

LEGISLATIVE GUIDE TO TELECOMMUNICATIONS REGULATION



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Telecommunications Regulation



I. Introduction.

The purpose of this Legislative Guide is to provide a general overview of the regulation of the provision of telecommunications services in the state of Iowa. The Guide includes a brief history of the regulation of telecommunications at the federal level and in Iowa since the industry began. The Guide also provides a description of the regulatory entities and their regulatory procedures and requirements. The Guide describes the regulatory provisions found in the Code regarding the provision of telecommunications services. Specifically, the Guide addresses price regulation, service regulation, determining the existence of effective competition, and cross-subsidization of affiliate businesses. Finally, the Guide describes certain federally regulated and nonregulated telecommunications services such as mobile and wireless devices, the Internet, and other related topics. A glossary of commonly used telecommunications terminology and concepts is included.

References to the Code are to the 2005 Iowa Code and 2005 Iowa Code Supplement and references to the Iowa Administrative Code and case law are to references published as of October 2005 unless specifically stated otherwise.

II. History of Regulation of Telecommunications.

Alexander Graham Bell formed Bell Telegraph Company in 1877 and was the sole provider of telephone service until his patent expired in 1894.¹ Independent companies brought competition to the new industry, which suffered from lack of interconnection among the independent companies and Bell. Bell formed American Telephone and Telegraph (AT&T) in 1885 to build and operate long distance lines but did not provide access to these lines to the independent companies.² Due to antitrust concerns, in 1913 AT&T agreed to sell the use of its long distance lines to the independent competitors in what became known as the Kingsbury Commitment.³

Congress passed the federal Communications Act of 1934 creating the Federal Communications Commission (FCC)⁴ to regulate interstate telephone, radio, and telegraph companies operating in the United States.⁵ The commission is composed of five commissioners appointed by the President and approved by the Senate.⁶ The Act was intended to make telephone and radio service available to all residents of the United States and ensure reasonable rates for telephone service.⁷ While the FCC would regulate all interstate communications services, states maintained their authority to individually regulate intrastate services.⁸ Whether a call is considered interstate or intrastate has been traditionally determined by the end points of the call. If the calling party and the called party were in the same state, the call was considered intrastate regardless of the path the call actually took.

¹ AT&T: A Brief History, www.att.com/history/ (last visited Nov. 15, 2005).

² Id.

³ Id.

⁴ 47 U.S.C. § 154.

⁵ Communications Act of 1934, 48 Stat. 1064; 47 U.S.C. § 151 et seq.

⁶ 47 U.S.C. § 154(a).

⁷ 47 U.S.C. § 151.

⁸ 47 U.S.C. § 214.



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In the 1980s, pursuant to a court-approved consent decree, AT&T agreed to divest its 22 local Bell companies into seven separate regional operating companies (Bell operating companies).⁹ AT&T was restricted from operating local exchange services but could keep its long distance network and manufacturing facilities.¹⁰ The regional Bell operating companies would provide local telephone service and yellow page directory service but could not manufacture equipment or offer long distance service.

III. Current Federal Regulation.

The passage of the federal Telecommunications Act of 1996 reflected a change in federal policy from legal monopoly to an emphasis on competition.¹¹ The 1996 Act opened local exchange markets by requiring the incumbent local exchange carriers to open their networks to competitor companies. Competitors may access the network by purchasing services at wholesale rates for resale, leasing elements of the network on an unbundled basis at wholesale cost for resale, or interconnecting the competitor's own facilities directly to the incumbent carrier's network.¹² This network access must also be provided without unreasonable or discriminatory conditions or limitations on the resale of telecommunications services.¹³ If the incumbent carrier cannot agree on terms with the competitor requesting access, the parties may request arbitration services from a state commission, such as the Iowa Utilities Board.¹⁴

The 1996 Act preserved the state regulation of interconnection obligations of local exchange carriers so long as the regulations do not conflict with the provisions of the Act.¹⁵ All telecommunications carriers are prohibited from subsidizing competitive services with noncompetitive services.¹⁶ The Act further required number portability, dialing parity, and access to rights-of-way.¹⁷ The Act also allowed Bell operating companies to manufacture telecommunications equipment and offer long distance services which had been restricted by the AT&T Consent Agreement.¹⁸

The 1996 Act revamped the universal service policy to further encourage the extension of telecommunications services to all consumers at nondiscriminatory prices regardless of additional costs for rural areas.¹⁹ Prior to the Act, carriers would use revenues from long distance services to subsidize the costs of providing local service. The new policy required every telecommunications carrier providing interstate service to contribute to a fund to ensure that telecommunications services are provided to supported customers, including health care providers, educational providers, and libraries in rural and high-cost-to-reach areas.²⁰ Carriers may then request funds from the Universal Service

⁹ United States v. American Tel. and Tel. Co., 552 F. Supp. 131, 226-234 (DDC 1982).

¹⁰ AT&T at 226-227.

¹¹ Pub. L. 104—104; 110 Stat. 56 (amending Communications Act of 1934, 47 U.S.C. § 151 et seq.).

¹² 47 U.S.C. § 251.

¹³ 47 U.S.C. § 251(b, c).

¹⁴ 47 U.S.C. § 252.

¹⁵ 47 U.S.C. §§ 251(d), 261.

¹⁶ 47 U.S.C. §§ 254(k), 260(a)(1), 273(g), 275(b)(2), 276(a)(1).

¹⁷ 47 U.S.C. § 251(b).

¹⁸ 47 U.S.C. §§ 272, 273.

¹⁹ 47 U.S.C. § 254(b).

²⁰ 47 U.S.C. § 254(d),(h).

