

Welcome to UEN

# We network for education

UEN connects all Utah school districts, schools and higher education institutions and is one of the nation's premier education networks. We invite you to learn more about UEN in the following pages.

We take our responsibilities very seriously. We understand the importance of a solid education for all Utah learners now depends on equal access to a robust network and quality resources. We value the public/private partnership we've achieved with Utah telecommunications companies that help improve their bottom line. We believe a quality education should be available to everyone, regardless of location or circumstances, and that technology enables and empowers learners to reach their full potential.

Our work is funded by the public. We pride ourselves on working hard to build partnerships, cost efficiencies, and innovative solutions that stretch every dollar to benefit the people we serve. We share performance data and the results of our work via our award-winning website [www.uen.org](http://www.uen.org).

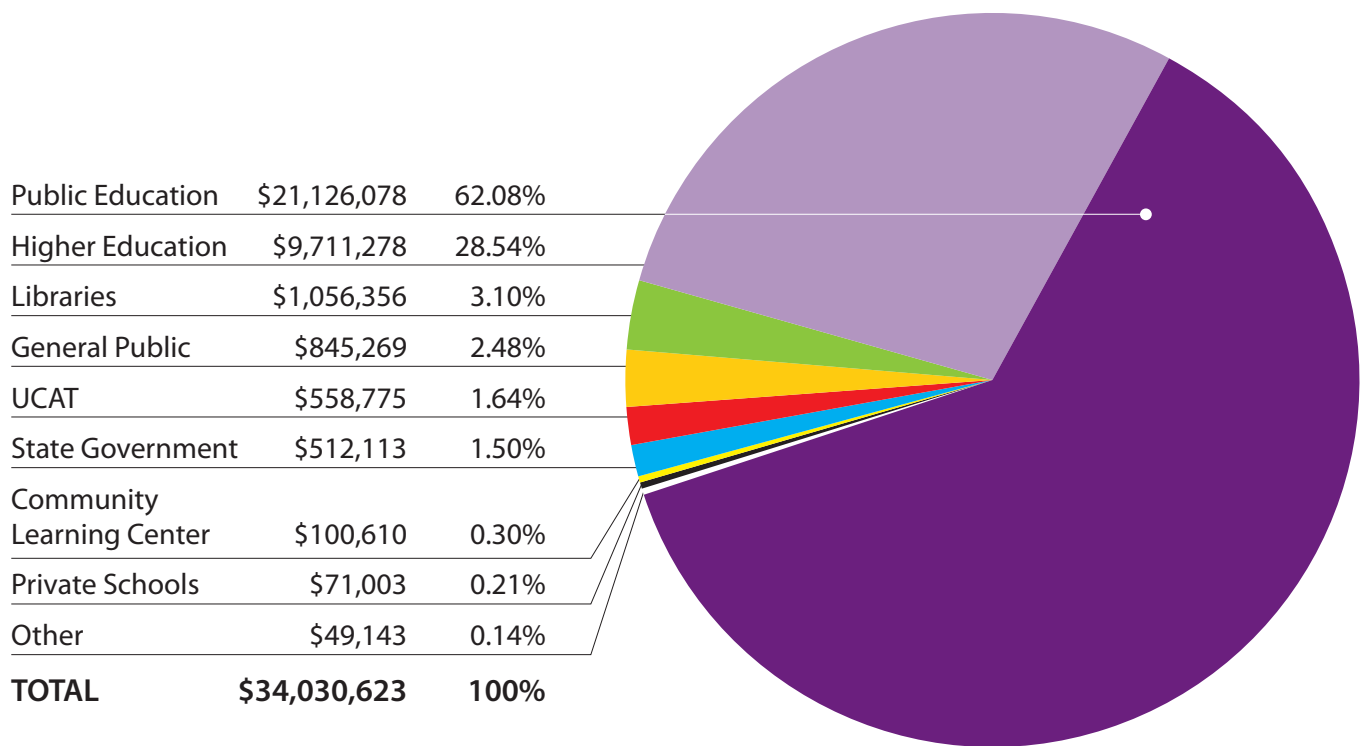
# UEN serves education customers all over Utah

UEN services match the priorities and objectives of the institutions we serve.

