

State of South Dakota

SEVENTY-FOURTH SESSION
LEGISLATIVE ASSEMBLY, 1999

400C0868

SENATE BILL NO. 239

Introduced by: The Committee on State Affairs at the request of the Governor

1 FOR AN ACT ENTITLED, An Act to revise certain provisions regarding telecommunications
2 services.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF SOUTH DAKOTA:

4 Section 1. That § 49-31-1 be amended to read as follows:

5 49-31-1. Terms used in this chapter mean:

6 (1) "Addressable," enabling users to connect and communicate with a specific party easily
7 and securely on a dial-up, addressable basis;

8 (2) ~~"Affordable," reasonably priced to promote the growth and usage of the network,~~
9 ~~leveraging economies of scale and the power of technology to provide ever-increasing~~
10 ~~bandwidths at ever-diminishing cost of facilities;~~

11 ~~(3) "ASC," Applications Service Center, a service platform owned by network providers~~
12 ~~or non-network providers, or both, which delivers communications features and~~
13 ~~services to customers, including database access, protocol conversion, rate adaption,~~
14 ~~and bridging;~~

15 ~~(4) "ATM," Asynchronous Transmission Mode, a broadband switching standard defined~~
16 ~~by CCITT and the ATM Forum standard setting groups;~~

17 ~~(5) "Available," ensuring that network services are available if the user requires them,~~

1 even at times of peak usage; designed to be a non-blocking network, minimizing
2 network contention;

3 ~~(6) "B ISDN," Broadband ISDN, a networking standard set by ATM Forum and CCITT's~~
4 ~~international standards;~~

5 ~~(7)(3) "Broadband network," the broadband network extends the range of fully switched,~~
6 ~~symmetric, addressable, robust transport services over the fiber network, utilizing~~
7 ~~SONET rates which increase in multiples of OC-1 (51.84 Mbps), including OC-3~~
8 ~~(155.52 Mbps) and OC-12 (622.08 Mbps). The broadband network will use one or~~
9 ~~more of the following switching technologies, ATM, STM, and channel switching,~~
10 ~~which will support the broadband ISDN UNI/NNI and SONET interfaces as defined~~
11 ~~by the ATM Forum, ANSI, and ITU-CCITT standards groups;~~

12 ~~(8) "Business community of interest," for the purposes of the deployment goals of this~~
13 ~~Act, the business COI shall include all incorporated municipalities in South Dakota;~~

14 ~~(9)(4) "Centron and centron-like services," services which provide custom switching features~~
15 ~~which include distributive dial tone, select number screening, toll restriction and~~
16 ~~screening, nonattendant busy out, nonattend and call transfer, and select trunk hunting~~
17 ~~and screening;~~

18 ~~(9A) "Class 5 switch," a local switching office which is part of the multilevel switching~~
19 ~~hierarchy used in the United States; levels (also called classes) of switching offices are~~
20 ~~used to concentrate communications traffic from increasingly larger geographic areas;~~

21 ~~(10) "Class of service," one of potentially several categories into which a service is broken,~~
22 ~~reflecting its use and value to end users and allowing more specific service-based and~~
23 ~~value-based pricing by classification of service;~~

24 ~~(11)(5) "Commission," the Public Utilities Commission;~~

25 ~~(12)(6) "Common carrier," anyone who offers telecommunications services to the~~

1 public;

2 ~~(13) "Communities of interest (COI)," major market sectors formed by a grouping of~~
3 ~~communication users based upon their inter-communication needs and their pattern~~
4 ~~of movement and manipulation of voice, data, and video information. COIs may cross~~
5 ~~industry boundaries, and they include the medical COI, education COI, business COI,~~
6 ~~and government COI;~~

7 ~~(14) "Education community of interest," for the purposes of the deployment goals of this~~
8 ~~Act, the education COI shall include all public and private elementary and secondary~~
9 ~~schools, all universities and other post-secondary institutions, and all RDTN sites in~~
10 ~~South Dakota;~~

