*i*Delta

Volume II: Recommendations for Information Technology in the Delta

Delta Regional Authority Board Members

Other information on *i*Delta is included in the
companion piece to this report; **Volume I: *i*Delta Report
and Data for Information Technology in the Delta.**

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DELTA REGIONAL AUTHORITY
OFFICE OF THE FEDERAL CO-CHAIRMAN

April 20, 2007

Information technology has the power to bring economic opportunity to the residents of the 240 counties and parishes served by the Delta Regional Authority (DRA). That's why the DRA is producing this information technology plan for the region. I want to extend my special thanks to the U.S. Department of Agriculture for having the foresight to fund this plan.

The release of this information technology plan comes less than three months after the unveiling of the plan for the Delta Development Highway System. We understand that information technology is as critical to the advancement of the region as highways. Our residents must have the ability to connect quickly to the global knowledge economy. We would never dream of limiting the access of drivers to publicly funded highways. By the same token, we must make sure people have access to the information highways.

There are, of course, differences between highways and information technology. The nation and the states have large agencies dedicated to the planning, funding, construction and maintenance of highway systems. No such unified system exists for telecommunications access. Responsibility is widely scattered.

We also teach driving skills. We don't exhibit the same drive to teach technology skills. And roads don't come in as many radically different forms as is the case with telecommunications access. People can choose from a telecommunications menu that consists of cable, phone lines, wireless, satellite and more.

The DRA would like to be a unifying force in our region when it comes to information technology. This fits into our mandated role as a regional planner, coordinator and advocate. No one is doing this for information technology in our region. We want to step up and help fill that role.

A wave of information technology investment is as necessary as great highway construction projects. We hope to use existing anchors such as universities, community colleges, medical schools, state organizations and local development districts as we move forward. Please join me in supporting this important initiative.

Sincerely,

Pete Johnson
Federal Co-Chairman

Executive Summary

In the new global economy information and communications technology (IT) is the major driver, not just of improved quality of life, but also of economic growth. Moreover, there are strong indications that IT has the potential to continue driving growth for the foreseeable future. Yet, most policymakers do not adequately appreciate this fundamental reality. In fact, after the post-2000 economic dip many concluded incorrectly that the IT economy was smoke and mirrors…

— Atkinson and McKay, *Digital Prosperity: Understanding the Economic Benefits of the Information Technology Revolution*, March, 2007

The *i*Delta project began with gathering data to accurately assess the status of information technology (IT) access and utilization in the Delta Regional Authority (DRA) counties and parishes. Through focus groups, a retreat, original source surveys, compilation of existing statistics, and input from an advisory council and the DRA's state alternates, the *i*Delta project was informed by contributions from more than 500 leaders in addition to substantial efforts in data collection and analyses. Volume I of the *i*Delta report, *Report and Data for Information Technology in the Delta,* records the fruits of the information gathering. Three fundamental conclusions, also documented in Volume I, emerged during the process:

- The accessibility, awareness and utilization of broadband infrastructure and resources are absolute necessities for individual, business, government and instructional success.

- DRA counties and parishes generally trail non-DRA counties and parishes and the U.S. in accessibility, awareness, and utilization of broadband infrastructure and resources.

- The Delta Regional Authority is the ideal organization to play a lead role in assembling and distributing resources for information technology in its constituent counties and parishes.

This is Volume II of the *i*Delta report, *Recommendations for Information Technology in the Delta*, and it consists of proposed

actions—driven by the gathered data—to improve IT access and usage. There are seven recommendations having to do with applications plus a recommendation on implementations. These recommendations are designed to achieve the three *i*Delta goals defined in Volume I: improve education, enhance entrepreneurship, and improve healthcare.

These recommendations are as follow:

Geographic Information Systems (GIS): All Local Development Districts (LDDs) in the DRA region will use GIS systems to support their community's (and DRA's regional) initiatives in health, transportation, economic and community development, homeland security, disaster pre-event planning and recovery, and other areas.

Telehealth: All citizens in rural areas will have access to health care augmented by the use of IT through applications such as basic and/or specialized clinical services, professional continuing education, and improved medical practice management.

Community Access: All citizens in the DRA region will have access to broadband Internet in their community, and the knowledge and training to operate in the Internet environment.

Awareness: All citizens and businesses in the DRA region will become aware of the value of technology to their economic future and the resources available to achieve success.

Distance Education: All schools will have distance education capabilities and trained personnel to manage the operations.

Workforce Development: All adults will have access to training in computer literacy, workforce skills, and business practices such as e-commerce and entrepreneurship.

E-Government: All communities will have Internet home pages that will provide information and services to their citizens, as well as the public outside the communities.

No single entity is currently organized to implement these recommendations in the Delta. No entity is currently engaged in developing applications, establishing priorities, working with local and state governments to plan for IT transformation in the Delta, or coordinating funding among a variety of federal sources. The Delta Regional Authority, however, is ideally suited to play such a role, and this report recommends that the Authority establish a new initiative to do so:

The DRA *i*Delta Center: Responsibility for addressing access and awareness issues, and for implementation of this report's recommendations, must reside in an organization that emulates the successful models of state broadband promotion organizations such as ConnectKentucky and e-NC.

