



Utah Education and Telehealth Network

Welcome to UETN

We network for education and healthcare

Whether you're a student or healthcare provider, a librarian or a teacher, UETN provides the broadband infrastructure to keep you connected. It doesn't matter if you're in college or a charter school, Blanding or Bountiful, you have access to reliable, high speed connections.

As one of the nation's premiere networks for education and healthcare, UETN's success is based on collaboration. We work closely with state legislators, the Governor's office, public education, higher and technical education, hospitals and health departments. Teaming up with technology and telecom providers we deliver cost-effective services throughout the state.

While UETN connects classrooms and clinics, we also provide tools to make the most of those connections. Our tools include interactive video conferencing, an online library with thousands of media resources and a statewide learning management system. We also provide training and technology support to assure that no matter where you are, robust resources are always available.

Through these UETN services we support and sustain Utah Governor Gary R. Herbert's P-20 *Utah Education Roadmap: 2018-2027*. It calls for innovation and collaboration from preschool through higher education to: ensure early learning, strengthen and support educators, ensure access and equity, and complete certificates and degrees. Given Utah's booming population of young families and our state's diverse geography, UETN infrastructure is critical to attaining each of these objectives.

Ray Walker
Chair, UETN Board

Ray Timothy
CEO and Executive Director, UETN

Purpose



We connect people and technologies to improve education and healthcare in Utah.

NETWORK

We will administer a secure, advanced, and stable network.

Grow capacity > Mitigate security incidents > Support HPC for research > Merge UEN and UTN infrastructure > Leverage peering

APPLICATIONS

We will curate and support high quality resources and tools.

Align to core needs and standards > Focus on graduation > Maximize cost savings through consortia

SUSTAINABILITY

We will secure ongoing funding for our work.

Be transparent and efficient > Maximize E-Rate and HealthCare Connect funds > Seek grants and partnerships

BROADCAST

We will extend programs and projects to benefit our community.

Manage FCC spectrum repack changes > Leverage the IP network > Produce new media

DEVELOPMENT

We will provide excellent professional learning experiences.

Expand Canvas training > Develop telehealth training > Staff adequately to reduce waitlists

Initiatives



Values



Service: open, honest, clear and respectful

Innovation: new ideas and creative solutions, a responsible risk-taking culture

Diversity: respect for all

Equity: statewide access

Fiscal Responsibility: stewardship, public trust

Empowered Staff: opportunities for professional growth

Communication: seek input, give voice to staff and stakeholders

Performance Indicators



1. Net Promoter Score
2. 100% of sites connected at sufficient capacity to meet need
3. Network uptime and availability at 99.9% or greater
4. # of Videoconferencing events and classes
5. Website metrics
6. \$ Savings through consortia purchasing
7. # of PD courses and credit hours completed
8. Finances are stable and sustainable

UETN serves customers all over Utah

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

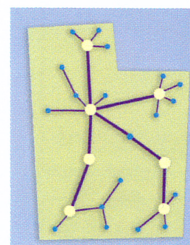
UETN SERVES:	AND ITS:	IN SUPPORT OF THEIR MISSION TO PROVIDE:
Utah Public K-12 Education	644,476 students 34,557 educators 1098 schools <small>(USBE Fingertip Facts, 2016-2017)</small>	<ul style="list-style-type: none"> Educational Equity Quality Learning System Values <small>(USBE Excellence for Each Student, 2017)</small>
Utah System of Higher Education	179,476 students 35,844 faculty and staff 8 institutions <small>(USHE Data Book 2017)</small>	<ul style="list-style-type: none"> Affordable Participation Timely Completion Innovative Discovery <small>(Utah: A State of Opportunity, USBR 2016)</small>
Utah System of Technical Colleges	38,985 students 14,029 trainees 8 technical colleges <small>(Annual Report, 2016)</small>	<ul style="list-style-type: none"> Technically-skilled workers to Utah employers Promotion of local and statewide economic development Market-driven technical education <small>(Annual Report, 2016)</small>
Utah Public Libraries	135 public libraries and branches Serving 3 million Utahns <small>(Utah State Library Division, 2016)</small>	<ul style="list-style-type: none"> Development, leadership and delivery of exceptional library services <small>(Utah State Library Division, 2016)</small>
Rural and Urban Healthcare	More than 70 hospitals, clinics, and health departments <small>(UTN Site List, 2016)</small>	<ul style="list-style-type: none"> Access and availability Care, disease prevention and promotion of wellness Efficient use of resources <small>(UTN member mission statements, 2016)</small>

