

IP- Based Interactive Communication Work Group
DRAFT KEN Template
August 27, 2007

KEN Applications Subcommittee
Work Group on IP-based Interactive Communications

Charge:

The IP-based Interactive Communications group will review the issues surrounding the development of an interactive communications network that will standardize audio and video interactivity throughout the Commonwealth. The group will evaluate the available applications, discuss issues of policy and methods, assess the preparation needed by each agency to participate, develop the functionality of the system, and establish a basic timeline for the project. This group will articulate a vision for future capabilities of IP-based interactive communications.

Scope:

Interactive Television, Videoconferencing, Peer-to-peer videoconferencing, Desktop videoconferencing, Streaming media, Voice over IP, Video broadcast and on-demand, Internet2 videoconferencing

Timeline:

July 18, 2007 – Mid-project progress report to the KEN Applications Subcommittee
 September 1, 2007 - Recommendations due to the Subcommittee

Work Group Members:

COT	Derrick Ellis
CPE	Stuart Johnston, Miko Pattie*
CRD	Charley Simpson
Education Cabinet	Ann Riggs, Kari Welch
EKU	Gene Kleppinger
Frankfort Independent Schools	Tim Smith
JCPS	Bo Lowery*
KCTCS	Sandy Cook*, Phil Duvall, Vince DiNoto Jamie Justice
KDE	Tim Sizemore, Rhody Streeter, Lee Muncy*
KET	Mike Clark
Murray State	Linda Miller, James Gantt
UK	Rex Stidham*, Rick Phillips, Rob Spring, Tad Pedigo, Patsy Carruthers
UofL	Tim Bickel
WKU	Tamela Smith

Where We Are in the Use of This Application

Currently, all collaborative parties are in their own system silo with no guarantee of connectivity. **See Attachment A “Barriers – Present Condition”**

Resources available:

- Connect Kentucky
- KEN (Kentucky Education Network)
 - KIH2 (Kentucky Information Highway 2)
 - KPEN (Kentucky Postsecondary Education Network)
- KTHN (Kentucky Tele-Health Network)
- Infrastructure Partners
 - Windstream
 - AT&T
 - CPE (Council on Postsecondary Education)
 - KET (Kentucky Education Television)
 - KETS (Kentucky Education Technology System)
 - CVCN (Commonwealth Video Conferencing Network)
 - ATT York
 - WireOne
 - Polycom/Tandberg
 - COT (Commonwealth Office of Technology)
 - CRD (Center for Rural Development)
- Content Partners
 - KDE (Kentucky Department of Education)
 - KET (Kentucky Education Television)
 - CRD (Center for Rural Development)
 - CPE (Council on Postsecondary Education)
 - All higher education institutions, public and private
 - OCTE (Offices of Career & Technical Education)
 - KITCenter (Kentucky Information Technology Center)
- Internet2
- Regional Optical Network
- State CIO Group

Deficiencies that are in place:

- Lack of standardization among users
- Lack of collaborative tools that will work across platforms, across applications
- Lack of money resources
- Multiple/diverse equipment – limited compatibility
- Outdated, old equipment
- Inter-operational challenges among industry partners
- Outdated, insufficient infrastructure
- Ineffective, inadequate internal/external communications
- Inadequate professional development for effective usage
- Lack of support services
- No shared vision or unified service plan

Where We Want to Go in the Use of This Application:

All parties are interconnected through a centralized system of collaborative tools and choices with high-quality, guaranteed connectivity. **See Attachment B “Desired Condition – All in the Same Silo”**

Describe the vision or long-term plan for the use of this application from the statewide perspective and why this is important:

The vision and long-term plan is to visually and collaboratively connect people across Kentucky's education communities and state agencies resulting in a powerful solution to more effectively share information and to solve problems more quickly. Supporting KEN partners to deliver reliable, easy to use collaborative tools to teachers, students, and agencies will advance educational achievement throughout the education community resulting in positive economic development and growth.

Providing a 21st Century statewide solution where all parties are interconnected through a centralized, one-stop, easy to use system will support the following vision:

- Single sign on for all collaborative tools
- Logical resource management
- Metadata and learning object repositories with interactive, engaging content
- Seamless interoperability
- Common systems and standards
- Guaranteed quality of service
- Greater and more meaningful interaction among family, school, agencies, workforce, and community
- Expand student and workforce access to schools, administration and teachers
- Remove time, place and distance barriers for the education community, including teachers, student and parent communication as well as for state agencies and workforce
- Expand access to instructional resources and tools outside the regular school hours and locations and lifelong learning
- Improved student learning and preparedness for advanced credentials, the military and the workforce
- Increased teacher productivity, effectiveness, and student satisfaction
- Enhanced natural communications technologies that provide the ability to interact as if participants are in the same room.
- Strategic decision-making with improved accuracy and timeliness of information resulting in reduced cost and improved accuracy
- A robust infrastructure where all school buildings, educational centers, libraries, statewide education networks, and agencies are interconnected
- Information sharing is quick and easy

