

Welcome to i341

Networks and Distributed Applications

Divestiture and Deregulation

Breakup of Ma Bell

Divestiture separated the suppliers for long distance and local telephone service. Each of the 22 Bell Operating Companies (BOCs) was incorporated into one of several regional holding companies call Regional Bell Operating Companies (RBOCs).

On January 1, 1984, AT&T divested itself of all the telephone companies that provided services to the end user as a result of what has become known as the Modified Final Judgment. According to the federal consent decree issued in 1982 by the Justice Dept. (Judge Green), AT&T would only be allowed to handle long distance service, plus pursue the development and manufacturing of technologies merging computers and telecommunications.

Before the divestiture of the BELL SYSTEM on January 1, 1984, there were 22 Bell Operating Companies owned by AT&T:



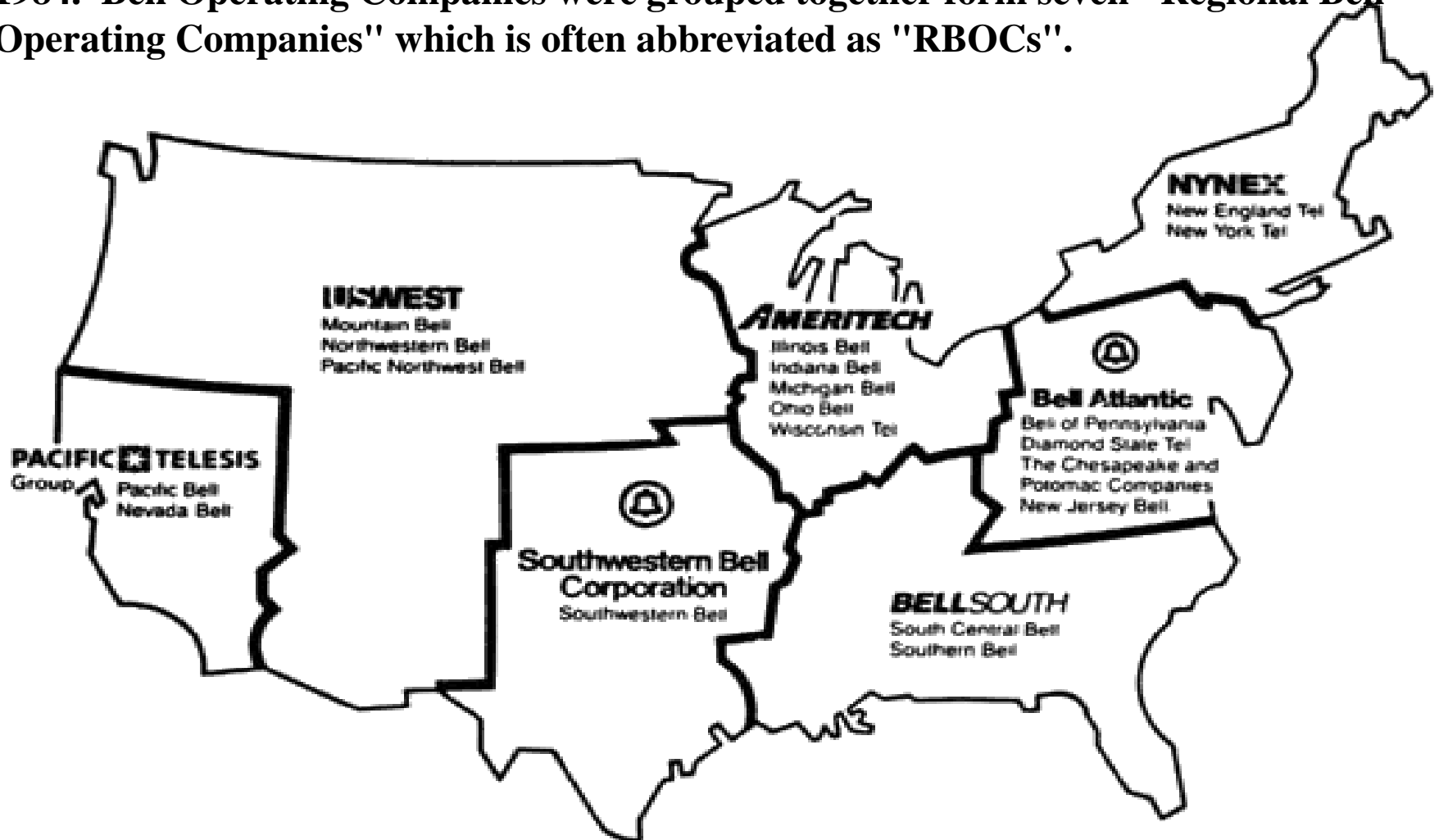
Fig. 1-1. Operating Companies of the Bell System