11 ~~(14A)(7)~~ "Eligible telecommunications carrier," a local exchange carrier designated by
12 the commission pursuant to 47 U.S.C. § 214(e) as of January 1, 1998, as
13 eligible to receive universal service support funding;

14 ~~(15)(8)~~ "Feature rich," providing the specific features and functionality required by
15 users' voice, data, video, graphics, imaging, and multimedia applications;
16 functionally beyond mere transport;

17 ~~(16) "Government community of interest," for the purposes of the deployment goals of this~~
18 ~~Act, the government COI shall include all county seats;~~

19 ~~(16A)(9)~~ "Incumbent local exchange carrier," a local exchange carrier, including
20 successors and assigns, which was providing local exchange service within a
21 defined service area in this state on or before February 8, 1996;

22 ~~(16B)(10)~~ "Interexchange telecommunications service," telecommunications service
23 between points in two or more exchanges;

24 ~~(17) "ISDN, nISDN, wISDN," Integrated Services Digital Network, narrowband ISDN,~~
25 ~~wideband ISDN, an end-to-end fully digital network, supporting the standard user~~

1 interfaces of BRI (Basic Rate Interface), PRI (Primary Rate Interface), H0 (384
2 Kbps), and H11 (1.536 Mbps), as defined by CCITT's international standards for
3 ISDN. The CCITT is part of the International Telecom Union (ITU);

4 ~~(18)~~(11) "LATA," a local access and transport area;

5 ~~(18A)~~(12) "Local exchange area," a geographic area established by a local exchange
6 carrier as filed with or approved by the commission for the administration of
7 local telecommunications service which may consist of one or more central
8 offices or wire centers together with associated facilities used in furnishing
9 telecommunications service in that area;

10 ~~(19)~~(13) "Local exchange service," the access to and transmission of two-way switched
11 telecommunications service within a local exchange area;

12 ~~(20)~~ "Medical community of interest," for the purposes of the deployment goals of this
13 Act, the medical COI shall include all: Essential Access Community Hospitals
14 (EACH), Rural Primary Care Hospitals (RPCH), and major hospitals with more than
15 fifty beds;

16 ~~(21)~~(14) "Narrowband network," a fully switched digital network covering the transport
17 range from 0 to 144,000 bits per second (144 Kbps), offering two 64 Kbps
18 information B (Bearer) channels and a 16 Kbps signaling D (Delta) channel
19 such that the two 64 Kbps channels can be coalesced to achieve 128 Kbps
20 information transport using ISDN BRI international ITU-CCITT standards
21 providing both B channels circuit and B channel packet switching capabilities;

22 ~~(22)~~(15) "New products and services," any new product or service introduced after
23 July 1, 1988, which is not functionally required to provide local exchange
24 service. Repackaging of any product or service which is fully competitive with
25 any service regulated as emerging competitive or noncompetitive is not

1 considered a new product or service;

2 ~~(23)~~ "NNI," Network nodal interface, a standard broadband interface as defined by CCITT
3 and the ATM Forum standard setting groups;

4 ~~(24)~~(16) "Optional service," a limited or discretionary service offered by a
5 telecommunications company which is not functionally required for the
6 provision of noncompetitive services and which the customer has the option
7 to purchase;

8 ~~(25)~~(17) "Private," ensuring confidentiality and integrity of network transport of
9 messages without dependency on specialized customer premise security
10 devices;

11 ~~(26)~~(18) "Rate of return regulation," the procedure used by the commission to approve
12 the charge for a service which gives due consideration to the public need for
13 adequate, efficient, and reasonable service and to the need of the public utility
14 for revenues sufficient to enable it to meet its total current cost of furnishing
15 such service, including taxes and interest, and including adequate provision for
16 depreciation of its utility property used and necessary in rendering service to
17 the public, and to earn a fair and reasonable return upon the value of its
18 property;

19 ~~(27)~~(19) "Robust," easily and economically sustaining the rigors of growth and
20 extensive public use;

21 ~~(27A)~~(20) "Rural telephone company," a local exchange company as defined in 47 U.S.C.
22 § 153(37) as of January 1, 1998;

23 ~~(28)~~(21) "Secure," physically precluding unwanted access to network and information;

24 ~~(28A)~~(22) "Service area," a geographic area established by the commission for the
25 purpose of determining universal service obligations and support mechanisms.

