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NTCA
NATIONAL TELEPHONE COOPERATIVE ASSOCIATION
The Voice of Rural Telecommunications

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

June 22, 2001

Ms. Magalie Roman Salas, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

EX PARTE OR LATE FILED

Re: Ex Parte Notice
WT Docket No. 97-82 and GN Docket No. 01-74

Dear Ms. Salas:

On Friday, June 22, Jill Canfield, Regulatory Counsel for the National Telephone Cooperative Association; John Prendergast, Partner with the law firm Blooston, Mordkofsky, Dickens, Duffy & Prendergast; and Greg Whiteaker, Principal with the law firm Bennet & Bennet, PLLC, met with Lauren Van Wazer, interim Legal Advisor to FCC Commissioner Michael Copps.

Ms. Canfield, Mr. Prendergast, and Mr. Whiteaker talked about Section 309(j) of the Communications Act, rural telephone cooperatives, and the difficulties faced by rural telephone companies in obtaining wireless spectrum. Specifically, the group discussed the possibility of licensing the lower 700 MHz spectrum according to small service territories and the problems with the Commission's current attribution rules. The group pointed out that the Commission's rules attribute the outside income of a director of a telephone cooperative to the cooperative for purposes of determining whether the cooperative qualifies for auction bidding credits. It was shown that such a rule is inconsistent with the cooperative model.

An NTCA "white paper" and a brochure about telephone cooperatives were handed out at the meeting. Both are attached.

In accordance with FCC rules, I am submitting two copies of this letter and attachments. If you have any questions, please do not hesitate to call me.

Very truly yours,

Jill Canfield
Regulatory Counsel

cc: Lauren Van Wazer

Attachments

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The NTCA 21st Century White Paper Series

NTCA

Community Based Telephone Service for Rural America

By NTCA Staff

May 2000

Community Based Rural Telephone Service for Rural America

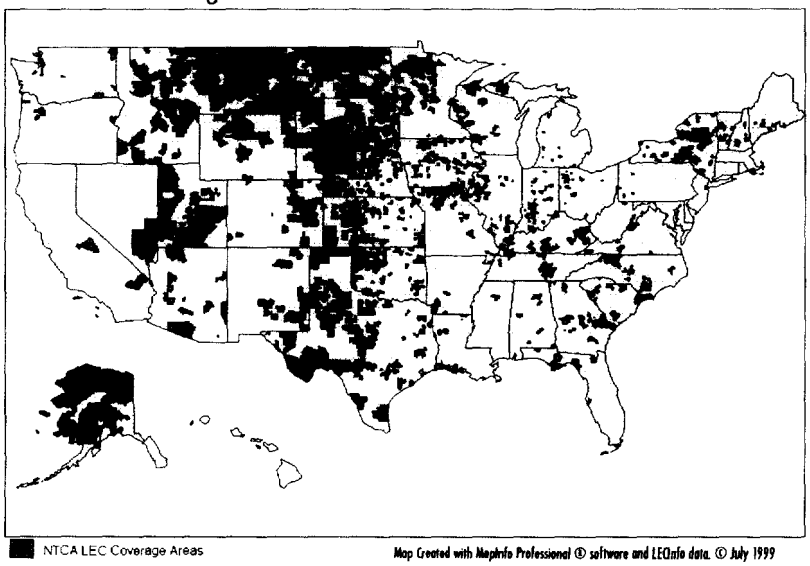
By NTCA Staff[1]

I. Introduction

NTCA an Association of Rural Telephone Companies

The National Telephone Cooperative Association (NTCA) represents more than 500 rural telecommunications companies that serve approximately 2.6 million subscribers across the United States. These companies' customer bases range from less than 100 to more than 50,000. One half of NTCA member companies have less than 2,500 subscribers. 80% serve between 500 and 10,000 subscribers. Excluding the 20 members with more than 20,000 lines, the average company has 3,800 subscribers. Each company is unique and serves communities and markets that also are unique. The companies are the true pioneers of the telecommunications industry. They were the first to string and bury cable in places too sparsely populated for serious consideration by the giants of the industry. They are still the first and often the only provider to bring the latest telecom technology to the remote subscriber in Alaska, Hawaii, the Northern Plains and other rural areas. The map depicts the large geographic area served by NTCA companies.

NTCA LEC Coverage Areas



NTCA LEC Coverage Areas

[1] R. Scott Reiter, NTCA, Senior Telecommunications Specialist and Pamela Sowar Fusting, Consultant. Grateful thanks and appreciation is extended to colleagues at NTCA for their selfless contributions. The authors are indebted to everyone who reviewed and edited this paper. Your efforts helped us to create a much better product. Our thanks to Paul Shultz, Jessica Bridges, Tom Wacker, Dan Mitchell, Jill Canfield, Aaryn Slafky and Mike Tetelman.