The proposed *i*Delta Center should build upon DRA's highly successful record of federal, state and local partnerships and leverage private-sector involvement. The process that the *i*Delta Center should use is to partner with other federal agencies through interagency agreements.

The economic, educational and health needs of the Delta region are well documented and well known. It is simply not possible for the residents of the Delta to live where they live and still compete in an ever more demanding global marketplace without the primary tools necessary for success in that marketplace. Information technology is foremost among those tools. With Congressional and Presidential mandates to significantly improve conditions in the Delta, the DRA can use the lessons chronicled in *i*Delta to forever change the expectations and lives of the residents of this great region.
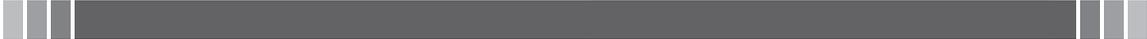
Introduction

Many reports have documented that information technology (IT), by increasing productivity, is a dominant factor in economic growth. The ever-increasing prominence of technology-driven growth provides a world of opportunities, but can be devastating for rural communities such as those found in the Delta. In general, their lack of access and utilization of IT has increased the isolation of rural residents from the vibrant, global economy. Absent intervention, this trend is likely to continue for the Delta as the IT-driven world becomes even more competitive.

As demonstrated in Volume I of the *i*Delta report, *Report and Data for Information Technology in the Delta*, the challenge is serious in scope and scale:

- Per capita income for the DRA region is about 20 percent below the U.S. average.

- The percent of population with a bachelor's degree is about 26 percent lower than the U.S. as a whole.

- About 15 percent of zip codes in DRA counties and parishes lack high-speed Internet service, compared to about 12 percent in the U.S. In DRA's rural areas, the number of counties and parishes lacking high-speed service is almost 18 percent.

- DRA counties and parishes that do have Internet-connected computers in their libraries still have far fewer computers per person than the U.S.

- The percentage of DRA school districts with a website lags the U.S., 54 percent compared to 62 percent.

- Only 13 percent of DRA counties and parishes have schools with community technology centers available after school hours; only 37 percent of communities have public technology centers outside of

schools and libraries; and only 22 percent of counties and parishes offer online government services.

● Only 15 percent of DRA local governments have a website, compared to about 24 percent of the U.S.

DRA counties and parishes trail in access, awareness and utilization of broadband infrastructure and resources that are absolute necessities for individual, business, government and institutional success. In areas such as health care and education where communities simply cannot afford to fail, IT represents the most convenient and most economically viable window of opportunity.

Just as the lack of IT resources represents a serious problem for the residents of the Delta, IT is also a great enabler. Advanced IT solutions are the mechanisms through which Delta communities can address problems most efficiently and pursue opportunities most vigorously. The aggressive deployment of IT applications in the Delta can catapult communities into positions of leadership, allowing them to move forward much more quickly than would be possible without IT solutions.

For more than a decade, economic development officials have been ringing the alarm about the South's lack of information technology access. To change this conversation and the region's reality, there must be significant new strategic investment in IT infrastructure and resources in the Delta. *i*Delta is the plan to guide the development of such an effort. Among the targets for such funds are:

● Schools,
● Clinics and medical practices,
● Workforce training,
● Local development districts,
● Local government,
● Communities,
● Non-profit organizations,
● Private businesses and
● Private citizens.

Of primary importance to the funding and implementation of this plan is the creation of federal interagency agreements between federal agencies and the *i*Delta Center to articulate and fund the vision of universal access and usage. The interagency agreements should articulate in concrete terms the strategic vision of each initiative. They must also have progress, performance measures, and timelines to ensure project success.

*i*DELTA AND DRA

Information technology and the telecommunications applications that it creates are as critical to the region's infrastructure as are its highways, electricity, water and sewer systems. IT has the potential to pave the way for DRA residents to connect to the global knowledge economy. IT can bring world-class education, health services, and employment and business opportunities to people's desktops. Policymakers would never consider preventing people's access to highways; neither should we hinder people's access to the information highways.

IT, however, differs dramatically from the highway system. The nation and each state have dedicated agencies that oversee the planning, funding, and promotion of the highway system. No such unified system exists for telecommunications access. Responsibility
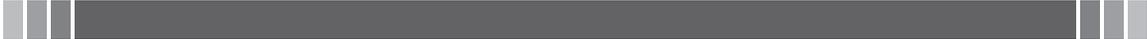
for access is scattered among federal departments and most states do not have focused organizations with access responsibility for all citizens. Also, society is set up to broadly teach driving skills as a necessary part of social and economic participation. Each state dedicates an entire agency to testing, licensing and regulating drivers. By contrast, people often operate computers without any training at all. Or worse, they are never exposed to the opportunities that can be developed with a working knowledge of computers and networks. Lastly, roads do not come in radically different forms, but telecommunications access does. Households can possibly choose from cable, phone lines, wireless, or satellite, for example.

This presents a fragmented, confusing landscape for IT, but one in which DRA can be the critical unifying force. DRA's Presidential mandate is to be "a regional planner and federal investment coordinator." DRA helps reduce fragmentation and duplication, while coordinating with federal agencies to administer projects for improving the region's workforce, and thereby, improving the region. Moreover, DRA has a substantive history of developing comprehensive programs that create highly successful economic solutions with broad participation of communities and the private sector. No one is currently doing this for IT in the region. DRA is an ideal agency to play the lead role in developing and deploying IT solutions in the region.

