

About CARES

The Center for Applied Research and Environmental Systems (CARES) at the University of Missouri has a long history of integrating Internet accessibility with emerging technologies to assist decision makers, researchers, organizations and underserved, under-resourced communities. Our centers' institutional setting enables rapid response to stakeholder needs. We are uniquely positioned to address the rural-urban differential with respect to using, accessing, and adopting information and communications technologies for decision support. Our understanding of the rural context with respect to resource limitations, data management issues, statistical challenges due to small numbers in rural settings, and mapping applications sets CARES apart from other information technology-based centers.

Our center's decision support framework requires ongoing monitoring and updating of existing datasets and scanning for additional datasets. These datasets, which include socio-economic, demographic, health, jurisdictional, political, environmental, and infrastructure data, serve as a distinctive foundation for addressing a myriad of public policy issues.

Organizations have varying resources and competencies for acquiring data and making it available to the public. Rather than focusing on the limitations of data availability across communities, states and regions, our center uses a "patchwork quilt" data acquisition approach by integrating data from Federal, state and local agencies, and non-profit organizations. Since data is continuously being created, updated, and made available to the public in a "chaotic" fashion, our center acquires data on an ongoing basis, and focuses on how it can be utilized for decision support at the community, regional and national levels. CARES capabilities enable data users to: (1) geographically visualize community, regional, and national-level data via the Internet; (2) integrate new spatial data and overlay these data to conduct location-specific analyses; and (3) generate maps, dynamic reports, and "what if" scenarios that utilize the integrated nature of these information systems.

Hardware, Software and Web Servers: CARES utilizes a variety of hardware and software. We have 14 full time staff as well as access to extensive campus resources in these areas. Hardware includes more than fifty Windows-based PCs and servers. All workstations are Ethernet networked and have full Internet access and utilize the University's gigabit speed TigerNet network. The center has over 21 terabytes (21,425 gigabytes) of combined disk storage, a 2.4TB capacity tape archive and backup system, and the ability to print E-size documents. Software includes Microsoft SQL Server 2005, ArcGIS 9.3, ArcIMS 9.3, ArcGIS Server 9.3 as well as several other economic and environmental modeling packages. Operating systems include Windows 7, Windows XP Pro and Windows Server 2003.

CARES Internet capacity includes nine production servers, four development servers, web hosting for other campus centers, and Internet mapping capacity. We serve a large number of geographic databases on the web, including Digital Orthophoto Quarter Quadrangles (DOQQs) for the entire state of Missouri. We serve nearly 9.52 terabytes of data on the Internet, including 3.11 terabytes of geographic data, allowing public access to over 12,000 Internet map layers, and generate over 250,000 map images per month.

For more information about Hardware, Software and Web Servers please go to:
<http://cares.missouri.edu/about/facility.aspx>.