UEN SERVES:	AND ITS:	IN SUPPORT OF THEIR MISSION TO:
<p><u>Utah Public K-12 Education</u></p>	<p>576,245 students 30,963 educators 1,084 schools</p> <p><i>(USOE Fingertip Facts 2010)</i></p>	<ul style="list-style-type: none"> <li>• Assure literacy and numeracy for all Utah children</li> <li>• Provide high quality instruction</li> <li>• Establish curriculum with high standards and relevance</li> <li>• Require effective assessment to inform high quality instruction and accountability</li> </ul> <p><i>(Promises to Keep 2009)</i></p>
<p><u>Utah System of Higher Education</u></p>	<p>173,017 students 30,333 faculty and staff 9 institutions</p> <p><i>(USHE Voluntary System of Accountability, Fall 2010)</i></p>	<ul style="list-style-type: none"> <li>• Grow the college ready pipeline</li> <li>• Increase college completion</li> <li>• Expand system capacity</li> <li>• Advance effective technology</li> <li>• Build economic prosperity</li> </ul> <p><i>(Higher Ed Utah Action Plan 2010)</i></p>
<p><u>Utah College of Applied Technology</u></p>	<p>9,411 secondary students 32,081 postsecondary students 14,308 adult trainees 1,282 companies 8 campuses</p> <p><i>(UCAT Annual Report 2011)</i></p>	<p>Meet the needs of Utah's employers for technically skilled workers by providing market driven technical education to both secondary and adult students.</p> <p><i>(UCAT Mission Statement 2009)</i></p>

**SOURCES:** Higher Ed Utah Action Plan 2010 • UCAT Annual Report 2010 • UCAT Mission Statement 2009 • UEN FY2011 Annual Budget Report • UEN FY2010 Performance Report • USHE Voluntary System of Accountability, Fall 2010 • USOE Fingertip Facts 2010 • USOE Promises to Keep 2009 • UT State Libraries Report 2010

# UEN Budget by customer



As of June 30, 2011 - FY2011

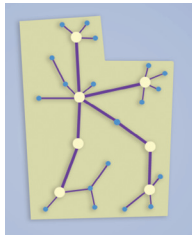
# How do we serve them?

UEN infrastructure services include three core areas: *Networking Services*, *Application Hosting* and *Application Support*. All three are integral to UEN's mission of networking for education.

## 1. Networking Services

Networking Services extend and maintain UEN's wide area broadband and digital TV networks. Students, parents, educators and local communities all benefit from these services.

**WIDE AREA NETWORK (WAN)** – The Network infrastructure carries high speed data and real-time applications including video to communities throughout the state. UEN connects a majority of schools at 100Mbps and many at 1Gbps. Network engineers and staff research, design, build, monitor and contract with multiple Utah service providers across the state. This public/private partnership benefits businesses and homeowners who gain increased bandwidth because UEN is the anchor tenant on their local network.



**INTERNET ACCESS** – UEN provides the capacity for more than 40Gbps of Internet traffic from several Internet Service Providers (ISPs) to and from Utah schools, colleges and libraries. The Network saves Utah institutions thousands of dollars per month by purchasing Internet access in bulk from multiple competing ISPs. UEN also manages a large network used by research institutions in Utah to support the state's science and economic development goals.

**NETWORK SUPPORT AND SECURITY MONITORING** – Network Support continuously tracks, reports and manages Internet, data, and video traffic on UEN's Wide Area Network (WAN). Network security detects attacks on the Network, identifies miscreant tools and trends, and mitigates infrastructure vulnerabilities. UEN provides in-depth leadership in security training and works in partnership with national and global security organizations to avert large threats and incidents. The UEN Network Operations Center (NOC) provides Second Tier help desk functions with UEN's real-time trouble ticket system for problem resolution.

**UEN-TV AND MHZ WORLDVIEW** – UEN-TV broadcasts two digital TV channels through a digital transmitter

and statewide translator system. UEN-TV provides educational programming to public education, higher education and the general public, while MHz Worldview carries international news and cultural programs.