Rural Telephone Companies—Community Based Companies

Small cooperative and commercial local exchange companies have played a major role in connecting rural America to the world. This paper is intended to highlight that role and bring out facts that demonstrate the need for federal policies to preserve the benefits these companies bring to rural America. While the paper relies on some data that is based solely on NTCA members, it draws from sources that include the larger and constantly changing universe of approximately 1,300 rural telcos.

Rural telephone companies[2] (telcos) are local businesses that serve a variety of community needs, including education and economic development. Modern rural telcos are integral parts of their communities, and they are the lead entities for procuring and deploying new telecommunication technologies that are needed by consumers. In general, rural areas cost more to serve and have far fewer inhabitants than urban areas and have limited financial resources at their disposal. These factors present ongoing challenges to the deployment and maintenance of advanced technologies. The small community based telcos that serve rural areas are best positioned to provide the state of the art facilities and services to avoid the so-called "digital divide between urban and rural America."[3]

Federal Policies Enabling Service to Rural America

The high level of telecommunications services provided by rural telcos is due in large part to the pioneering and entrepreneurial nature of these companies. Yet dedication, ingenuity, and commitment alone would not have been sufficient without federal policies and support programs such as the Rural Utilities Service[4] (RUS) Telecommunications Loan Program, universal service[5], and an interstate access charge system that helped bear the high cost of service to rural areas.

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[2] As used interchangeably herein, "rural telephone companies," "rural telco," and "rural incumbent local exchange carriers" refer to Rural Telephone Companies as defined in 47 U.S.C. § 153 (47).

[3] See generally, National Telecommunications and Information Administration, Falling Through the Net: Defining the Digital Divide, A Report on the Telecommunications and Technology Gap in America, U.S. Department of Commerce (July 1999).

[4] The Rural Utilities Service (RUS), formerly Rural Electrification Administration (REA), is a department of the U. S. Department of Agriculture, and is authorized to make loans pursuant to 7 U.S.C. § 922.

[5] Universal service is a federal policy embedded in Section 1 of the Communications Act of 1934 and in Section 254 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 codified at 47 U.S.C. §§ 151 et seq. The Federal Communications Commission (FCC) implemented Section 1 by establishing a Universal Service Fund and other mechanisms. It began the implementation of Section 254 in a Report and Order, FCC 97-157, CC Docket No. 96-45, 12 FCC Rcd 8776 (rel. May 8, 1997).

Rural telcos still receive support under universal service mechanisms established before the 1996 Act. They receive support for service to low income customers and for high cost areas. The low-income support mechanisms, Lifeline and Link Up America, were instituted in 1984 and 1987 to help low-income individuals afford the cost of monthly telephone service and to pay part of the costs of connection and installation.[6] High-cost support enables telcos serving areas with very high costs to recover some of those costs from the support mechanisms.[7]

There are three high-cost support mechanisms that still apply to rural telcos: Universal Service Fund (USF), Long-Term Support (LTS), and Local Switching Support (LSS). The USF provides support for high cost "loops" or connections between the subscriber and the telco central office. The USF was created in its present form in 1988. LTS was established in 1989 to enable the companies remaining in the National Exchange Carrier Association (NECA) common line pool to charge rates closer to those charged by low-cost companies permitted to withdraw from the common line pool. LSS is support provided to local exchange carriers (LECs) with 50,000 or fewer access lines to defray the higher switching costs of small LECs.

The access charge system was adopted by the FCC in 1983 to replace the settlements system that existed prior to the breakup of AT&T.[8] The calculation of access charges involves a multi-step process to record costs and revenues,[9] determine regulated costs,[10] apply separations rules to identify interstate costs,[11] and then use access charge rules to translate costs into charges or rates that interexchange carriers pay local exchange carriers for originating and terminating their customers toll calls.[12] The access charge rules provide for the recovery of incumbent local exchange carrier costs that have been determined to be interstate costs. Most rural telcos receive more than half of their total operating revenues from access charges. For the small local exchange companies, access revenues are governed by traditional "rate-of-return" regulation.[13]

The access charge regime and universal service programs and policies have given rural companies the financial means by which to deploy modern services throughout the rural areas of America. The combination of rural community based companies and federal programs and policies have made it possible for the companies to offer comparable telecommunication services at prices and

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[6] See Monitoring Report, CC Docket No. 98-202 (December 1999), Section 2 for comprehensive description of low-income support.

[7] See Monitoring Report, CC Docket No. 98-202 (December 1999), Section 3 for comprehensive description of high cost support.

[8] MTS and WATS Market Structure, Third Report and Order, CC Docket No. 78-72, Phase 1, 93 FCC 2d 241, recon., 97 FCC 2d 682 (1983), second recon., 97 FCC 2d 834 (1984).

[9] The rules for recording financial information are referred to as the Uniform System of Accounts and are contained in Part 32 of the FCC's Rules. See 47 C.F.R. §§ 32.1-32.9000.

[10] This is governed by a section of Part 64 of the FCC's Rules. See C.F.R. §§ 64.901-64.904.

