

# VOIP, Universal Service & Next Generation Broadband

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# VOIP, Universal Service & Next Generation Broadband

- According to Cisco, voice over Internet Protocol or Internet telephony, is a booming segment of the telecommunications industry.
- Some 30 percent of all new business phones send calls over an Internet broadband connection, rather than traditional wires.

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- The CPUC Telecommunications Division (TD) projects that VoIP will account for 40 percent to 43 percent of total intrastate telecommunications revenues in California.
- These projections assume no change in the number of residential and business access lines, and assume conversion rates from conventional voice service to VoIP service of 10 percent for cable/residential; 5 percent for ILEC/residential; and 10 percent for ILEC/business.

# Briefing Overview

- VOIP, Universal Service & Next Generation Broadband
  - State Policy Perspective
    - Existing universal service programs
    - Redefining universal telephone service to include high-speed internet access.
    - Encouraging the widespread availability and use of advanced communications infrastructure.
    - Pro competitive neutral regulation

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## **California Universal Service Programs**

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- **California Universal Service Programs**
  - Section 270 et seq. of the Public Utilities Code
    - California High-Cost Fund-A
    - California High-Cost Fund-B
    - Rural Telecommunications
    - The Universal Lifeline Telephone Service Fund
    - The Deaf and Disabled Telecommunications Program Fund
    - The California Teleconnect Fund Fund.

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- **California Universal Service Programs**
  - California High-Cost Fund-A
    - Provides a source of supplemental revenues to 17 small local exchange carriers (LECs) for the purpose of minimizing any rate disparity of basic telephone services between high-cost rural and small metropolitan areas on the one hand and larger metropolitan areas in the state.

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- **California Universal Service Programs**
  - California High-Cost Fund-B
    - provides subsidies to carriers of last resort (COLRs) for providing basic local telephone service to residential customers in high-cost areas that are currently served by Pacific Bell, Verizon California Inc., Citizens Telecommunications of California, and Roseville Telephone Company.

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- **California Universal Service Programs**
  - Rural Telecommunications
    - aid in the establishment of telecommunications service in areas not currently served by existing local exchange carriers. The program shall be funded out of either the California High-Cost Administrative Committee Fund-A or B, or both, as determined by the commission at a funding level of ten million dollars (\$10,000,000) per year.

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- **California Universal Service Programs**
  - The Deaf and Disabled Telecommunications Program (DDTP) provides:
    - for the distribution on a loan basis of telecommunications devices for the deaf (TDDs)
    - direct access to California's public switched telephone network for deaf and hearing impaired residents;
    - specialized telecommunications equipment to consumers with hearing, vision, mobility, speech and cognitive disabilities

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- **California Universal Service Programs**
  - The Universal Lifeline Telephone Service Fund
    - provides discounted basic residential telephone services to low-income households and operates a competitively neutral marketing program.

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- **California Universal Service Programs**
  - The California Teleconnect Fund
    - Enables public and non-profit private schools, libraries, community based organizations and hospital/health clinics to receive discounts for eligible intrastate telecommunications services

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- California collects about \$1 billion annually from these surcharges, but that total could erode quickly as more business and residential customers migrate to Internet phones.
- By 2008, between 25 and 40 percent of all of that revenue could be lost, according to CPUC projections.

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- The TD projects that by 2008, given current VoIP penetration rates, between \$183 and \$407 million in revenue will no longer be available to support California's five statutorily mandated universal service programs if the support for these programs continues to rely on surcharges placed on regulated revenues.

# VOIP Impact on State Universal Service Programs

Subsidy Program	FY 03-04 Appropriation	2008 VOIP Impact
Total Program	\$939 M	\$183M- <del>\$407M</del>
HCF-A	\$62M	\$12M- <del>\$27M</del>
HCF-B	\$522M	\$102M- <del>\$226M</del>
ULF	\$246M	\$48M- <del>\$107M</del>
DDTP	\$69M	\$13M- <del>\$30M</del>
CTF	\$40M	\$8M- <del>\$17M</del>

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Redefining universal telephone  
service to include high-speed  
internet access.

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- Senate Bill (SB) 1712
  - Required the CPUC to open an investigation into the feasibility of redefining universal telephone service to include high-speed internet access, and to report its findings to the Legislature.