How do we serve Utah?

1. Networking Services

Networking Services extend and maintain UETN's wide area broadband and digital TV networks. Students, parents, educators, patients and health care providers 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. UETN connects a majority of education and healthcare institutions at 100 Mbps and most at 1 Gbps. 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 UETN is the anchor tenant for their local community.

INTERNET ACCESS – UETN manages a large network used by research institutions in Utah to support the state's science and economic development goals. It also provides the capacity for more than 170 Gbps of Internet traffic from several Internet Service Providers (ISPs) to and from Utah schools, colleges, libraries, clinics and hospitals. The Network saves Utah institutions thousands of dollars per month by purchasing Internet access in bulk from multiple competing ISPs.

NETWORK SUPPORT AND SECURITY MONITORING – Network Support continuously tracks, reports and manages Internet, data, and video traffic on UETN's Wide Area Network (WAN). Security monitoring detects attacks on the Network, identifies miscreant tools and trends, and mitigates infrastructure vulnerabilities. UETN provides in-depth leadership in security training and works in partnership with national and global security organizations to avert large threats and incidents.

BROADCAST – UEN-TV broadcasts three TV channels through a digital transmitter and statewide translator

system: UEN-TV 9.1 provides educational programming to public education, higher education and the general public; MHz Worldview 9.2 carries international news and cultural programs; and UEN's First Nations Experience (FNX) Channel 9.3 carries Native American and Indigenous programming.

INTERNET FILTERING – UETN 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. UETN also provides and coordinates internet filtering with healthcare facilities.

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2. Application Services

Working with stakeholders, UETN licenses or develops multiple applications that meet education and telehealth needs. This optimizes cost efficiencies through shared support, infrastructure and procurement.

INTERACTIVE VIDEO CONFERENCING (IVC) – UETN IVC is Utah's high quality, high definition, conferencing system for education, telehealth and government. Thousands of students and educators use it every day for live, instructor led courses, collaborative meetings, training and other special educational events. IVC connects more than 1100 locations in Utah through more than 350 daily educational events. UETN IVC also incorporates robust desktop video conferencing options allowing students and administrators to collaborate from almost anywhere.

LEARNING MANAGEMENT SYSTEM (LMS) – Working with other Utah institutions, UETN licenses and supports a software application that manages online components of in-person and online classes; a shared platform for information sharing and collaboration. UETN contracts with Utah-based Instructure for its Canvas LMS. The Network regularly convenes higher and public education partners who work collaboratively to maximize this service.

UTAH'S ONLINE LIBRARY – This statewide service purchases online library resources from national suppliers at consortium discounts. The Library provides access to newspaper articles, magazines, professional journals and eBooks. UETN pays the K-12 portion of the online library. Public Libraries and Academic/College Libraries also benefit through this collaboration. Preschool Pioneer provides early childhood resources in English and Spanish to children ages 3-5, their parents and caregivers. This service benefits more than 285,000 Utah pre-school age children as they prepare for school.

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

TEACHING AND LEARNING TOOLS – UETN provides Utah's K-12 educators, faculty, and pre-service educators with tools they need to teach effectively. UETN also supports various web projects aligned to state education goals, such as STEM (Science, Technology, Engineering and Math) learning resources, UtahFutures college and career planning courses, and Internet Safety and Financial Literacy. UETN's eMedia service includes more than 20,000 digital videos, images and documents. More than 35,000 Utah educators have my.UEN accounts. In addition, we work closely with the Utah State Board of Education (USBE) to develop curriculum applications such as the Utah Core Curriculum Database with vetted lesson plans, open educational resources, and links.

