

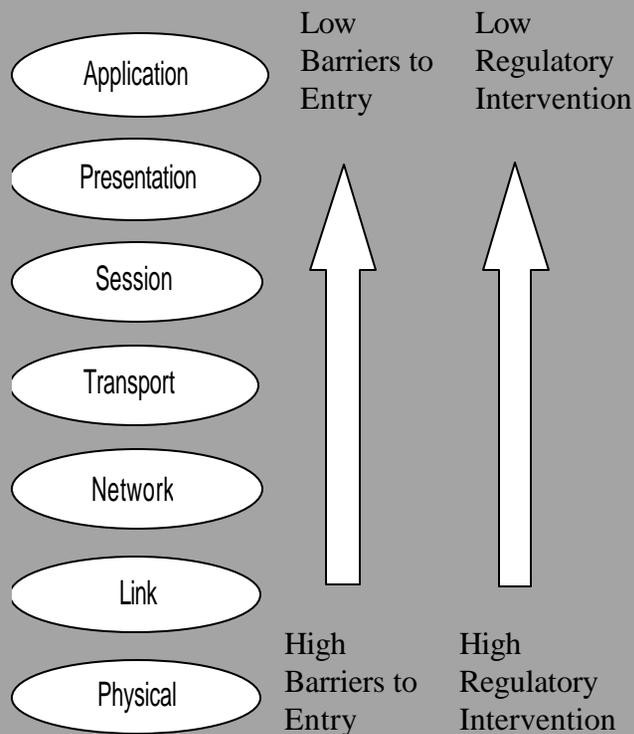
# You Can't Dance with Elephants in the Dark

Alliance for Rational  
Intercarrier Compensation

# Appropriate Regulatory Policy in an IP World

- Regulators need to manage the transition from circuit-switching to packet-switching.
  - Packet-switching and circuit-switching will co-exist for a long time.
  - ICC/USF/IP policies are all interrelated.
- Decisions on a patchwork of petitions without a comprehensive framework create confused policy driven by special interests.
- The Layers Model for regulation provides insight into resolving the issues in a technology-neutral manner.

# “Layers” Approach to Regulatory Oversight



- The layers model shows that network functionality is separable from applications.
- There should be greater regulatory intervention when there is market power created by
  - high barriers to entry, and/or
  - market concentration, and/or
  - bundling across layers.

# Vertical Integration Will Likely Lead to Market Power Abuse

- Vertically-integrated companies will own distribution facilities, ISPs, IP backbones and content sources.
- Vertically-integrated entities will be *both* retail competitors and wholesale suppliers.
- Wholesale suppliers with retail interests have a *motive* for market power abuse.
- Without constraints, these companies have the *opportunity* for market abuse.

# Market Power Can Be Exerted by Restricting Interconnection

- Interconnection can be restricted by
  - closing local distribution facilities, or
  - refusing to peer/interconnect, or
  - charging high transit rates, or
  - degrading service levels.
- No rules exist to ensure independent ISPs' ability to interconnect in the IP world.

# Commercial Agreements Will Create Anarchy in Interconnection

- Large entities want interconnection governed by “commercial agreements” in order to exert market power.
  - Small companies have little leverage in negotiations with large companies. Large companies can “walk away” from negotiations, small companies cannot.
  - Predatory and discriminatory practices are hidden and protected by non-disclosure terms.
  - Large backbone providers will likely act in a cartel-like manner.
- For small companies, commercial agreements will be like dancing with elephants in the dark.

# Interconnection Is Critical to Customers of Independent ISPs

- In an unregulated environment, the winner of any game between big and small is already decided.
- Why is this important to customers?
  - Not regulating *local* interconnection will limit customers' choice of ISPs.
  - Not regulating *backbone* interconnection will disadvantage independent ISPs' customers and leave rural customers without affordable broadband access.
- Regulators must set rules for the game.

# The Foundation of Public Networks: Interconnection

- Open interconnection rules are the foundation of a seamless, multi-provider network.
- Under Title II, telecommunications carriers must interconnect based on public, non-discriminatory terms and conditions.
- Interconnection obligations under Title II hinge on entities being classified as telecommunication carriers.

# Bundling Allows Entities to Avoid Telecommunications Classification

- Bundled IP services containing no “explicit fee for telecommunications” are labeled information services.
- Bundling strategies are designed to avoid
  - regulatory oversight,
  - interconnection obligations and
  - USF assessment.
- Brand X: The appeals court made the appropriate technical and legal decision.

# Vonage Order: The Application of Section 230

- Section 230
  - relates to indecency on the Internet, which is content, *not* transmission.
  - is *not* an appropriate basis for decisions whether to regulate IP transmission.
- Targeted regulation is necessary for IP interconnection.
- Retail content or applications should remain unregulated.