From p. 8 of the 1977 edition of Engineering and Operations in the Bell System

1. Bell Telephone Company of Nevada
2. Illinois Bell Telephone Company.
3. Indiana Bell Telephone Company
4. Michigan Bell Telephone Company
5. New England Telephone & Telegraph Company
6. New Jersey Bell Telephone Company
7. Northwestern Bell Telephone Company
8. Pacific Northwest Bell Telephone Company
9. Pacific Telephone & Telegraph Company
10. South Central Bell Telephone Company
11. Southern Bell Telephone and Telegraph Company
12. Southwestern Bell Telephone Company
13. The Bell Telephone Company of Pennsylvania
14. The Chesapeake & Potomac Telephone Company
15. The Chesapeake & Potomac Telephone Company of Maryland .
16. The Chesapeake & Potomac Telephone Company of Virginia.
17. The Chesapeake & Potomac Telephone Company of West Virginia
18. The Diamond State Telephone Company
19. The Mountain States Telephone & Telegraph Company
20. The New York Telephone Company
21. The Ohio Bell Telephone Company
22. Wisconsin Telephone Company

And Then Along Came Divestiture . . .

Under the terms of the consent decree signed by AT&T, the company was required to divest itself completely from the ownership of all of these companies by January 1, 1984. Bell Operating Companies were grouped together form seven "Regional Bell Operating Companies" which is often abbreviated as "RBOCs".



LATA \neq Area Code



CCMI/McGraw-Hill
50 South Franklin Tpk.
Ramsey, New Jersey 07446
(201) 825-3311 (In N.J. only)
(800) 526-5307

900 numbered LATAs indicate independent LATAs

 Data Boundaries
 State Boundaries
 Bell Holding Companies

1. NYNEX
2. Bell Atlantic

4. Bell South
5. Southwestern Bell Corp.

6. US West
7. Pacific TELESIS

Types of Carriers

Local Carrier (LEC – Local Exchange Carrier):

Local telephone companies are usually called the local exchange carriers (LECs). The LEC interfaces the end user (home or business) to carrier. This connection has often been described as **the local loop** or, **the last mile**, because it provides the physical connectivity from your voice or data device to the phone network. The LEC is presently the only organization authorized to install wire under the streets or overhead within a limited geographic area. This is significant in terms of cellular radio service. Any service within a LATA (local access and transport area) is considered local.

Long Distance Carriers (Interexchange Carriers - IXC):

These organizations provide all connections between local areas (LATAs), providing both dial and leased line services. Long distance carriers include AT&T, MCI, Sprint and ITT.

Relevance

Impact of Divestiture:

No longer one call does all

More difficult to analyze/troubleshoot problems (finger pointing)

More competition by carriers for your \$\$\$ *(Avoid Long Term contracts)*

More functionality and improvements to network and supporting devices (both capabilities and services)