[11] Separations requirements are contained in Part 36 of the FCC's Rules. See C.F.R. §§ 36.1- 36.741.

[12] The detailed rules for calculating access charges are found in Part 69 of the FCC's rules. See C.F.R. §§ 69.1-69.622.

[13] Rates are based strictly on the costs to provide service including a fair rate of return on investment.

quality that are comparable to those that are available in urban areas. Without access charges, federal low interest loan programs and universal service policies, many services would not be available in rural areas.

Universal service policies have been the foundation that has served rural America throughout the 20th century and will continue to make it possible for local telcos to serve the nation's rural customers in the 21st century. The Telecommunications Act of 1996 made universal service support explicit and mandatory after many years of experience with implicit support and agency policies backed by the industry. The FCC has not yet decided how it will implement the new system of explicit support for rural telcos. The Rural Task Force will make a recommendation on an appropriate mechanism for rural telcos on September 30, 2000.[14]

History has demonstrated that community based telcos have provided widespread availability of high-quality basic and advanced telecommunications services to rural America. Appropriate government policies can provide the financial assistance and incentives necessary for future investments needed for comparable services to continue to be available. This is the challenge of the 1996 Act. The rapid technological advances occurring across the telecommunications spectrum require the ongoing deployment of new infrastructure. Today's advanced services are tomorrow's basic services.

Although many policymakers acknowledge that there are differences between rural and urban areas, they tend to view "rural America" as a single, homogeneous region. Nothing could be further from the truth. There are marked differences between and among rural areas in demographics, geography, and economic bases.[15] The reality of such rural diversity belies the old, stereotypical, Grant Wood-like image of rural people dressed in overalls and holding pitchforks. This diversity carries over to rural telecommunications service areas as well.[16] Without question, telecommunications solutions for the Northern Plains do not necessarily work for the Desert Southwest, the Gulf Coast, or even the Southeastern United States. Each area is different and, indeed, there is no "one size fits all" solution, technology, or approach to serving rural markets. Overcoming these challenges will require creativity, innovation, entrepreneurship, and adequate universal service mechanisms to keep the same telecommunications available in rural America that can be found in urban areas.

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[14] The Rural Task Force is an independent advisory panel appointed by the Federal State Joint Board on Universal Service to provide guidance on universal service issues affecting rural telephone companies.

[15] See The Rural Difference, Rural Task Force, White Paper 2, January 2000.

[16] See generally, Vicki M. Hobbs and John Blodgett, The Rural Differential: An Analysis of Population Demographics in Areas Served by Rural Telephone Companies, Rural Policy Research Institute (RUPRI), University of Missouri (August 1999); < www.rupri.org >.

II. Historical Background

1890s–1930

To understand the modern rural telco, one must look at the history of telephone service in rural America. The independent telephone industry[17] dates to the early 1890s, when the nation was still largely agricultural. At that time, farmers and other pioneers began to develop mutual, cooperative, and family-owned phone systems to meet their communications needs.[18] The early systems employed large, wall-mounted, magneto, crank instruments and often had 20 or more subscribers connected to the same line.[19] Thousands of such rural telephone systems sprang up—more than 32,000 by 1912, reaching a high water mark than 60,000 in 1927.

1930–1950

In the 1930s, the Great Depression descended upon America and prevented many rural subscribers from being able to afford telephone service. As a consequence, many rural telephone facilities deteriorated and fell into disarray. In short, poor phone service in the 1930s and 1940s became the standard in rural America. By 1949, only 39% of rural Americans had telephones.[20]

This state of decline prompted the federal government to establish a telephone loan program modeled after the successful electric programs that were launched under the Rural Electrification Act of 1936 (RE Act). The so-called telephone amendments to the RE Act were signed into law by President Harry Truman on October 28, 1949. These amendments have provided the necessary financing for the evolution of rural telecommunications from a patchwork of old and broken down equipment to a landscape of modern technology.

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[17] The independent telephone industry is defined by those telephone companies which were not part of the pre-divestiture AT&T company. Independent companies appeared in 1893 with the expiration of the original patents held by Alexander Graham Bell. Independent companies have existed continuously since and more than 1,300 exist today. Most are locally owned and dedicated to providing telephone service to their communities.

[18] "Mutual" organizations were actually the forerunners of "cooperatives." "Stock" mutuals charged member subscribers a regular fixed fee and usually operated their own switchboards. Members of "pure" mutuals—also known as "club lines" or "farmer lines"—each bore a share of the system expenses, did their own repairs, and paid no fixed service fees. See Builder of the Past–Architect of the Future: The History of the REA/RUS Telephone Program (Builder of the Past-Architect of the Future), Foundation for Rural Service (1999) at 12. Mutuals eventually evolved into today's cooperatives, and family-owned or investor-owned small enterprises are referred to as "commercial companies or independents."

[19] Builder of the Past–Architect of the Future at 12. Early rural systems used two types of construction: grounded, one-wire systems that used the ground to complete the circuit, and metallic two-wire systems that offered reduced electrical circuit interference.

