Network Separation: Mission Imprudent

Richard N. Clarke
Assistant Vice President
AT&T - Public Policy
rnclarke@att.com
Overview of presentation

- Theory behind network separation
- Requirements for different flavors of network separation
- History of telecom network separation in the U.S. and post-mortem of its effects
- Lessons for the future
Theory

- Networks are divided into two segments:
  - Monopoly segment
  - Competitive (or potentially competitive) segment
- Separate (structurally/functionally/financially) these two segments
  - Competition will blossom in the competitive segment
  - Regulation will discipline the monopoly segment
  - Get the best of both worlds
- In telecom, the monopoly segment is believed to be access, and competitive segment is believed to be most else
Practice

- To **implement** separation, must establish:
  - Physical network **demarcation** points
  - **Interface** specifications
  - **Cost allocation** processes
  - **Pricing** regulation/restrictions
  - **Compliance** monitoring and enforcement processes
  - Process to **continually adjust** plan to reflect changing technical, competitive or economic conditions

- **None** of these tasks are quick, simple or cheap – or without possibly severe undesirable consequences
Physical network demarcation

45% of wireline BB in U.S.

But xDSL+cable still account for only 55% of all U.S. broadband

53% of wireline BB in U.S.
Demarcation neutrality

Where do you draw the demarcation line in this complex environment?
Interfaces

- Location, number, geographic scope and nature of points-of-interface
- Operations support systems to support nondiscriminatory access to wholesale:
  - Ordering
  - Provisioning
  - Maintenance
  - Billing
- Rules for how affiliates may interface with wholesale entity
- Financial responsibility for interfaces and OSS development
Cost allocation

- Many costs are **joint** or **common** between wholesale and retail entities
  - Corporate **overheads**
  - **Cables and structures** (e.g., poles, trenches, ducts)
  - **Line-sharing**
    - Voice/data: low and high frequency spectrum
    - Data/video: spectrum quantity, location and transmission priority

- These costs will need to be allocated among users
- Economic theory provides **little or no basis** for determining such allocations
- Any allocation choice will be **arbitrary**
Pricing regulation

- Need to establish a regulatory framework to govern pricing by the wholesale affiliate (presumably with SMP)
  - Each type of regime (e.g., RoR, price cap, LRIC) has issues
  - Pricing regulation creates big investment incentive challenges
- Purpose of separation generally is to enable deregulation of the retail affiliate
  - Rarely seems to take place in a complete or timely manner
  - Competitors and regulators typically have ancillary interests in maintaining regulation regardless of competition
Compliance

- Separations regimes must be monitored
  - Development of a set of performance metrics
  - Process for monitoring/reporting levels of adherence to these performance standards

- Enforcement processes must be established to:
  - Encourage desired behavior
  - Not be delegated to third parties
Revision

“Optimal” separations plans must change constantly to reflect new developments in technology, competition and customer demand

- Revisions must be timely, and not delayed
- But any revision is costly to all affected parties

History of U.S. separations regimes

- 1984: local/LD voice separation at line side of Class 4 switch
- 1981-2000: CI2 accounting separation for enhanced services
- 1992: expanded interconnection at trunk side of Class 5 switch
- 1996: DSL access and line sharing at central office MDF
- 2000-2008: Section 272 separation for RBOC LD or info services
- 2000: Bitstream or subloop access to remote terminal-based DSL
- 2003: Bitstream access requirement revoked
- 2005: DSL line sharing not required
Lessons

- Separations policies are:
  - **Complex** to implement, especially in markets that already display substantial multi-network competition
  - **Costly** to maintain
  - **Short-lived** in their usefulness

- It is **unnecessary** to adopt separation as a policy when facilities-based multi-network competition exists

- Separation is also an especially **unwise** policy when:
  - Technology and consumer demand are **evolving quickly**
  - Regulatory/legal oversight is **fragmented and procedural**