**INTERNET FILTERING** – UEN operates content-control software and hardware on behalf of Utah K-12 public schools, charter schools and public libraries to limit child exposure to harmful content such as violence and pornography. In addition to protecting children, this enables Utah schools and libraries to meet requirements of the Children's Internet Protection Act (CIPA) and maintain eligibility to receive E-Rate funding.

## 2. Application Hosting

Working with stakeholders, UEN licenses or develops software that meets higher education and public education needs. This optimizes cost efficiencies through shared support, infrastructure and procurement processes.



**INTERACTIVE VIDEO CONFERENCING (IVC)** – UEN IVC is Utah's high quality, high definition, Interactive Video Conferencing system for public education, higher education and many state government offices. Thousands of students and educators use the UEN IVC system every day for live, instructor led curriculum, collaborative meetings and special educational events. This alternative to in-person instruction and meetings has the ability to connect over 800 locations throughout Utah, as well as many locations around the globe. In addition to more than 250 daily educational events, UEN IVC also incorporates a robust desktop video conferencing option allowing hundreds of administrators to collaborate and meet from almost anywhere. UEN IVC is a highly effective service that saves time, money and energy.

**LEARNING MANAGEMENT SYSTEM (LMS)** – UEN licenses, hosts and supports a software application that manages online components of in-person and online classes, and makes possible information sharing

and collaboration. UEN contracts with Utah-based Instructure for its Canvas software. The Network regularly convenes higher and public education partners who work collaboratively to maximize this service.

**PIONEER LIBRARY AND PRESCHOOL PIONEER** – Pioneer Library is a statewide service that purchases online library resources from national suppliers at large discounts. Pioneer provides access to newspaper articles, magazines, professional journals and graphics. UEN pays the K-12 portion of the Pioneer Library. Public Libraries and Academic/College Libraries also benefit through this collaboration. Preschool Pioneer provides early childhood resources to children ages 3-5, their parents and caregivers. Utah has about 285,000 children under age six.

**WEB CONFERENCING** – UEN licenses and supports Wimba Classroom for desktop-based conferencing. Wimba creates a live, virtual classroom, office or conference room with two-way audio, video, interactive whiteboard, computer desktop sharing and chat. This tool is available statewide for educational use such as meetings, mentoring, virtual office hours, presentations and tutoring.

**CORE CURRICULUM DATABASE RESOURCES AND TOOLS** – UEN hosts a database of the Utah Core Curriculum standards adopted by the Utah State Board of Education. The standards link to multiple lesson plans and resources that have been carefully selected and aligned to learner development, instructional goals, pedagogical strategies and curriculum needs. UEN also creates websites that support teachers, such as the Constitution Day materials required by the legislature. Examples of UEN tools include a lesson plan builder and rubric tool.

**TEACHING AND ASSESSMENT RESOURCES** – UEN provides Utah’s K-12 educators, faculty, and pre-service educators with tools they need to teach effectively. UEN also supports various web projects aligned to institutional goals, such as the STEM (Science, Technology, Engineering and Math) resources database, the Concurrent Enrollment course development project, Internet Safety and Financial Literacy. UEN’s eMedia service includes more than 19,000 digital videos, images and documents for public education and higher education. UEN hosts my.uen, a web tool for teachers to communicate with parents. More than 35,000 Utah educators have my.uen accounts. UEN also works closely with the Utah State Office of Education (USOE) to develop the state’s formative testing application called UTIPS (Utah Test Item Pool Service).

### 3. Application Support

Application Support provides services and assistance to the users of UEN infrastructure and hosted applications.

