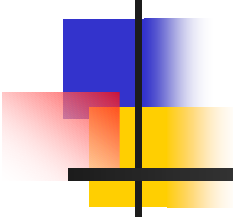


# Universal Service in a Multimedia World: How do we get from here to there?



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# Background

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- Universal service support and intercarrier compensation account for about 50% of RLEC revenue
- These two revenue streams are at risk



# Background

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## Current Regulatory Situation

- Universal Service is Under Pressure
- Intercarrier Compensation is a mess
- Proposals for comprehensive reform are unlikely to pass
  - Bill and Keep will raise the contribution rate substantially
  - Connection based contribution to the fund will be challenged in court
  - Primary line support is unmanageable
  - CETC curbs are the only glimmer
- VOIP is gaining market share
- Fear that basic voice service may be jeopardized in rural America



# Long Term Forecast

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- Market Forecast
  - Multimedia packages widespread
    - Virtually all carrier services classified as information
    - Virtually all communications classified as interstate
  - Personal numbers portable
  - Widespread use of virtual private networks
  - Widespread use of stored or downloadable services

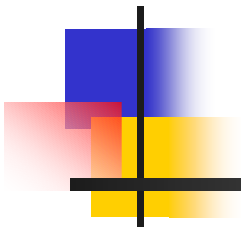


# Long Term Forecast

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- Technology Forecast
  - Packet technology has largely replaced circuit switched technology
  - Fiber to the home is the replacement technology of choice
  - Wireless low-speed broadband services widespread
- Cost of Service Forecast for Rural Areas
  - Still costly
  - Still need basic service support

# Guidelines for Universal Service/ICC Reform





# Universal Service

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- Define a “carrier of last resort” as distinguished from a carrier or even an eligible telecommunications carrier
  - The carrier of last resort must have the physical network to transport traffic to all customers in a serving area that want to connect to the network
  - Currently ILECs fill that role. Other entities that wish to be treated as COLR can petition for ILEC status under section 251(h)(2) of the Act
  - Other “ETCs” that do not have a fully-deployed network do not qualify as COLR



# Universal Service

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- Universal Service Network Funding should be linked to regulatory obligation
  - Funding should go primarily to the carrier of last resort
  - Other ETCs should receive support, if any, based on their own costs
  - Other carriers without physical networks should not receive funding



# Universal Service

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- Note: the alternative of letting end users fund networks by giving them vouchers won't work
  - It is increasingly difficult to define an end user
  - Competition for vouchers may insufficiently fund the competing networks



# Universal Service

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- A voucher system would also require a complicated payout plan
  - To match cost of delivering service, it would require support by route or zone
  - Even then, if the voucher is the same for all customers in a similar location, vouchers may still block network build outs to remote customers
    - The first remote customer will pay for all the feeder distribution cabling to his home
    - The second customer benefits from this network build out to the first customer – the feeder plant is already paid for
  - In contrast, a telco would estimate the cost of serving customers as a group



# Universal Service

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- Funding levels should be targeted to produce the most economical network based on evolving customer needs
  - A carrier of last resort network should be able to transport bundled voice, data, and video services
  - Any attempt at restricting its capacity to, say, “voice only” will threaten its financial viability, which will prove more costly in the long run
  - Funding the transition from the PSTN to an IP network would be in the national interest



# Universal Service

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- Expand the Revenue Base to include
  - Intrastate Revenue
  - IP Revenue



# Intercarrier Compensation

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- Users of a network ought to pay for the privilege
- Prices should be based on the cost of delivering service
- The cost structure of the PSTN lends itself to three types of charges
  - Usage charges
  - Mileage sensitive charges
  - Flat charges



# Intercarrier Compensation

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- An IP network's cost structure lends itself to three types of charges
  - Capacity charges
  - Mileage charges
  - Quality of Service charges
- Regulators need to define flexible pricing rules that allow efficient cost recovery as a telco's network evolves



# Regulatory Oversight

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- Regulatory oversight of services should be related to universal service funding
  - Services provided by carriers of last resort should have the greatest scrutiny
    - A carrier of last resort could, for example, block entry by blocking access to the SS7 network
  - But, they are not the only carriers with market power
    - A cable company that is a content provider could threaten the long-term viability of a carrier of last resort by making video cost prohibitive



# Regulatory Oversight

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- The focus of regulatory oversight should be on a service bundle that includes voice, high-speed Internet connection, and video.
  - MCI's protocol layering may have some use for this oversight once the "basic service bundle" is defined
  - Examining protocol layers from physical to application related to the basic bundle of services could uncover pockets of market power



# Regulatory Oversight Principles

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Any regulatory reform for reforming rural carriers should follow ten common sense principles:



# Regulatory Oversight Principles

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- **Principle 1:** Maintain a balance of three revenue streams (end user charges, intercarrier compensation, and universal service) to promote universal service and efficient use of a carrier's network
- **Principle 2:** Implement changes in a revenue neutral manner for both the state and interstate jurisdictions
- **Principle 3:** Universal service must be sufficient, predictable, and sustainable
- **Principle 4:** End user rates (including SLCs) need to be reasonably comparable on a national level
- **Principle 5:** Any new intercarrier compensation plan must not advantage a specific network architecture



# Regulatory Oversight Principles

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- **Principle 6:** Any new intercarrier compensation plan must correct and prevent arbitrage
- **Principle 7:** Pooling and RoR regulation must continue to be available to small and rural carriers
- **Principle 8:** Any new intercarrier competition regime must allow for viable retail competition
- **Principle 9:** Intercarrier pricing structures must recognize the reality that transport and switching costs are higher in rural than in urban areas
- **Principle 10:** Any universal service support funds targeted to reduce a carrier's access rates should be set based on a carrier's own costs and should go only to that carrier