[20] Id. at 7. Frequently, subscribers paid their phone bills with chickens, grain, and other farm produce. Equipment was often broken down—wires were tied to fenceposts, and fruit jars were occasionally used as insulators.

1950-1990

The impact of the federal loan program was dramatic. By 1958, 83% of the lines served by rural telcos that secured financing under this program were converted from manual to dial[21], and by 1960 this had increased to 91%. The REA program financed 80% of these dial offices[22]. By 1970, 99.8% were dial. The almost ubiquitous availability of one-party service is another indicator of the great strides made in the last 40 years.[23] In 1960, only 14% had one-party lines and 77% had four-party or higher service. By 1970, 42% had one-party service. This increased to 79% in 1980, 96% in 1990 and reached 99.8% in 1997[24].

1990s and Beyond

In the 1970s and 1980s, it was the small rural telcos that led the way by deploying digital switching into the local central office.[25] At the end of 1997, over 99% of rural telco switches were digital.[26] In contrast, the Regional Bell Operating Companies (RBOCs) still had almost 15% of their switching investment in analog switches.[27] Some surmise that the large companies have lagged behind due to the adoption of incentive-based, or alternative, regulation, i.e., using price caps instead of rate of return regulation. Tom Bonnett[28], for example, suggests that [large] telcos have continuously invested heavily in digital switches, but have made these major investments strategically rather than throughout their service territories. Hence, the quality of infrastructure deployed by the large companies varies.[29] In fact, some NTCA members have begun to offer competitive local exchange services in adjacent large company areas with poor service. This is possible because of the common pattern of service prior to the passage of the Telecommunications Act of 1996. Until then, the larger companies typically served the town as "a hole in the doughnut" which left the less densely popu-

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[21] Dial Central Offices permitted subscribers to place local calls themselves without the need for an operator.

[22] 1960 Annual Statistical Report, Rural Telephone Program, REA Bulletin 300-4, Rural Electrification Administration, U. S. Department of Agriculture (Jan. 1962) at 8, Table IV.

[23] Today everyone takes one-party service for granted. Only 40 years ago nearly everyone in rural areas had multi-party service and shared the phone line with their neighbors.

[24] All data are taken from REA and RUS Annual Statistical Reports for the referenced years.

[25] Digital has two major advantages over analog. First, a digital signal is precise. It avoids the build up of extraneous noise by regenerating (recreating the original digital signal). This advantage has become increasingly important with the huge increases in the transmission of information. Second, the electronics used in digital switches continues to get cheaper and more powerful. Today's modern audio, video, and information equipment is digital.

[26] At the end of 1997, only 44 0f 7093 switches were not digital. 1997 Statistical Report Rural Telecommunications Borrowers, I.P. 300-4, U.S. Department of Agriculture, Rural Utilities Service (Aug. 1998) at 33.

[27] Of a total switching investment of $45,841 million, investment in analog switching was $6,610 million. 1997 Statistical of Common Carriers, FCC, Common Carrier Bureau Report (Nov. 30, 1998) at 30, Table 2.7 ("1997 SOCC").

[28] Thomas W. Bonnett is an independent public policy consultant and writer. From 1992 to 1997 he was Director of Environment and Economic Development at the Council of Government Policy Advisors. He is the author of Telewars in the States: Telecommunications Issues in a New Era of Competition, July 1996, Council of Governor's Policy Advisors.

[29] Bonnett, as cited in letter to John McNamee, Economic Development Administration, Department of Commerce, June 9, 1997.

lated surrounding areas for the small companies. With the passage of the Act, competition for the towns is both permitted and encouraged by federal policies. This has allowed the smaller rural telcos to overbuild inferior facilities and bring better service to small towns in rural America.[30]

III. What Is "Rural"?

Home to roughly one-fourth of the U.S. population, rural America is a vital part of this country.[31] Rural areas have long been viewed as agricultural economies, and while they remain the providers of most of the nation's food and fiber, the U.S. Department of Agriculture (USDA) notes that rural America has taken on many additional roles. These roles include providing labor for industry, land for urban and suburban expansion, sites for storage of waste and hazardous materials, and natural settings for recreation and enjoyment.[32] Many rural economies are not based solely on farming or the mining and extraction of natural resources.

The Rural Policy Research Institute (RUPRI) has determined that, at the time of the 1990 census, rural telcos served approximately 17 million people, or 7% of the U.S. population.[33] RUPRI notes that 73% of those 17 million people or approximately 12.5 million are considered rural by census definition–e.g., they live in open country or in locales with less than 2,500 people. But of those 73%, nine out of 10 (91%) live in a "non-farm" setting. Further, RUPRI states that 21% of the population or approximately 45 million people are living in rural areas served by non-rural telcos.[34]

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[30] See comments of The Rural Independent Competitive Alliance, In the Matter of Access Charge Reform, Fifth Report and Order & Notice of Proposed Rulemaking, CC Docket 96-262 (filed Oct. 29, 1999) at 3.

