

Universal Service Funding in an IP World

**Commissioner
Susan P. Kennedy**

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California Universal Service Programs

Five Primary Programs:

- Universal Lifeline Telephone Service (ULTS)
- California High Cost Fund-A (CHCF-A)
- California High Cost Fund-B (CHCF-B)
- Deaf and Disabled Telecommunications Program (DDTP)
- California Teleconnect Fund (CTF)

Funded by all-end-user surcharge that appear on a customer's bill and are collected by carriers

Universal Lifeline Telephone Service (ULTS)

- Moore Universal Telephone Service Act (Public Utilities Code § 871)
- Provides 50% discount off flat rate for basic residential telephone services to low-income families (annual income for household of four: \$28,400 via self-certification)
- Flat rate for Lifeline subscriber: \$5.34 (SBC). ULTS pays no federal Subscriber Line Charge.

California High Cost Fund-A Small Carriers

- Set in Statute: Public Utilities Code §739.3
- Purpose is to encourage deployment and service in high cost, rural areas by subsidizing cost differential
- Provides subsidies to small local exchange carriers to minimize rate disparity between rural and metropolitan areas for the cost of basic service.
- 17 small local exchange carriers eligible in California

California High Cost Fund-B

Large Carriers

- Set in Statute: Public Utilities Code §739.3
- Provides subsidies to carriers of last resort for providing basic local telephone service to residential customers in high cost areas.
- Available to large local exchange carriers to serve rural and small metropolitan areas (e.g. SBC & Verizon)
- Commission determines where cost of providing service exceeds rates charged by providers

Goals of Universal Service Programs

Universal Lifeline Telephone Service (based on income)

- Universal access to high quality basic service
- Promote equity of access to high-speed data services

High Cost Funds (based on geography)

- Fair and equitable local rates for rural areas
- Competitive neutrality
- Broadbased financial support from other carriers
- Transfers must equal the benefits provided

Investigate reduction or elimination of subsidy in areas of demonstrated competition

Deaf and Disabled Telecommunications Program (DDTP)

- Set in Statute: Public Utilities Code § 2881

Three Programs:

- Telecom Devices for the Deaf
 - Provides devices for hearing impaired to individual subscribers, schools and public service organizations
- California Relay Services
 - 24 hour direct access to public switched network (live operator)
- Devices for the Disabled
 - Provides equipment for hearing, mobility, vision, speech impairment (e.g. amplification, cordless, ringer signals)

California Teleconnect Fund (CTF)

- Established by Commission pursuant to 1994 Legislation
- Provides 50% discount on basic telephone service and broadband access
- Aimed at qualifying schools, libraries, hospitals, community-based organizations. Similar to federal E-rate program.

Other Universal Service Programs

- Public Policy Payphones
 - Pays for placement of payphones in remote locations
- TDD Placement
 - Pays for placement of deaf & disabled equipment at public payphones, airports, hospitals, libraries
- Rural Infrastructure Grant Program (2001)
 - \$10 million in grants for rural communities to build telecommunications infrastructure (High Cost Funds)

How is Universal Service Funded?

Two kinds of universal service funding:

Explicit Charges
and
Implicit Subsidies

Explicit Charges for Universal Service Programs Based on Cost

- Surcharges on customers' bill are based on a percentage of the monthly intrastate (State) and interstate (Federal) charges:

ULTS:	1.10%
CHCF-A	0.17%
CHCF-B	2.20%
DDTP	0.30%
CTF	0.16%
FUSF	8.70%

- The higher the phone bill, the higher the contribution to USF

Note: CTF surcharge is a draft released 6/8/04

Explicit Funding for Universal Service Programs (in millions)

	FY 03-04	FY 04-05
ULTS	\$ 245,034	\$ 251,637
CHCF-A	\$ 48,780	\$ 48,780
CHCF-B	\$ 520,472	\$ 438,866
DDTP	\$ 69,115	\$ 68,604
CTF	\$ 38,682	\$ 37,645
TOTAL	\$ 922,083	\$ 845,532

Implicit Funding for Universal Service Based on Cross-Subsidies

- Implicit Subsidies - Built into rates
 - Business rates subsidize residential rates
 - “Luxury Tax” on long distance
 - Add-on services such as call-waiting, call-forwarding
 - Above-Cost charges for Interconnection
 - Access Charges set by regulation, not cost