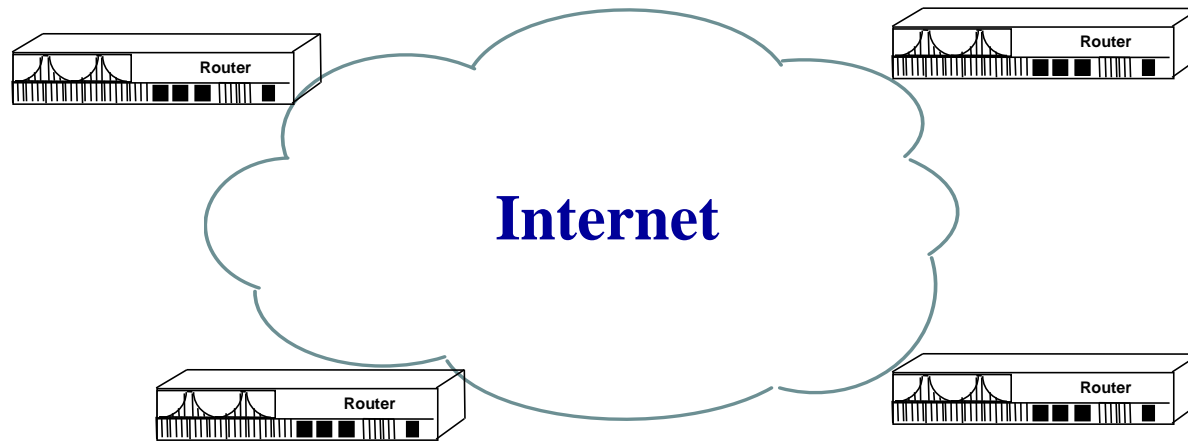
Cost of T1 (1.5 Mb Link Coast to Coast) - 1986 ???

\$ 66,000 per month

Cost of T1 (1.5 Mb Link Coast to Coast) - 2013 ???

\$ 2500-3000 per month

In an Internet environment/economy:

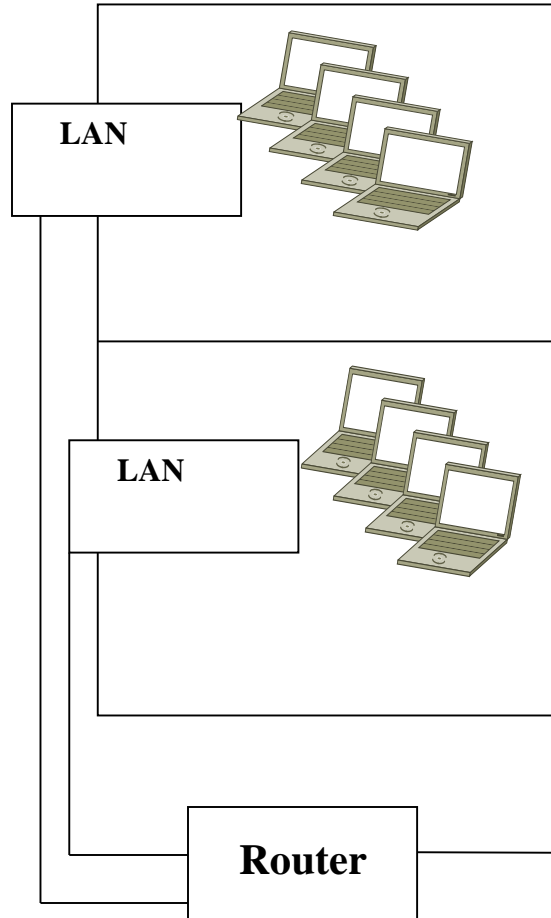


Why would I want to have dedicated/private data links ?