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Fund for the provision, maintenance, and upgrading of facilities and services for supported customers.²¹ Carriers are prohibited from charging customers of interexchange and interstate services in rural and other high-cost areas higher rates than the carriers charge to customers in urban areas.²²

IV. State Regulatory Entities.

A. Iowa Utilities Board — Department of Commerce.

The Iowa Utilities Board, a division of the Department of Commerce, is responsible for the regulation of telecommunications and other public utilities in Iowa pursuant to Code chapter 476. The board began as the Iowa Board of Railroad Commissioners in 1878, regulating railroad passenger and freight rates and operation.²³ In 1911, the Office of Commerce Counsel was created within the Railroad Commission to assist with regulation and location of electric transmission lines in Iowa.²⁴ After authority was expanded to include the regulation of grain warehouses, passenger and freight rates for motor truck transportation, and natural gas pipelines, the agency was renamed the Commerce Commission in 1937.²⁵

Electric and gas rates and services were governed by local governments until 1963 when those duties were given to the Commerce Commission.²⁶ In 1976, electric utilities were granted exclusive service areas and the Commission began to issue certificates of public convenience, use, and necessity for the construction of electric generating facilities.²⁷ The commission was renamed the Iowa Utilities Board in 1986 and was made a division of the Department of Commerce.²⁸

The board consists of three members who are appointed by the Governor for six-year terms.²⁹ One member is selected by the Governor to be the chairperson of the board, who also serves as administrator of the Utilities Division.³⁰ The three members are subject to confirmation by the Iowa Senate. The board has broad general powers to enforce the provisions of Code chapter 476, including the authority to issue subpoenas, hire employees and other professionals, intervene in Federal Energy Regulatory Commission proceedings or state proceedings which may affect the costs of any public utility service, and inquire into the management of and obtain any necessary information from public utilities.³¹

B. Consumer Advocate.

The Office of Consumer Advocate was created in 1983 to represent the public interest in rate cases.³² The Office of the Consumer Advocate was made a division of the

²¹ 47 U.S.C. § 254(e).

²² 47 U.S.C. § 254(g).

²³ "History of the Iowa Utilities Board," <http://www.state.ia.us/government/com/util/history.html> (last visited Nov. 15, 2005).

²⁴ Id.

²⁵ Id.

²⁶ Id.

²⁷ Id.

²⁸ Id.

²⁹ Iowa Code § 474.1.

³⁰ Iowa Code § 474.1.

³¹ Iowa Code § 476.2.

³² "History of the Iowa Utilities Board," <http://www.state.ia.us/government/com/util/history.html> (last visited Nov. 15, 2005).



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Department of Justice in 1986.³³ The Consumer Advocate is appointed by the Attorney General and subject to confirmation by the Iowa Senate.³⁴ The Consumer Advocate serves a four-year term and is the administrator of the Consumer Advocate Division of the Department of Justice.³⁵ The duties of the Consumer Advocate include investigation of the legality of all rates, charges, rules, regulations, and practices of all persons under the jurisdiction of the Iowa Utilities Board and instituting legal proceedings to correct any illegal activities.³⁶ The Consumer Advocate acts as the attorney for and represents all consumers and members of the public generally in proceedings before the board or in any state or federal court.³⁷ The Consumer Advocate may employ attorneys and other employees and has free access to all records of the board except confidential personnel records, attorney work product, and certain confidential customer information.³⁸

V. Regulation of Telecommunications Services.

A. Regulation Authority.

The Utilities Board regulates the rates and services of public utilities as provided in Code chapter 476. Public utilities generally include those utilities that furnish communications services to the public for compensation.³⁹ However, not all utilities are public utilities which are subject to rate regulation by the board. Municipally owned utilities and unincorporated villages which own their own distribution systems are not subject to rate regulation. Mutual telephone companies which are 50 percent owned by users, cooperative telephone corporations or associations, and telephone companies having less than 15,000 customers and 15,000 access lines are also not subject to rate regulation.⁴⁰

Iowa has 160 local telephone companies (or local exchange carriers) only three of which currently meet this definition of public utilities for the provision of communications services: Qwest, Iowa Telecommunications Services (Iowa Telecom), and Frontier Communications of Iowa. The remaining 157 companies are small independent carriers not subject to rate regulation but are generally subject to service quality regulation by the board. Wireless carriers are not subject to either rate or service regulation since deregulated by the board in 1986.⁴¹

B. Local Telephone Service.

1. Incumbent Local Exchange Carriers.

All utility companies must have a certificate of public convenience and necessity issued by the board before furnishing land-line local telephone service in Iowa.⁴² A utility cannot construct or operate any lines or equipment for the purpose of furnishing

³³ Id.

³⁴ Iowa Code § 475A.1.

³⁵ Iowa Code § 475A.1.

³⁶ Iowa Code § 475A.2.

³⁷ Iowa Code § 475A.2.

³⁸ Iowa Code §§ 475A.3, 475A.4.

³⁹ Iowa Code Supplement § 476.1(2).

⁴⁰ Iowa Code Supplement § 476.1.

⁴¹ In re Mobile Telephone and Paging Service, Docket No. INU—86-2, "Order Terminating Investigation," IUB, August 7, 1986.

⁴² Iowa Code § 476.29(1).

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local telephone service prior to obtaining a certificate.⁴³ Certificates are issued by the board after the board determines that the proposed service will promote the public convenience and necessity.⁴⁴ Each certificate defines the service territory in which land-line local telephone service will be provided.⁴⁵

Each local exchange utility has an obligation to serve all eligible customers within the service territory unless explicitly excepted by the board.⁴⁶ A certificate may be revoked for failure to furnish reasonably adequate service and facilities.⁴⁷ A certificate may also be revoked if at least 80 percent of the customers in a community within the service territory sign a petition indicating they are adversely affected by school reorganization or economic dislocation and prefer a different local exchange utility.⁴⁸ If a city receives voter approval to establish a public utility providing communications services, the city is entitled to receive a certificate if the board finds that the proposed service is consistent with the public interest.⁴⁹

2. Competitive Local Exchange Service Providers.

Certificates do not grant a monopoly or franchise to a particular local exchange carrier or utility.⁵⁰ An incumbent local exchange carrier must provide equal access to and interconnection with its facilities so that its network is fully interoperable with the telecommunications services and information services of other providers, and must offer unbundled essential facilities to competitor providers.⁵¹ Incumbent local exchange carriers must also provide reasonable access to ducts, conduits, rights-of-way, and other pathways to competitive local exchange carriers.⁵² Incumbent local exchange carriers must provide reasonable and nondiscriminatory access to, use of, and interconnection with those unbundled essential facilities on reasonable, cost-based, and tariffed terms and conditions and implement provider number portability.⁵³ Price lists for these services and facilities, or tariffs, must be filed with the board to ensure compliance with board requirements.⁵⁴

C. Traditional Rate Regulation and Deregulation.

1. Rate Regulation.

The board has authority to regulate the rates and charges of only certain telephone utilities that meet the definition of "public utility" in Code section 476.1 which have not already been deregulated.⁵⁵ A public telephone utility is required to furnish

⁴³ Iowa Code § 476.29(1).