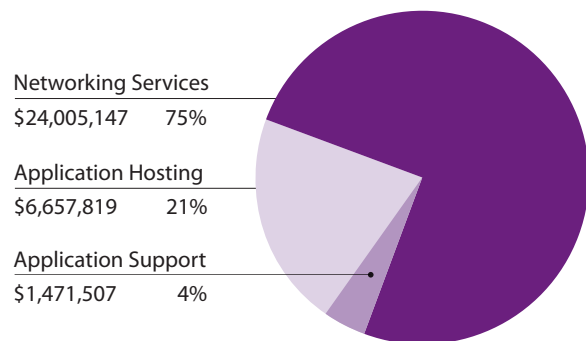
**TRAINING AND INFRASTRUCTURE SUPPORT** – UEN provides workshops and presentations to help end-users (teachers, faculty, librarians) use Network infrastructure services effectively. UEN coordinates with K-12 and higher education specialists to provide handouts, videos, and teaching materials to support their educational technology work. UEN offers technology integration support via UEN-TV, WIMBA classroom, in-person, and the Canvas learning management system. UEN’s IVC Advocates are based in Richfield and Ogden and provide customer support specific to Interactive Video Conferencing (IVC).



**REGIONAL SUPPORT** – UEN helps sustain Utah’s four Regional Service Centers with technical support, grant support and personnel funding. The centers are NUES, Northeastern Utah Educational Services in Heber City; CUES, Central Utah Educational Services in Richfield; SEDC, the Southwest Educational Development Center in Cedar City; and SESC, the Southeastern Educational Service Center in Price. They provide frontline support for Utah’s rural school districts.

**E-RATE SUPPORT** – UEN supports Utah public school districts, charter schools, private schools, libraries and Headstart programs in obtaining E-Rate reimbursements for broadband circuit costs. The E-Rate program is part of the Federal Communication Commission’s Universal Service Fund. Consumers, such as cell phone users, pay into this fund as a part of their monthly bills. With UEN’s E-Rate support, Utah schools and libraries are laying claim to millions of E-Rate dollars which have been set aside for education.

### UEN Infrastructure Services



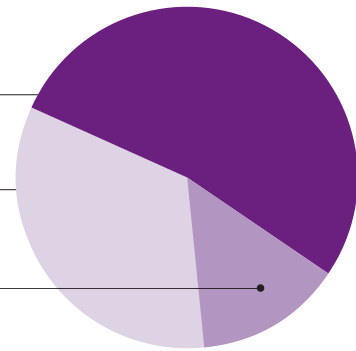
# UEN Infrastructure Map

Connecting 1383 locations throughout Utah

- █ 10 GIGABITS/SECOND BACKBONE
  - █ 1 GIGABIT/SECOND BACKBONE
  - █ 1 GIGABIT/SECOND
  - █ 1 GIGABIT/SECOND ETHERNET
  - █ 155 MEGABITS/SECOND
- - - 155 MEGABITS/SECOND MICROWAVE
  - █ 45 MEGABITS/SECOND
  - - - 45 MEGABITS/SECOND MICROWAVE
- NAME** POINT OF PRESENCE (POP)