DRA can be the catalyst and coordinator of IT solutions, working with communities throughout the Delta and a wide range of federal and state agencies. DRA should use interagency agreements to marry the resources and national policies of federal agencies to the capabilities and challenges that exist in DRA communities.

THE *i*DELTA PROJECT

With funding from the U.S. Department of Agriculture, the Delta Regional Authority (DRA) contracted with Southern Growth Policies Board (SGPB) to accomplish two tasks: 1) assess the utilization of information technology for economic development in DRA's 240 counties and parishes, and 2) create recommendations based on the usage results. The results for Task #1 appear in the report, *Volume I: Report and Data for Information Technology in the Delta*. It includes data for 18 indicators for every DRA county and parish, a listing of federal and state IT programs, and an annotated bibliography of important resources. More complete descriptions of the project, Delta Regional Authority, and Southern Growth policies Board also appear in *Volume I*.

Recommendations that are the subject of Task #2 appears in this report, *Volume #2: Recommendation for Information Technology in the Delta*.

The *i*Delta project looked at IT utilization in five domains: education, healthcare, government, business, and personal and community engagement. A tremendous amount of citizen input informed the project's recommendations. The project engaged citizens through a regional planning retreat, focus groups, a survey of local development districts, interviews of county and parish officials, and an advisory committee.

DRA will take the recommendations in this report and work with federal agencies toward implementation, specifically by forming interagency agreements.

*i*DELTA RECOMMENDATIONS

The usage data presented in *iDelta Volume I* pointed to the IT needs of the DRA region. DRA and SGPB gathered data through focus groups, retreats, original source surveys, compilation of existing statistics, and the feedback from an advisory council and state representatives to DRA. All of this work led to the inescapable conclusion that the area's lack of broadband *access*, the lack of *affordable* access and lack of *awareness* about the economic and social importance of IT must be addressed. This report's recommendations are based on seven applications and a central organization responsible for promoting access and utilization throughout the region.

The applications are:

> *Geographic Information Systems (GIS)*
> *Telehealth*
> *Community Access*
> *Awareness*
> *Distance Education*
> *Workforce Development*
> *E-Government*

The report also recommends the creation of ***The DRA iDelta Center.***

The use of interagency agreements will allow greater leverage of knowledge and financial assets to accomplish the goals set forth in this report. Figure 1 is a matrix showing the applications with potential interagency partners for each. The total amount of funding, knowledge and expertise in the matrix, if properly organized and deployed, can unlock investment and progress in the Delta.

Figure 1. Matrix for Interagency Agreements

APPLICATION	POTENTIAL PARTNERS*
GIS	NOAA, USDA, Commerce, EDA, HUD, FCC, DHS, FEMA, NASA
Telehealth	HHS, USDA, FCC, USAC, HUD
Community Access	FCC, USAC, USDA, HUD, Commerce, EDA
Awareness	FCC, USAC, Commerce, EDA, NTIA (Commerce)
Distance Education	FCC, USAC, USDE, DOL, HUD, USDA
Workforce Development	DOL, FCC, USAC, USDA, Commerce, USDE
E-Commerce and Entrepreneurship	DOL, FCC, USAC, USDA, Commerce
E-Government	FCC, USAC, Commerce, EDA, HUD, USDA
The DRA *i*Delta Center	Appropriate Federal Agencies

*Key to Federal Agency Names

Commerce	Department of Commerce
DHS	Department of Homeland Security
DOL	Department of Labor
EDA	Economic Development Agency
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
HHS	Department of Health and Human Services
HUD	Housing and Urban Development
NASA	National Aeronautics and Space Administration
NOAA	National Oceanic and Atmospheric Administration
NTIA	National Telecommunications and Information Administration
USAC	Universal Service Administrative Company
USDA	U.S. Department of Agriculture
USDE	U.S. Department of Education
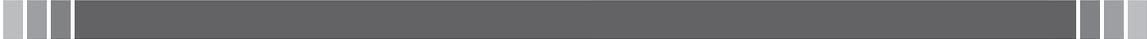
Listening to
the Region

DRA GOVERNORS

In developing the *i*Delta project and recommendations, DRA and SGPB canvassed a wide array of public figures and experts. A review of the DRA governors' legislative plans through State of the State addresses or similar documents revealed wide support for IT access programs.

Five governors specifically mentioned investments in public access:

- Arkansas Governor Beebe suggested spending $1.7 million to provide broadband access in libraries.

- Illinois Governor Blagojevich mentioned funding additional Community Technology Centers, where citizens can access the Internet, conduct computer operations, and receive computer training and assistance.

- Missouri Governor Blunt advocated spending $2.9 million to provide distance education at more of the state's high schools.

- To address IT issues, Tennessee Governor Bredesen proposed the creation of a Community Broadband Stimulus Program.

- Kentucky Governor Fletcher has an existing initiative, *No Child Left Offline,* which promotes computer and Internet usage.

Other areas of importance to governors are distance education (AL, KY and MO), the creation of regional councils that promote technology (MS and TN), and telehealth (LA and MO).