⁴⁴ Iowa Code § 476.29(2).

⁴⁵ Iowa Code § 476.29(4).

⁴⁶ Iowa Code § 476.29(5).

⁴⁷ Iowa Code § 476.29(9).

⁴⁸ Iowa Code § 476.29(10).

⁴⁹ Iowa Code § 476.29(13).

⁵⁰ Iowa Code § 476.101(1).

⁵¹ Iowa Code § 476.101(2).

⁵² Iowa Code § 476.101(3).

⁵³ Iowa Code § 476.101(4)(a).

⁵⁴ Iowa Code § 476.101(5).

⁵⁵ As discussed previously, only three telephone companies currently meet the definition of "public utility" under Code § 476.1: Qwest, Iowa Telecom, and Frontier.



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reasonably adequate service at rates and charges outlined in tariffs filed with the board.⁵⁶ Rate-regulated telephone utilities are prohibited from discriminating in rates charged or services provided to any person or that subject any person to unreasonable prejudice or disadvantage.⁵⁷ Delayed payment charges may not be assessed on a customer's account until 20 days after the billing was sent to the customer.⁵⁸ Rate-regulated telephone utilities may not pass on charges related to lobbying, certain legal costs, or advertising to their customers.⁵⁹

2. Rate Deregulation.

The board may regulate communications services provided by a public utility until a service or facility becomes subject to effective competition as determined by the board.⁶⁰ To determine whether effective competition exists, the board considers whether a comparable service or facility is available from a different supplier in the geographic market and whether the resulting market forces are sufficient to assure just and reasonable rates without regulation.⁶¹ Market forces to be considered include the presence or absence of wireless communications services, cable telephony, voice over internet protocol services, and economic barriers to the entry of competitors in that market.⁶²

A telecommunications service or facility may also be deregulated after a finding of effective competition by the board.⁶³ If the board determines the service or facility is an essential communications service or facility and the public interest warrants retention of service regulation, the board may deregulate rate regulation but continue service regulation.⁶⁴ The board may reimpose rate or service regulation if the service or facility is no longer subject to effective competition.⁶⁵

3. Price Regulation.

Since 1995, rate-regulated local exchange carriers have had the option to choose to be subject to price regulation instead of rate regulation.⁶⁶ Whereas under rate regulation, the carrier's rates were determined by the carrier's costs. Under price regulation the carrier's rates rise and fall based largely according to the inflation rate.⁶⁷ To change to price regulation, a carrier must submit a plan to the board which may approve, modify, or reject the plan within 90 days after filing.⁶⁸ The plan must include provisions regarding establishing and changing prices, terms and conditions for basic and nonbasic communications services, reporting new service offerings to the board,

⁵⁶ Iowa Code § 476.3(1).

⁵⁷ Iowa Code § 476.5.

⁵⁸ Iowa Code § 476.54.

⁵⁹ Iowa Code § 476.18.

⁶⁰ Iowa Code Supplement § 476.1D(1).

⁶¹ Iowa Code Supplement § 476.1D(1)(a).

⁶² Iowa Code Supplement § 476.1D(1)(b).

⁶³ Iowa Code Supplement § 476.1D(2).

⁶⁴ Iowa Code Supplement § 476.1D(5).

⁶⁵ Iowa Code Supplement § 476.1D(6).

⁶⁶ Iowa Code Supplement § 476.97(1).

⁶⁷ Iowa Code Supplement § 476.97(1).

⁶⁸ Iowa Code Supplement § 476.97(1, 2).



reflecting in rates any changes in revenues, expenses, and investment due to factors beyond the carrier's control, and provide for notice to customers, the board, and the Consumer Advocate of changes in prices, terms, or conditions for basic and nonbasic communications services.⁶⁹ Despite changing to price regulation, the board still has authority over the level, extent, and timing of the unbundling of essential facilities, and ensuring against cross-subsidization between basic and nonbasic communications services.⁷⁰ Each of the three public telephone utilities subject to rate regulation by the board have elected to change to price regulation.

D. Current Rate Regulation and Deregulation.

As of July 1, 2005, rate-regulated telephone utilities may elect deregulation for their business and retail local exchange services. Because each of the three public telephone utilities subject to rate regulation by the board have elected to deregulate, traditional rate and price regulation provisions will no longer apply after deregulation is complete. If a telephone utility chooses this deregulation, the utility's single line flat-rated residential and business service rates that were price-regulated on January 1, 2005, must remain at the same rates charged on January 1, 2005. Thereafter, the single line monthly residential rates may be increased by not more than \$1 per year and single line monthly business rates may be increased by not more than \$2 per year until June 30, 2008. At no time prior to June 30, 2008, may residential rates exceed \$19 per month or business rates exceed \$38 per month. A telephone utility that chooses this deregulation must provide digital subscriber line broadband service (high-speed Internet access) in each of the utility's exchanges within 18 to 24 months of making the election. After June 30, 2008, single line residential and business service rates are not subject to board regulation unless the board finds an immediate extension of up to two years necessary for the public interest.⁷¹

E. Service Regulation.

Telephone utilities may be subject to service regulation even if they are not subject to rate or price regulation.

1. Service Reduction.

All utilities are prohibited from discontinuing, reducing, or impairing service, except in cases of emergency, or for nonpayment or violation of rules and regulations, unless permitted by the board. Violators are subject to civil penalties.⁷²

2. Discrimination.

Local exchange carriers are prohibited from discriminating against providers of communications services by refusing or delaying access to the carrier's services or by refusing or delaying access to essential facilities on terms and conditions no less favorable than those it provides to itself and affiliates.⁷³ A local exchange carrier may not degrade the quality of access or service provided to another provider, fail to disclose upon request information regarding the network specifications, unreasonably

⁶⁹ Iowa Code Supplement § 476.97(3).

