

The National Regulatory Research Institute

Aspects of Telecommunications Reform: Results of a Survey of State Regulatory Commissions

Vivian Witkind Davis, Ph.D.
Senior Research Specialist

Nancy Zearfoss
Graduate Research Associate

Catherine E. Reed
Graduate Research Associate

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Proposals for telecommunications reform at the state and federal level call for timely, objective analysis of many issues. This survey is one in a series of focused NRRI analyses of high priority issues in telecommunications from a state regulatory and public policy perspective. The survey was conducted by the NRRI with funding provided by participating member commissions of the National Association of Regulatory Utility Commissioners (NARUC). The views and opinions of the authors do not necessarily state or reflect the views, opinions, or policies of the NRRI, the NARUC, or any NARUC member commission.

Introduction

Sweeping changes in telecommunications laws are expected to be on the legislative agenda of the 104th Congress. Legislation cleared the House in 1994 but died in the Senate. Broad reform could profoundly alter the nature of state regulation of telecommunications. In considering appropriate policy decisions at the federal level it is important that policymakers be aware of what state regulatory commissions are already doing to adapt to the technological and economic change that is transforming an ever more vital industry:

- All but one U.S. regulatory jurisdiction has taken steps towards replacing traditional regulation of telephone companies with alternative regulation. Alternatives to traditional ratebase, rate-of-return regulation are currently in effect or under active, formal consideration for all but six commissions.
- The number of states with price cap plans is increasing rapidly: eleven states have instituted price cap reform regulation and the number could be as high as 21 within a year or so.
- In addition to the 13 states where competition in switched local service is already allowed, opening up local markets to competition is under formal consideration in 16 states; thus, over half the states already allow local competition or have it on the formal agenda of their legislature or commission.
- Whether to allow cable companies to enter local markets is typically being considered in the context of general deliberations on competition. Only six states currently assert direct regulatory oversight of cable companies. Of those, two now allow cable companies to provide switched local service.

- IntraLATA toll presubscription is required in six states and under formal consideration in 18.
- Colocation of central office facilities is allowed in 15 states and under formal consideration in 13.
- Unbundling of the local exchange network is required by seven commissions and under formal consideration by 16.
- Eighteen states are currently conducting wide-ranging, strategic assessments of telecommunications trends and needs, and many more already have done so.
- Distance learning, telemedicine and other projects to serve the public through advanced telecommunications technologies are underway in 46 states.

This paper is the result of a request by the Ad Hoc Legislative Work Group of the NARUC Staff Subcommittee on Communications in October of 1994 for the NRRI to gather information on developments in state telecommunications regulation. We developed a survey to which staff members from 49 commissions responded. Information from the survey was supplemented by other sources from the NRRI, NARUC, and the trade press. The survey results cover many aspects of state telecommunications reform, including treatment of competition in the local exchange market and consideration of alternative regulation. The survey reported on here builds on one begun earlier in 1994 at the request of the Regulatory Methodologies Subcommittee of the Staff Subcommittee. The results of that information-gathering effort are discussed in a

companion piece to this paper documenting the decline of ratebase, rate-of-return regulation and commission encouragement of competition in many markets.¹

Alternative Regulation

All but one U.S. regulatory jurisdiction has taken steps towards replacing traditional regulation of telephone companies with alternative regulation. All but six commissions have either implemented or are formally considering alternative regulation, such as revenue sharing, distinctions between basic and competitive services, and price cap plans.

With the 11 states where price caps have already been implemented and the ten where price caps are under formal consideration, as many as 21 states could have price cap regulation within approximately the next year.

Alternative regulation was in effect in 36 jurisdictions as of November 1994 (Table 1). The trend in alternative regulation plans is towards price caps. Illinois finalized its price cap late in 1994, bringing to eleven the total number of states with price cap regulation. Besides price caps, states have implemented alternative regulation that requires revenue or profit sharing and alternative regulation that distinguishes between basic and competitive services to determine the level of regulation (sometimes in combination with sharing). Fifteen states have instituted alternative regulation plans that distinguish between services that are considered basic and those that are considered competitive and subject to lessened regulation. Eight commissions currently have revenue or profit sharing plans without such a distinction between basic and competitive services and without price caps. Nebraska and Wisconsin have incentive regulation plans that do not fit the other three categories.