1 For a rural telephone company, the service area is the company's study area or
2 any other area designated jointly by the commission and the Federal
3 Communications Commission pursuant to 47 U.S.C. § 214(e) (5) as of
4 January 1, 1998;

5 ~~(29) "SONET," Synchronous Optical Network, an optical interface standard set by the~~
6 ~~ANSI and CCITT standard setting groups;~~

7 ~~(30)~~(23) "Standard," supporting universal interfaces and networking standards and
8 protocols of generally accepted standards setting bodies;

9 ~~(31) "STM," Synchronous Transfer Mode, a broadband switching technology;~~

10 ~~(32) "Survivable," ability to maintain service while enduring natural events and human~~
11 ~~actions hostile to the network;~~

12 ~~(33)~~(24) "Switched," providing circuit, packet, or channel type switching, each suited
13 to specific application requirements;

14 ~~(33A)~~(25) "Switched access," an exchange access service purchased for the origination
15 and termination of interexchange telecommunications services which includes
16 central office switching and signaling, local loop facility, or local transport.

17 ~~(34) "Symmetric," establishing two-way communication with equal bandwidth both ways;~~

18 ~~(35)~~(26) "Telecommunications company," any person or municipal corporation owning,
19 operating, reselling, managing, or controlling in whole or in part, any
20 telecommunications line, system or exchange in this state, directly or indirectly,
21 for public use. For purposes of this definition the term, for public use, means
22 for the use of the public in general or for a specific segment of the public, or
23 which connects to the public in general or for a specific segment of the public,
24 or which connects to the public switched network for access to any
25 telecommunications service;

1 ~~(36)~~(27) "Telecommunications service," the transmission of signs, signals, writings,
 2 images, sounds, messages, data or other information of any nature by wire,
 3 radio, lightwaves, electromagnetic means, or other similar means. It does not
 4 include the provision of terminal equipment used to originate or terminate such
 5 service, broadcast transmissions by radio, television and satellite stations
 6 regulated by the federal communications commission and one-way cable
 7 television service;

8 ~~(37)~~ "~~Ubiquitous,~~" ~~universally accessible, available across South Dakota;~~

9 ~~(38)~~ "~~UNI,~~" ~~User network interface, a standard broadband interface as defined by CCITT~~
 10 ~~and the ATM Forum standard setting groups;~~

11 ~~(39)~~(28) "Wideband network," the wideband network extends the range of fully
 12 switched, digital, addressable information transport from the ~~BRI~~ rate of 144
 13 Kbps to the DS3 rate of 44.736 Mbps, including the DS1 and DS2 rates of
 14 1.544 Mbps and 6.312 Mbps, respectively. ~~The wideband network physically~~
 15 ~~encompasses two transport mediums; it utilizes the expanded capabilities of the~~
 16 ~~copper wire telephone network, as well as fiber optic networking facilities. The~~
 17 ~~wideband network includes new local fiber facilities and rings utilizing the~~
 18 ~~virtual tributary sub-SONET rates access switches to provide direct local~~
 19 ~~public network access close to the customer supporting a variety of network~~
 20 ~~switching technologies and interfaces, including one or more of the following:~~

- 21 ~~(a) Fractional ISDN-NX 64 Kbps & NX BRI: ranging from 128 Kbps to 45~~
- 22 ~~Mbps, (b) Wideband ISDN: Primary Rate ISDN (PRI) @ 23B (64 Kbps) + D~~
- 23 ~~(64 Kbps) H0, H11.~~

24 Section 2. That § 49-31-60 be amended to read as follows:

25 49-31-60. It is the intent of the Legislature that South Dakota have a telecommunications