⁷⁰ Iowa Code Supplement § 476.97(5).

⁷¹ Iowa Code Supplement § 476.1D(1)(c).

⁷² Iowa Code § 476.20.

⁷³ Iowa Code § 476.100.



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refuse or delay interconnections or provide inferior interconnections to another provider, use basic exchange service rates to subsidize or offset the costs of other products or services offered by the carrier, or discriminate in favor of itself or an affiliate in the provision and pricing of or extension of credit for any telephone service.⁷⁴

3. Unauthorized Changes in Service.

A telephone utility is prohibited from making unauthorized changes in the services it provides to its customers. This includes the practice of "slamming" or "cramming". A telephone utility must have the customer's permission to change the customer's provider of telecommunications services and to add or delete a product or service for which a separate charge is made to a customer's telecommunications account.⁷⁵ A telephone utility may not impose a preferred carrier freeze to prevent a change in a customer's preferred service provider unless the customer gives express consent.⁷⁶ The board may assess civil penalties for violations, restrict the services or billing of the local exchange provider, or revoke the provider's certificate of public convenience.⁷⁷

F. Cross-Subsidization and Reorganization.

Rate-regulated telephone utilities providing local exchange service may not directly or indirectly include in regulated rates or charges any costs of an affiliate nonutility business unless the affiliate provides goods or services to the public utility and the costs are reasonably necessary and appropriate for the utility business.⁷⁸ Local exchange carriers in particular are prohibited from using basic exchange service rates to subsidize or offset the costs of other products or services offered by the carriers.⁷⁹ Each rate-regulated telephone utility and its affiliates must provide the board with access to the records, books, and other information necessary to determine whether the carrier is engaging in unlawful cross-subsidization.⁸⁰ The board may also conduct periodic audits of transactions between a telephone utility and its affiliates.⁸¹

A rate-regulated telephone utility is prohibited from selling, leasing, or otherwise disposing by merger or consolidation the whole or any substantial part of its assets, or acquiring the controlling capital stock of any public utility without approval of the board.⁸² The board may consider whether ratepayers or the public interest may be detrimentally affected by the reorganization when making its determination.⁸³

⁷⁴ Iowa Code § 476.100.

⁷⁵ Iowa Code § 476.103; Iowa Admin. Code 199-22.23.

⁷⁶ Iowa Code § 476.103(8); Iowa Admin. Code 199-22.23(2)(d).

⁷⁷ Iowa Code § 476.103(5).

⁷⁸ Iowa Code § 476.71.

⁷⁹ Iowa Code § 476.100(6).

⁸⁰ Iowa Code §§ 476.73, 476.74.

⁸¹ Iowa Code § 476.75.

⁸² Iowa Code §§ 476.76, 476.77.

⁸³ Iowa Code § 476.77.



G. Long Distance Services.

Most long distance services are no longer regulated and providers are not required to have a certificate of public convenience.⁸⁴ Long distance telephone companies may be classified as "competitive" if subject to effective competition or if more than half of a company's revenues are from interexchange services that originate and terminate within the same local access transport area.⁸⁵

All intrastate telecommunications services provided by alternative operator services companies using other than ordinary residence or business telephones are subject to regulation by the board and must submit tariffs for board approval.⁸⁶

H. Automatic Dialing-Announcing Device Equipment.

Automatic dialing-announcing device equipment (ADAD equipment) is a device used to automatically dial or select telephone numbers without the use of a live operator to send prerecorded messages to the numbers dialed or selected.⁸⁷ The use of ADAD equipment is generally prohibited except for the following:

- Nonprofit organizations or persons calling for a purpose other than profit-making or fund-raising if the calls are not for the advertisement or offering for sale, lease, or rental of goods, services, or property.
- The payment for, service of, or warranty coverage of previously ordered or purchased goods or services, or to persons with a prior business relationship with the person using the calls.
- The collection of lawful debts.
- An organization calling its members or employees.
- Calls which use an initial prerecorded message of a duration no greater than seven seconds prior to a live operator intercept or which involve an initial message from a live operator.

I. Enforcement Provisions of the Board.

If a public telephone utility violates any provision of Code chapter 476 or a rule adopted pursuant to Code chapter 476, the board must first give a written notice to the utility of the violation.⁸⁸ Upon a second or subsequent violation of the same provision or rule, the board may issue a civil penalty in the amount of at least \$100 up to \$2,500 for each violation.⁸⁹ Willful second and subsequent violations may result in penalties from \$1,000 to \$10,000 per violation.⁹⁰ Such penalties collected from telecommunications companies are deposited in the General Fund of the State to be used for consumer education programs administered by the board.⁹¹ The board may also file an action in

⁸⁴ See IUB decisions deregulating long distance services: Docket Nos. INU-95-3; INU-28-2; RPU-24-8.

⁸⁵ Iowa Code Supplement § 476.1D(10).

⁸⁶ Iowa Code § 476.91.

⁸⁷ Iowa Code § 476.57(1).

⁸⁸ Iowa Code § 476.51(1).

⁸⁹ Iowa Code § 476.51(1).

⁹⁰ Iowa Code § 476.51(2).

⁹¹ Iowa Code § 476.51(5).



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district court against a public utility or any other person for an injunction to prevent or stop any violation of Code chapter 476.⁹²

The board may receive complaints from local exchange carriers of antitrust activities of other local exchange carriers. The board may conduct a hearing on such complaints and if the board finds that a local exchange carrier has engaged in an activity inconsistent with antitrust laws, the board may order the carrier to correct the antitrust activity by adjusting the carrier's retail rate, order the carrier to pay costs incurred by the complaining carrier, or assess a civil penalty against the carrier.⁹³

J. Deregulated Services.

The following communications services have been deregulated by order of the board.