¹ Vivian Witkind Davis, *Breaking Away from Franchises and Rate Cases: A Perspective on the Evolution of State Telecommunications Policy* (Columbus, OH: NRRI, 1995).

TABLE 1
STATUS OF ALTERNATIVE TELECOMMUNICATIONS REGULATION
(as of November 1994)

Alternative Regulation in Effect	Under Formal Consideration	Not under Formal Consideration
Alabama	Nebraska	Alaska
California	Nevada	Arkansas
Colorado	New Jersey	Missouri
Delaware	New York	North Carolina
District of Columbia	North Dakota	Oklahoma
Florida	Ohio ^a	Vermont
Georgia ^a	Oregon	
Idaho	Pennsylvania	
Illinois	Rhode Island	
Indiana	South Carolina	
Kansas	South Dakota	
Kentucky	Tennessee	
Louisiana ^a	Texas	
Maryland	Utah ^a	
Michigan	Virginia ^a	
Minnesota	Washington	
Mississippi ^a	West Virginia	
Montana	Wisconsin ^a	

^a Also formally considering further alternative regulation.

Source: NRRI Survey on Alternative Regulation and Competition, November 1994, and *NARUC Report on the Status of Competition in Intrastate Telecommunications*, September 1994.

A total of 16 commissions were formally considering alternative regulation as of November 1994. Six of those already had alternative regulation in place but were considering further departures from ratebase, rate-of-return regulation. Table 2 provides some details for those states which are now formally considering alternative regulation. ("Formally considering" means various stages of formal review, including implementation of laws, litigation and formal hearings.) Among the commissions where alternative regulation is under formal consideration, either for the first time or as a replacement for existing alternative

TABLE 2**STATES FORMALLY CONSIDERING ALTERNATIVE REGULATION
(as of November 1994)**

State	Company to which alternative regulation applies/could apply	Company requested Commission approval?	Previous type of regulation	Features of alternative regulation plan	Status
Arizona	U S West	Yes	Traditional	Price cap, formal distinction between basic and competitive services, and rate freeze for basic services.	Decision expected December 1994.
Connecticut	Southern New England Telephone	Information not available.	Traditional	Not defined.	Department of Public Utility Control has opened ten dockets to implement 1994 law authorizing Department to adopt alternative regulation of telephone companies and open local exchange to competition.
Georgia	Southern Bell	Yes	Sharing	Price cap, formal distinction between basic and competitive services, rate freeze on basic services.	Under consideration in state legislature (SB 566). Commission hearings are underway and a decision was expected by Dec. 29, 1994.
Hawaii	GTE and others	Yes	Traditional	Formal distinction between basic and competitive services.	Ongoing (Docket 7702).

TABLE 2 - Continued

**STATES FORMALLY CONSIDERING ALTERNATIVE REGULATION
(as of November 1994)**

State	Company to which alternative regulation applies/could apply	Company requested Commission approval?	Previous type of regulation	Features of alternative regulation plan	Status
Iowa	All	Information not available.	Traditional	Not decided.	A 1983 law required deregulation of competitive services. Utilities Board has opened a generic investigation into alternative forms of regulation.
Louisiana	South Central Bell Telephone Company	Yes	Sharing	Price cap, rate freeze for basic services.	Hearings on Company's application were completed and a decision was expected December 1994 or January 1995.
Maine	Nynex	No response.	Traditional	Not decided.	Legislation was passed in 1994. Commission considering alternative regulation and has planned hearings. A decision is expected in late spring of 1995.
Massachusetts	Nynex	Yes	Traditional	Price cap, infrastructure commitments, new tariff review procedures.	Litigation in progress: parties include Attorney General, AT&T, MCI, NECTA, Dept of Defense. A decision is expected by early spring of 1995.