LISTENING TO CITIZENS AND POLICY MAKERS

To gather additional information and perspectives, DRA and SGPB held a regional retreat, two focus groups, and gathered reactions from an advisory committee and DRA state alternates.

More than 160 leaders in IT policy and representing all states in the DRA region attended the IT retreat in Jackson, MS. The retreat identified the following themes:

1. Connect all Delta residents to the Internet using all/any technology, and be innovative in considering *how* to connect Delta residents.

2. Train all residents to use technology.

3. Increase awareness about the benefits of, and need for, technology.

4. Streamline and simplify the funding process from state and federal sources

5. Create strategic plans for the region based on existing resources, the state of technology, and goals.

These themes have been absorbed into the recommendations in this report.

Focus Groups

DRA and SGPB held focus groups in Cape Girardeau, Missouri and Memphis, Tennessee, in addition to the retreat in Jackson, Mississippi. Participants in the Missouri focus group, like participants in the retreat, identified DRA's role as a funder and coordinator of "other federal funding sources for IT development." They also mentioned that Local Development Districts could be leaders on implementation activities.

Also proposed was the creation of an asset map of telecommunication resources, especially in GIS. Retreat participants advocated for educating the community on the benefits of technology. One group said that DRA should provide "leadership training and identify local leaders to be spokesmen for IT development " Another group said DRA should push for the creation of a "non-profit organization to accelerate broadband adoption."

In the Memphis focus group, participants again suggested that DRA "launch state and local public awareness campaigns emphasizing benefits of technology" and "encourage state and local politicians to make IT a platform." The group also advocated for projects using IT in workforce development, telehealth, and distance education. This group also critiqued the data indicators in Volume I.
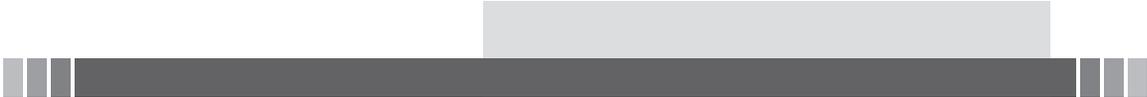
*i*Delta
Recommendations

This chapter contains descriptions and recommendations grouped by the eight iDelta IT areas. Each area consists of a vision statement, a context that explains the rationale for the vision, and example of model programs.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Vision

All Local Development Districts (LDDs) in the DRA region will use GIS systems to support the DRA's regional initiatives in health, transportation, economic and community development, homeland security, disaster pre-event planning and recovery, and other areas.

Context

Participants in the *i*Delta focus groups said that the Local Development Districts in the DRA region could lead access initiatives. LDDs are often centers of technical expertise in areas otherwise without such. They have the technical skills, the computer systems, and communications networks in which to anchor further deployment in surrounding areas.

Focus groups emphasized that LDDs should use their GIS systems to create asset maps of telecommunication resources. LDDs could also map resources that are key for disaster pre-event planning and recovery in areas such as homeland security, natural catastrophes, other infrastructure needs, and economic development.

Models

- Purchase Area Development District (PADD), Kentucky

  PADD GIS staff use an integrated suite of hardware and software tools to collect, analyze, and display a wide variety of economic, demographic and geographic data. PADD provides the public and private sector with accurate, up-to-date maps and addresses, including maps

of counties and cities, water and sewer lines, and maps to support comprehensive community plans, highway plans, and development. Activities include:

◆ Creating and maintaining one meter-accuracy roadway centerline mapping data information for four Purchase Area counties.

◆ Performing final quality controls for 68 counties in the Kentucky Transportation Cabinet's Highway Centerline Mapping Project's Maintenance Program.

◆ Providing technical support to the area's 911 system.

◆ Maintaining address-ranged road data for eight counties, which feeds into several state systems such as the highways and 911 programs.

◆ Generating maps for the Regional Industrial Park Board, the Four Rivers Performing Arts Center, Business Lending, Graves and McCracken County Bus Garage for route planning, and the New Concord Post Office.

◆ Providing mapping and data analysis support for the Regional Hazard Mitigation Plan.

◆ Providing water and sewer data for the State Water Resource Information System (WRIS) and the Water Management Council.

◆ Operating a Geographic Positioning System Base Station, which collects survey and mapping reference data, accessible from anywhere in the world.

◆ Making some of the maps available on the Internet.

● Meramec Regional Planning Commission (MRPC), Missouri

In cooperation with the Ozark Rivers Solid Waste Management District, MRPC has used technology to tackle illegal dumping as part of its strategy to promote a desirable quality of life for residents and businesses. MRPC used its GIS system to identify and map 69 illegal dumpsites in a seven-county region, including the site's location and size, and proximity to the region's water supply. Further studies will show the potential impact of the sites on water quality and will be used in clean-up efforts.

TELEHEALTH

Vision

All citizens in rural areas will have access to health care augmented by the use of IT through applications such as basic and/or specialized clinical services, professional continuing education, and improved medical practice management.

Context

Improving the health of the region's citizens is one of DRA's major goals. The citizens in the region generally have poorer health indicators than the U.S., including an infant mortality rate that is 43 percent higher than the U.S. (see *Volume I: Report and Data for Information Technology in the Delta*). Lack of access to medical care contributes to the poor health.