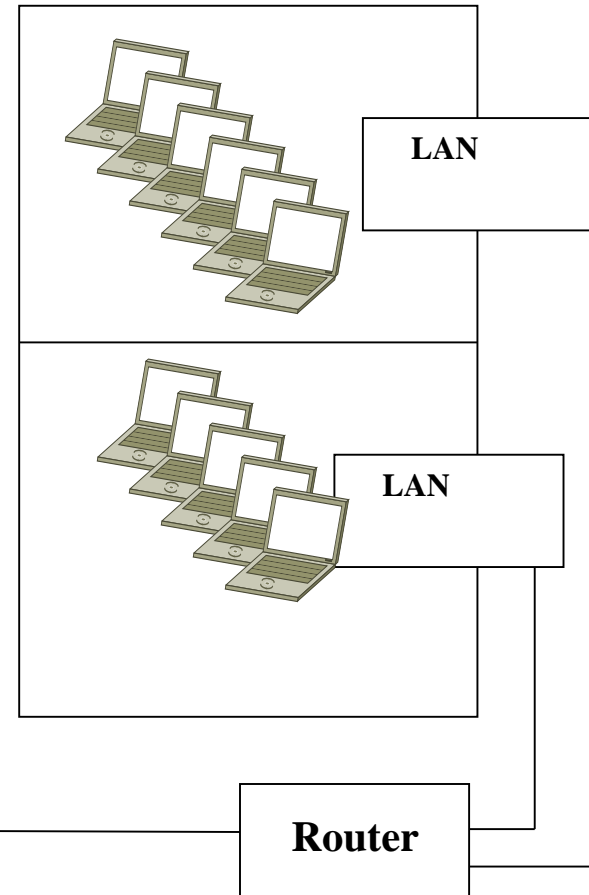


MyNetwork

Multi-floor bldg

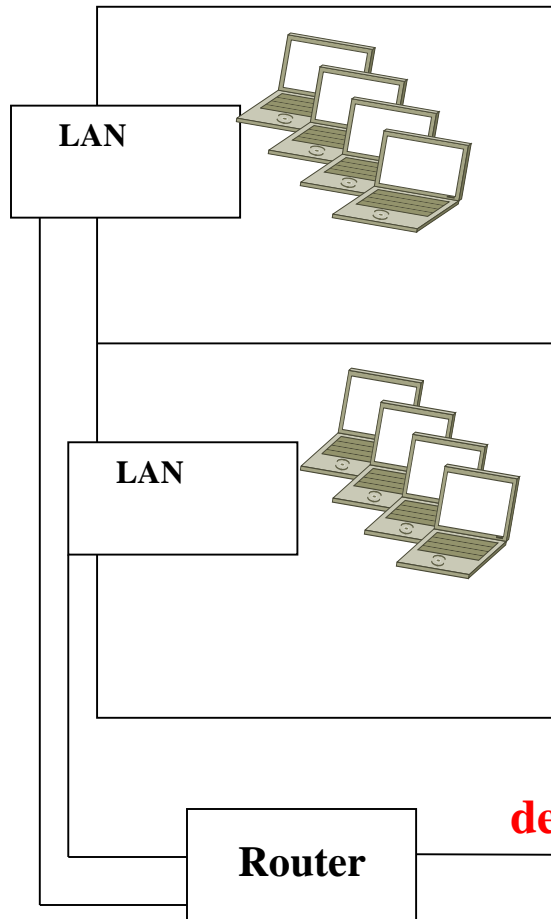


Multi-floor bldg

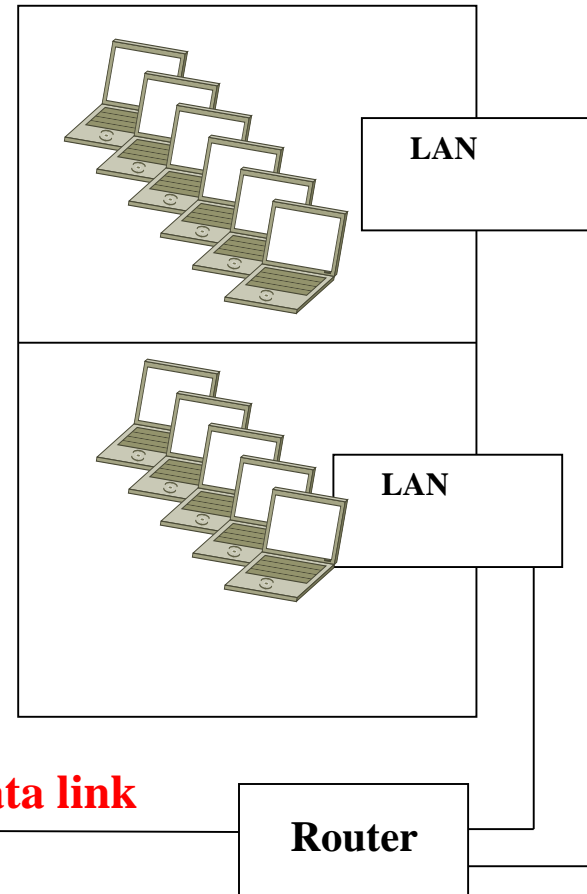