- 1982 - Terminal equipment (telephones) - Docket No. RMU-82-1.
- 1984 - Centrex, interexchange private lines - Docket No. RPU-84-8.
- 1985 - Pay telephones - Docket No. RMU-85-6.
- 1986 - Mobile telephones and paging services - Docket No. INU-86-2.
- 1987 - Pay telephone service lines - Docket No. RMU-87-18.
- 1988 - InterLATA long distance, WATS, and private lines - Docket No. INU-88-2.
- 1995 - All long distance services other than intraLATA nonequal access service - Docket No. INU-95-3.
- 2000 - Local directory assistance - Docket No. INU-00-3.

VI. Dual Party Relay.

The Dual Party Relay Service is a program administered by the Iowa Utilities Board to enable persons with communications impairments to access and communicate with voice telephone users using text via the telephone system.⁹⁴ The service, known as Relay Iowa, is available 24 hours a day, 365 days a year, with no restrictions on the number of calls placed or on their length. Both text telephone (TTY) and voice users may initiate calls through Relay Iowa.⁹⁵

The Iowa Equipment Distribution Program (Telecommunications Access Iowa) provides vouchers for specialized telephone equipment to qualified hard-of-hearing, deaf, or speech-impaired individuals.⁹⁶ The board establishes criteria for persons to receive telecommunications devices.⁹⁷

The Dual Party Relay Council provides advice to the board on all matters concerning the relay service and equipment distribution programs. The council consists of 11 members who include consumers with communication impairments, and representatives

⁹² Iowa Code § 476.14.

⁹³ Iowa Code § 476.55.

⁹⁴ Iowa Code and Iowa Code Supplement ch. 477C.

⁹⁵ www.relayiowa.com.

⁹⁶ Iowa Code § 477C.4.

⁹⁷ Iowa Code § 477C.4.

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from telephone companies, the Division of Deaf Services of the Department of Human Rights, the Office of the Consumer Advocate of the Department of Justice, and the board.⁹⁸

The Dual Party Relay Service and the Iowa Equipment Distribution Programs are funded through an annual assessment on all telecommunications carriers providing service in the state, including local exchange telephone companies, interexchange carriers, centralized equal access providers, alternate operator services companies, and wireless communications service providers. The amount of the assessment is determined according to Code section 477C.7 and the administrative rules adopted by the board.⁹⁹

VII. Municipal Utilities.

A city may form a telecommunications utility in the same manner as any other city utility pursuant to the requirements of Code chapter 388. A proposal to establish a municipal telecommunications utility must be submitted to the voters of the city at any city election by the council on its own motion or if a valid petition is submitted requesting that the proposal be submitted to the voters. If a proposal is approved by a majority of the voters, the city may proceed according to the proposal. If a proposal does not receive majority voter approval, the same or a similar proposal may not be submitted to the voters of the city for at least four years from the date of the election at which the proposal was defeated.¹⁰⁰

Municipal utilities providing telecommunications services are not public utilities regulated by the Iowa Utilities Board pursuant to Code section 476.1 but are subject to certain restrictions pursuant to Code section 388.10. Services subject to the restrictions include the telecommunications services of local exchange telephone services, long distance telephone services, Internet access services, and cable television services.¹⁰¹ A city that operates a telecommunications utility is prohibited from using State General Fund revenue or revenue generated from electric, gas, water, sewage, or garbage services provided by the city to support or otherwise cross-subsidize the telecommunications utility.¹⁰² The city may, however, market the bundling of city services with municipal telecommunications services if a separate charge for each service is provided.¹⁰³ The city is restricted from providing any city facilities, equipment, or services to the utility at a cost which is less than the reasonable cost of providing such facilities, equipment, or services.¹⁰⁴ The city is prohibited from providing any other city service to any of its telecommunications customers at a cost less than any other person would pay who is not a customer of the municipal telecommunications utility.¹⁰⁵

Cities that own or operate a municipal telecommunications utility are required to maintain full accounting records of the costs of providing telecommunications services, including the amount and source for capital for initial construction or acquisition. The

⁹⁸ Iowa Code § 477C.5.

⁹⁹ Iowa Code Supplement § 477C.7.

¹⁰⁰ Iowa Code § 388.2.

¹⁰¹ Iowa Code § 388.10(1).

¹⁰² Iowa Code § 388.10(1).

¹⁰³ Iowa Code § 388.10(3).

¹⁰⁴ Iowa Code § 388.10(1).

¹⁰⁵ Iowa Code § 388.10(1).



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accounting may include a reasonable allocation of the cost of use of any city employees, facilities, equipment, or services used by the municipal telecommunications utility. The records shall generally be made available to the public. Rates that a municipal telecommunications utility charges must reflect the actual cost of providing the services.¹⁰⁶ Cities that own or operate a municipal telecommunications utility must certify compliance through an audit performed pursuant to Code section 11.6, through the Auditor of State, or through a certified public accountant.¹⁰⁷

VIII. Wireless Communications Services.

Wireless communications services provided through cellular, digital, or personal communications services technology are not generally regulated by the state. Instead, wireless carriers must be licensed through the Federal Communications Commission (FCC). The Wireless Telecommunications Bureau of the FCC administers all FCC domestic wireless telecommunications programs and policies, except those involving satellite communications or broadcasting, including licensing, enforcement, and regulatory functions.¹⁰⁸ Wireless communications services include cellular telephone, paging, personal communications services, public safety, and other commercial and private radio services.

A. Coverage Issues.

The coverage of a mobile telephone refers to the geographic area where a mobile telephone can receive a signal from the mobile carrier's network and customers can use their mobile phones. The coverage of each mobile carrier is determined by where the carrier has built its network within its licensed areas. Analog networks cover most of the United States, while digital networks currently cover less area. The newer technology, digital networks are clearer, more secure, and more feature-rich than the older technology, analog networks. Carriers may agree to share their networks with other carriers, allowing subscribers to "roam" on the other carrier's network, usually for an additional or increased fee. Topography and network architecture and capacity may also affect coverage, resulting in "dropped calls" and "dead spots." A dropped call results when a carrier fails to transfer a call in progress when traveling from one part of the carrier's network to another. A dead spot may occur when the topography blocks the signal from the telephone to the cell tower. Because of these issues, coverage maps provided by mobile carriers are not necessarily representative of actual coverage.¹⁰⁹

B. Pricing Issues.

Most mobile telephone pricing plans provide a certain number of minutes per month for a certain price, with additional minutes used priced at a higher level, plus an activation fee for new customers. Unused minutes of the month usually expire unless the pricing plan provides for "rollover" minutes. Many carriers will differentiate what minutes may be used during weekday daytime hours versus nighttime and weekend hours and charge a higher rate during weekday daytime or "peak" hours. The minutes offered in the pricing plan

¹⁰⁶ Iowa Code § 388.10(2).