Telehealth, the providing of care, education, and improved medical practice management via advanced telecommunications

networks, is an answer to the region's access problems due to geographic and population-density isolation. Yet, only 20 percent of DRA counties and parishes (excluding Arkansas and Tennessee) have access to telemedicine programs.

Models

- Addressing Diabetes in the Delta, University of Tennessee Health Science Center

  The number of adults with Type II diabetes in Tennessee has increased by 51.6% from 1994 to 2004. Diabetes rates are highest in the DRA coverage area of West Tennessee, with some Tennessee counties experiencing the highest diabetes rates in the country. U.S. direct medical and indirect expenditures attributable to diabetes in 2002 were estimated at $132 billion.

  Addressing Diabetes in the Delta (ADD) seeks to provide diabetes care and education to 300 residents in six counties across state lines: Dyer, Fayette and Weakley, TN; Marshall and Tallahatchie, MS; and Mississippi, AR. The primary goal is to demonstrate the value of a health information technology intervention that delivers best practices care to an underserved population.

  ADD has three main components: (1) patient education; (2) quarterly group health visits; and (3) a secure, web-based electronic health record to facilitate outcomes tracking and communication among providers.

- Students Utilizing Community-Centered Education Systems (SUCCESS), University of Arkansas for Medical Sciences Rural Hospital Program

  A recent survey indicated that healthcare facilities in Arkansas had 5,885 *current* workforce vacancies, with 14,093 *expected* vacancies projected within the next 5 years. Unless significant changes are made in Arkansas' system of educating health professionals, critical shortages in rural areas for qualified health care professionals are destined to become a devastating problem.

Research has shown that if students can be recruited from rural communities and trained in those communities, they are much more likely to remain in those communities to practice. Although effective training and recruitment programs are in place to help improve the distribution of physicians and advanced practice nurses in Arkansas, a gap still exists in accessible training programs for allied health practitioners needed in scores of rural communities.

Students Utilizing Community Centered Education Systems (SUCCESS) is an individualized educational training program specifically designed for health vocations, uniquely crafted for individual pre-qualified candidates, and collaboratively funded in partnership with employers/communities to fill identified job vacancies. With the goal of bringing the education to the student, the curriculum is delivered primarily via distance education and will include various components, drawing from area libraries, community colleges and universities, Internet and interactive television courses, and clinical rotations in area hospitals and clinics.

The program is conducted in collaboration with local community advisors, rural hospitals, community health centers, health department clinics, the Rural Hospital Flexibility Program of the Arkansas Department of Health, Arkansas

Workforce Boards, the U.S. Department of Labor (Workforce Education and Apprenticeship Programs), and area colleges and universities. Additional resources will be needed to fund personnel, teaching equipment, curriculum development, program design, technology, and connectivity costs.

- Electronic Health Records in the Mississippi Delta, Delta Health Alliance

  Despite the opportunity to reduce errors, cut costs and improve the delivery of healthcare, the latest research indicates that only 10 percent of physicians use true electronic health record systems (EHR). The regional adoption of EHR will enhance the public health infrastructure (data, information and communication systems) and the ability of the healthcare workforce to deliver the best available services to individuals and communities. Researchers examining the impact of effective systems have projected that national adoption of these systems could save from 44,000 to 98,000 lives in the U.S. per year, and could yield a savings of $77.8 billion to healthcare companies, hospitals and providers.

To realize the vision of a dramatically improved healthcare landscape, the Delta Health Alliance, and nine institutions and agencies, have united to establish a regional health information network. The network will facilitate communication between providers, standardize and improve care, reduce errors, ensure privacy and increase profitability for healthcare facilities

This project will provide the infrastructure for 1) electronic health records at the Delta Regional Medical Center and the University of Mississippi Medical Center and 2) a platform for record sharing across all health agencies of the Delta Health Alliance. In the first year of operations, a team of clinical and technical experts from the University of Mississippi Medical Center and the Delta Health Alliance will establish the network in two locations: the Delta Regional Hospital and the University of Mississippi Medical Center. This pilot system is anticipated to serve 50 physicians across the Delta Region.

COMMUNITY ACCESS

Vision
All residents and businesses in the DRA region will have access to broadband Internet in their community and the knowledge and training to operate in the Internet environment.

Context
Communities can increase awareness, skills, and utilization of IT among their citizens by providing public computer centers equipped with broadband access, support personnel, computers, and printers. The centers can double as computer training classes. Community technology centers can be located on public property such as libraries, schools, or town facilities. The centers are often the first broadband and training link to poor, rural communities. As an added bonus, workers can use these centers to tele-work—perform work for a company geographically located elsewhere.

DRA counties and parishes generally have fewer public centers to access broadband IT than other areas of the country. As demonstrated in *Volume I*, they have fewer Internet terminals per population, have only 13 percent of their counties and parishes with schools open for computers operations after hours, and have only 37 percent of counties and parishes with public centers outside school and libraries. Clearly, an increased number of centers are needed for the DRA region.