## Overall Bandwidth Utilization

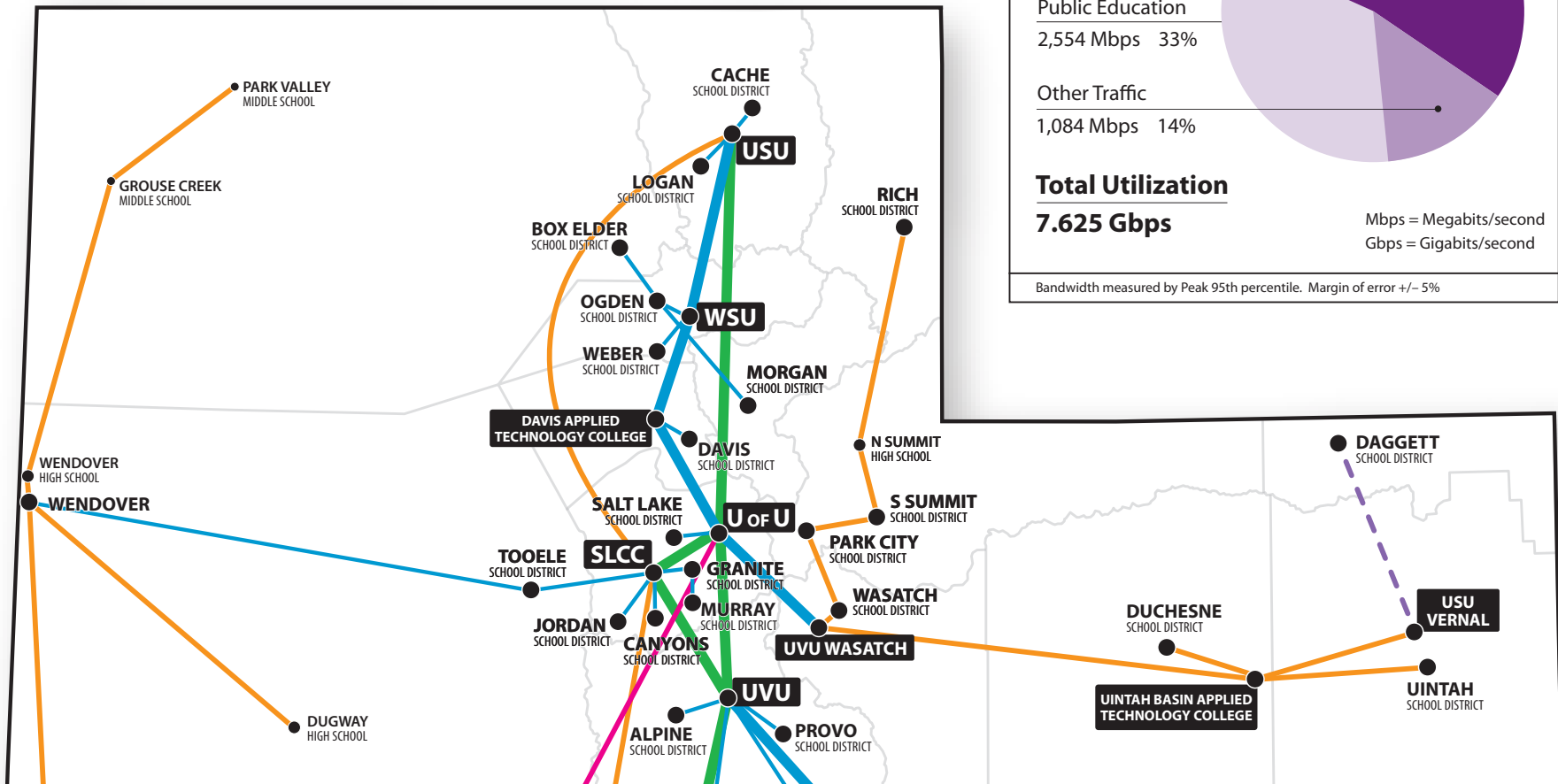
Higher Education	3,987 Mbps	52%
Public Education	2,554 Mbps	33%
Other Traffic	1,084 Mbps	14%