¹⁰⁷ Iowa Code § 388.10(2).

¹⁰⁸ <http://wireless.fcc.gov/organization> (last visited Nov. 16, 2005) .

¹⁰⁹ "What you should know about Wireless Phone Service," <http://www.fcc.gov/cgb/wirelessphone.pdf> (last visited Nov. 16, 2005).



usually include both incoming and outgoing calls so that the minutes of incoming calls are also deducted from the monthly minute allotment provided in the plan. Nationwide pricing plans may either mean the customer can use the plan's monthly minutes from anywhere in the United States without incurring roaming or long distance charges or that the customer may send and receive calls only on the carrier's network towers which are scattered throughout the more populated locations in the United States without incurring roaming and long distance fees.¹¹⁰

C. Services Offered.

In addition to basic voice communications, the carrier may also offer additional services such as call waiting, voice mail, or three-way calling services for additional fees. Short messaging services (SMS) or text-messaging services allow a mobile user to send and receive short text messages to other mobile users. SMS services are usually offered as a fee per message or a certain amount of messages for a monthly rate. Many carriers offer mobile data services using Bluetooth and other technologies enabling users to send and receive e-mail and digital photos, download games, and access the Internet through their mobile telephone, personal digital assistant, or computer.¹¹¹ The availability of higher speed Internet access through mobile phones also permits the availability of video programming, such as downloading music videos or television shows.¹¹²

D. Break Fees.

Most mobile carriers require new customers to sign service contracts for one or two years and if the customer wishes to cancel the contract prior to that time, an early termination fee usually applies. Fees can range from \$50 to several hundred dollars. Many carriers allow customers to cancel service without an early termination fee if the cancellation is done within a certain period of time after the contract is made.¹¹³

E. E911 Coverage.

Many mobile telephones are compatible with E911 systems allowing the location of the phone to be immediately recognized by E911 dispatchers. Newer phones have the capability to have their specific geographic location tracked by longitude and latitude while other phones may only give the location of the nearest cellular tower to which the mobile phone is connecting. An E911 surcharge is assessed on each wireless communications service number provided in Iowa to enable the mobile carrier to provide the mobile phone number and latitude and longitude coordinates of the mobile devices dialing 911.¹¹⁴ The ability to use a mobile phone to call 911 will also be subject to dead spots and dropped calls just as any other mobile phone call. Mobile networks are susceptible to weather conditions where severe weather damages towers and electricity outages restrict transmissions.¹¹⁵

¹¹⁰ Id.

¹¹¹ Id.

¹¹² Dionne Searcey, "Wireless Web," Wall St. J., Sept. 12, 2005, at R6.

¹¹³ "What you should know about Wireless Phone Service," <http://www.fcc.gov/cgb/wirelessphone.pdf> (last visited Nov. 16, 2005).

¹¹⁴ Iowa Code Supplement § 34A.7A.

¹¹⁵ See "After Katrina, Communications Still Hobbled," Peter Grant and Christopher Rhoads, Wall St. J., Sept. 8, 2005, B3.



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F. Number Portability.

Mobile customers may change service providers within the same local area and still keep the same phone number. However, a consumer may not be able to keep the same phone number when moving to a new town or city. Carriers are allowed to recover their costs of porting the number by charging fees to customers. Once a consumer has requested service from a new carrier, the old carrier may not delay or refuse to port a number even if that individual owes money for an outstanding balance or termination fee. Wireless-to-wireless transfer porting usually takes approximately two and a half hours from the time the porting request is made of the old carrier, although the FCC has not mandated a specific time frame for the wireless-to-wireless porting process. For various reasons, wireless handsets are often incompatible among different wireless service providers, requiring consumers to purchase a new phone, even when they retain the same phone number.¹¹⁶

IX. Internet Services.

The Internet is a system of electronic communications networks linked by telecommunications channels using standardized protocols which facilitates electronic communications services, including but not limited to use of the World Wide Web; the transmission of electronic mail or messages; the transfer of files and data or other electronic information; and the transmission of voice, image, and video.¹¹⁷ Internet connection can be obtained by contacting an Internet service provider (ISP) and signing up for service, usually for a monthly fee. Neither the state nor federal governments directly regulate the provision of Internet services, although consumer fraud issues may be reported to the Attorney General. Initially, Internet service was only available through dial-up service or accessed directly through a telephone line connected to a computer with a modem. Dial-up services are generally more available but offer considerably slower connectivity than high-speed broadband Internet service.

A. Broadband.

"Broadband services" is a general term that refers to all high-speed Internet technologies, including digital subscriber line (DSL), cable modem (CM), wireless access, satellite access, fiber to the home (FTTH), and broadband over power line (BPL). Broadband also differs from dial-up in that the connection is typically always on and does not require a user to dial an ISP using a telephone line, allowing users to use the Internet and the telephone simultaneously. DSL service is provided using existing copper telephone lines. DSL does not require users to dial in to a telephone number like a dial-up connection and maintains a dedicated and generally continuous connection to the Internet. The availability of DSL is limited to three miles from the provider's central office where the DSL switching equipment is located.¹¹⁸

Integrated services digital network (ISDN) is a similar digital technology to DSL but transmits data at slower speeds than DSL and is not continually connected, requiring dial-up to an ISP. Many cable providers provide Internet access through coaxial cables used

¹¹⁶ <http://www.fcc.gov/cgb/NumberPortability/#whatis> (last visited Nov. 16, 2005).

¹¹⁷ Iowa Code Supplement § 4.1(9A).