Models

- Connect SI, Southern Illinois University, Illinois

  Connect SI is a 20-county economic and community development initiative that seeks to expand the regional economy through broadband connectivity. The goal of Connect SI is to create a highly collaborative, connected, and competitive region that celebrates its unique assets and qualities, and communicates those assets and qualities into the global marketplace

  Southern Illinois University anchors Connect SI by providing technical, educational, and management resources to surrounding communities. The integration of Connect SI into Southern Illinois University has proven to be of profound benefit in providing broadband access and helping to instill a sense of urgency and collaboration within the region.

- Business and Technology Telecenters, e-NC, North Carolina

  The e-NC Authority has launched seven business and technology telecenters. Telecenters are technology and entrepreneurship hubs within communities. In North Carolina's most rural areas, these telecenters provide free high-speed

Internet service to the public and a variety of fee-based business and technology services to local nonprofits and businesses. The telecenter system offers employee training, state-of-the-art office space, technology expertise and business advice.

The four original telecenters have provided free Internet access to more than 50,000 individuals. They have created more than 200 jobs and provided technical and business support services to more than 1,000 public and private sector clients. They have leased space to more than 20 organizations and brought computer training to more than 10,500 people through nearly 900 training classes. More than anything else, the telecenters act as catalysts for economic development in their regions.

Each telecenter has its own unique focus and partners. However, all telecenters provide the following services:

- Technological resources and services, including high-speed Internet connections, video conferencing, and Web site design and e-commerce assistance for local businesses. The services are offered to new and existing businesses as well as to local governments and non-profit organizations.

- Training programs to prepare local people for higher-skilled jobs and to support the needs of area businesses.

- Tele-work programs that provide on-site employment opportunities. For example, telecenters might contract with businesses (local or distant) to provide services from the telecenter, or provide space or workstations for companies that wish to set up their businesses at the telecenter site.

AWARENESS

Vision
All residents and businesses in the DRA region will become aware of the value of technology to their economic futures and of the resources available to make their economic futures successful.

Context
In the DRA/SGPB IT retreat, participants identified "educating the community on the benefits of technology" as one of the five most important themes. In the Memphis focus group, participants suggested that DRA "launch state and local public awareness campaigns emphasizing benefits of technology" and "encourage state and local politicians to make IT a platform issue."

In the survey of county and parish officials, SGPB found that many county and parish leaders were not aware of IT resources available in their community, were intimidated by the technology, or did not grasp the importance of IT infrastructure.

Models
● Healthy Delta Program, Delta Regional Authority

Analagous to IT awareness is DRA's Healthy Delta Campaign. In 2006, the Delta Regional Authority created a comprehensive program to increase diabetes awareness in the 240 counties and parishes it serves. Diabetes is a problem across the country, but the Delta has experienced especially high rates of the disease. Of the 10 states with the worst diabetes statistics, five of them are DRA states. The Delta region is truly ground zero for the diabetes epidemic. The epidemic is holding the Delta workforce back from being as productive as it should be.

The DRA board determined that this is an economic issue as well as a public health issue. People who aren't healthy can't go to work and produce the goods and services needed to drive a region's economy. The DRA's Healthy Delta program is designed to get people in the region to see their health care providers and manage their diabetes.

Television and radio spots are run throughout the region. People are encouraged to use a toll-free number to contact the Healthy Delta call center. Those who call are given an American Diabetes Association risk test, screened for Medicaid eligibility and given help finding a provider. All of the information is put into a database. The call center follows up after 30, 60, 90 and 120 days to see what care callers are receiving.

There is also a minority outreach element of the program since minority audiences have traditionally been hard to reach. A network of several thousand churches has been involved in this approach to increase awareness. DRA should do a similar awareness campaign for IT.

DISTANCE LEARNING

Vision

All schools will have distance education ca-
pabilities and trained personnel to manage
the operations.

Context

Distance education—the provision of classes
over telecommunications lines—potentially
enables any student, anywhere in the DRA
region, to participate in class subjects available
to students in much larger, affluent schools.
Students in the DRA counties and parishes
could use the help. The educational data in
Volume I demonstrate poor school perfor-
mance, including percent of school districts
with websites (DRA 54.2 vs. U.S. 62.2),
percent of adults with at least a bachelor's
degree (17.2 vs. U.S. 23.4, with only 12.4
percent in rural DRA counties and parishes)
and percent of students leaving high school
(5.5 vs. 4.5 percent for the U.S.).

Models

- KIPP Delta College Preparatory School,
  Arkansas

  The KIPP Delta College Preparatory
  School is a public charter school that
  is part of the national Knowledge Is
  Power Program (KIPP). KIPP schools
  are free public schools in under-served
  communities in 16 states and the
  District of Columbia. The Delta Col-
  lege Prepatory School in Helena-West
  Helena was established in 2002 and has
  grown to serve 270 students in grades
  five through nine. The student body is
  97 percent African-American and 89
  percent of the students qualify for free or
  reduced-price lunches.

In 2006, DRA awarded the school a grant
of almost $30,000 for a distance learning
lab. The lab will initially deliver Spanish
courses taught by teachers at the Arkansas
School for Mathematics, Sciences and the
Arts in Hot Springs, Arkansas. The variety
of courses offered through the lab will be
expanded significantly in future years.