**Total Utilization**  
**7.625 Gbps**

Mbps = Megabits/second  
Gbps = Gigabits/second

Bandwidth measured by Peak 95th percentile. Margin of error +/- 5%





# What are the main sources of UEN funding and how is it allocated?

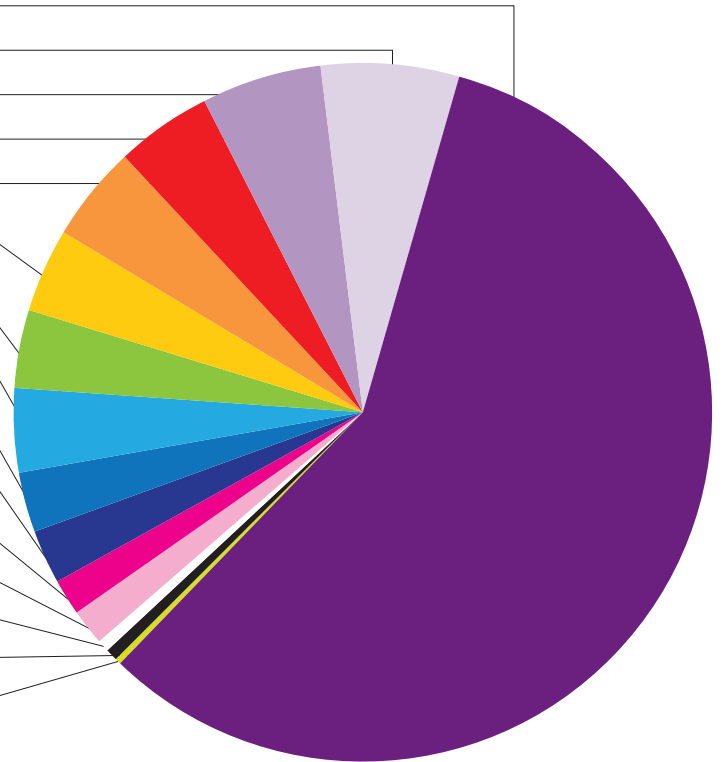
As of June 30, 2011

UEN SERVICES	TOTAL	STATE APPROP	KUEN GRANT	FEDERAL E-RATE	OTHER FUNDING*
<b>NETWORKING SERVICES</b>	<b>\$ 24,005,147</b>	<b>\$ 9,391,843</b>	<b>\$ 1,073,742</b>	<b>\$ 10,869,649</b>	<b>\$ 2,669,913</b>
Wide Area Network (WAN)	19,730,704	6,474,876	48,539	10,869,649	2,337,639
Internet Access	1,297,985	1,148,185	-	-	149,800
Network Support and Security Monitoring	1,267,955	1,267,258	-	-	697
UEN-TV and MHz Worldview	1,497,507	290,527	1,025,202	-	181,777
Internet Filtering	210,996	210,996	-	-	-
<b>APPLICATION HOSTING</b>	<b>6,657,819</b>	<b>5,369,748</b>	<b>584,763</b>	<b>-</b>	<b>703,307</b>
Interactive Video Conferencing (IVC)	2,118,809	2,082,968	-	-	35,841
Learning Management System (LMS)	1,570,108	1,230,371	-	-	339,737
Core Curriculum Database Resources and Tools	976,375	936,971	12,254	-	27,149
Teaching and Assessment Resources	1,251,892	900,580	50,732	-	300,580
Pioneer Online Library and Preschool Pioneer	574,221	69,075	505,146	-	-
Web Conferencing	166,414	149,782	16,631	-	-
<b>APPLICATION SUPPORT</b>	<b>1,471,507</b>	<b>1,414,721</b>	<b>16,793</b>	<b>-</b>	<b>39,993</b>
Training and Infrastructure Support	854,293	820,037	16,793	-	17,463
Regional Support	526,913	504,383	-	-	22,530
E-Rate Support	90,302	90,302	-	-	-
<b>UEN OVERHEAD</b>	<b>1,896,150</b>	<b>1,368,000</b>	<b>484,651</b>	<b>-</b>	<b>43,499</b>
Overhead Expense	1,896,150	1,368,000	484,651	-	43,499
<b>TOTAL</b>	<b>\$ 34,030,623</b>	<b>\$17,544,312</b>	<b>\$ 2,159,950</b>	<b>\$ 10,869,649</b>	<b>\$ 3,456,712</b>
<b>PERCENTAGE OF TOTAL FUNDING</b>	<b>100.00%</b>	<b>51.55%</b>	<b>6.35%</b>	<b>31.94%</b>	<b>10.16%</b>

\* Note: "Other Funding" is comprised of the BTOP and miscellaneous grants and reimbursements from Public Ed, Higher Ed, and Department of Technology Services.

# UEN Budget by service

Wide Area Network (WAN)	\$19,730,704	57.98%
Interactive Video Conferencing (IVC)	\$2,118,809	6.23%
Overhead Expense	\$1,896,150	5.57%
Learning Management System (LMS)	\$1,570,108	4.61%
UEN-TV and MHz Worldview	\$1,497,507	4.40%
Internet Access	\$1,297,985	3.81%
Network Support and Security Monitoring	\$1,267,955	3.73%
Teaching and Assessment Resources	\$1,251,892	3.68%
Core Curriculum Database Resources and Tools	\$976,375	2.87%
Training and Infrastructure Support	\$854,293	2.51%
Pioneer Online Library and Preschool Pioneer	\$574,221	1.69%
Regional Support	\$526,913	1.55%
Internet Filtering	\$210,996	0.62%
Web Conferencing	\$166,414	0.49%
E-Rate Support	\$90,302	0.27%
<b>TOTAL</b>	<b>\$34,030,623</b>	<b>100%</b>