[31] There are varying definitions of rural. The 1990 census classified 25% of the population as rural. The U.S. Bureau of the Census defines "urban" areas as comprising all territory, population, and housing units in places of 2,500 or more persons incorporated as cities, villages, boroughs (except in Alaska and New York), and towns (except in the six New England States, New York, and Wisconsin), but excluding the rural portions of "extended cities," in census designated places of 2,500 or more, or in other territory, incorporated or unincorporated, included in urbanized areas.

The U. S. Office of Management and Budget (OMB) definition for rural, which is based on "non-metropolitan" areas, is the definition most commonly used for research, analysis, and policymaking in the United States. The OMB defines counties located inside a Metropolitan Area as "metropolitan" counties, and counties outside a Metropolitan Area are considered "non-metropolitan" or "rural" counties.

A Metropolitan Area (MA) is defined as one large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus. Some MA's are defined around two or more nuclei. A Metropolitan Area contains:

1. At least one central county with either a place with a minimum population of 50,000 or a Census Bureau-defined urbanized area and a total MA population of at least 100,000 (75,000 in New England).

2. One or more outlying counties that have close economic and social relationships with the central county. An outlying county must have a specified level of commuting to the central counties and also must meet certain standards regarding metropolitan character, such as population density, urban population, and population growth.

[32] Agriculture Information Bulletin No. 710: Understanding Rural America, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. (February 1995). See section titled, "Rural America."

[33] The Rural Differential at 2. RUPRI acknowledges that its 1990 census data is not current but states that it conducted its study "largely as a precursor to the forthcoming 2000 census, so that the methodology could be perfected well in advance of collection and release of millennial census data."

[34] Id. States where rural telcos serve the highest percentage of the population are Alaska (44%), North Dakota (31%), Montana (28%), South Dakota (27%), Iowa (23%), Minnesota (23%), Arkansas (22%), South Carolina (21%), and Wisconsin (20%). In Delaware, Rhode Island, and the District of Columbia, non-rural telcos serve 100% of the respective populations.

Although the rural work force was dominated by agriculture at one time, the family farm has all but disappeared. The percentage of rural residents employed in farming has dropped from 14.4% to 7.6% in the last 20 years, and less than 10% of the rural population live on farms.[35] Agricultural productivity increases have been partially realized through farm consolidation, and this has shifted many rural jobs to other sectors.

Government data indicates that the largest share of rural jobs and employment growth now comes from the services sector, which employs over half of all rural workers. The emergence of the services sector mirrors what has occurred in urban areas.[36] Overall population in rural communities is on the rise, having increased by 5% between 1990 and 1995.[37]

IV. Rural America—a Diverse Landscape

Awareness of the differences among rural areas and the differences within those areas is necessary to begin to understand the unique challenges facing rural telcos. For example, only 2% of jobs in rural New England are farming while farming is 13% of employment in the Great Plains states.[38] Mining predominates in Appalachian regions and the Mountain West. Manufacturing is more prevalent in the East and the South. Rural areas generally have lower income levels than urban areas, but poverty is worse in the South, parts of Appalachia, areas bordering on the Rio Grande Valley and on American Indian reservations.[39] Other differences include topography, climate, age of the population, ethnic backgrounds, and political views. Thus, it is inappropriate to characterize any rural area with a few stereotypical views.

The community based rural telco capitalizes on the distinct characteristics of the areas it serves while it shares and reflects the values and views of its own community. Furthermore, the economic viability of the rural telco is almost totally dependent on the economic well being of the local community it serves. As a result, the rural telco is able to sharply focus its efforts on quality, efficiency and service. This is a strength which cannot be matched by global giants or large companies serving numerous communities in many different states and differing regions of the nation.

V. The High Cost of Serving Rural Areas

Certain economic disadvantages persist in rural America. It continues to be more expensive for telecommunications providers to serve rural areas than urban areas. Fewer subscribers and lower subscriber density translate into higher costs. On average, RUS borrowers serve about 6 customers

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[35] Agriculture Information Bulletin No. 710 at section titled, "Rural Employment."

[36] Id.

[37] D. Linda Garcia, Who? What? Where? A Look at Internet Deployment in Rural America, Rural Telecommunications, Vol.15., No. 6 (Nov.-Dec. 1996) at 29.