TABLE 2 - Continued

**STATES FORMALLY CONSIDERING ALTERNATIVE REGULATION
(as of November 1994)**

State	Company to which alternative regulation applies/could apply	Company requested Commission approval?	Previous type of regulation	Features of alternative regulation plan	Status
Mississippi	South Central Bell	No	Sharing	Price caps and other features.	Commission initiated review of current regulatory environment to see if method of regulation should be changed (Docket 94-VA-536, Phase 1). Hearings scheduled for February and March 1995.
New Hampshire	New England Telephone and others	Information not available.	Traditional	Not decided.	Collaborative process has been underway to define competitive, emerging competitive, and monopoly services. Legislation in 1994 authorizes Commission to change regulation of telephone companies to price regulation or to deregulate them.
New Mexico	U S West Communications	Yes	Traditional	No response.	Company has applied.
Ohio	Ameritech	Yes	Traditional for Ameritech	Price cap.	Commission decision made: alternative regulation went into effect in January 1995.

TABLE 2 - Continued

**STATES FORMALLY CONSIDERING ALTERNATIVE REGULATION
(as of November 1994)**

State	Company to which alternative regulation applies/could apply	Company requested Commission approval?	Previous type of regulation	Features of alternative regulation plan	Status
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Utah	To be decided.	Yes	Distinction between basic and competitive services	Price cap, pricing flexibility.	Legislation needed and under consideration; litigation in progress with decision expected March 15, 1995.
Virginia	Bell Atlantic, United and Centel	Yes	Distinction between competitive and basic services	Price cap, formal distinction between competitive services, rate freeze for basic services.	Commission decision made: alternative regulation effective as of Jan. 1, 1995.
Wisconsin	All telephone companies in state can elect alternative regulation but Wisconsin Bell has asked for price regulation and GTE North has indicated it will too.		Sharing, incentive	Wisconsin Bell: formal distinction between basic and competitive services, price cap, rate freeze for basic services, filing of a six-year investment commitment plan. Also provides for any telephone company under 150,000 lines to propose a company-specific price regulation plan.	Act 496 was signed into law on July 5, 1994 and became effective Sept. 1, 1994.
Wyoming	U S West and independent telephone companies	Yes	Traditional	Price cap, formal distinction between basic and competitive services.	Legislation is needed: currently being considered in committee but there is no bill number.

Source: NRRI Survey.

regulatory regimes, Ohio and Virginia were on the verge of implementing price cap regulation. In Ohio alternative regulation was already effective for Cincinnati Bell and was to be implemented Jan. 9, 1995, for Ameritech-Ohio. A price cap plan was scheduled to go into effect Jan. 1, 1995, in Virginia. In Wisconsin alternative regulation was signed into law on July 5, 1994, effective Sept. 1, 1994. The legislation was developed through a cooperative effort of industry representatives, the Wisconsin Public Service Commission and members of the legislature on the basis of findings of a task force established by the governor to look at infrastructure needs in the state. Although company-specific plans under the legislation require Commission approval, the price regulation plan specified in the statute does not. The Commission has begun a number of rulemakings to clarify and implement the legislation. Legislation has also passed in Maine and the Commission is considering how to implement it. Louisiana is close to a decision on a price cap plan for South Central Bell. In Massachusetts litigation is in progress. New Mexico and South Dakota told the NRRI they are considering alternative regulation.

Six commissions had not implemented and were not formally considering alternative regulation by the end of 1994. Five of those had made progress on alternative regulation but were "on pause" for one reason or another. Three of the five states (Arkansas, Missouri, and Vermont) had been considering alternative regulation in 1994 but by late in the year it had been dropped. In North Carolina, legislation passed in 1989 allows the Commission to adopt alternative regulation but no petitions have been filed. In Oklahoma recent legislation requires the commission to begin considering alternative regulation. Only in Alaska has alternative regulation never been considered.

Local Competition

Competition in switched local service is already allowed in 13 states and 16 more are formally considering allowing full local competition, for a total of 29 states.

Table 3 shows the results of the survey for commission action on competition in switched local telephone service. Thirty-three states have no generic or regulatory barrier to allowing switched local competition in their states. Twenty-two of those either already allow competition or are formally considering it. In 13 states there is a statutory barrier to allowing local competition and in five states, a generic commission policy or order stands in the way.

Table 4 details the actions of the 16 commissions that informed the NRRI they are formally considering allowing competition with the incumbent local exchange companies for facilities-based, switched local service.

