

Introduction to Telecommunications

Overview of the regulatory and market landscape for telephone (voice) service in Vermont

Presentation for the House Committee on Energy and Digital Infrastructure

Prepared by Maria Royle, VT Legislative Counsel

January 21, 2025

Table of Contents

- Regulatory Framework
- Regulators
- Market
- Regulations
- State Goals
- Programs and Services
- Emerging Issues

The Early Years

- **1876** - Alexander Graham Bell patents the first telephone
 - Bell Telephone Company
 - Bell patents expired in 1894
 - AT&T was subsidiary and then the parent company in 1899
- **1910** – Federal Interstate Commerce Commission
 - Began regulating telephone industry (not just railroads)
 - Local franchising by states to control rates and service quality
- **1913** - Kingsbury Commitment
 - In response antitrust action
 - Sold Western Union stock
 - Allowed competitors to interconnect with its network

Communications Act of 1934

- Purpose
 - To regulate interstate and foreign commerce in communication by wire and radio
 - Telephone, telegraph, and radio communications
- Original 1934 Mission
 - To make available, so far as possible, to all the people of the U.S. a rapid, efficient, nationwide, and worldwide wire and radio communication service with adequate facilities at reasonable charges for the purpose of the national defense . . .

Titles of the Act

- **Title I** – General Provisions
 - Federal Communications Commission
 - Dual Jurisdiction
- **Title II** – Common Carriers (*telephone and telegraph*)
- Title III – Special Provisions Relating to Radio
- Title IV – Procedural and Administrative Provisions
- Title V – Penalties and Fines
- Title VI – Miscellaneous Provisions

Federal Communications Commission (FCC)

- Independent federal agency overseen by Congress
 - Bipartisan (only 3 of same party)
 - Five commissioners
 - Appointed by the President and confirmed by the Senate
 - President selects the chair
 - Five-year terms
- Budget derived from regulatory fees

Dual Federal-State Jurisdiction

- Federalism
 - FCC has jurisdiction over interstate communications
 - States have jurisdiction over intrastate communications
- 1934 Regulatory Context
 - Telephone companies were regulated monopolies (common carriage model)
 - Most telephone service was local (intrastate)

Common Carriage

As applied to communications networks:

- Carriers (from the law of bailment)
 - Responsible for the goods they carried (strict liability)
 - Does not control the content or destination
- Transport networks (from franchise and monopoly regulations)
 - Serve all customers and serve them equally (nondiscrimination)
 - Just and reasonable rates

See Susan P. Crawford, *Transporting Communications*, 89 BOSTON UNIV. L. REV. 871 (2009)



Technologies and Markets Evolved

1982 Breakup of Bell system (AT&T Consent Decree)

- Divestiture of the Regional Bell Operating Companies (RBOCs or “baby bells”)
 - Local telephone service
 - VT part of NYNEX

1983 Commercial launch of the first handheld cellphone, “the brick”

1994 VT Universal Telecommunications Service (for 911; low-income; relay; high cost)

1995 First commercial VoIP application

Policy Shift to Deregulation

Telecommunications Act of 1996

To provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced information technologies and services to all Americans by opening all telecommunications markets to competition

Forbearance Provision – FCC must forbear from applying unnecessary regulations to telecommunications carriers or services

Remove regulatory barriers to market entry

Incumbents must offer access to unbundled network elements at reasonable rates

State Regulators

- Public Utility Commission
 - Tariffs and rules
- Department of Public Service, Division for Telecommunications and Connectivity
 - [Vermont 10-Year Telecommunications Plan](#), June 7, 2024
 - Mapping
 - Administers the VT Universal Service Fund
 - Advocacy
 - Telecommunications and Connectivity Advisory Board

Vermont Market

Incumbent Local Exchange Carriers (ILECs)

- 9 legacy providers delivering plain old telephone service (POTS)
 - 1 Regional Bell Operating Company (RBOC) - basic local exchange service is price capped, otherwise have flexibility under an Incentive Regulation Plan
- 8 independent telephone companies - not price regulated; only service quality
- All operate in service territories and are considered carriers of last resort
- PUC Rule 7.600 – Standards for Billing, Credit and Collections, and Customer Information for Telecommunications Carriers (includes Consumer Bill of Rights)

Competitive Local Exchange Carriers (CLECs)

- Cellular service
- VoIP service
- Must report outages over certain threshold to E-911 Board

Consumer Bill of Rights

- 1) The right to know and control what one is buying.
- 2) The right to know from whom one is buying.
- 3) The right to know the full price of goods and services purchased.
- 4) The right to reasonable payment terms.
- 5) The right to fair treatment.
- 6) The right to impartial resolution of disputes.
- 7) The right to reasonable compensation for poor service quality.
- 8) The right of access to basic local exchange service, as long as service charges are paid, regardless of whether they have paid services other than basic local exchange services.
- 9) The right to be free of improper discrimination in prices, terms and offers.
- 10) The right to privacy by controlling the release of information and one's calling patterns and by controlling unreasonable intrusion.
- 11) The right to join with other consumers for mutual benefit.

Statutory Goals of State Telecom Planning

- Support the universal availability of appropriate infrastructure and affordable services for transmitting voice and high-speed data
- Support the availability of modern mobile wireless telecommunications services along the State's travel corridors and in the State's communities
- Support competitive choice and open access
- Support technology to improve governmental and public services, public safety, and economic development

For full list of statutory goals see [30 VSA 202c](#)

Programs and Services

- Vermont Universal Service Fund and Charge
 - Relay Service
 - Lifeline
 - VT 988 Suicide and Crisis Lifeline (*effective July 1, 2025*)
 - E-911
 - High-Cost Program and Connectivity Initiative
- 248a – Siting of telecommunications facilities
- In 2007, VTA created to expand broadband and cellular coverage in VT
 - Owned fiber assets; Bethel cell tower
 - CoverageCo microcell system (2012-2018)
 - Grants for cell service expansion (2012 - \$2.6 million VTel Wireless)
- Public safety communications systems
 - Land mobile radios for first responders
 - FirstNet wireless broadband network
 - PSAPs
 - Statewide Communication Interoperability Plan

Emerging Issues

- Privacy
 - Through multiple forfeiture orders issued in April 2024, FCC fined several national wireless carriers for selling customer location information to aggregators (then re-sold) without consent
- Cybersecurity
- Resiliency and redundancy
- Battery-back up compliance and consumer education for VoIP
- Decommissioning legacy copper lines
 - Abandonment/curtailment of telephone service subject to PUC approval