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Rural America Home Based Businesses and the
Information Age

by

John Allen and Bruce Johnson

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Rural America Home Based Businesses and the Information Age

John Allen & Bruce Johnson ^{1/}

Recent technological developments in the areas of personal computers, fax machines, satellite and down-link systems and interactive television have allowed rural residents to participate in national affairs as never before. The use of these new technologies is creating new forms of social and economic organization which makes it possible for rural residents to overcome historic geographic isolation.

The importance of telecommunication technology for rural residents should not be taken lightly. As manufacturing jobs have decreased in the last decade, service jobs, primarily using telecommunication technology, have been increasing. The importance of this new development in the organization of labor is that it is now possible for rural residents to hold jobs at home which were previously located almost exclusively in urban centers. This new labor force is currently being identified as *Home-Office Workers*. In 1974, less than 8 million Americans worked out of their homes. In 1992, approximately 39 million were working out of their homes, and it is estimated that by 1997 almost 55 million workers will be conducting work without leaving home.

In 1993, of those 39 million home workers, 31% were full-time, self-employed home workers, 22% worked at home after hours, 30% were part-time, self-employed and 17% were full-time telecommuters. These telecommuters provide a model for job creation in rural areas of the nation; but the availability of a telecommunication infrastructure is vital to participation in this new form of social and economic organization.

Yet, for rural Americans to fully participate in the information age^{2/} and to capitalize upon these changes in social and economic organization, several physical, political and social barriers must be overcome.

The presence of the physical telecommunications infrastructure is a minimal precondition to the information highway much like roads and rail lines initiated settlement more than a century ago. Because of relatively sparse population spread over large expanses of space, the sheer costs of infrastructure development may preclude rural development without public policy intervention.

While most rural areas are presently linked with the information highway, the problem is a lack of consistency of service quality from among rural locations. Particular public consciousness is needed to avoid geographic *have nots* in telecommunications services access. But "Who will pay for the installation and continual upgrading of equipment?" The tradition is a private sector model in which local exchanges and long distance carriers provide access to all areas of the nation. But will the private sector serve the rural sparsely populated areas where costs may well exceed expected returns? A Nebraska study of telecommunications providers found most of the rural providers were operating with the help of government-

^{1/} John Allen & Bruce Johnson, "Policy Issues for Rural America in the Information Age," Directions, Univ. of Nebraska-Lincoln: Dept. of Agric. Economics, late spring 1994.

^{2/} Fundamentally, the information age results from the substitution of information for time, energy, labor and other resources in the production of goods and services.

subsidized loans and technical services rendered through the Rural Electric Administration (REA).

Decisions need to be made about regulations when users are crossing Local Access and Transportation Areas (LATA's). These LATA's are geographic areas established for carrying out the breakup of Ma Bell a decade ago. While they served this role, they also could be institutional barriers to rational organization. For example, as schools and hospitals attempt to create special linkages of computers and other communication devices across LATA's, these institutional boundaries can become impediments. As LATA's are crossed, new contracts need to be written with Interexchange Carriers (IXC's); and often these IXC's do not work together congenially. How to remove this institutional impediment to more effective reorganization of education and other services is a policy issue of special importance to rural areas.

An additional area of concern regarding equal access is local skill development. Recent research in Nebraska indicates that nearly one-third of Nebraska's adult and rural residents have had some training or work-related experience in using computers with modems and satellite hookups. Yet, as telecommuting becomes more common, worker skills will need to be upgraded. Currently, few training programs exist in rural areas which focus primarily on developing information technology skills. How to provide such programs and pay for them is a political and social question that needs to be addressed at both the federal and state levels.

In examining the movement toward job creation through the use of telecommunications communities play a critical role. Many small communities have zoning restrictions for home based businesses. While these restrictions may make sense for businesses which bring customers to a neighborhood or have large advertising signs, those of the information age generally have neither. Their customers are linked to them by telephone and satellite downlinks versus automobiles. So zoning regulations may inadvertently stifle some forms of information age home based businesses.

To facilitate the creation of information age jobs communities can support a focus on the use of computers, interactive television, and the use of electronic mail in their schools. These skills will be useful for those students who wish to stay in the community and create their own employment.

As job creation becomes more focused on information technology it may be necessary for some communities to use local tax dollars to provide the infrastructure necessary to hook into the telecommunication systems. This may include increasing the number of dedicated lines in a community and fiber optic cable hook-ups to homes, businesses and schools. Tax dollars may also be needed to create technology incubators to support new entrepreneurs grappling with the information age.

As participation in the information age expands, rural residents and communities have an opportunity to overcome much of their geographic isolation using telecommunication technology for job creation, education and service delivery. To become *suppliers* in the information age, many rural communities will need to become proactive and make investments in educational offerings and technological infrastructure. The passive alternative is to remain *buyers* in this new age, resulting in a net transfer of local incomes and purchasing power to the information *suppliers*.

Ron Shaffer
Community Development Economist