[38] RUPRI website, http://www.rupri.org/policyres/context/employ.html

[39] RUPRI website, http://www.rupri.org/policyres/context/income.html

per sheath mile of cable[40], compared with the Bell company average of 48 customers per sheath mile.[41] Furthermore, there are even more customers per mile in cities. For example, Washington, D. C., has 261 customers per sheath mile.[42] On average cable and wire investment per subscriber for rural telcos is $1591[43] versus $785 for the RBOCs.[44] A similar comparison of switching investment per line reveals that RUS borrowers have invested $569 in central office switching per line[45] while the RBOCs average $348 per line.[46]

Density is not the only factor that makes it costlier to serve rural areas. The administration of a small rural telco takes a certain minimum amount of work, regardless of how many or how few subscribers are served. Also, for rural areas located a great distance from a major city or town, longer than average transport is required to carry less than average network traffic. Also, certain regions of the nation suffer from unforgiving terrain. Furthermore, the introduction of competition in the local telecommunications market does not change the underlying economics and only reinforces the provider's need to invest where the money is—in dense urban areas.[47]

Rural areas can also pose certain problems for the deployment of wireless systems.[48] The long distances and low population densities involved in serving rural customers mean fewer customers are served from each tower. Carriers need to operate cellular transceiver base stations at much higher power levels than in urban areas to reach enough subscribers to make the investment worthwhile.[49]

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[40] 1997 Statistical Report Rural Telecommunications Borrowers at 23.

[41] Total Switched Access Lines divided by Total Cable Sheath KM, converted to miles. 1997 SOCC, Table 2.10, column 2. This average includes Bell Company rural areas.

[42] Id. Column 14.

[43] Number is derived by dividing 1997 Cable and Wire Facilities Investment, 1997 Statistical Report Rural Telecommunications Borrowers at 27, Table 14 by lines served, 1997 Subscriber by grade—Total at 17, Table 9.

[44] Number is derived by dividing December 31, 1997, Total Cable and Wire Facilities, Balance at End of Year, 1997 SOCC, Table 2.7 by Total Switched Access Lines, 1997 SOCC, Table 2.10, column 2.

[45] Number is derived by dividing Total Switching Investment, 1997 Statistical Report Rural Telecommunications Borrowers at 27, Table 14, by lines served, 1997 Subscriber by grade—Total at 17, Table 9. 1997.

[46] Number is derived by dividing Total Central Office Switching by Total Switched Lines, 1997 SOCC.

[47] See Comments filed by Harris, Skrivan & Associates, LLC (HSA) on behalf of Cross Telephone Company, Pottawatomie Tel Co., Cimarron Tel Co., Carnegie Tel Co., Smithville Tel. Co, Valley Tel Coop, Cooper Valley Tel Co, and Home Tel Co., CC Docket No. 96-45 (December 19, 1996).

[48] Much emphasis has recently been placed on wireless alternatives as a cost effective substitute to landline service in some rural and/or insular areas. This is really a case by case decision process to determine the most economical way to serve an area.

[49] Bruce L. Egan, Improving Rural Telecommunications Infrastructure, Columbia Institute for Tele-Information, Columbia University (1996) at Section 6.3.

VI. Services & Technologies Provided by Rural Telcos

While there is no single recipe for the rural prosperity, few argue that an advanced communications infrastructure comparable to that offered in urban areas is an amenity needed to sustain the viability and growth of rural areas. In his paper for The Center for Rural Studies, Bruce Egan summarizes:

> Businesses consider telecommunications capability an important factor in their location decisions. To extent they have access, rural areas may gain more consideration as a viable alternative to urban and suburban locations. In turn, this demand-pull will stimulate further technology adoption as businesses and their various suppliers and customers make use of more efficient network facilities.[50]

Up to now, rural telcos have been able to bring most rural consumers basic options that their urban counterparts receive. NTCA annually gathers certain information from its members regarding technology, services, and lines of business.[51] The most recent information was collected in the fall of 1999.

Percent of Companies Offering Selected Features and Services

Custom Calling[52]	91%
Equal Access	87%
Signaling System 7[53]	74%
Voice Mail	65%
Internet Service Provider[54]	97%

These are important indicators of the widespread availability of what many would consider to be basic consumer options. It is only in some of the very smallest and most remote areas that these services are not available.

Internet Access

It seems clear that wherever basic telephone service is available in rural telco areas, so too is basic Internet service. In September, 1999 NTCA published the results of a joint Internet/Broadband Availability Survey.[55] The survey showed that 97% of the companies or their affiliates operate as

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[50] Id. Section 5.1.

[51] See NTCA's Web site, < http://www.ntca.org >.

[52] Custom Calling features are a group of features that do not need special terminal equipment. Custom Calling services include call waiting, three-way calling, speed calling, and call forwarding.

[53] SS7 is the standard state of the art signaling system used by the public switched network. Features which use end-to-end information like Caller ID and Look Ahead for Busy require SS7 capability.

[54] Information reported to NTCA by members as of 1999.

[55] Responses were received from 412 rural telcos, including rural companies that are not NTCA members.

Internet Service Providers (ISPs), 63% offer the service themselves and 34% offer the service through an affiliate. The survey indicated that Internet dial-up service is available to at least three-fourths of their subscribers in 81% of the companies. However, less than 20% of telephone subscribers also have Internet service. The average rate charged for unlimited access was under $20 with most charging $19.95 per month.