- ACCESS Distance Learning, Alabama

  ACCESS Distance Learning (Alabama
  Connecting Classrooms, Educators, and
  Students Statewide) is an education ini-
  tiative of the Alabama Department of
  Education. It uses telecommunications
  to provides opportunities and options
  for Alabama public high school students
  to engage in Advanced Placement (AP),
  electives, and other courses to which they
  would not otherwise have access. Ala-
  bama began the program because the state
  ranked 14th out of 16 southern states in
  AP offerings and because approximately
  32 percent of Alabama public school stu-
  dents are in rural schools, often in impov-
  erished regions with limited local funding
  and education resources.

  ACCESS provides high quality instruc-
  tion and coursework through a statewide
  interactive videoconferencing network
  and the Internet. Instruction is pro-
  vided by Alabama teachers certified as
  "E-teachers," at delivery school labs, to
  other high school labs staffed by facilita-
  tors without such credentials.

The program's objectives are to provide:

◆ Advanced diploma courses

◆ Advanced placement or dual enroll-ment courses

◆ Variety in electives

◆ Remediation resources and supple-mental resources

◆ Teachers with additional multime-dia and technology tools to enhance instruction.

WORKFORCE DEVELOPMENT

Vision

All adults will have access to training in computer literacy, workforce skills, and business practices such as e-commerce and entrepreneurship.

Context

Adult computer literacy is a prerequisite for participating in the global economy, and is the key to higher paying jobs. The deliv-ery of distance education in key areas such as ecommerce and entrepreneurship can only be accomplished with students know-ing the computer basics. The key to train-ing in this area is providing training that fits the schedule of adults. The two models below increase the ease of access to train-ing, thereby increasing the participation in such programs.

Models

● Information Commons, Southeast Mis-souri State University

Kent Library, on the campus of Southeast Missouri State University, is employing the "Information Commons" concept. This concept is replicable on other uni-versity campuses and communities to en-hance and encourage research and learn-ing. Several components differentiate the Commons from a typical computer lab, library, or help desk. Those components include technical and educational sup-port, state-of-the-art computers, software

and media production equipment, flexible and modular furniture and a combination of wireless and hard-wired connectivity. An additional aspect of the Information Commons is integrating Information Literacy into the curriculum to teach students to effectively search and process the information that they need

An Information Commons encourages teamwork through seamless integra-tion of technology and social interac-tion. Students develop soft and critical thinking skills that employers expect. The Commons offers hardware and software that are often cost-prohibitive for students to purchase on their own. It serves as a place where students can continue learning outside the classroom in a collaborative, comfortable and in-viting atmosphere.

● BIT Mobile, Mobile Technology Training Van, University of Nebraska Extension Program

The Business Information Technology (BIT) Mobile is a self-contained mobile technology classroom that includes note-book computers and other technology resources. Through the Mobile, Univer-sity of Nebraska-Lincoln Extension IT educators can offer classes to students of all ages to build skills and confidence in using computers and technology. The

cost-effective educational tool brings high-speed computing and technology training to Nebraska's rural youth, families and communities. Participants learn contemporary business and technology skills through classes provided by UNL Extension program.

The van has the following characteristics:

◆ Can be transported to various remote sites.

◆ Can comfortably house notebook computers, printers and file server, and provides for multi-media instructional capability.

◆ Uses cables for electrical power via land or its own generator.

◆ Is self-contained with a furnace, air conditioning, and interior and exterior lighting.

◆ Provides online access by utilizing existing network connections or wireless bridging technology.

◆ Has the potential for hands-on training of Global Positioning Systems, Geographic Information Systems, and digital photography, as well as other technologies.

During its first year of operation, the BIT Mobile trained more than 500 people in 24 communities.

e-GOVERNMENT

Vision

All local governments will have Internet home pages that provide information and services to their citizens as well as publics outside their localities.

Context

One economic development journalist remarked that communities without a website simply "do not exist" to people outside the region. More and more, businesses and people research places for new facilities and homes through the Internet. If a community does not have a web presence, searchers may miss the community altogether.

Only 15 percent of local governments in the DRA region have websites, compared with about 24 percent in the U.S. The situation is worse for DRA rural counties and parishes, where only about 11 percent of local governments have websites.

Models

● e-Communities, e-NC, North Carolina

The e-communities program is a grassroots, community outreach effort to create local commitment and participation in bringing high-speed Internet access, technology awareness and training to all areas of North Carolina. The program provides a vital structure for catalyzing communities to reinvigorate their local economies to participate in technology-driven economic development

e-NC's e-communities program was launched in 2001 with the awarding of $10,000 e-communities planning grants to all 85 rural counties and the Eastern Band of the Cherokee Indians, along with extra $5,000 public engagement grants for particularly distressed counties. The program grew to include public access and digital literacy training grants, and

e-communities implementation grants. In addition to these grants, the original program offered extensive trainings for e-communities participants. By the end of 2003, all 85 rural counties plus the Eastern Band of the Cherokee had been designated official e-communities. In 2004, 56 active e-communities applied for and received grants of $3,000 each to support efforts in their area

e-NC continues to support and grow the e-communities network via continued education and awareness activities offered primarily through quarterly training sessions.