MyNetwork

Multi-floor bldg



Multi-floor bldg



dedicated private data link

**T1/T3
OC3
MPLS**

TRUSTED

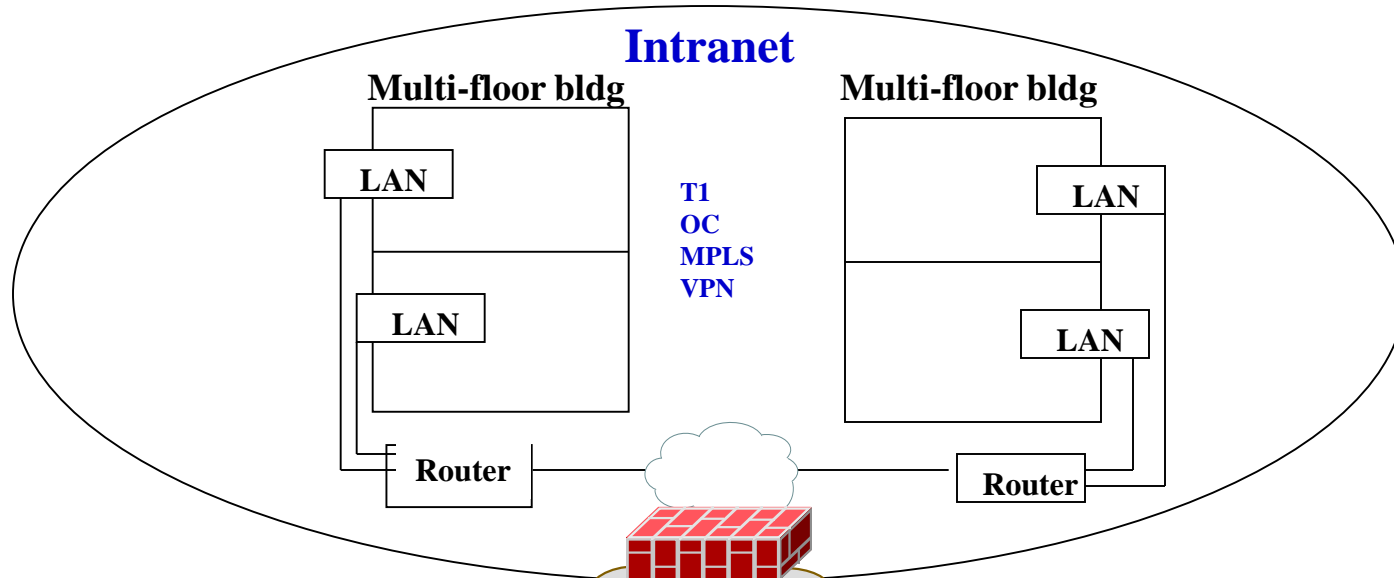
Co. Owned/Leased Bldg. (Fenced)