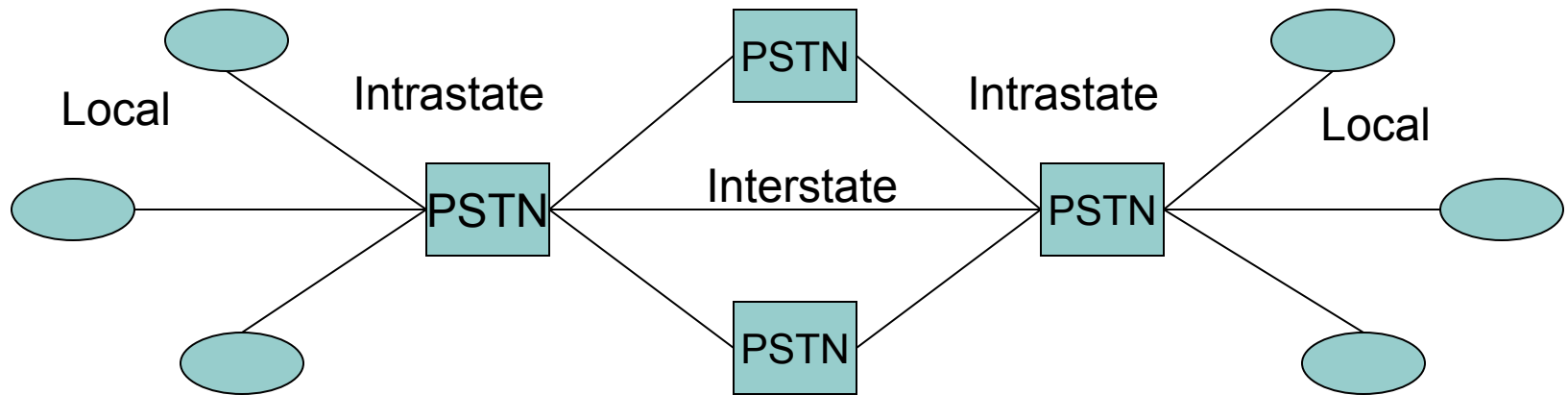
Access Charges Not Based on Cost - Rates are a Nightmare

- Large ILEC switched access (interstate): 0.6 cents/min.
- Small ILEC switched access (interstate): 2.6 cents/min.
- Large ILEC switched access (intrastate): 2.5 cents/min.
- Small ILEC switched access (intrastate): 5-10 cents/min.
- CLEC switched access (interstate): 1.8 cents/min.
- Rural CLEC switched access (interstate): 2.4 cents/min.
- CLEC switched access (intrastate): 3.0 cents/min.
- CMRS switched access: zero (for now)
- Cable telephony access: same as CLEC rates
- Reciprocal compensation (non-ISP traffic): 0.2 cents/min.
- Reciprocal compensation (ISP) traffic): 0.1 cents/min.
- ISP dial-up (local business lines): \$40.00/month

*rates are per single end (originating or terminating);
rough estimates intended only for purpose of general comparison

Implicit Funding Relies on Intercarrier Comp through Public Switched Telephone Network (PSTN)