¹¹⁸ "High Speed Internet Access," <http://www.fcc.gov/cgb/consumerfacts/highspeedinternet.pdf> (last visited Nov. 16, 2005).

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for cable television and a cable modem. Cable access is comparable to DSL in constant connectivity and speed and does not require separate dial-up, although speeds vary depending on the type of modem, the cable network, and traffic load.¹¹⁹

Satellite Internet service provides Internet access to those who may not be able to subscribe to other types of broadband service. Satellite Internet requires ownership of a satellite dish and modem and is generally slower than DSL but faster than dial-up modems. Satellite service is also subject to similar conditions as satellite television, such as weather conditions and line of sight to the satellite. Fiber to the home (FTTH) requires installation of a fiberoptic cable connection and provides communications packages including phone, television, and high-speed Internet. Broadband over power line (BPL) delivers data communications over the existing electric power distribution network, allowing Internet access by "plugging" into an ordinary electrical outlet. The BPL connectivity speeds are similar to DSL, and BPL could be made available anywhere power lines are installed.¹²⁰

In Iowa, rate-regulated telephone utilities that elect deregulation for their local exchange services pursuant to Code section 476.1D(1)(d) must provide digital subscriber line broadband service in each of the utility's exchanges.¹²¹ However, this requirement does not mandate that broadband service be made available to every customer within each exchange.

B. Wireless.

Wireless access uses radio connection technology to connect to the Internet through mobile devices or fixed wireless technologies such as a computer or a network of computers. Mobile wireless uses the same method of transmission as mobile phone calls. Fixed wireless usually requires a radio link through rooftop antennas between the customer's location and the ISP and can be located up to 35 miles from the wireless provider. WiFi technology allows wireless networking for home computers as well as the creation of "hotspots" but is limited in distance to a few hundred feet.¹²² Newer technologies in wireless Internet promise higher-speed connection and longer distance availability. WiMax technology also creates "hotspots" but stretches much farther than WiFi, up to 30 miles, and allows connection at speeds faster than DSL or cable modem.¹²³ Third-generation technology or "3G" provides high-speed Internet access to digital mobile phone users but is subject to similar connectivity problems as mobile phones, such as dead spots and dropped connections.¹²⁴

C. VoIP.

Voice over Internet Protocol (VoIP) allows consumers to make telephone calls using a broadband Internet connection instead of regular telephone lines. VoIP services offer many of the same service options as traditional telephones while generally at a much lower

¹¹⁹ "High Speed Internet Access," <http://www.fcc.gov/cgb/consumerfacts/highspeedinternet.pdf> (last visited Nov. 16, 2005).

¹²⁰ *Id.*

¹²¹ Iowa Code Supplement § 476.1D(1)(c).

¹²² "High Speed Internet Access," <http://www.fcc.gov/cgb/consumerfacts/highspeedinternet.pdf> (last visited Nov. 16, 2005).

¹²³ WiMax speed of more than 75 megabits per second compared to DSL at 32 megabits per second. See Olga Khanf, "Warp Speed for Wireless Networks", *Bus. Wk. Online*, June 21, 2005, http://www.businessweek.com/technology/content/jun2005/tc20050621_1471_tc_212.htm (last visited Nov. 16, 2005).

¹²⁴ Dionne Searcey, "Wireless Web," *Wall St. J.*, Sept. 12, 2005, at R6.



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or no cost to the consumer other than the cost of broadband access, depending on the service provider. Calls can be made using a computer or a special VoIP telephone connected to the broadband connection. Some providers offer only calls to other VoIP users while others will allow connection to any phone number in the world for an additional charge. VoIP telephone adapters can usually be transferred to any broadband connection.¹²⁵ There are few federal regulations governing VoIP services, but the FCC has mandated VoIP providers to provide E911 service to all customers to enable public safety responders to locate the call in the same manner as from traditional telephones.¹²⁶ The FCC has also determined that VoIP providers are not subject to traditional state public utility regulation.¹²⁷

X. E911.

Enhanced 911 emergency telephone systems are administered by the E911 program manager, who is appointed by the administrator of the Homeland Security and Emergency Management Division of the Department of Public Defense.¹²⁸ Enhanced 911 or E911 service is the service that provides the telephone user the ability to reach a public safety answering point (PSAP) by dialing the digits 911 and provides the PSAP with the voice, name, address or location, and telephone number of the incoming 911 call.¹²⁹ The board of supervisors of each county is required to maintain a joint E911 service board, which must maintain an enhanced 911 service plan for the entire county.¹³⁰

E911 services are funded through a surcharge imposed on each wire-line telephone access line and paid by the subscriber of each access line as part of each subscriber's monthly telephone bill.¹³¹ Before a surcharge may be imposed, the joint E911 service board must submit a referendum to the voters of the county or counties and receive at least a majority of approval of the voters.¹³² The amount of the surcharge is determined by the local joint E911 service board but shall not exceed \$1 per month unless an alternative surcharge of up to \$2.50 per month is approved by the voters.¹³³ A surcharge up to 65 cents per month may also be placed on each wireless communication service number provided in Iowa and collected on the wireless subscriber's monthly bill.¹³⁴

XI. Common Terminology and Concepts.

- BPL (broadband over power line) — Internet connectivity using existing electric power lines.¹³⁵

¹²⁵ "VoIP/Internet Voice," FCC Consumer Facts; "IP-Enabled Services," www.fcc.gov/voip (last visited Nov. 16, 2005).

¹²⁶ "VoIP and 9-1-1 Service," FCC Consumer Advisory, <http://www.fcc.gov/cgb/consumerfacts/viop911.html> (last visited Nov. 16, 2005).

¹²⁷ In the Matter of Vonage Holdings Corporation, Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, WC Docket No. 03-211, Memorandum Opinion and Order, FCC 04-267, Nov. 9, 2004, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-267A1.pdf (last visited Nov. 16, 2005).

¹²⁸ Iowa Code § 34A.2A.

¹²⁹ Iowa Code § 34A.2(5).

¹³⁰ Iowa Code § 34A.3.

¹³¹ Iowa Code § 34A.6; Iowa Code Supplement § 34A.7.