Badge/Physical Access Controls

Locked Data Closets/WPA2-WiFi

Multi-factor Authentication

Co owned/operated firewall/perimeter



Public Internet

**Partners,
Suppliers, Vendors,
Customers
Intl. Co. Sites**

UN-TRUSTED
Lack of Controls

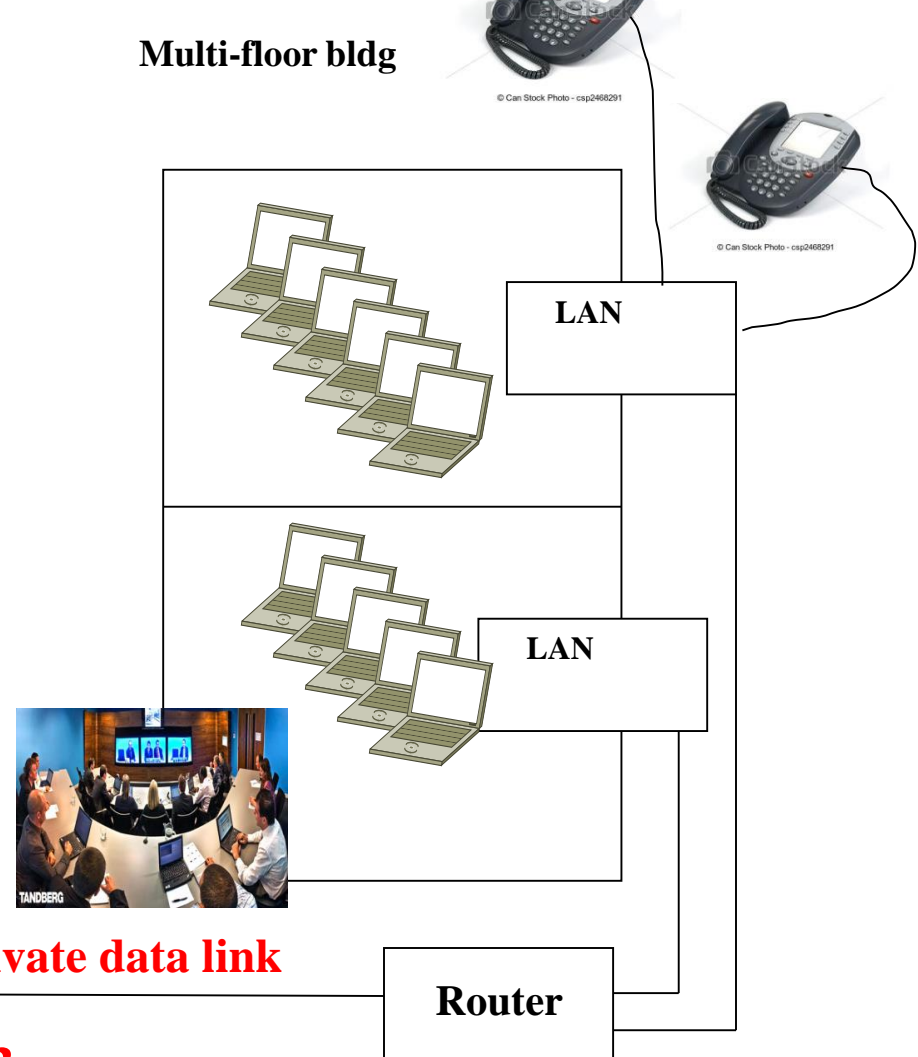
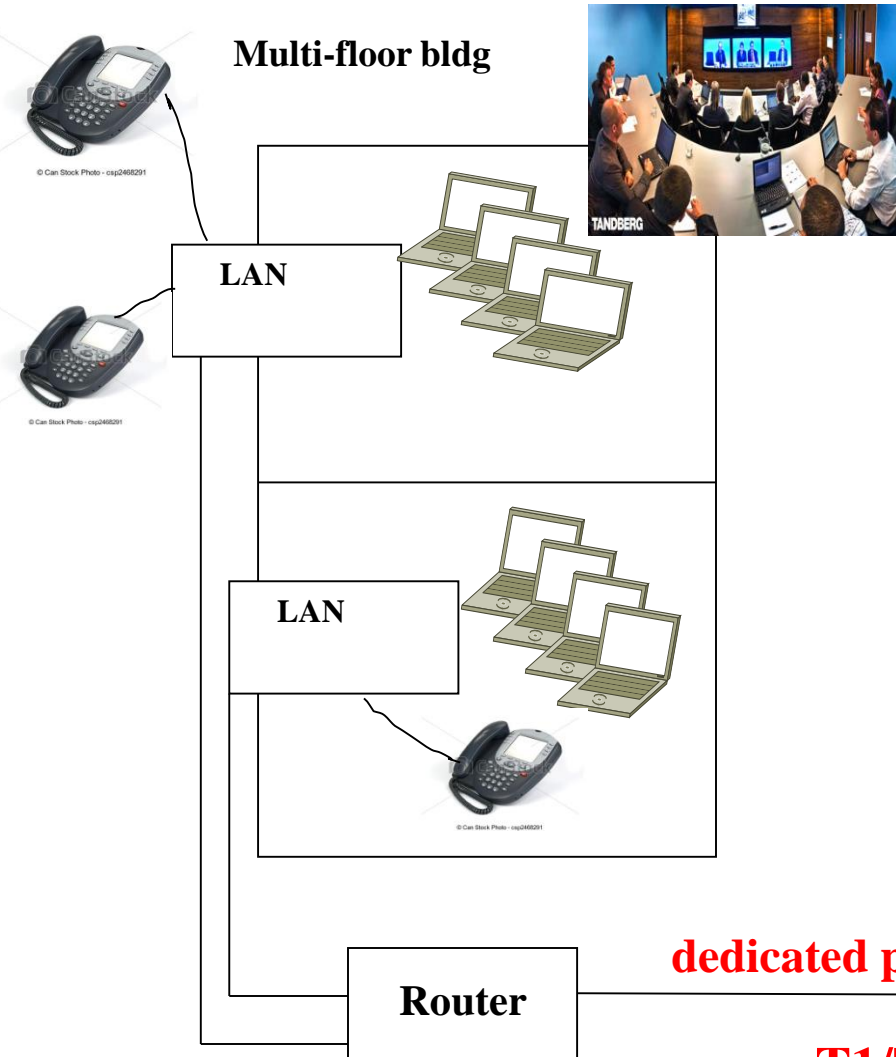
Video