# If a Laissez-Faire Interconnection Policy Is Pursued...

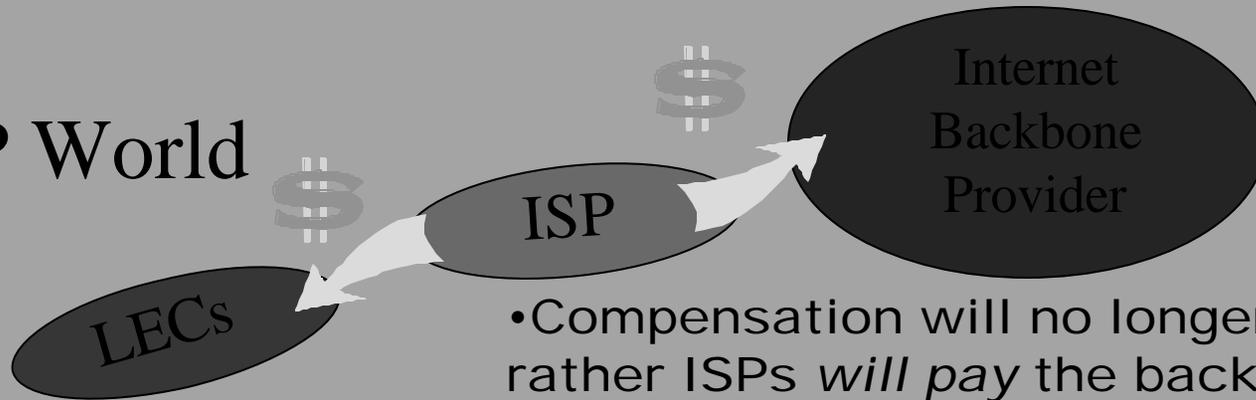
- History from the early 1900s will repeat itself (e.g. interconnection anarchy)
- Independent ISPs will be eliminated when networks are closed.
- Content availability will be controlled by vertically-integrated entities.
- A duopoly between the cable providers and the ILECs will exist in cities.
- Interconnection terms will be dictated by the largest players, not negotiated between equals.

# Market Structure Changes Impact Compensation

PSTN World



IP World



- Compensation will no longer *be paid by IXC's*, rather *ISP's will pay* the backbone providers.
- *ISP's will also pay LEC's.*
- *For many rural LEC's, the ISP and the LEC are affiliated companies.*

# Broadband Capability Depends on Infrastructure

- Market structure changes necessitate USF modifications to ensure that rural broadband infrastructure will be universally available.
- IP uses circuit-switching infrastructure enhanced for broadband. “Last mile” facilities become even more expensive.
- 99% of broadband internet access is provided by DSL or cable modem service. There are no reasonable alternative technologies.

# Support Should Be Re-targeted to Networks

- Today, services-based USF is targeted to customers, not networks.
- Without stable high-cost support to replace intercarrier compensation, rural companies will be reluctant to invest in long-term assets.
- Support should be directed to infrastructure outside city limits.
  - Separate funds for broadband and for mobility.
  - Funds would support infrastructure deployment up to and including layer 2.
  - Cities and towns will have infrastructure without funding.

# Targeted Regulation in the IP Environment Is Necessary

- Stabilize and re-target high-cost support.
- Base technology-neutral regulation on the Layers Model.
- Address barriers to entry and concentration of market power by maintaining open network access to IP backbone and local distribution.
  - Backbone agreements should be public and non-discriminatory. Disputes should be adjudicated by regulators.
  - Local distribution should be available under wholesale tariff.
- Forebear on regulation for retail services (content and applications).

# Recommendation for Managing the Transition to IP

	<b>Existing Circuit-Switched Environment</b>	<b>ARIC recommendations for Packet-Switched Environment</b>
<b>Regulation</b>	<ul style="list-style-type: none"> <li>• Silo Method</li> <li>• Obligation: Telecom vs Info Service</li> <li>• Local Distribution: Telephone-open; CATV-closed</li> <li>• Long Distance: Regulated</li> </ul>	<ul style="list-style-type: none"> <li>• Layers Method</li> <li>• Obligation: Layer(s)</li> <li>• Local Distribution: Open</li> <li>• Backbone: Targeted Regulation of Transmission</li> </ul>
<b>ICC Payments for Local Networks</b>	<ul style="list-style-type: none"> <li>• Switching and transport paid under tariff or agreement</li> <li>• ICC payments are a major component of cost recovery</li> </ul>	<ul style="list-style-type: none"> <li>• DSL and cable broadband transmission paid by ISPs</li> <li>• LECs and ISPs are affiliates so net inflow to rural areas is zero</li> </ul>
<b>Compensation for Connectivity</b>	<ul style="list-style-type: none"> <li>• Tandem switching and transport paid under tariff</li> </ul>	<ul style="list-style-type: none"> <li>• ISPs purchase from backbone providers under open agreements</li> </ul>
<b>Narrowband (mobility) USF</b>	<ul style="list-style-type: none"> <li>• Services-based fund</li> <li>• Portable</li> <li>• Wireline costs determine funding for LSS, HCL, ICLS and IAS</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure-based fund to CMRS carriers for rural mobility</li> <li>• Based on CMRS costs/proxy model</li> <li>• Targeted to low density areas outside towns and cities</li> </ul>
<b>Broadband USF</b>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Non-portable, infrastructure-based fund to wireline carriers for broadband</li> <li>• Based on wireline broadband costs</li> <li>• Targeted to low density areas outside towns and cities</li> </ul>