Guiding Principles

- a) Always on, always available, anywhere life-long learning
- b) Virtually transparent and reliable
- c) Adopt standard applications
- d) Standing Committee/Governance Board
- e) Agreements on common applications to encourage cross training and reduce costs
- f) Ease of use
- g) Strive for economy of scale when appropriate to reduce costs
- h) "Allow faculty to provide whatever they define as quality educational experience to students, wherever they want it.
- i) Employ synchronous with asynchronous functionality to benefit students and increase access to content."
- j) Highest level of quality in:
 - i) Technology scalable and flexible
 - ii) Educational Content
 - iii) "One-Stop" Website with choice of collaborative tools
 - iv) Scheduling Options
- k) Faculty- Driven Capabilities:
 - i) One-Touch Recording Capabilities

- ii) Make all platforms work together – Elluminate, Wimba, Polycom, etc...
- iii) Engaging/interactive for users, accelerated experience
- l) ADA compliant
- m) No artificial barriers

How Are We Going to Get There?

The following existing barriers such as policies, processes or resources offer challenges to achieve the desired use of collaborative tools.

Existing challenges (barriers):

Policy Challenges

- Lack of policies that promote and facilitate collaboration, standardization, funding models, new technology solutions among state agencies and higher education.

Process Challenges

- Organically-driven self-interest and silos and recognizing areas of enlightened self-interest
- Governance and empowerment acceptance

Resource Barriers

- Connectivity
 - Accessibility (anyplace, anytime, anywhere)
 - Home
 - Communities
 - Education institutions
- All public places
- Mobile learner
- Content
 - Rights
 - Management
 - Standards

Current plan to address deficiencies:

- Develop enabling policies that promote and facilitate collaboration, standardization, funding models, new technology solutions among state agencies and higher education.
- Develop extensive funding model to achieve Kentucky high-quality collaborative network with tools customized to need
- Adopt standard applications for guaranteed connectivity
- Develop “One-Stop” common website that is menu driven for ease of use and choice of collaborative tools
- Appoint standing committee/governance board
- Agree on common applications to encourage cross training and reduce costs
- Strive for economy of scale when appropriate to reduce costs
- Provide technology solutions that are scalable and flexible
- Achieve scheduling options
- Plan and provide user pedagogy and technology training relative to the collaborative tool

Impact on Teaching and Learning:

The vision of a one-stop “shop” for selecting and accessing virtual collaborative tools provides teachers and students with technology solutions that meet the needs of 21st Century education. All teaching, learning, and workforce training should utilize the best learning methods available customized to the need as follows:

High quality virtual, interactive, collaborative tools as a part of every Kentuckian's educational or training experience and for life-long learning

- Single sign on
- Opportunity for customized content and delivery through learning object repositories
- Greater learner success
- Rich content websites and ease of access to Internet2 content
- On demand streaming video (studio and/or classroom)
- Live video to the desktop
- IP based ITV for high-quality interaction as if in the same room
- Podcasting (video and audio)
- Social networking, including Second Life
- Conferencing webcasts
- Virtual office hours
- Posted lecture/instruction notes
- Asynchronous or synchronous format
- Instant messaging

A robust infrastructure

- School buildings, educational centers, libraries and statewide education networks are interconnected
- Stationary or mobile access to instructional tools is provided where appropriate
- Access to video, voice and text instructional and administrative content is provided
- Standards and protocols are provided
- Current and timely information for decision-making is provided
- Information sharing is quick and easy

Improved student learning and preparedness for higher education, the military and the workforce

- Increase thinking and problem-solving skills by analyzing information with technology tools
- Address differentiated learning styles through the delivery of video, voice and written content
- Develop communication skills through writing, verbal interactions and the exchange of information with students at other sites
- Access to rich instructional content
- Basic skills and concepts developed through simulations and computer-assisted instruction
- Instructional content available expand students research and information processing skills
- Student awareness of a multi-cultural world view enhanced through access and communication with students at other schools throughout the world
- Encourage respect of rights of others and ethical issues in using school technology assets

Increased teacher productivity

- Improved effectiveness and efficiency of instruction, curriculum development, school organization and operation
- Improved communication among teachers, parents, and students
- Computer-managed instructional delivery system
- Improved special education management
- Reduced teacher paperwork
- Encourage and support joint curriculum development and sharing
- Improved capacity to individualize instruction and to monitor assessment

Enhanced communications

- Immediate availability of memos, letters, bulletins, reports and documents
- Improved communications between buildings, school districts, libraries, KDE, postsecondary institutions, and state agencies
- Enhanced calendaring and scheduling to assist coordination of personnel, building and district resources
- Facilitate the creation of "Electronic communities"

Strategic decision-making

- Improved accuracy and timeliness of information
- Timely problem solving and continuous quality improvement
- Reduced cost and improved accuracy from centralized approach

Potential measurable outcomes

- More Kentuckians advancing toward higher credentials
- More Kentucky teachers using interactive, engaging content
- Increased student success
- Increased participant satisfaction – teachers, students, state agencies workforce
- Increased usage
- Increased efficiency of connection
- Increased interaction globally and state to state

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