Commission Action on Provision of Switched Local Service by Cable TV Companies

According to a recent NARUC survey, only six state commissions currently regulate entry of cable TV companies. Alaska, Connecticut, Delaware and West Virginia regulate both rates and entry. Rhode Island and Vermont do not regulate rates but do regulate entry.² Table 5 summarizes the status of allowing cable companies to provide switched local service in those states where cable service is regulated. A few states which do not regulate cable TV directly reported in the NARUC/NRRI that allowing cable companies to compete in local service is under formal consideration: Ohio, Oklahoma, Maine, Tennessee and Wisconsin. Nevada, Ohio and Wisconsin volunteered that they allow competition by cable TV companies. Other states that are allowing or considering opening up switched local service to competition are presumably including cable companies among the potential competitors to the local exchange companies.

² NARUC Report on the Status of Competition in Intrastate Telecommunications, September 1994, 222.

TABLE 3

**STATE REGULATORY COMMISSION TREATMENT OF
COMPETITION IN SWITCHED LOCAL SERVICE
(as of November 1994)**

	Decision made: competition is allowed	Under formal consideration	Being considered informally	Not being considered
No statutory or generic regulatory barrier	CT, IL, IA, MD, MA, MI, MT, NM, ^a NY, OR, PA, WA, WI	HI, IN, KS, ME, NV, OH, OK, SC, TX	NE, RI, WY	DE, MN, NH, NJ, ND, VT, VA, WV
Statutory barrier		DC, GA, KY, NC, TN, UT	CO, FL	AR, ID, ^b LA, MO, SD
Generic policy or order is barrier		AZ	CA	AL, AK, MS

^a Competition is allowed in U S WEST service area.

^b Companies may deregulate local service for business customers with over five lines.

SOURCE: NRRI Survey and NARUC Report.

TABLE 4
COMMISSIONS FORMALLY CONSIDERING ALLOWING
SWITCHED LOCAL COMPETITION
(as of November 1994)

Commission	Action
Arizona	Commission has decided on proposed rules. Public hearings planned for mid-1995, after which rules will become effective.
District of Columbia	Bill pending in legislature and under consideration by commission with hearings planned. A company other than the local exchange company has applied to provide switched local service.
Georgia	Legislation is needed and is under consideration in state legislature (SB 566).
Hawaii	Time frame and conditions for implementation under consideration in Docket 7702.
Indiana	Formal study is pending with hearings planned.
Kansas	Litigation is in progress with 40 parties composed of LECs, IXCs, CAPs, cable companies and others. Hearings were scheduled from Nov. 21 - Dec. 2, 1994 with a decision expected by Jan. 1995.
Maine	Formal study underway. A rulemaking is contemplated.
Nevada	Hearings planned and decision expected sometime in 1995.
North Carolina	Legislation is needed. A company other than the LEC has applied to provide switched local service. The issue is under consideration by Commission.
Ohio	Formal Commission study underway with hearings planned.
Oklahoma	Under consideration by Commission through a formal study with hearings planned (PUD 940000461).
Oregon	Formal Commission study underway. A company other than the LEC has applied to provide switched local service.
Pennsylvania	Act 67, passed in 1993, allows competition. Commission is considering an application through a formal study with hearings underway. Pending petitions by MES Intelenet and MCI Metro Access Co.
South Carolina	A company has applied to provide local exchange service.
Tennessee	Commission considering through a formal study with hearings planned. A company other than the LEC has applied to provide switched local service. The Attorney General is presently studying state law to determine options to the TNPSL in filings now pending.
Texas	MFS Intelenet and Teleport have applied for certificate of convenience and necessity to serve seven counties. Decision expected in 1995 or 1996.
Utah	Formal study completed Nov. 23, 1994. Decision expected March 15, 1995. Legislation will be needed.

Source: NRRI Survey and NARUC Report.

TABLE 5	
ACTION ON ALLOWING SWITCHED LOCAL SERVICE OF CABLE COMPANIES BY COMMISSIONS THAT REGULATE CABLE (as of November 1994)	
Commission	Status of Allowing Switched Local Service
Alaska	Not acted on.
Connecticut	Litigation in progress; docket open to review terms and conditions (docket 94-07-04); decision expected March 1995.
Delaware	Allowed under statute PA 94-83.
Rhode Island	Do not allow. Expect to consider requests from cable companies within a year.
Vermont	Not acted on.
West Virginia	Not acted on.