MyNetwork

VoIP

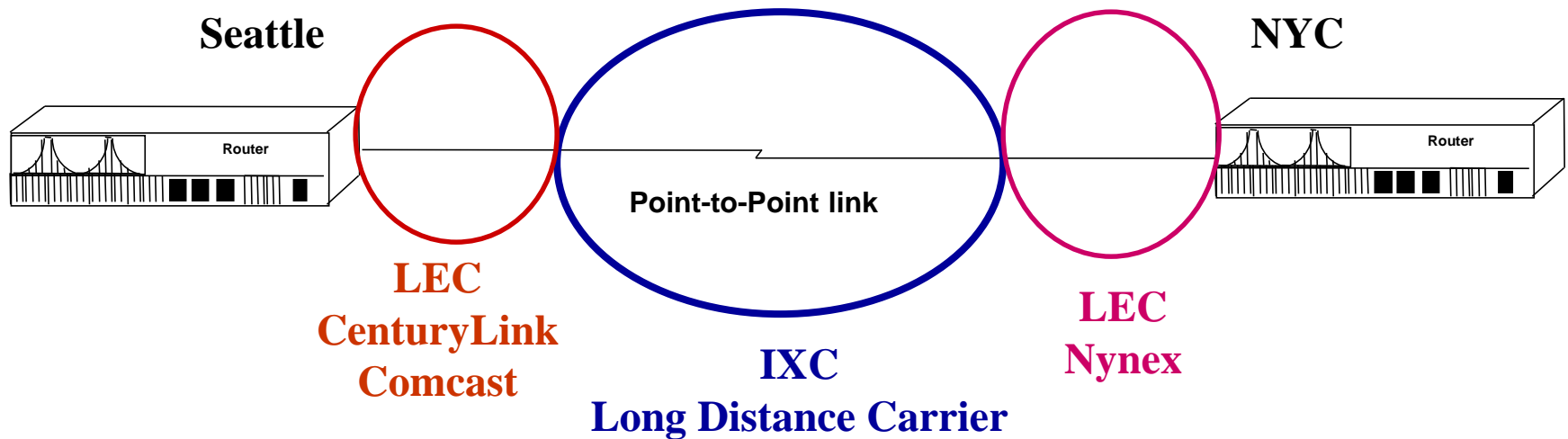
Multi-floor bldg

Multi-floor bldg



T1/T3
OC3
MPLS

In private/dedicated link environment - what do I need to think about ?