¹³² Iowa Code § 34A.6.

¹³³ Iowa Code §§ 34A.6, 34A.6A.

¹³⁴ Iowa Code Supplement § 34A.7A.

¹³⁵ "High Speed Internet Access," <http://www.fcc.gov/cgb/consumerfacts/highspeedinternet.pdf> (last visited Nov. 16, 2005).

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- Broadband — Digital technologies that provide consumers a signal switched facility offering integrated access to voice, high-speed data service, video-demand services, and interactive delivery services at speeds meeting FCC requirements.¹³⁶
- Cellular technology — Often used for all wireless phones regardless of the technology the wireless phones use; derives from cellular base stations that receive and transmit calls. Both cellular and PCS phones use cellular technology.¹³⁷
- CLEC (competitive local exchange carrier) — Offers local exchange services in competition with the ILEC in a particular area or telephone exchange.¹³⁸
- Cramming — A practice in which customers are billed for enhanced features such as voice mail, caller ID, and call-waiting that they have not ordered.¹³⁹
- Cross-subsidization — Using services that are not subject to competition to subsidize competitive services, such as using joint facilities. Each joint facility should be allocated a reasonable share of the cost of the facility used to provide each service.
- DSL — Digital subscriber line services using a wireline transmission technology that brings data and information faster over copper telephone wires already installed in homes and businesses. Normally does not require consumers to dial an ISP and is continually connected to the Internet.¹⁴⁰
- FCC — Federal Communications Commission.
- FTTH (fiber to the home) — Internet connectivity entirely through installed fiberoptic cables.
- ILEC (incumbent local exchange carrier) — Telephone companies that offered local exchange service in a particular community prior to the passage of the federal Telecommunications Act of 1996.¹⁴¹
- Internet — The federated international system that is composed of allied electronic communications networks linked by telecommunications channels, that uses standardized protocols, and that facilitates electronic communications services, including but not limited to use of the World Wide Web; the transmission of electronic mail or messages; the transfer of files and data or other electronic information; and the transmission of voice, image, and video.¹⁴²
- InterLATA service — Telecommunications between a point located in a local access and transport area and a point located outside such area.¹⁴³ Also known as long distance service.

¹³⁶ FCC Glossary of Telecommunications Terms, www.fcc.gov/glossary.html (last visited Nov. 16, 2005).

¹³⁷ Id.

¹³⁸ Iowa Code § 476.96(3).

¹³⁹ FCC Glossary of Telecommunications Terms, www.fcc.gov/glossary.html (last visited Nov. 16, 2005).

¹⁴⁰ "High Speed Internet Access," <http://www.fcc.gov/cgb/consumerfacts/highspeedinternet.pdf> (last visited Nov. 16, 2005).

¹⁴¹ 47 U.S.C. § 251(c)(2005).

¹⁴² Iowa Code § 4.1(9A).

¹⁴³ 47 U.S.C. § 153(21) (2005).



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- IntraLATA service — Telecommunications between points located within a local access and transport area and may involve a toll charge. Also known as long distance service.
- ISP — Internet services provider.
- IXC (interexchange carriers) — Long distance companies that sell toll-free numbers, international data networking, and outgoing telephone service on an interexchange basis.
- LAN (local area network) — A group of data devices that can communicate with each other within a limited geographic area, such as a floor or department.
- Landline — Traditional wired telephone service.¹⁴⁴
- LATA (local access and transport area) — A contiguous geographic area established by a Bell operating company before the enactment of the federal Telecommunications Act of 1996 or after the enactment and approved by the FCC.¹⁴⁵
- Local exchange carrier (or company) — Any person that is engaged in the provision of telephone exchange service or exchange access.¹⁴⁶
- PCS (personal communications services) — Mobile telephones using cellular technology operating in the 1900 MHz band spectrum.
- POTS — Plain old telephone service.
- Slamming — Occurs when a customer's long distance service is switched from one long distance company to another without the customer's permission. Such unauthorized switching violates FCC rules and Code section 476.103.¹⁴⁷
- Tariff — The documents filed by a local exchange carrier with the board describing its services and the payments to be charged for such services.¹⁴⁸
- Telecommunications — The transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.¹⁴⁹ Generally includes local exchange services, long distance services, Internet access, broadcasting (television by cable or satellite, radio), and wireless services (cellular).
- Telephone exchange service — Service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or comparable service provided through a system of switches, transmission equipment, or

¹⁴⁴ FCC Glossary of Telecommunications Terms, www.fcc.gov/glossary.html (last visited Nov. 16, 2005).

¹⁴⁵ 47 U.S.C. § 153(25).

¹⁴⁶ 47 U.S.C. § 153(26).

¹⁴⁷ FCC Glossary of Telecommunications Terms, www.fcc.gov/glossary.html (last visited Nov. 16, 2005).

¹⁴⁸ Id.

¹⁴⁹ 47 U.S.C. § 153(43).

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other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service.¹⁵⁰

- Universal service — The financial mechanism which helps compensate telephone companies or other communications entities for providing access to telecommunications services at reasonable and affordable rates throughout the country, including rural, insular, and high-cost areas, and to public institutions. Companies, not consumers, are required by law to contribute to this fund and may pass this charge on to customers.¹⁵¹
- VoIP (voice over internet protocol) — Method of sending voice calls over the Internet or similar broadband network as data using a phone adapter or computer.
- WiFi — Wireless Internet networking creating "hotspots" of Internet connectivity. Has a limited range of a few hundred feet.
- WiMax — Wireless Internet technology that provides connectivity speeds faster than DSL and is available at distances up to 30 miles, depending on conditions.¹⁵²

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¹⁵⁰ 47 U.S.C. § 153(47).

¹⁵¹ FCC Glossary of Telecommunications Terms, www.fcc.gov/glossary.html (last visited Nov. 16, 2005).

¹⁵² Olga Khanf, "Warp Speed for Wireless Networks," Bus. Wk. Online, June 21, 2005, http://www.businessweek.com/technology/content/jun2005/tc20050621_1471_tc_212.htm (last visited Oct. 20, 2005).