3. Support Services

Support Services provides assistance to the users of UETN infrastructure and applications.

TRAINING – UETN provides workshops and presentations to help end-users (teachers, faculty, librarians, clinicians) use Network infrastructure services effectively. We coordinate with K-12 and higher education specialists to provide courses, workshops, and teaching materials to support their educational technology work. UETN offers technology integration support in-person and via UEN-TV, Adobe Connect and the Canvas LMS. Our teacher trainers work closely with district and school leaders to provide workshops specific to local school needs including 67 online license endorsements for teachers.

REGIONAL SUPPORT – UETN's regionally located field support centers provide 24/7 assistance to the data and IVC network. UETN helps sustain these four Regional Service Centers with technical support, grant support and personnel funding. The centers are the frontline support for connectivity, training and problem resolution for Utah's rural school districts. The centers include 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.

E-RATE SUPPORT – UETN assists Utah public school districts, charter schools, private schools, libraries, Head Start programs and health care providers in obtaining E-Rate and Healthcare Connect Fund reimbursements for broadband circuit costs. The programs are 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 UETN's E-Rate and Health Care Connect Fund support, Utah schools, libraries and health care facilities are laying claim to millions of reimbursement dollars set aside for education and healthcare.

4. Telehealth Services

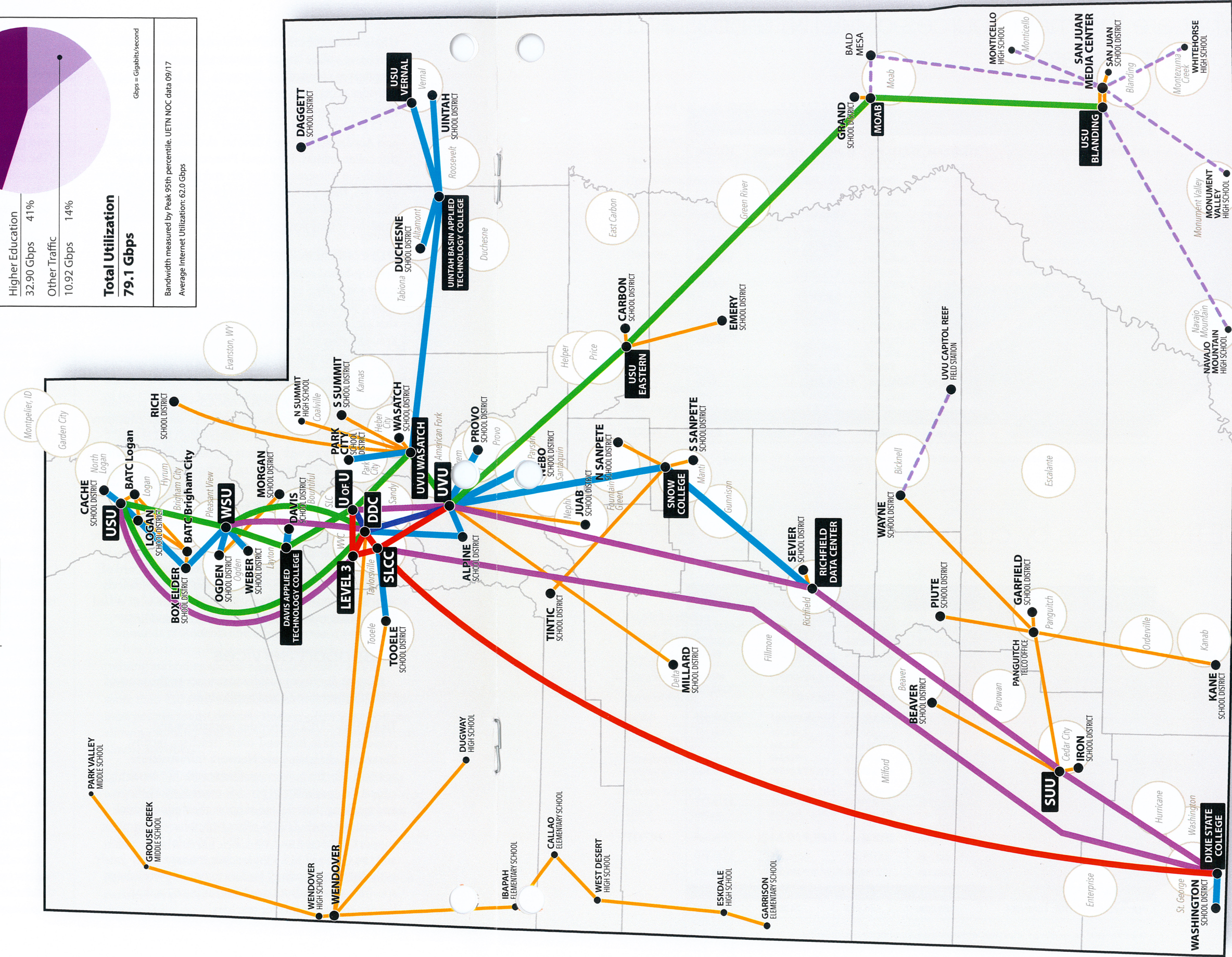
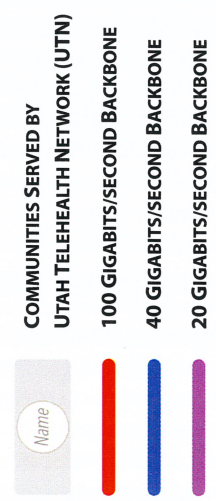
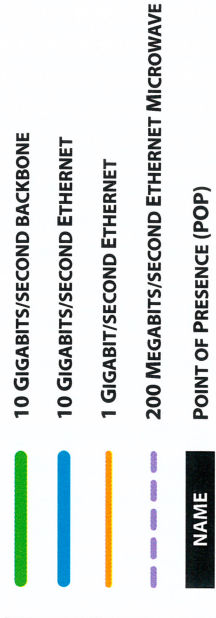
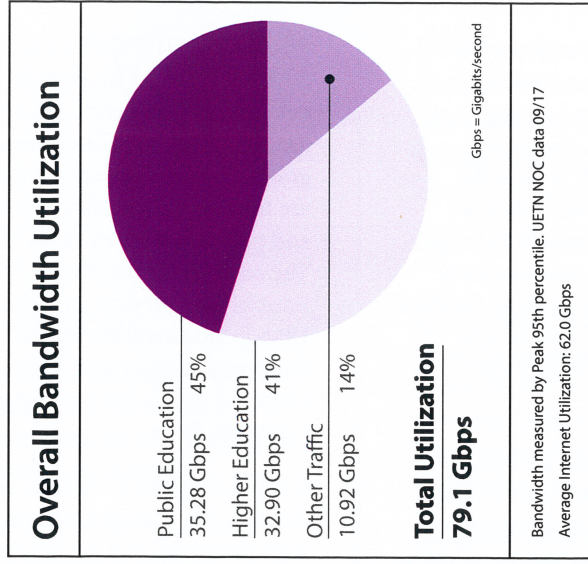
UETN's telehealth professionals link rural patients and health providers with access to services previously available only in more populated urban areas. Whether live-streaming surgery grand rounds, transmitting radiology images, or linking behavioral health providers to patients in their homes, the telehealth network helps deliver healthcare to rural and underserved populations throughout the state. UETN provides high quality broadband to rural healthcare providers and collaborates with their IT staff on cyber security initiatives to maintain patient confidentiality and privacy. UETN supports patient care, provides continuing education to health professionals, and facilitates administrative meetings. Web video has expanded telehealth access to homes, mobile devices, nursing homes and other new locations.