- eCommunity Leadership Teams, Connect-Kentucky

    eCommunity Leadership Teams are important bodies, crucial to the success of Governor Fletcher's *Prescription for Innovation,* part of which addresses digital divide issues within the state. The teams arise from each community and contain community leaders from all constituent groups for a comprehensive picture of the community in terms of broadband deployment. Teams include representatives from business and industry; K-12, healthcare, libraries, higher education, community-based organizations, government; tourism, recreation, and agriculture.

    The eCommunity Leadership Teams work with **ConnectKentucky** to determine ways in which broadband deployment can provide better government services, improve educational opportunities, healthcare access, and establish an expanded marketplace for local businesses. Once these determinations are made, the eCommunity Leadership Teams, with the help of **ConnectKentucky,** identify applications and assist in the building of infrastructure to further support the initiative.

THE DRA *i*DELTA CENTER

Vision

Responsibility for addressing access and awareness issues, and for implementation of this report's recommendations, must reside in an organization that emulates the successful models of state broadband promotion organizations such as Connect-Kentucky and e-NC.

Context

In researching how to accomplish the problems of IT access and usage, the model that stands out is that of a centralized organization with the mandate, the responsibility, the ability to be a conduit of funds from many different sources, and the jurisdiction to address the issues. The South is lucky enough to have two nationally-recognized models: ConnectKentucky, Kentucky and e-NC, North Carolina. To replicate this success, a new center—the DRA *i*Delta Center—should be created to ensure universal access and usage in the region.

Models

- ConnectKentucky

    ConnectKentucky develops and implements effective strategies for technology deployment, use, and literacy in Kentucky,
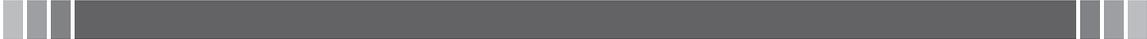
creating both the forum and the incentive for interaction among a variety of people and entities that would not otherwise unite behind common goals and a shared vision. ConnectKentucky's mission is that "by leveraging the latest in technology and networking, ConnectKentucky is ensuring Kentucky remains the place of choice to work, live, and raise a family." ConnectKentucky's mission is to accelerate the growth of technology in support of community and economic development, improved healthcare, enhanced education, and more effective government.

ConnectKentucky has four main functions:

◆ Technology Expansion
  ■ ConnectKentucky coordinates the planning, funding, deployment and adoption of high-speed Internet, also called broadband, and related technology at the local level.
◆ Planning
  ■ ConnectKentucky supports the technology planning efforts of Kentucky's executive branch, the Kentucky General Assembly and local community leaders. Additionally, ConnectKentucky provides technology consulting and research for Kentucky companies, communities, and government entities that are implementing the technology expansion plans.
◆ Public Policy
  ■ ConnectKentucky provides a centralized source for government affairs and policy planning related to technology-based economic development.

◆ Networking
  ■ ConnectKentucky maintains a strategic alliance of technology-minded companies, universities and government entities to share knowledge, ideas, and resources and to communicate with a clear voice on issues that impact Kentucky's technological competitiveness.

◆ Recruitment
  ■ ConnectKentucky works to proactively identify, recruit, and support entrepreneurs and technology-based companies to Kentucky.

● e-NC

The e-NC initiative uses the Internet as a tool for helping people to improve their quality of life. Affordable Internet service will provide North Carolinians with increased access to commerce, health care, education and government services. Through the Internet, rural North Carolinians can utilize resources not located in their areas, contact friends and experts, grow their businesses and increase their personal knowledge—while preserving the lifestyle that is an integral part of who they are.

By encouraging North Carolinians to use the Internet and providing opportunities for them to gain new skills, e-NC is building connected communities and a more economically competitive state. Increased ties between citizens and neighbors, between rural and developed areas and between businesses and communities will help prepare North Carolina for a brighter, more prosperous future.

The e-NC initiative was originally led by the Rural Internet Access Authority. The
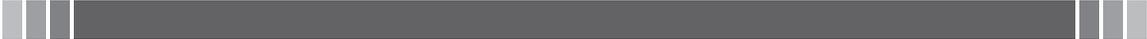
authority was created on August 2, 2000, by the N.C. General Assembly and began operation in January 2001. Its members are appointed by the General Assembly and the Governor. e-NC operates with support from a coalition that includes the N.C. Rural Economic Development Center, the legislature and state government, the telecommunications industry, non-profit organizations and individuals.

The e-NC Authority is charged with continuing the work of the Rural Internet Access Authority which included the following goals:

◆ To provide local dial-up Internet access from every telephone exchange in North Carolina within one year (achieved in August 2001)

◆ To provide high-speed Internet access at competitive prices (at least 128K for residential customers and at least 256K for business customers) to all North Carolinians within three years;

◆ To significantly increase the numbers of individuals, businesses and organizations who own computers and computer devices and who subscribe to the Internet;

◆ To establish telecenters located in the state's most economically distressed areas;

◆ To establish a web site to provide North Carolinians with complete information on Internet and telecommunications services, how they can be obtained and what kinds of services will be available in the future;

◆ To develop Internet applications that improve government services in areas such as education and health care—and that make it easier and more convenient for citizens to receive services;

◆ To encourage all potential Internet service providers to participate in the effort, regardless of the technologies they employ (telephone, cable, wireless, satellite); and

◆ To recommend to the Governor and General Assembly actions to improve Internet access statewide.