Source: NRRI Survey and NARUC Report.

Of the six states that currently assert authority over rates or entry of cable TV companies, one now allows those companies to compete in providing switched local service and another is formally considering it.

State Actions to Promote Competition

Although few states have finalized rules for intraLATA toll presubscription, unbundling of the network and colocation, many are actively considering one or more of those steps towards providing a level playing field for competition (Tables 6 and 7).

TABLE 6

**STATUS OF COMMISSION ACTION ON PRESUBSCRIPTION,
UNBUNDLING AND COLOCATION
(as of November 1994)**

	Not required and not being formally considered	Under formal consideration	Required or allowed
IntraLATA toll carrier presubscription	AL, AR, CO, DC, IA, LA, ME, MD, MA, MS, MO, MT, NE, NV, NH, NM, ND, OH, OK, OR, RI, SC, SD, TN, UT, VA, WY	AZ, CA, DE, FL, GA, HI, ID, IL, IN, KS, KY, NJ, NC, PA, TX, VT, WA, WV	AK, CT, MI, MN, NY, WI
Colocation of central office facilities	AL, AK, AZ, CO, IA, GA, HI, KY, LA, NV, MN, MS, MO, MT, NE, NH, NM, NC, OH, RI, SC, SD, UT, VA, WY	CA, CT, FL, HI, KS, ME, MI, ND, OK, TN, UT, VT, WA	AR, DE, DC, ID, IL, IN, MD, MA, NJ, NY, OR, PA, TX, WI, WV
Unbundling of local exchange network	AL, AK, AZ, AR, DE, DC, FL, GA, HI, ID, IN, IA, KY, LA, MD, MI, MN, MS, MT, NE, NH, NM, NC, OH, RI, SC, SD, UT, VA, WV, WY	AZ, CA, CT, HI, IL, KS, ME, NV, NJ, ND, OK, OR, TN, UT, VT, WA	CO, MA, MO, NY, PA, TX, WI

Source: NRRI Survey and NARUC Report.

TABLE 7**STATES FORMALLY CONSIDERING ACTION ON PRESUBSCRIPTION,
UNBUNDLING AND COLOCATION**

State	Action
Arizona	Rulemaking process begun.
California	Formal study underway on intraLATA toll presubscription. Hearings planned for unbundling and litigation in progress with IEC, LEC's, and CAP's with a decision expected in March 1995.
Connecticut	Litigation in process on colocation and unbundling.
Delaware	Hearing underway on intraLATA toll presubscription.
Florida	IntraLATA toll presubscription and colocation under consideration.
Georgia	IntraLATA toll presubscription under consideration.
Hawaii	Collaborative process and hearings currently underway on unbundling and colocation requirements.
Idaho	Commission has ordered docket opened to investigate provision of intraLATA equal access (PUC Order 25826, Dec. 13, 1994).
Illinois	Rulemaking underway on intraLATA toll presubscription and line side unbundling. Hearing completed. Decision expected in first quarter of 1995.
Indiana	Moratorium on intraLATA 1+ until July 1, 1995. Parties to stipulation can file for 1+ authority after that date. (AT&T, MCI, Sprint, and others).
Kansas	IntraLATA toll presubscription study underway. Colocation under consideration with decision expected in January 1995. Unbundling hearings conducted November 21, 1994 to December 2, 1994 with LECs, CAPs, IXCs, and cable TV companies.

TABLE 7 - Continued**STATES FORMALLY CONSIDERING ACTION ON PRESUBSCRIPTION,
UNBUNDLING AND COLOCATION**

State	Action
Maine	Rulemaking contemplated.
Michigan	Formal study (4-10610) underway for colocation.
New Jersey	Hearings planned for intraLATA toll presubscription and colocation.
North Carolina	IntraLATA toll presubscription hearings planned.
Oklahoma	Colocation and unbundling under consideration by Commission (PUD Cause No. 94000461).
Oregon	Hearings planned on unbundling.
Pennsylvania	Decision expected 1995-96 on intraLATA toll presubscription under consideration Docket No. I-00940034. Generic Investigation.
Tennessee	Formal Study on colocation and unbundling.
Texas	Formal study underway on intraLATA toll presubscription. Decision expected in 1995.
Utah	Commission hearings planned on unbundling and colocation.
Vermont	Hearings planned on intraLATA presubscription, colocation, and unbundling Docket 5713.
Washington	Hearings planned on intraLATA toll presubscription, colocation, and unbundling.
West Virginia	IntraLATA toll presubscription under consideration.

