



NEWSLETTER

A TRADITION OF EXCELLENCE SINCE 1915

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TECHNOLOGY SERVICES DIVISION AND UTAH STATE UNIVERSITY – CASE STUDY

Utah State University (USU) has come a long way since its founding in 1888. What started as a small, agricultural college in northern Utah has grown into a university widely recognized for intellectual and technological leadership in land, water, space and life enhancement.

time to start looking around and seeing what else was out there,” said Eric Hawley, the university’s CIO.

Cache Valley Electric was a natural fit for the USU storage refresh project, having worked with the university for years on such



Photo by Jared Thayne

Utah’s designated land-grant and space-grant institution boasts more than 850 faculty and over 25,000 undergraduate and graduate students, including 10,000 students in distance education programs across the state.

In 2009, the university began pursuing a refreshed storage solution to maintain cutting-edge IT infrastructure for its students, faculty and staff.

“We had purchased the CX3-80, and the maintenance contract was coming to an end, so we felt it was

projects as cabling and physical infrastructure improvements. According to CVE Division Manager Chad Gardner, a combination of relationship building and effective deployment of design experts from EMC ultimately won the deal. “Other divisions of Cache Valley Electric had been working with the university for many years, so there was already an established relationship there we could build on,” says Gardner. “On top of that, we spent a lot of time with Eric Hawley, bringing in EMC experts and really collaborating on a

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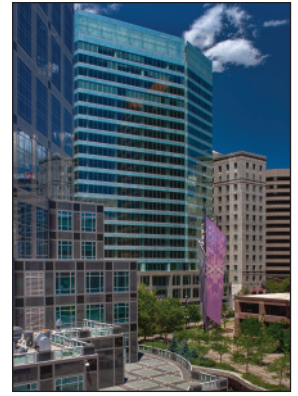
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AVTEC UPGRADES BUILDING 222 SECURITY SYSTEM

Avtec, a division of Cache Valley Electric, is providing security upgrades to the 222 South Main high-rise in Salt Lake City. Avtec has contracted with Hamilton Partners, a developer that CVE worked with during the building's initial construction.

CVE has provided additional access control and CCTV to meet the needs of the building's new tenants. Emergency call stations have been added in the public parking structure and optical turnstiles were placed in the lobby. Avtec is also providing full graphics mapping and integration of the facility's access control, CCTV and visitor management system. **CVE**



SEVERSTAL COLUMBUS – PHASE II

Cache Valley Electric has worked with Severstal Columbus since the steel mill's construction began in 2005. The Columbus facility is located on a 1400-acre site in Mississippi's "golden triangle" and provides flat-rolled products to manufacturing facilities across the region, including the South's growing automotive industry. This area produces a third of all cars manufactured in the US annually and 19 of the region's assembly plants are located within 450 miles of the mill. The Severstal facility produces high-quality flat-rolled products, including hot rolled bands, hot rolled processed sheet, cold rolled full hard and cold rolled fully processed sheet, and hot dipped galvanized sheet steel.

CVE is currently working for Severstal Columbus to complete the electrical installation of the \$555 million Phase II expansion. This project will double the mill's footprint and capacity, increasing the plant's annual production capacity to 3.4 million tons.

During preliminary work for the project, CVE completed an

expansion of the main substation and installed additional primary power distribution throughout the facility to power the Phase II expansion.



This project involves construction of a second electric arc furnace, ladle metallurgy furnace, vacuum tank degasser, caster, tunnel furnace with shuttles, and a second down-coiler in the hot mill. A new baghouse and new water systems will support the meltshop and hot mill areas. In the finishing mill, a fourth pickle tank will be added to the existing pickling line. Additional annealing bases, a new pickle line and a new galvanizing line will also be created. **CVE**

SMITH'S FOOD AND DRUG TELEDATA UPGRADE

Cache Valley Electric's Teledata Division has a long relationship with Smith's Food and Drug and has helped remodel many Smith's locations. In January 2011, Smith's contracted with CVE for two new projects. The first contract will be completed in two phases. Phase One consists of a complete enterprise infrastructure upgrade at Smith's corporate headquarters in Salt Lake City, Utah. CVE technicians will first create a new fiber backbone to nine telecommunications closets located throughout the campus. Corning OM3 multimode fiber will be installed in a "star-ring" topology that offers dual separate pathways to each closet and 10 times the current bandwidth. New equipment racks will be installed in each closet to host the system's cabling and electronics.

During the project's second phase, CVE will upgrade all horizontal cabling throughout the campus—otherwise known as "station cabling at the desk". A new CAT 6 solution will replace existing CAT 5 cabling to nearly 950 workstations. Everything that supports the system will be also be improved, including patch panels, work area outlets, cable pathway supports and wire management.