# UEN services by customer

As of June 30, 2011

UEN SERVICES	TOTAL	PUBLIC EDUCATION	HIGHER EDUCATION	OTHER CUSTOMERS
<b>NETWORKING SERVICES</b>	<b>\$ 24,005,147</b>	<b>\$ 14,934,340</b>	<b>\$ 5,665,890</b>	<b>\$ 3,404,917</b>
Wide Area Network (WAN)	19,730,704	13,052,066	4,367,214	2,311,423
Internet Access	1,297,985	437,097	751,469	109,420
Network Support and Security Monitoring	1,267,955	838,766	280,651	148,539
UEN-TV and MHz Worldview	1,497,507	432,779	266,556	798,171
Internet Filtering	210,996	173,632	–	37,364
<b>APPLICATION HOSTING</b>	<b>6,657,819</b>	<b>3,292,238</b>	<b>3,295,153</b>	<b>70,428</b>
Interactive Video Conferencing (IVC)	2,118,809	454,591	1,617,814	46,404
Learning Management System (LMS)	1,570,108	–	1,570,108	–
Core Curriculum Database Resources and Tools	976,375	976,375	–	–
Teaching and Assessment Resources	1,251,892	1,251,892	–	–
Pioneer Online Library and Preschool Pioneer	574,221	526,174	24,024	24,024
Web Conferencing	166,414	83,207	83,207	–
<b>APPLICATION SUPPORT</b>	<b>1,471,507</b>	<b>1,171,897</b>	<b>209,133</b>	<b>90,478</b>
Training and Infrastructure Support	854,293	600,736	209,133	44,424
Regional Support	526,913	526,913	–	–
E-Rate Support	90,302	44,248	–	46,054
<b>UEN OVERHEAD</b>	<b>1,896,150</b>	<b>1,144,640</b>	<b>541,102</b>	<b>210,407</b>
Overhead Expense	1,896,150	1,144,640	541,102	210,407
<b>TOTAL</b>	<b>\$ 34,030,622</b>	<b>\$ 20,543,115</b>	<b>\$ 9,711,278</b>	<b>\$ 3,776,230</b>
<b>PERCENTAGE OF TOTAL EXPENSES</b>	<b>100.00%</b>	<b>60.37%</b>	<b>28.54%</b>	<b>11.10%</b>