Source: NRRI Survey and NARUC report.

Six commissions have implemented intraLATA toll presubscription and 18 are formally considering it. Seven commissions have ordered unbundling and 16 more have it under consideration. In 15 states, the regulatory commission has instituted colocation requirements, and 13 more have it under consideration.

State Investigations into Telecommunications Reform

Legislation and commission actions opening up telecommunications markets, planning for infrastructure development and instituting alternative regulation has been preceded in many states by statewide investigations into telecommunications needs, through such vehicles as Blue Ribbon panels, Governors's task forces and such. Table 8 lists states where such investigations are underway now.

Eighteen states are currently conducting wide-ranging strategic assessments of telecommunications trends and needs. Many others have already done so.

Projects in Advanced Infrastructure and Services for Public Institutions

Forty-six commissions reported action in their states on distance learning, telemedicine, and other projects for the use of advanced telecommunications technologies for education, medicine and other public service purposes.

The NRRI asked commissions whether or not there were projects on distance learning, telemedicine and related endeavors in their states. Table 9 combines these results with the most recent NARUC report on the status of competition and other matters.

TABLE 8
CURRENT REVIEWS OF STATE TELECOMMUNICATIONS NEEDS
(as of November 1994)

State	Action
Alaska	Alaska 2001 program was initiated for this purpose.
Colorado	Telecommunications Advisory Council report to be issued end of 1994.
District of Columbia	Proceeding currently ongoing to investigate company construction program and budget, and the needs of customers for new telecommunications, services, and infrastructure.
Hawaii	Communications infrastructure docket.
Kansas	Telecommunications Infrastructure and Planning Task force was initiated July 1, 1994; task force was established by senate concurrent resolution 1627.
Maine	Commission will report back to state legislature on further changes needed to state law.
Michigan	Staff has been monitoring results of current telecommunications law, which sunsets Dec. 31, 1995. Staff will issue final report in 1995 to assist in the preparation of new legislation.
Mississippi	Task force recommendations to Governor due December 1994 or January 1995.
Missouri	"Governors Commission on Information Technology," set up in 1994, includes representation from local exchange carriers, interexchange carriers, cable, regulators, and others.
Montana	Telecommunications Advisory Council was created in 1993. Will recommend policy actions to achieve modern state-of-the-art telecommunications infrastructure.
Nebraska	Created Nebraska Information Technology Commission, statewide strategy for enhancing "Nebraska competitiveness through telecommunications and information technology."

TABLE 8 - Continued
CURRENT REVIEWS OF STATE TELECOMMUNICATIONS NEEDS
(as of November 1994)

State	Action
Nevada	An omnibus telecommunications rulemaking docket is open to review all telecommunications issues.
New Mexico	Governors Task Force under HB 308.
North Dakota	Governors Task Force, Department of Instruction, Information Service Division.
Oklahoma	Investigation underway in PUD Cause No. 940000461.
Texas	Review in process.
Utah	Reviewing competitive issues, beginning June 2, 1993 (93-999-01).
Washington	Governors Task Force to look at entire market.

Source: NRRI Survey.

TABLE 9

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Alabama	South Central Bell has a "class room communications service" tariff. Company in September 1994 announced network linking schools, hospitals, colleges, and government offices. There is also one countrywide distance learning network for schools and state correctional facilities and another which provides connection to several school districts in the Birmingham area. Network is currently used for distance learning.	There are several hospitals in the Birmingham area which are "on-line" with the University of Alabama-Birmingham Medical Center (facilities by DELTACOM).
Alaska	Since 1992 operation linking North Slope schools with Barrow has been underway.	In a few systems people in remote areas can get advice.
Arizona	Distance learning trials in Phoenix.	Information not available.
Arkansas	In the planning or implementation stages due to various commission decisions in Docket No 92-260-U.	The University of Arkansas Medical School is initiating a project.
California	Pacific Bell has a project to wire schools and libraries. Three major telephone companies are offering "Promotional free service to public schools (K-12), libraries, and community colleges to provide baseline capability for distance learning and to access information. Pacific Bell/GTEC are including private schools. Contel is studying this.	Only in the form of technology test at this time.