Project manager Chris Noble and foremen Dale Jolley and Jared Morrison are leading this project. Anticipated completion is scheduled for February 2012.

For the second contract, CVE will complete a CCTV security project in Smith's Burley, Idaho location. Our Teledata Division is partnering with Avtec, a division of CVE, to install 63 cameras with all new cabling and head-end equipment, including upgraded DVRs with large memory capacity. Avtec project manager Brian Chamberlain is managing the security portion of this contract. **CVE**



SORENSEN MOLECULAR BIO-TECHNOLOGY BUILDING - USTAR

Cache Valley Electric was awarded a contract in 2009 for the Sorenson Molecular Bio-Technology Building, part of the USTAR (Utah Science Technology and Research) initiative. This 208,000 sq. ft. building will facilitate bio-medical and nano-science research while promoting new business development and partnerships in these fields. The facility's location, design and equipment were specifically selected to encourage interaction and collaboration between research experts. The facility will house laboratory space, analytical processing areas, specialized equipment areas and staff in 4 core areas: a 24,000 sq. ft. vivarium, a 9000 sq. ft. microscopy suite, an 8,000 sq. ft. imaging facility and a 25,000 sq. ft. nanofabrication facility. Several public areas will also be part of the building to enable scientific presentations and public forums, including a 150-seat auditorium, a large lobby, visitor space and a café.



CVE will complete the power distribution, lighting, lighting controls, fire alarm, lightning protection and raceways for various systems such as data and security. We are also responsible for commissioning and providing electrical power to owner-furnished specialty equipment. Advanced technology was utilized in the design and construction of this project, including BIM (Building Information Modeling) engineering. The facility also incorporates sustainable design strategies and it is slated for a LEED gold certification.

Cache Valley Electric is working with Layton Construction, CM/GC, headquartered in Sandy, Utah. The project is scheduled for completion in November 2011. **CVE**

TECHNOLOGY SERVICES DIVISION AND UTAH STATE UNIVERSITY – CASE STUDY (continued from page 1)

Storage Area Network (SAN) design that would fulfill their requirements now and in the future.”

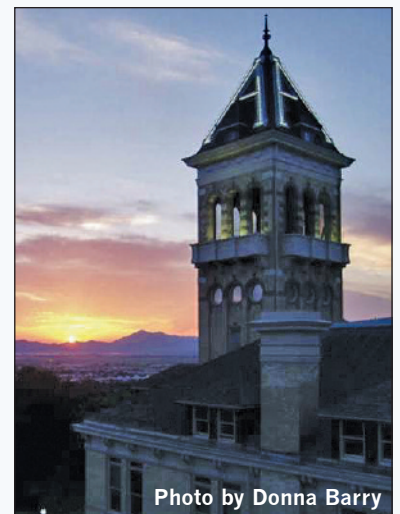
USU eventually decided on a solution consisting of an EMC Celerra NS-480, a Celerra NS-120 and a Data Domain DD690 to replace its legacy Data Domain unit. Thanks to these new components, the university's storage environment is now completely standardized on EMC technology. The Celerra arrays offer ease of use, advanced functionality and no-compromise availability, while the Data Domain gateway provides efficient deduplication functionality with simplified backup and recovery processes.

As a research university, USU requires ample storage space and high availability for its files—many of which are in video form. The EMC Celerra and Data Domain technology assures that these critical research files will remain protected and available. The university can also leverage the storage environment to store and recover video surveillance files, creating a more secure campus for students, faculty and staff.

USU's new EMC storage array is a unified and standardized solution that offers complete deduplication capabilities across all departments. It has also improved efficiencies and accelerated connection times for USU users. “When we began transitioning USU's file sharing infrastructure to the new system, the only comments we received were, ‘Something's wrong with the file system—it's going too fast,’” says Hawley. “Obviously, having your system move faster than your users expect is a good problem to have.”

In addition, this high-capacity and cost-effective storage solution allows many additional university departments to purchase storage space affordably from USU's technology group. The university has subsequently seen availability and recoverability improvements across the board. USU's risk of downtime from disasters or data corruptions has also been reduced.