5. Operational Services

These business functions provide the operational foundation for UETN's networking, application, telehealth and support services. They include basic operations and maintenance such as administration, accounting, internal telecommunications, utilities, database backups and internal security tools.

UETN Infrastructure Map

Connecting 1500+ locations throughout Utah



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

As of Jun. 30, 2017

UETN SERVICES	TOTAL	STATE APPROP	KUEN GRANT	FEDERAL E-RATE	OTHER FUNDING*
NETWORKING SERVICES	\$31,037,804	\$13,137,400	\$1,940,112	\$15,836,658	\$123,636
Wide Area Network (WAN)	25,557,279	9,717,796	575,452	15,264,030	-
Internet Access	610,017	124,958	-	485,059	-
Network Support and Security Monitoring	2,773,238	2,773,238	-	-	-
Broadcast	1,796,818	308,524	1,364,659	-	123,636
Internet Filtering	300,453	212,884	-	87,568	-
APPLICATION SERVICES	\$10,097,343	\$8,326,520	\$369,093	-	\$1,401,730
Interactive Video Conferencing (IVC)	4,710,583	3,464,490	(1)	-	1,246,094
Learning Management System (LMS)	495,965	495,965	-	-	-
Teaching and Learning Tools	4,346,821	4,191,185	-	-	155,636
Utah's Online Library	538,079	168,985	369,094	-	-
Web Conferencing	5,895	5,895	-	-	-
SUPPORT SERVICES	\$2,296,987	\$2,012,581	-	-	\$284,406
Training	1,401,497	1,117,091	-	-	284,406
Regional Support	802,717	802,717	-	-	-
E-Rate Support	92,773	92,773	-	-	-
OPERATIONAL SERVICES	\$3,483,195	\$2,062,754	\$1,419,726	-	\$715
Operational Services	3,483,195	2,062,754	1,419,726	-	715
TOTAL	\$46,915,330	\$25,539,254	\$3,728,931	\$15,836,658	\$1,810,486
PERCENTAGE OF TOTAL REVENUE	100.00%	54.44%	7.95%	33.76%	3.86%

Other Funding is comprised of miscellaneous grants and reimbursements from Public Ed, Higher Ed, and Department of Technology Services.

UETN Budget by service

Wide Area Network (WAN)	\$25,557,279	54.48%
Interactive Video Conferencing (IVC)	\$4,710,583	10.04%
Teaching and Learning Tools	\$4,346,821	9.26%
Operational Services	\$3,483,195	7.42%
Network Support and Security Monitoring	\$2,773,238	5.91%
Broadcast	\$1,796,818	3.83%
Training	\$1,401,497	2.99%
Regional Support	\$802,717	1.71%
Internet Access	\$610,017	1.30%
Utah's Online Library	\$538,079	1.15%
Learning Management System (LMS)	\$495,965	1.06%
Internet Filtering	\$300,453	0.64%
E-Rate Support	\$92,773	0.20%
Web Conferencing	\$5,895	0.01%
TOTAL	\$46,915,330	100%