1 infrastructure that meets the advanced communication needs of the state's individual citizens and
2 its communities of interest, including our schools, medical facilities, businesses, and all levels of
3 government. To achieve this intent, it is anticipated that three networks, accessible by all South
4 Dakotans, will be established: a narrowband network, a wideband network, and a broadband
5 network. Together, these three networks will form South Dakota's Public Communications
6 Network Infrastructure. This infrastructure will enable any-to-any voice, data,
7 videoconferencing, graphics, imaging, and multimedia communications. These three networks
8 will fully support the following capability requirements: ubiquitous, feature rich, standard, secure,
9 private, survivable, robust, addressable, switched, ~~symmetric~~, affordable, and available.
10 Communications services will be reasonably and affordably priced ~~to promote the growth and~~
11 ~~usage of each of these three networks, leveraging the power of technology to provide~~
12 ~~ever-increasing bandwidths at ever-diminishing cost of facilities.~~ Classes of service will be
13 created for network services in order to establish a service-based and value-based pricing model.
14 The new narrowband, wideband, and broadband communications networks will be established
15 in a manner ensuring that all the citizens of South Dakota realize the advantages of the
16 forthcoming information age, including economic development, educational opportunities, a
17 heightened level of medical care, and better, more efficient service from all levels of government.

18 It is the intent of the Legislature, that:

19 (1) The Public Communications Network Infrastructure will grow and enhance with
20 expanding user needs and advancements in technologies' bandwidth and feature
21 capabilities;

22 (2) ~~The three networks (narrowband, wideband, and broadband) will transport~~
23 ~~information in fully switched, secure, survivable communications;~~

24 ~~(3)~~ This layered network hierarchy, based upon a fully integrated ~~SONET~~ backbone of
25 interconnected switched survivable rings, will carry independent and fully integrated

1 voice, data, and video communications; and

2 ~~(4)(3)~~ The network architecture will enable access and interconnection points for
3 public-to-public, public-to-private, and wireline-to-wireless inter-networking.

4 It is the intent of the Legislature that all of the future rules, policies, actions, and decisions
5 of the State of South Dakota and all its political subdivisions, and the actions and decisions of
6 its offices and employees, shall be made consistent with and further the purposes and directives
7 of §§ 49-31-60 through 49-31-68, inclusive. Any rule, policy, action, decision, or directive from
8 a regulatory agency shall consider input from common carriers, including local exchange carriers,
9 and others; allow economic deployment of technology; encourage maximum cooperation among
10 facilities providers; and consider a fair return on the investment made by facility providers to
11 implement §§ 49-31-60 through 49-31-68, inclusive.

12 Section 3. That § 49-31-62 be repealed.

13 ~~—49-31-62. The narrowband network is fully switched, digital network covering the transport~~
14 ~~range from 0 to 144,000 bits per second (144 Kbps), offering two 64 Kbps information B~~
15 ~~(Bearer) channels and a 16 Kbps signaling D (Delta) channel such that the two channels can be~~
16 ~~coalesced to achieve 128 Kbps information transport using ISDN international ITU-CCITT~~
17 ~~standards providing both B channel circuit and B channel packet switching capabilities.~~

18 Section 4. That § 49-31-63 be repealed.

19 ~~—49-31-63. To encourage usage of the narrowband network, fully digital and switched~~
20 ~~transport at narrowband's 64/128 Kbps rates shall be reasonably and affordably priced. Data~~
21 ~~traffic shall be encouraged to use the narrowband network, which shall be designed with the~~
22 ~~specific feature and traffic handling capabilities to handle ever-increasing loads of data and video~~
23 ~~users.~~

24 Section 5. That § 49-31-64 be repealed.

25 ~~—49-31-64. If commercially available, the narrowband network shall utilize an ISDN address~~

1 ~~scheme, including standard interfaces, to support private-to-public-to-private inter-networking.~~
2 ~~The narrowband network shall establish any-to-any connectivity for data and videoconferencing~~
3 ~~communications on a dial-up basis. It shall be allowed to overlay the existing voice telephone~~
4 ~~network, supporting data and video conferencing traffic and shall become fully integrated with~~
5 ~~the existing voice network. The narrowband network shall utilize a base-satellite fully digital~~
6 ~~architecture, where stand-alone remote switches located in smaller communities will home-in on~~
7 ~~larger host switches. This architecture shall allow local switching within a community for~~
8 ~~emergency services in the event that the link to the host is cut.~~