# FY 2012 Strategic Plan

<p><b>MISSION:</b> We network for education.</p> <p><b>VISION:</b> To be Utah's most recognized, trusted, and accessible partner for innovation in educational technology.</p>		<p><b>VALUES:</b> <b>CARING</b> supporting our co-workers, customers, and community.</p> <p><b>LEADERSHIP</b> advancing relationships and encouraging ideas.</p> <p><b>INTEGRITY</b> keeping our promises.</p> <p><b>COMMUNICATION</b> listening to meet needs.</p> <p><b>SERVICE</b> benefiting our partners.</p>	
KEY OBJECTIVES	NETWORKING SERVICES	APPLICATION HOSTING	APPLICATION SUPPORT
<p><b>Initiatives</b></p>	<ul style="list-style-type: none"> <li>Complete Utah Anchors BTOP project</li> <li>Build metro ring and SE capacity</li> <li>Build data center</li> <li>Plan for IVC replacement cycles</li> <li>Connect new schools and elementaries</li> <li>Conduct RFPs/procurement for WAN</li> <li>Explore feasibility of I2 ION in Utah</li> <li>Pursue additional funding sources</li> <li>Expand digital broadcast translators</li> <li>Coordinate w/national groups, peers</li> <li>Build UEN's capacity as UCAN site</li> </ul>	<ul style="list-style-type: none"> <li>Migrate to web-services architecture</li> <li>Manage Utah Database Alliance grant</li> <li>Apply IPv6 for Outfacing Services</li> <li>Move to centralized authentication</li> <li>Complete core mgmt interface</li> <li>Curate resources for Common Core</li> <li>Add e-commerce to PD registration</li> <li>Develop preschool reading site</li> <li>Create an Apps for Education site</li> <li>Integrate OER Glue and my.UEN</li> <li>Redesign NetSafe Utah website</li> <li>Expand eMedia and PBS LM content</li> <li>Procure and launch web conferencing</li> <li>Program USOE formative testing tool</li> <li>License mission-aligned programming</li> <li>Maintain Pioneer Library databases</li> <li>Increase mobile-friendly tool set</li> <li>Retire BB, migrate to 100% Canvas LMS</li> <li>Build UETS and UELS websites</li> </ul>	<ul style="list-style-type: none"> <li>Administer E-Rate program</li> <li>Implement strategic communication plan</li> <li>Host technical summit and UtahSAINT conference</li> <li>Expand QuickTicket and Site DB tools</li> <li>Expand online security monitoring</li> <li>Plan for national SC12 conference</li> <li>Support NSF-EPSCoR Utah projects</li> <li>Host T-Forum and C-Forum meetings</li> <li>Train others on UEN tools and services</li> <li>Support UtahFutures project</li> <li>Support USHE Gen Ed courses project</li> <li>Support USHE and K-12 Canvas sites</li> <li>Support CPB transmedia grant, if funded</li> <li>Produce user guides and documents</li> <li>Produce video tutorials on UEN tools</li> <li>Increase online and just-in-time PD</li> <li>Support IVC scheduling processes</li> <li>Leverage social networking tools</li> <li>Engage community w/screenings and events</li> </ul>
<p><b>Performance Indicators</b></p>	<ul style="list-style-type: none"> <li>% of network uptime</li> <li>10 Gbps redundancy in metro area</li> <li>1 Gbps redundancy in Southeast</li> <li>\$ grant funding secured</li> </ul>	<ul style="list-style-type: none"> <li>% grant project goals met</li> <li># IVC events (one-time and recurring)</li> <li># web visits and % growth</li> <li># Pioneer logins and # results returned</li> <li># LMS course sections</li> </ul>	<ul style="list-style-type: none"> <li>% growth in E-Rate reimbursements</li> <li># of workshops and support events</li> <li># of participants</li> <li>% incidents resolved on time</li> <li>% of tools with user documentation</li> </ul>
<p><b>GUIDE TO ACRONYMS:</b> BB Blackboard • BTOP Broadband Technology Opportunities Program • CPB Corporation for Public Broadcasting • DB database • E-Rate Universal Service Fund • I2 Internet2 • ION Interoperable On-Demand Network • IPv6 Internet Protocol version 6 • LMS Learning Management System • NSF-EPSCoR National Science Foundation Experimental Program for Stimulating Competitive Research • OER Open Educational Resources • PD Professional Development • PBS LM Public Broadcasting Service Learning Media • RFP Request for Proposals • SC12 International Conference for High Performance Computing, Networking, Storage and Analysis • SE Southeastern IVC Interactive Video Conferencing • UCAN Universal Community Anchor Network • UELS Utah Educational Leadership Standards • UETS Utah Effective Teaching Standards USOE Utah State Office of Education • USHE Utah System of Higher Education • UtahSAINT Utah Security Advisory and Incident Network Team • WAN Wide-Area-Network</p>			

**UTAH EDUCATION NETWORK**A-Z Site Index

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### STEM



Learning opportunities for students...  
View the video from Governor Herbert to learn more.

### UEN News

**Jan. 16 - Martin Luther King, Jr.**



To help you incorporate primary sources and lesson plans in your classroom, Verizon Thinkfinity offers a special collection dedicated to the work of Dr. Martin Luther King, Jr. View resources ....

**Jan. 14: High School Supercomputing Competition**



The Utah High School Supercomputing Competition (UHSSC) is an annual competition aimed at introducing Utah high school students to the techniques involved in programming and managing computer clusters. The kickoff is on Jan. 14. Read more...

**#356: Utah students dedicated to "Lego Missions"**



**January 11, 2012**  
On Saturday, January 7, 2012 students gathered at McGillis School in Salt Lake City, one of seven locations around the state that hosted the first of... Read More

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### UEN-TV

**Now Showing**

**Duck on a Bike**



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