

Broadband Content: Arts and Technology

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Broadband Content

- Applications which utilize high speed networks
 - Videoconferencing
 - HD Video delivery
 - Virtual Environments
 - Dynamic Data Layers
 - Stereographic signals

ARTS

- Painting
- Animation
- Sculpting
- Writing
- Videography

TECHNOLOGY

- Programming
- Engineering
- Drafting
- Sciences
- Data Management

Arts and Technology: Evolution

- Traditional Arts Programs are evolving due to emerging digital media

Arts and Technology: Visualization

- Advanced Visualization is changing the way scientists analyze data in fields such as Biotechnology, Engineering, and Computer Science

ARTS TECHNOLOGY

- Painting • Three Dimensional Design
- Animation • Digital Video Production
- Sculpting • Web Design
- Writing • Data Visualization
- Videography • Flash Animation
- Drafting
- Sciences
- Data Management

Arts Technology Influences

- Geospatial Technology and Engineering Industries
- Marketing and E-Commerce
- Electronic Entertainment

Geospatial and Engineering

- Computational Science allows the analysis of exponentially increasing levels of data

Marketing and E-Commerce

- Advertising is evolving to utilize the capabilities of the 3D Internet

Electronic Entertainment

- EE applications represent some of the most realistic and lucrative virtual environments in existence

Electronic Entertainment

- Electronic Arts is the fifth largest publicly owned software company in the US
- Yearly revenues : \$3 Billion
- Larger than Apple and Pixar combined

Electronic Entertainment

- Expectations are high as movies and game markets continue to merge

Educational Impact?

- How will access to broadband content influence educational communities in years to come?

Educational Impact: Distribution

- Broadband creates a new outlet to reach K-20 populations
 - Synchronous
 - Videoconferencing
 - Asynchronous
 - Streaming video
 - Real-time Interactivity
 - Dynamic Data Layers



NASA Center for Distance Learning

- Based out of NASA VT-STEM program at Virginia Tech, NASA CDL produces five television and multimedia programs
 - [NASA Live](#)
 - [KSNN](#)
 - [SCIFiles](#)
 - [Connect](#)
 - [Destination Tomorrow](#)



Riverstone Technology Park

- NASA VT-STEM will be located within Riverstone Technology Park Building One

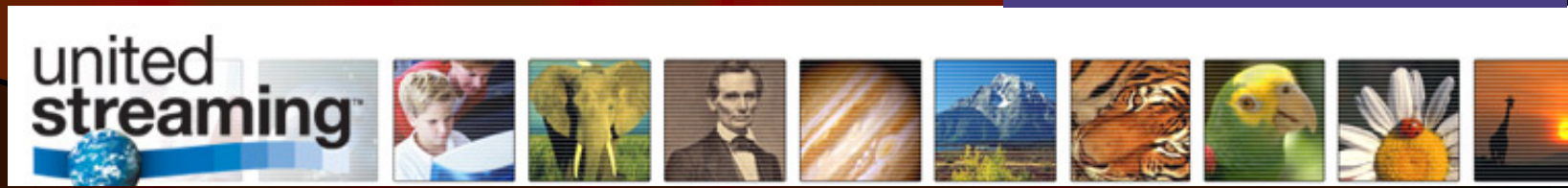
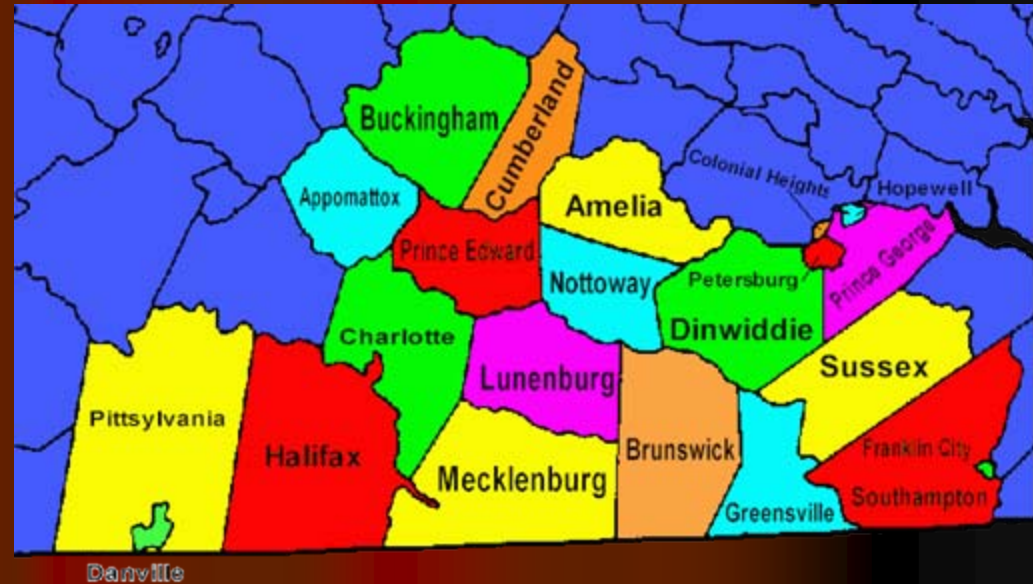


Educational Impact: Commercial

- Commercial
 - Proliferation of Broadband networks create the opportunity for a new market for educational content

Educational Impact: Evaluation

- Evaluation
 - Broadband access creates both new challenges and new opportunities for evaluation of educational content



Educational Impact

It is thrifty to prepare today for the wants of tomorrow.

Aesop (620 BC - 560 BC), The Ant and the Grasshopper

**Research and development in
Broadband Educational Content is vital
to maximizing the potential of next
generation networks**