



Commonwealth of Kentucky

2007 NASCIO Recognition Awards Nomination  
Category: Cross-Boundary Collaboration and Partnerships

## Kentucky Education Network

*Kentucky Education Cabinet*

The Kentucky Education Network (KEN) is a high-speed education centric network jointly designed and implemented by the Council on Postsecondary Education, colleges, universities, Kentucky Department of Education, P-12 school districts, the Education Professional Standards Board, and all agencies of the Education Cabinet. KEN is the result of an unprecedented level of collaboration and joint planning. KEN is designed to break down the physical and political boundaries between secondary, postsecondary, and adult education and to share, both virtually and physically, content and resources throughout P-21.



## ***Executive Summary***

Education is a major user of information and communication technologies. Broadband data services are a critical element for the successful delivery of content in education. The challenge is to achieve and manage the high bandwidth communication services fundamental to all schools while realizing the educational, management, and administrative benefits of technology.

Governor Fletcher's vision for the Kentucky Education Network (KEN) is to develop a seamless education-centric network that will grow and scale to meet new, increasing, and unforeseen needs to support equitable life long learning for all Kentuckians, to break down the physical and political barriers between secondary and postsecondary education, and to provide a foundation to allow sharing, both virtually and physically, of learning content and resources throughout P-21. In implementing this vision, technology developments make bandwidth a critical input for schools.

Contributions in the field of information technology policy provide:

- A collaborative environment for the education community between P-12 and postsecondary, as well as adult learners using technology for "any where any time" learning by building a uniform networking structure that brings together the best of the best transport technologies and carriers in any given region in Kentucky and linking them to a comprehensive statewide network architecture
- Analysis of student data that assists in determining, with greater accuracy, the next "best steps"
- Ease in access to expert data analysis consultation
- Rapid turnaround of student performance data
- Diagnostic tools that pinpoint individual student needs
- Intervention strategies driven by current student data

Impacts on the field of information technology policy:

- KEN will provide the building blocks to assist increased teacher effectiveness, raising the quality of classroom practices, and building student engagement. KEN facilitates innovation and helps reduce inequity.
- KEN is essential for economic competitiveness, social strength, and improved quality of life for our citizens.
- KEN will facilitate communication tools, distance learning systems, student information systems, assessment tools, curriculum management systems, and professional development services.
- KEN will enable empirical evidence of patterns and predictors in education.
- KEN will enable consistent, secure assessment of student progress.

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## ***Project Description***

### *What is the Kentucky Education Network?*

KEN is a high-speed education centric network jointly designed and implemented by the Council on Postsecondary Education (CPE), colleges, universities, Kentucky Department of Education (KDE), P-12 school districts, the Education Professional Standards Board (EPSB), and all agencies of the Education Cabinet. This includes Kentucky Educational Television, Department of Workforce Investment, Department of Libraries and Archives, and the Commission on the Deaf and Hard of Hearing.

KEN is the result of an unprecedented level of collaboration and joint planning. It is the foundation for the development, deployment, and operation of a set of seamless P-21 educational applications. It supports advanced research and education in order to further Kentucky's educational agenda. KEN is designed to break down the physical and political boundaries between secondary, postsecondary, and adult education and to share, both virtually and physically, content and resources throughout P-21.

KEN received \$20.6M general operating funds and \$8.9M for capital investments in the 2006 legislative session to implement KEN.

### *How many Kentucky students, faculty, and staff are served by KEN?*

Every P-12, community college, university, and adult student being taught by a state-supported institution or agency will be served by this high-speed network.

## ***Significance to the Improvement of the Operation of Government***

### *Why is KEN needed?*

Before KEN, telecommunication services to the P-12 schools and other education locations were inadequate. Access to a statewide, high-speed, affordable, educationally focused network builds upon the successes that are occurring at universities and selected P-12 districts, and adult education centers across the state.

A universally available high-speed network:

- Connects all students with educational and research resources that are not available locally
- Strengthens the relationship between postsecondary, adult education, and P-12 educators
- Connects pre-service teachers with real world P-12 classroom learning experiences
- Increases the opportunities for high school students to participate in dual credit courses
- Allows for educators to assess students' knowledge and subject mastery
- Supports data gathering for analysis and accountability of student and instructor performance

- Provides contemporary, up-to-date research materials for students, teachers, and faculty
- Connects students with the rich research and advanced instructional applications of Internet2
- Delivers virtual instruction to underserved areas to fill gaps in their programs
- Provides access to shared resources
- Facilitates collaboration among researchers

This network does for the education community what ConnectKentucky does for geographic and local communities across the Commonwealth, connecting education and technology in world-altering ways. To illustrate, at the highest level, KEN provides for all partners:

- Equity in terms of cost, geographic availability, access, and support for all learning styles
- Immediate availability
- Support of audio and video-intense learning and research opportunities
- Scalable and adaptable network design that easily supports future growth
- 24/7 network availability and support

Benefits for all KEN participants include improved security; enhanced bandwidth allowing media-rich instruction, on-line assessment, educational simulation, and greater access to the Internet for instructional use in the classroom; policy enablement; and stabilization of service.

### ***Public Value of the Project***

*How does KEN change what we are doing today?*

Prior to KEN, the current network bandwidth for students in the P-12 community was 1 kbps per student (0.95). The national average for bandwidth per student is 2.9 kbps. Post KEN average bandwidth is 14.5 kbps per P-12 student. Projected bandwidth for the year 2011 is 40 kbps.

KEN will allow all public postsecondary institutions to modestly increase the speed of their connections beginning July 2007. This upgrade will enable them to better accommodate the insatiable bandwidth demands of researchers, faculty, and students for eLearning, administrative processes, research activities and, now with the significant upgrades KEN provides for P-12, collaborative activities with the P-12 community.

In *Education Week's* 2007 "Technology Counts" publication, Kentucky was tied for fifth in the nation in the overall technology grades and was one of two states identified as the best at integrating technology into curriculum and classrooms.

The Kentucky Education Network won the Best of Kentucky Award for "Best IT Collaboration Among Organizations" at the 2007 Kentucky Digital Government Summit.

The summit, co-sponsored each year by the Commonwealth Office of Technology (COT) and Government Technology Magazine, recognizes outstanding individuals and programs that have made information technology contributions to the public sector.

We are making great strides forward, but as we've suspected, our work has just begun.

**For more information on KEN:**

Please visit <http://ken.ky.gov>