Broadband Telecommunications Capabilities

Many believe the changes now occurring in the field of broadband services are as important to rural areas as they are to their urban counterparts because information technologies can greatly diminish the traditional growth barrier caused by geographic isolation. Rural telcos stand ready to offer broadband services to their communities. Indeed, many rural telcos are already deploying some broadband, but they will need financial assistance to realize the same success across rural America with broadband that has been accomplished with basic telephone service.

It is too early to measure the extent of broadband deployment in rural areas. The definition of "broadband telecommunications capabilities" under Section 706 of the Telecommunications Act of 1996 is still being debated. Likewise, the FCC has still to determine which "advanced services" will be included in the definition of universal service.[56] NTCA does have anecdotal evidence that rural telcos are making progress in planning for and deploying broadband capabilities. In varying degrees, NTCA member telcos have deployed, or are in the process of deploying, asynchronous transfer mode (ATM), frame relay, hybrid fiber-coax (HFC), integrated services digital network (ISDN), synchronous optical network (SONET), and various digital subscriber line (DSL) technologies. For example, Valley Telephone Cooperative, Raymondville, Texas, already has deployed DSL even though the telco serves only 0.8 subscribers per square mile.

Diversified Companies

Rural telcos have diversified their service offerings to meet the unique and changing demands of the markets and customers they serve. They have not stood still. They have grasped each new opportunity presented by technological changes in the industry. They have capitalized on their experience and resources by investing in related lines of business utilizing affiliates, partnerships or joint ventures.

Approximately half of NTCA's member companies offer cellular, PCS, or both and about 45% provide long-distance service. Access to television channels either via cable TV or Direct Broadcast Satellite (DBS) is offered by 59%.

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[56] Section 254 of the Telecommunications Act of 1996 requires the Federal-State Joint Board on Universal Service and the FCC to base policies for the preservation and advancement of universal service on certain principles. These principles include providing reasonably comparable access to advanced services to consumers in rural and high cost areas at rates that are reasonably comparable to urban rates. The FCC is given authority to define those services eligible for universal service.

Nearly 30 NTCA member companies are involved in more than 80 local multipoint distribution service (LMDS) licenses. LMDS offers a broadband fixed wireless solution for both urban and rural areas. NTCA's LMDS Alliance has forged a request for proposal (RFP) to encourage manufacturers to develop equipment for rural applications.[57] South Central Telephone Association (Medicine Lodge, Kansas), Central Texas Telephone Cooperative (Goldthwaite, Texas), and PVT Networks Inc., a subsidiary of Penasco Valley Telephone Cooperative (Artesia, New Mexico) are launching LMDS systems during this year.

VII. Community Oriented and Community Based Services

The commitment to quality telecommunications networks and services by rural telcos stems from their roots—they are community based organizations. All NTCA members are headquartered in the locality where they provide service.[58] A home base means accessibility to the community where service is provided. In most rural communities, the telco is the largest or one of the largest businesses in town. It also means that the rural telco's prosperity is tied to the community's prosperity and future.

Civic duty is born of this relationship. Being an integral part of the community is a fact of life for rural telcos. These words from Jim Dahmen, general manager of Columbus Telephone Company in Columbus, Kansas, show how this view is reflected in the thinking of small telco leaders:

> The future of our company is the future of the community. If the company goes down, the community goes down. If the company rises, the community rises with it. Our loyalty is 100 percent to Columbus. We operate with the founding ideas of this country ... that we're all in this together ... It's the American way.[59]

Paul Violette, president of Merrimack County Telephone Company (Contoocock, New Hampshire) described the link between a rural telco's economic interest and community development this way: "I think it's a split between financial motivation and communal duty. We have both."[60]

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[57] NTCA press release, LMDS Alliance Update: Licensees to Push for Equipment (March 15, 1999).

[58] Some companies are located on state borders and may have exchanges in more than one state. Those companies may have a local office that serves customers across the state boundary.

[59] As quoted by Theron W. McLarty, The New Age of Economic Development, Rural Telecommunications, Vol. 18, No. 5 (Sept.–Oct.1999) at 14.

[60] Id., at 16.

In 1998, NTCA's Foundation for Rural Service (FRS) investigated the role of rural telcos in their communities. In a report published by FRS, 92% of the responding rural telcos said they were major supporters of community programs in their service areas. When asked about education, 85% said their telco was helping schools to take advantage of new technologies. Nearly three-fourths reported that they are interested or actively engaged in some form of electronic commerce. Almost two-thirds of the company managers surveyed participate in their local chamber of commerce or in some other type of development organization. Many managers, who said "no," indicated that they are located in very small communities without chambers of commerce.[61]

Involvement in Education and Health Care

As providers of state-of-the-art services, rural telcos furnish rural areas with access to information, educational and healthcare services, commercial markets, and business and technical assistance. They afford rural communities vital communication linkages with the economic sectors in urban, national, and global economies. Further, they are strong advocates of education.