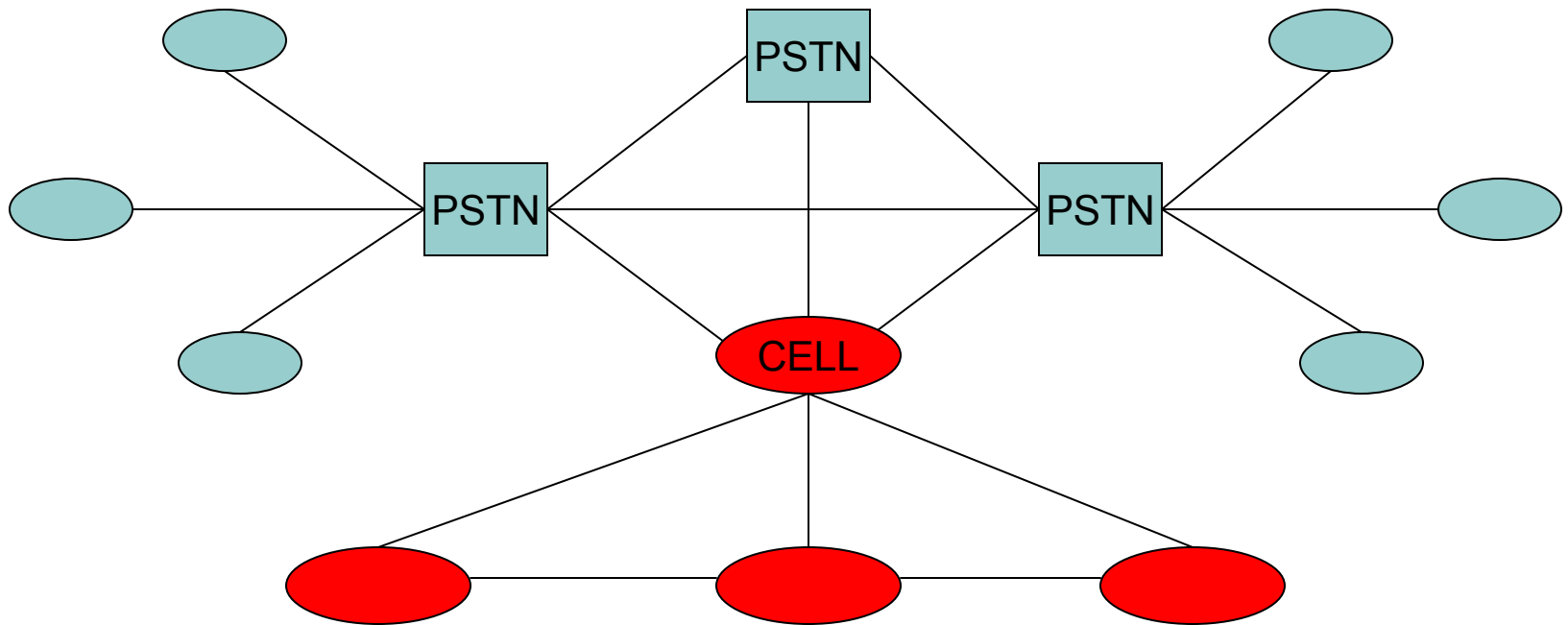
Circuit Switches act as meters



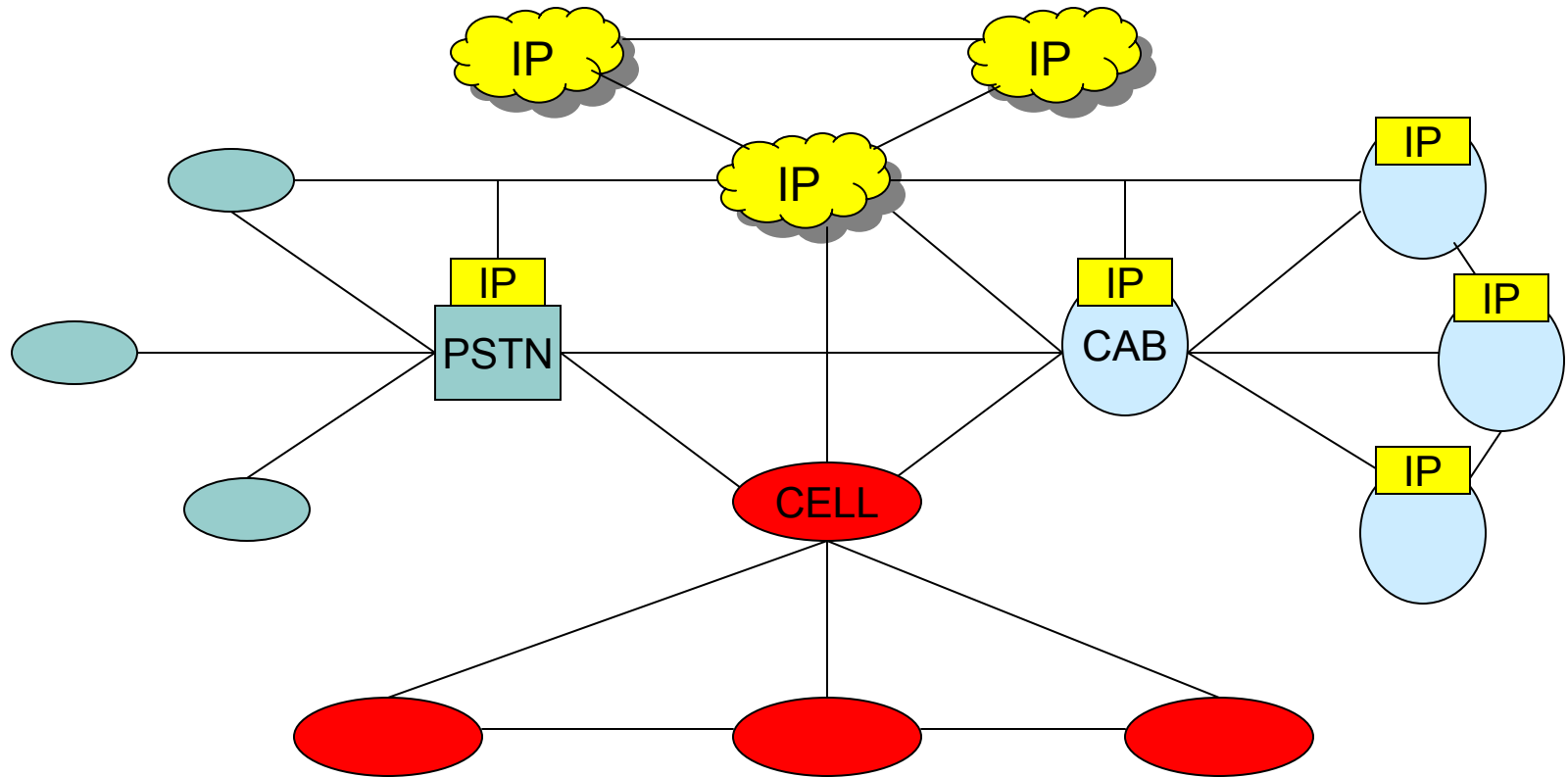
Costs are based on distance, time of use, type of carrier and jurisdiction