Estimates as of Jun. 30, 2017 - FY2017

UETN services by customer

As of Jun. 30, 2017

UETN SERVICES	TOTAL	PUBLIC EDUCATION	HIGHER EDUCATION	OTHER CUSTOMERS
NETWORKING SERVICES	\$31,037,804	\$20,212,416	\$6,697,856	\$4,127,532
Wide Area Network (WAN)	25,557,279	17,378,950	5,622,601	2,555,728
Internet Access	610,017	201,306	347,710	61,002
Network Support and Security Monitoring	2,773,238	1,828,599	475,991	468,648
Broadcast	1,796,818	503,109	251,555	1,042,155
Internet Filtering	300,453	300,453	-	-
APPLICATION SERVICES	\$10,097,343	\$4,330,755	\$3,418,081	\$2,348,507
Interactive Video Conferencing (IVC)	4,710,583	550,208	1,991,228	2,169,147
Learning Management System (LMS)	495,965	163,668	332,296	-
Teaching and Learning Tools	4,346,821	3,434,572	912,249	-
Utah's Online Library	538,079	179,360	179,360	179,360
Web Conferencing	5,895	2,947	2,947	-
SUPPORT SERVICES	\$2,296,987	\$1,846,851	\$336,359	\$113,777
Training	1,401,497	981,048	336,359	84,090
Regional Support	802,717	802,717	-	-
E-Rate Support	92,773	63,086	-	29,687
OPERATIONAL SERVICES	\$3,483,195	\$2,159,581	\$975,295	\$348,319
Operational Services	3,483,195	2,159,581	975,295	348,319
TOTAL	\$46,915,330	\$28,549,603	\$11,427,591	\$6,938,136
PERCENTAGE OF TOTAL EXPENSES	100.00%	60.85%	24.36%	14.79%

Totals in these tables may not reflect precise summaries of the data since amounts less than one dollar are rounded.

UETN Budget by customer

Public Education	\$28,549,603	60.85%
Higher Education	\$11,427,591	24.36%
Telehealth	\$2,090,546	4.46%
Libraries	\$1,724,171	3.68%
General Public	\$947,601	2.02%
UCAT	\$947,601	2.02%
State Government	\$859,775	1.83%
Community Learning Centers	\$175,653	0.37%
Private Schools	\$120,183	0.26%
Other	\$72,606	0.15%
TOTAL	\$46,915,330	100%

Estimates as of Jun. 30, 2017 - FY2017

UEN & UTN Advisory Councils



UEN.ORG



UTN.ORG

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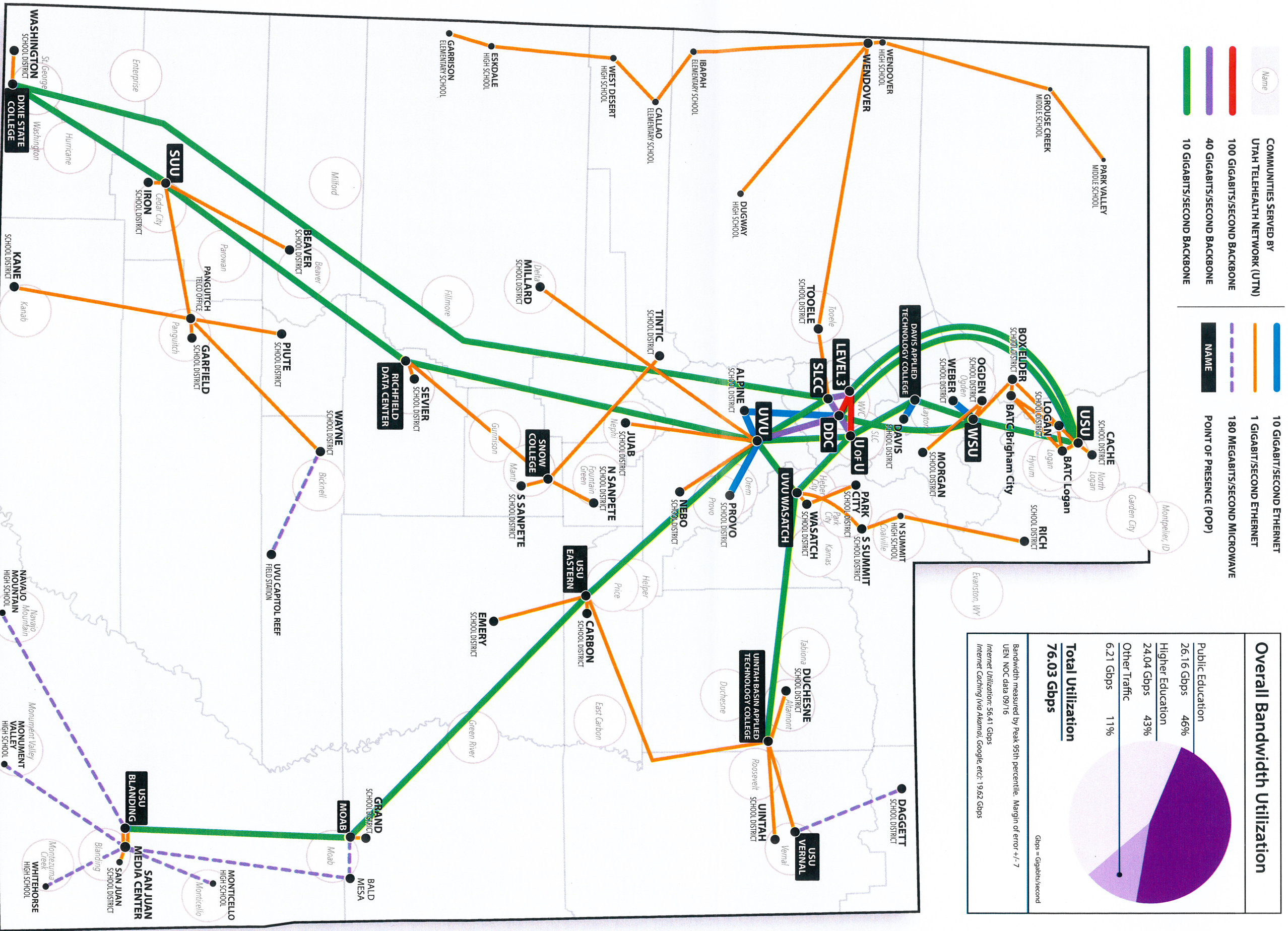


