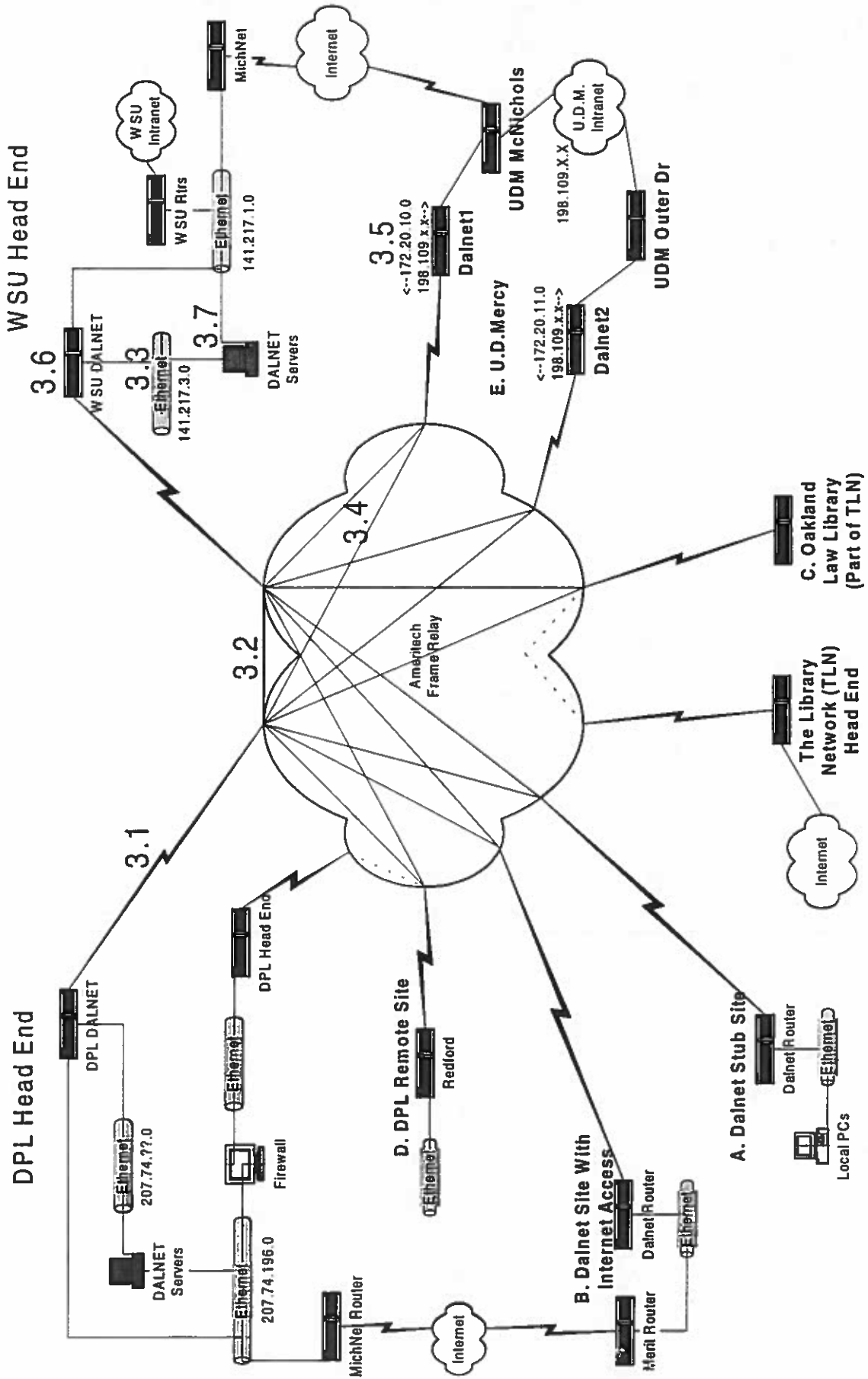
DALNET RESPONSIBILITIES



DALNET TEAM RESPONSIBILITIES



DALNET NETWORKING POLICIES



DALNET - LOCAL RESPONSIBILITIES