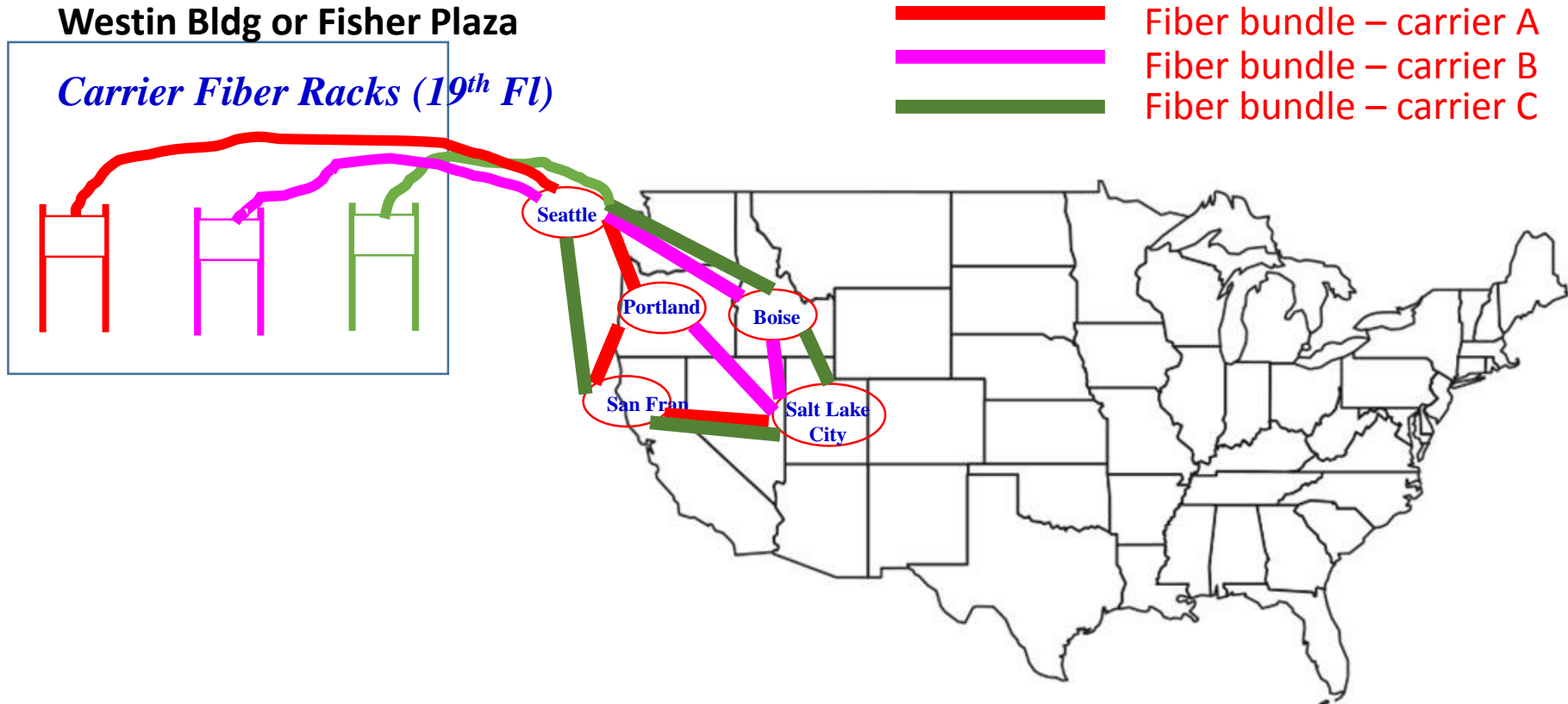
You have freedom to choose the carriers (leverage \$\$\$\$)

You are now the integrator (end to end)

When issues/outages occur – YOU need to know who to contact !!!

Carrier Hotels (where carrier long distance, inter-city fiber infrastructure) terminates in a city.

Example: Seattle: Westin Bldg, Fisher Plaza



Carrier Hotels (where carrier long distance, inter-city fiber infrastructure) terminates in a city.

Example: Seattle: Westin Bldg, Fisher Plaza