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Through Jun. 2017



UJETN Infrastructure Map

Connecting 1500+ locations throughout Utah



UETN supports health care and education statewide

644,476
K-12 STUDENTS AT
1,098 SCHOOLS

70+

HOSPITALS, CLINICS,
AND HEALTH
DEPARTMENTS


59%
GROWTH IN USAGE OF
UTAH'S ONLINE LIBRARY




7,804,693
unique visits
to uen.org,
UTAH'S PUBLIC MEDIA
WEBSITE FOR EDUCATION



232,490
POSTSECONDARY
STUDENTS AND TRAINEES



3 MILLION
POTENTIAL
PATRONS
AT **135**
PUBLIC LIBRARIES
AND BRANCHES



73,542
EDUCATORS AND
STAFF FROM PRE-K
THROUGH COLLEGE

61,640 visits
TO PRESCHOOL PIONEER
AND ESCUELA PREESCOLAR,
UTAH'S BILINGUAL LIBRARY
FOR YOUNG LEARNERS

~20,000 STUDENTS
USED UETN'S INTERACTIVE VIDEO
CONFERENCING SYSTEM IN 2017
TO EARN HIGHER EDUCATION CREDITS

1,500+


EDUCATION AND COMMUNITY SITES ARE
CONNECTED VIA UETN'S WIDE AREA NETWORK



29,000+
PEOPLE REACHED THROUGH
UTAH AMERICAN GRADUATE

24/7 EDUCATIONAL PROGRAMMING ON KUEN'S THREE DIGITAL CHANNELS:
UEN-TV 9.1 | MHZ WORLDVIEW 9.2 | FNX 9.3

\$15.8
MILLION
IN TELECOMMUNICATION FUNDS
RECOVERED FOR UTAH SCHOOLS
THROUGH THE E-RATE PROGRAM



MORE THAN
1 MILLION
UNIQUE PAGEVIEWS OF
Utah's
Online Library



254,627
VISITS TO EMEDIA



135,135  VIEWS OF VIDEOS ON
UETN WEB PAGES

196,247
HIGHER EDUCATION COURSES
DELIVERED VIA UETN'S LMS
THROUGH 2016

7,304+
UTAH EDUCATORS PARTICIPATED
IN **538** HOURS OF
UETN PROFESSIONAL DEVELOPMENT

Estimates as of Oct. 2017

Updated Nov. 6, 2017