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Colorado	TCI has a project not under commission's jurisdiction in Englewood County.	Under consideration through request for proposal.
Connecticut	Approximately 13 CATV companies have ongoing projects. SNETCO has distance learning programs throughout the state.	No
Delaware	Bell Atlantic - Delaware network modernization to link schools, hospitals, and government offices. School links provided free of charge - trial linking eight schools.	Bell Atlantic promised broadband to all hospitals.
District of Columbia	No	No
Florida	Distance learning initiative exists but is not finalized.	No
Georgia	"Georgia Distance Learning & Telemedicine Act of 1992" enacted to develop network. Currently 100 sites on line to test effectiveness statewide.	"Georgia Distance Learning & Telemedicine Act of 1992" enacted to develop network. Currently 100 sites on line to test effectiveness statewide.
Hawaii	"Video connect" program: one-time credit for advanced service installation.	Telemedicine and video conferencing pilot programs.
Idaho	Legislature created State Council for Technology in Learning to provide for public school technology grants (HB 901, 1994).	Tele-radiology through Teton Valley Hospital with University of Washington and more.

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Illinois	Consolidated Communications, parent of Illinois Consolidated Telephone announced investment in linking 23 schools in ten years.	Information not available.
Indiana	(1) Smithville Telco - DS3 interconnection of high schools in serving territory. (2) Ameritech Opportunity Indiana - \$25 million per year in infrastructure investment.	No
Iowa	Iowa Communications Network - state owned network connecting schools, hospital, libraries etc.	No
Kansas	Ten clusters operational serving approximately 100 schools. Plans underway to provide distance learning to all Kansas high schools by end of 1997.	About five.
Kentucky	\$200 million set aside by legislature to use in public school system K-12; request for proposal out to link state agencies with distance learning.	Information not available.
Louisiana	Information not available.	Seed money has been provided to Louisiana Telemedicine initiative.
Maine	University of Maine interactive video network goes to all campuses and high schools.	Information not available.
Maryland	Tariff approved by Commission: Bell Atlantic will make available to public high schools, public community colleges, and four year colleges and universities.	Information not available.

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Massachusetts	Massachusetts Corporation for Education Telecommunications operates LearnNet to about 200 public schools with funding from private and public sources. Offices of education grant approx \$6 million to program involving three schools in Boston and Worcester.	Yes
Michigan	Has been provided by small niche providers so far. Michigan Bell and GTE have only recently become interested.	No
Minnesota	Of 425 school districts, 225 are involved in interactive distance learning.	Information not available.
Mississippi	Legislative task force looking into expanding current network; internet project links some universities.	No
Missouri	Distance learning pilot projects set up 1992.	Pilot project set up 1994.
Montana	State and University of Montana Multi-Protocol Network (Summitnet) to connect each county. To be used by state and local governments, universities, K-12 schools, libraries and possibly for medical applications.	Telemedicine projects are underway.
Nebraska	Great Plains Communications currently has on-line four high schools and state colleges and plans to link 10 more schools. Internet Access - LB 452, two existing K-12 pools.	Yes

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Nevada	No	No
New Hampshire	Projects are in development stage, but have not yet been implemented. Proposal to link several regional schools in different districts.	Options are under consideration by the C. Everett Koop Institute.
New Jersey	Two systems in place. One county has well established system with 23 public high schools and two colleges. The other since September 1993 has connected 135 students with 20 teachers. Plans to connect all 2,700 schools in state are being finalized.	Projects underway for hospital to hospital. Some county proposals underway.
New Mexico	U S West to invest \$19.6 million to construct communications network to serve institutions of higher learning.	Task force set up through legislation is studying this issue.
New York	Two small LECs are currently involved in distance learning projects with public schools. NY Telephone has proposed two projects.	Yes