Despite all of these technological improvements, Hawley believes that Cache Valley Electric's ability to “just get things done” is what made this engagement so successful for USU. “With its in-house expertise and understanding of not just EMC technology, but storage architecture in general, Cache Valley was always able to answer our questions and follow through on what we need from them,” concludes Hawley. “In fact, I'm not sure we would have moved forward with EMC if it wasn't for Cache Valley—no matter what we asked of them, they got it done. You can't ask for more than that.” **CVE**



RECENTLY AWARDED PROJECTS

AVTEC

Clackamas County/Fire;

ACS / VSS System Installation
– Milwaukie, Oregon

CTI Food; ACS – System Installation

– Boise, Idaho

Hamilton Partners; 222 So. Main

Security Upgrades
– SLC, Utah

Mountain America Credit Union;

ACS – System Installation
– South Jordan, Utah

Oregon Department of Veterans Affairs;

ACS / VSS System Installation
– Salem, Oregon

Pacific Energy – Hydro Resources;

EAP Project
– Klamath River System

Salt Lake City Public Utilities;

– North Salt Lake, Utah
ACS – Software Upgrade
– North Salt Lake City, Utah

Salt Lake City Public Utilities;

Jefferson – Salt Lake City, Utah

ViaWest; ACS – System Installation

– Salt Lake City, Utah

WCF; ACS – System Installation

– St. George, Utah

ELECTRICAL

CONSTRUCTION DIVISION

Logan

Nucor; Decatur, Alabama

Cold Mill HV ductbank and feeders
Baghouse

Severstal;

Alloy System; Downcoiler;
Galvanizing Line; Tunnel Furnace

Rocky Mountain Power

300 West Substation Project
– Salt Lake City, UT
Jordan Substation – Salt Lake City, UT
Copper Hills Substation
– West Jordan, UT

KUC – Line relocation truck shop

expansion – Magna, UT

Salt Lake City

ATK; Clearfield, Utah

Deicing Pad 34L; Salt Lake City Dept.

Of Airports – Salt Lake City, Utah

Draper LRT Crossing;

11400 South – UTA – Draper, Utah

Duchesne County Jail Controls Upgrade;

– Duchesne, Utah

ITT Fiber Science; Salt Lake City, Utah

KUC; CHLP Project – Magna, Utah

KUC SAG Mill 4 Control Upgrade;

– Magna, Utah

LHM Toyota Murray Dealership;

– Murray, Utah

Mtn. View Corridor; Redwood Road to

5400 S. – UDOT – Murray, Utah

Nye County Jail; Pahrump, Nevada

Park Lane & Station Park Road Traffic

Signal; – CenterCal Properties

– Farmington, Utah

SR-114 Geneva Road; Roadway

Widening – Orem, Utah

Tooele County Jail; Tooele, Utah

Utah County HVAC Upgrade; Utah

SERVICE DIVISION

Dannon – Waste Water Treatment Plant;

– West Jordan, Utah

Echopass; UPS System Replacement

– Cottonwood, Utah

Closure Systems International; In-Line

Project – Salt Lake City, Utah

Select Health; UPS Power Upgrade

– South Salt Lake, Utah

Proctor & Gamble; Simplex – Fire

Alarm upgrades – Bear River City, Utah

Intermountain Health Care; Chiller

System – West Valley City, Utah

Pacificorp; Naughton Plant – Unit #1

Damper Drives – Kemmerer, Wyoming

Edwards Life Sciences; BMS Controls

Installation – Draper, Utah

SAPA; Compressor Power System

Upgraded – Spanish Fork, Utah

Topaz; Controls Solutions Group

– BMA Controls Installation

– West Jordan, Utah

TECHNOLOGY SERVICES

DIVISION

ACS; Sandy, Utah

Galileo Processing; SLC, Utah

Harmons; West Valley City, Utah

Monrovia School District;

– Monrovia, California

Opinionology; Orem, Utah

Overstock.com; SLC, Utah

Rio Tinto; South Jordan, Utah

Salt Lake County; SLC, Utah

Sirsidynix; Provo, Utah

Washington School District;

– St. George, Utah

TELEDATA

Salt Lake City

Oracle; West Jordan, Utah

Salt Lake School District;

(Clayton Middle School)

– Salt Lake City, Utah

Logan Regional Hospital;

– Logan, Utah

Proctor and Gamble;

– Tremonton, Utah

Sundance Ski Resort;

Teleperformance; Salt Lake City, Utah

Sorenson Companies;

– Salt Lake City, Utah

Chase Bank; Draper, Utah

LDS Business College;

– Salt Lake City, Utah

Ogden Clinic; Ogden, Utah

Portland

Reliant Behavioral Health;

– New Office – Portland, Oregon

PCC; Sylvania Campus – SS Building

– Portland, Oregon

UPS; Vancouver, Washington

Niketown Las Vegas Remodel;

– Las Vegas, Nevada

Tualatin Valley Fire and Rescue Union

Hall; Tualatin, Oregon

Easy Street Data Center;

– Beaverton, Oregon

The Regence Group;

– Salt Lake City, Utah