9 Section 6. That § 49-31-65 be repealed.

10 ~~—49-31-65. The deployment goal for the narrowband network is to achieve ubiquitous~~
11 ~~deployment across South Dakota within five years, with significant results achieved within two~~
12 ~~years where seventy-five percent of each of the four strategic communities of interest (education~~
13 ~~COI, medical COI, business COI, and government COI) are provided access to the narrowband~~
14 ~~network.~~

15 Section 7. That § 49-31-66 be repealed.

16 ~~—49-31-66. The wideband network shall physically encompass at least two transport mediums.~~
17 ~~It shall utilize the capabilities of the copper wire telephone network, as well as fiber optic~~
18 ~~facilities and rings. The wideband network shall extend the range of fully digital and switched,~~
19 ~~fully addressable information transport from 144 Kbps to 44.736 Mbps, including the DS1 and~~
20 ~~DS2 rates of 1.544 Mbps and 6.312 Mbps. Wideband users shall be provided access to multiples~~
21 ~~of the 64 Kbps channels up to the 44.736 Mbps rate over a fully interactive, switched,~~
22 ~~symmetric-two way, fully addressable, robust, secure, survivable transport network. The~~
23 ~~wideband network includes local fiber facilities and ring type architectures at up to DS3 (44.736~~
24 ~~Mbps), utilizing the virtual tributary sub-SONET rates. This architecture shall provide robust,~~
25 ~~diverse routing in the local loop. Class level switching nodes shall be located close to the~~

1 customer, to extend the class level hierarchy. The wideband access switches will provide direct
2 local public network access, supporting a variety of network switching technologies and
3 interfaces, facilitating public-to-private inter-networking including one of more of the following:

4 ~~— (1) Fractional ISDN -- N X 64 Kbps and N X BRI: ranging from 128 Kbps to 44.736~~
5 ~~Mbps;~~

6 ~~— (2) Wideband ISDN: Primary Rate ISDN (PRI) @ 23B (64 Kbps) + D (64 Kbps), H0~~
7 ~~H11.~~

8 Section 8. That § 49-31-67 be repealed.

9 ~~— 49-31-67. The wideband fully switched, addressable, supportable, growable, integrated~~
10 ~~network architecture shall support the open access requirements of the federal~~
11 ~~Telecommunications Act of 1996. It shall allow alternative resellers to provide transport to~~
12 ~~customers via these new local fiber rings, while isolating their activities from the critical class 5~~
13 ~~switch functions. Users and emerging ISPs (Information Service Providers), and ESPs~~
14 ~~(Enhanced Service Providers) shall be able to either access or bypass the public network's higher~~
15 ~~level class 5 and broadband's super 5 switches offerings when communicating locally or~~
16 ~~regionally with an ASC (Applications Service Center), or globally via an IXC's (Inter Exchange~~
17 ~~Carrier's), ATP's (Alternative Transport Provider's), or CAP's (Competitive Access Provider's)~~
18 ~~POP (Point of Presence).~~

19 Section 9. That § 49-31-68 be repealed.

20 ~~— 49-31-68. The broadband network shall extend the range of fully switched, symmetric,~~
21 ~~addressable, robust transport services over the fiber network, utilizing SONET rates which~~
22 ~~increase in multiples of OC-1 (51.84 Mbps) including OC-3 (155.52 Mbps) and OC-12 (622.08~~
23 ~~Mbps), while using the broadband ISDN UNI/NNI & SONET interfaces. ATM, STM, or~~
24 ~~channel switching shall be provided with advanced operational support systems that use~~
25 ~~expanding network management capabilities to ensure the ongoing support of the network~~

- 1 ~~infrastructure when commercially available. This protects the citizens of South Dakota from~~
- 2 ~~disrupted or failed communications because of increased traffic loads.~~