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- **CPUC Response**

- Expanding the definition of basic service to include broadband was not feasible, primarily due to the resulting cost to be allocated to all other users, as well as the monthly price lifeline customers would be required to pay.
- Low-cost basic telephone service is key to maintaining and increasing access to the Internet for all Californians.

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- **CPUC Response**

- Most on-line Californians, regardless of income level, use dial-up services as their means to access the Internet.
- Basic telephone service is required for this access.
- the Commission should maintain its commitment to keeping basic telephone service as affordable as possible, as well as expanding certain subsidy programs to enhance low-cost telephone access to certain groups.

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- **The CPUC's Policy**
  - Keep down universal service subsidy costs by not expanding the definition of basic service to include broadband.
  - Dial-Up is good enough for the majority of Californians for now.

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- **The Impact of VOIP on the CPUC's Policy**

**Decision:**

- CPUC effectively placed a ceiling on universal service subsidy costs by establishing dial-up as the standard.
- The standard will be of decreasing significance as business and high-end residential customers migrate to VOIP.
- Contrary to state policy goals, there is a significant chance that the digital divide may widen rather than narrow.

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Encouraging expanded access to state-of-the-art technologies for rural, inner city, low-income, and disabled Californians, and encouraging fair treatment of consumers.

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- **California Legislature**

- The Legislature tries again.

- Senate Bill (SB) 1563's Intent:

- [T]o bridge the “digital divide” by encouraging expanded access to state-of-the-art technologies for rural, inner city, low-income, and disabled Californians, and encouraging fair treatment of consumers through consumer oriented conduct.

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- **California PUC**

- Senate Bill (SB) 1563 requires the Commission to:

- develop a plan for encouraging the widespread availability and use of advanced communications infrastructure; and
    - submit a report of findings and recommendations to the governor and legislature by December 31, 2004.

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- Among the issues the CPUC identified to be explored:
  - Barriers to the ubiquitous availability and use of advanced telecommunications technology;
  - Anticipated changes in telecommunications technologies and their cost that would make them more economical to deploy statewide;
  - Whether the Commission can or should direct changes in technologies, their deployment or related infrastructure to promote more ubiquitous availability;

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- CPUC issues continued:
  - Examine existing programs' ability to promote the availability and use of advanced telecommunications technology for inner-city, low-income, rural and disabled Californians;
  - Assess the adequacy of current efforts to provide educational institutions, health care institutions, community-based organizations, and governmental institutions with access to advanced telecommunications services.

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- Possible Impact on SB 1563 goals due to VOIP:
  - To the extent that ubiquitous availability and use of advanced telecommunications technology is facilitated by the state's universal service programs, the anticipated changes in telecommunications technologies [VOIP] and their costs may make them more economical to deploy to parts of the state, but by no means all of the state.
  - This raises the question of whether the Commission can or should direct changes in technologies, their deployment or related infrastructure to promote more ubiquitous availability.

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- Possible Impact on SB 1563 goals due to VOIP:
  - The ability of existing programs to promote the availability and use of advanced telecommunications technology for inner-city, low-income, rural and disabled Californians will diminish as their funding does.
  - The adequacy of current efforts to provide educational institutions, health care institutions, community-based organizations, and governmental institutions with access to advanced telecommunications services will diminish as their funding does.

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CPUC Order Instituting  
Investigation on VOIP

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- Viewing VoIP functionally from the end-user's perspective, and consistent with definitions in the Public Utilities Code, we tentatively conclude that those who provide VOIP service interconnected with the PSTN are public utilities offering a telephone service subject to our regulatory authority.

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- to the extent that a VoIP provider holds itself out to the public to offer for a fee voice telephony on a local or intrastate basis, it appears to qualify as a public utility telephone corporation in California.

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- CPUC Order Instituting Investigation (OII):
  - Whether VoIP providers should be required to:
    - **contribute directly to state universal service programs**
    - **provide E911 service** at this time, and, if so, how.
    - **pay access charges** to interconnect with the Public Switched Telephone Network.
  - Whether to recommend to the FCC that VoIP providers should be required to **comply with the NANP protocols**.

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- Whether VoIP providers should be subject to basic consumer protection rules, such as:
  - disclosure of terms and conditions of service,
  - billing information,
  - customer privacy,
  - service termination, and
  - slamming/cramming

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- *Whether...the Commission should change the current system for financially supporting telecommunications universal service programs to prevent the erosion of revenues possible with the introduction of VoIP and other new technologies, and if so, how?*