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
North Carolina	A major distance-learning project, Vision Carolina, encompasses 16 sites including universities, public school and a regional medical center. "Impact North Carolina: 21st Century Education" is a distance learning project that reaches students in the mountains around Appalachian State University. Many of these sites will eventually be encompassed by the North Carolina Information Highway (NCIH) which was activated in August of this year. The NCIH is a broadband network that will provide video, voice, and data communications among schools, hospitals, libraries, courts, prisons, and other facilities.	VistaNet links computer resources to provide sophisticated medical imaging for use in treating cancer.
North Dakota	1994 requested evaluation of 1989 distance learning projects funded by North Dakota Education Telcom Council several interactive programs.	Information not available.
Ohio	Several LECs involved in distance learning projects. Governor proposed to use state funds to wire schools.	No
Oklahoma	Distance learning initiatives implemented, Oklahoma State Regents for Higher Education OneNet Proposal.	University of Oklahoma Health Science Center Telemedicine Network.
Oregon	Small distance learning network in place for certain colleges and grades K-12.	No
Pennsylvania	Distance learning project exists.	Information not available.

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Rhode Island	Distance learning project exists.	No
South Carolina	Winthrop College (Rock Hill) - MBA program to Coastal Carolina (Myrtle Beach) - video with interactive voice compressed T-1 facility.	Richland Memorial Hospital in Fairfield County (Approximated 30 miles video) Medical University (Charleston) to hospital in Allendale.
South Dakota	Interactive video.	Interactive video and data.
Tennessee	<p>Information Systems Council has established a distance learning committee. December 1993 project began to link.</p> <p>November 1993 decision PSC required telephone companies to discount carrier access charges on interLATA private lines for schools comparable to the existing discount on interLATA private lines for schools and directed South Central Bell to seek a waiver of the consent decree.</p> <p>Effective December 1993, South Central Bell established a tariff for public schools which provides one-line ISDN in classrooms at residential rates.</p> <p>Nashville's Vanderbilt University provides tutors for at-risk sixth graders at a local inner city middle school with ISDN link.</p>	No

TABLE 9 - Continued

**STATES WITH PROJECTS ON ADVANCED TELECOMMUNICATIONS
INFRASTRUCTURE FOR PUBLIC INSTITUTIONS
(As of November 1994)**

State	Education, Government, Hospital Projects	Telemedicine Projects
Texas	Under 1993 law, all telephone companies provide a 25 percent discount on transmission facilities used for distance learning.	Texas Telemedicine Projects links Austin to Santiago, Chile; 2,500 patients in five years. Required discount for telemedicine projects is under consideration by Commission. Decision was expected in January 1995.
Utah	Yes: universities, colleges, high schools, and middle schools.	Yes: includes University of Utah, St. Marks, and LDS hospitals, plus participation in national research.
Vermont	Information not available.	Information not available.
Virginia	Information not available.	Information not available.
Washington	PTI Inc. San Juan Islands trial through September 1995.	No
West Virginia	No	No
Wisconsin	Distance learning projects currently active, Commission issued an order in docket 05-TI-126 specifying criteria for when a video distance learning project is considered compensatory.	Interim order date April 15, 1994. In Docket 6655-NC-101 Commission authorized provision of interLATA video and data services to a major medical clinic in central Wisconsin.
Wyoming	All community colleges are connected to each other and to University of Wyoming. Numerous high schools also connected.	Two hospital 50-60 miles apart have instituted project, transfer of information.

Source: NRRI Survey and NARUC Report.

Conclusion

Changes in regulation at the state level are a rapidly moving target for the researcher attempting to keep track. State actions cannot be counted precisely. The snapshot presented here is perhaps best looked at as indicative of a broad thrust towards adaptation and evolution rather than as specific numbers.

The results of the NRRI survey, supplemented by information from NARUC, show that state regulatory commissions throughout the nation are steadily moving towards a new era in telecommunications. The commissions are adopting new regulatory methods for a time when local exchange carriers face competition. They are opening up markets to competition and making sure competitors will have a fair chance of entering those markets. They are exploring state infrastructure needs and experimenting with new ventures like distance learning and telemedicine that rely on advanced telecommunications infrastructure to improve public services and make the United States more competitive in the twenty-first century. Far from standing in the way of evolution of new technologies and industry structure, commissions appear to be in the forefront of facilitators of the institutional changes that are called for.