An example of this commitment to education can be found in northeastern and western Montana where Vision Net Inc., was formed by rural telcos to provide distance-learning to schools.[62] This project was established in 1995 (before enactment of the Telecommunications Act and the federal Schools and Libraries program). Vision Net Inc. uses ATM technology and fiber optics to provide interactive video business conferencing, interactive video education, Internet services, wide area networks, and broadband transport throughout the state of Montana. When the ATM-backbone network is not being used for distance-learning, it becomes a virtual Internet pipeline to the world.

Each site pays $8,000 per year to be hooked up to Vision Net. The schedule includes 746 hours of classroom instruction per week at all sites, and nursing instruction that helps telemedicine programs. Telehealth Magazine named Eastern Montana's telemedicine network one of the top 10 in the nation.[63]

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[61] D. Linda Garcia, Ph.D. and Jennifer Wager, Rural Telcos: Connecting Their Communities to the Future, Foundation for Rural Service (1998).

[62] Vision Net is owned by five Montana ILECs: Nemont Telephone Cooperative (Scobey), Triangle Telephone Cooperative (Havre), Blackfoot Telephone Cooperative (Missoula), Northern Telephone Cooperative (Sunburst), and 3 Rivers Telephone Cooperative (Fairfield). As of September 1999, Vision Net had 60 interactive video sites, including 41 Montana school districts.
See < info@montanavision.net > See also, Innovation in Rural Telecommunications: Interactive TV at Work, Rural Telecommunications (July–August 1999) at 46, describing ENMR*Plateau's (Clovis, New Mexico) ITV network, which serves 11 school districts in the telco's 24,000 square mile service area.

[63] See Pat Bellinghausen, Eastern Montana Network Tops in Telemedicine, The Billings Gazette (December 13, 1999), < www.billingsgazette.com/main.htm >.

The Columbus Telephone Company (Columbus, Kansas) approach to economic development is to (1) provide schools and nonprofit organizations with high-speed access, (2) install fiber optics to extend telemedicine services, and (3) provide miscellaneous aid to connect public infrastructures, support job creation, and develop further business and housing space.[64]

The modern rural telco goes beyond government requirements when it comes to serving the community. The federal E-rate program, for example, provides for discounted service to schools, libraries, and hospitals for Internet access.[65] But many rural telcos provide services that receive no discounts from the E-rate program. They offer lessons on how to use the Internet, as well as instruction in Web development and design.[66] Others such as Nemont Telephone Cooperative retain grant writers to help educational institutions apply for E-rate funding.[67]

Rural telco managers are a key to the success of the rural telcos community-based orientation. As the FRS study states:

> Because these companies are socially embedded in their local communities, their managers can employ their skills and expertise not just to encourage network diffusion and technology transfer, but also to assure that rural networks build on local strengths and resources and are tailored to local needs. As leaders in their communities, telephone managers are also in a position to serve as brokers among local groups and officials—doctors, educators, bankers, economic development advocates—whose cooperation is essential not only to share network costs but also to pursue a multifaceted approach to development, designed to address the multiple problems facing rural communities.[68]

Community based boards have also played a critical role. Cooperative boards, for example, are elected by the cooperative membership, most often on a regional basis. These local governing boards know their communities and have an interest in their well being. Similarly, many small commercials are governed by directors and investors who have a deep interest in the well being of the communities where they live and do business.

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[64] McLarty, supra note 59, at 19.

[65] See generally, 47 U.S.C. § 254.

[66] See, NTCA's home page at < www.ntca.org > for links to member sites and the Web-related services they offer.

[67] Dial-Tone Is Not Enough: Serving Tribal Lands, National Telephone Cooperative Association (November 1999) at 29.

[68] Garcia and Wager, supra note 61, at 35.

VIII. Conclusion

In this paper we have described the diversity of rural America and the rich heritage of high quality services provided to local communities by community based companies. With few exceptions, the basic telephone services offered to the customers by the cooperatives and small independent companies is comparable to that available in urban areas. These companies have met the challenge. Government policies and support programs have been instrumental in the realization of universal service as we know it today. But these policies are not the sole reason for the success of the rural telco. The close tie and interdependence between the rural telco and the community has also been a critical component of this success.

We believe the pioneer spirit that brought phone service to the frontier more than a century ago has evolved into an entrepreneurial spirit that is causing today's community oriented service providers to maintain state of the art services and expand into new businesses and new areas. Further, we think the unique, diverse characteristics of rural communities offer major opportunities for the continuing economic growth of the nation. The success of the rural telco is an important ingredient for national prosperity. Healthy rural telcos contribute to healthy rural economies. Healthy rural economies contribute to the economic development of the country. A healthy rural economy backed by advanced technologies and universal service support will help ensure the United States continues to lead and benefit from the technological revolution that is currently sweeping the globe.

In future papers in this series, we will further explore how well the small community companies are doing in providing service to their communities. We will also look at what needs to happen to extend advanced services throughout rural America. The series will conclude with an examination of the implications and potential for competition in rural America.

Attachment A

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1 Pamphlet