Cellular Network is Separate from PSTN

Cellular contributes to USF by percentage of bill



VoIP Changes Everything



VoIP Disrupts Entire Intercarrier Compensation System

- Move from circuit switched to IP-based makes it impossible to distinguish between interstate and intrastate, local and long distance.
- Carriers moving to bundled packages: Voice, video, Internet, email, instant messaging. Difficult to keep voice separate from other services for costing or regulation.
- Major carriers moving to IP network to reduce costs.
 - Verizon migrating all traffic to IP-backbone
 - MCI plans 100% of traffic IP-based by 12/2004
 - Comcast plans phone service to all 40 million homes passed by 2006
 - Time Warner plans VoIP to all 18 million homes by 2005

Multi-Platform Competition and New Technologies Driving Costs Down

- Average Revenue Per Minute (ARPM) for cellular declined 76% between 1994 and 2003 from \$0.47 to \$0.11
 - Free Nights & Weekends
 - Free “On-Network” Calling
 - Fierce Competition within the Wireless Industry
- Average Residential LD usage declined from 100 mins per month to 57 mins per month between 1997-2002
 - Average price per minute dropped by half since 1993
- Prices being driven flat & down – Unlimited local & LD
 - SBC All-Distance \$48.95
 - MCI The Neighborhood \$39.99
 - AT&T Call Vantage \$39.99
 - Vonage Local and LD \$35.00
 - Cablevision Optimum Voice \$35.00

Universal Service Dependent Upon Current Inter-carrier Comp System

- Access charges account for 30% to 50% of revenues for small, rural carriers
- Universal Service funding constitutes as much as 50% of revenue for small rural carriers
- “On-Network” calls don’t pay access charges, reduce costs.
- **As costs decline by moving to IP-network, revenue for Universal Service declines**

Impact of IP Telephony on Universal Service Programs (\$ in millions)

Program	FY 03-04	2008
Universal Lifeline (ULTS)	\$ 246	\$ 107
High Cost Fund-A (small LECs)	\$ 62	\$ 27
High Cost Fund-B (large LECs)	\$ 522	\$ 226
Deaf & Disabled (DDTP)	\$ 69	\$ 30
CA Teleconnect	\$ 40	\$ 17
TOTAL	\$ 939	\$ 407

What's the Solution?

- First Do No Harm
 - Do not impose current intercarrier compensation regime on IP-based providers
- Do not attempt to fit VoIP providers into current regulatory boxes
 - Telecommunications vs. Information
 - CLEC vs. ILEC vs. RLEC vs. NDIXC

We Need a New Framework

- What is “basic” service? Does it matter anymore?
- What is the purpose of Universal Service?
 - Subsidize low-income families
 - Subsidize high cost areas. How long?
- Who is a “telecommunications” provider?
 - Who should pay into Universal Service Fund?
 - Who should provide 911?

Principles for a New Framework

- **Must be Technology Neutral**
 - No winners and losers through regulation
 - Eliminate unnecessary regulation
- **Broad-based Support for Universal Service**
 - Redefine COLR & ETC
 - Broaden Uses for USF (wireless, cable, other)
- **Basic Standards for Consumer Protection**
 - 911 / E911
 - CALEA
 - Privacy - Do Not Call
 - Applied Uniformly to Designated Providers

Reform Universal Service Funding and Intercarrier Compensation

Move from revenue-based to number-based funding mechanism for USF

- \$1.50 monthly fee per numbers in use in CA (65M) replaces entire \$1 billion for current state programs
- Use of NANP Resources Triggers Obligations for 911, CALEA, Privacy
- Simplify Intercarrier Compensation
 - Eliminate Dual Jurisdiction for Pricing
 - Connection Charge Based on Pipe Capacity