

Anchorage Municipal Light & Power

Customer Success Story

Autodesk® Utility Design
AutoCAD® Map 3D
Autodesk® Design Review

“When you factor in populating multiple systems and applications, and printing and distributing designs manually, it used to take days to complete even simple projects. Now, these same projects can be completed in a matter of hours. That saves a tremendous amount of time and money. And our reduced backlog proves it!”

—Ray Pearce
GIS Project Manager
Anchorage Municipal Light & Power

Utility Integrates Systems, Speeds Design

Integrated network design helps utility complete tasks 15 times faster



Project Summary

Anchorage Municipal Light & Power (ML&P) provides electric generation, transmission and distribution services to downtown Anchorage, Alaska. The utility needed to integrate multiple external systems and streamline its design processes to complete network design projects faster, easier and more accurately.

Using Autodesk Utility Design and geospatial software, Anchorage Municipal Light & Power is able to:

- Complete design projects 10 to 15 times faster
- Improve data and design quality
- Manage the design process in one system, from start to finish
- Help new designers quickly become productive by capturing the utility's institutional knowledge in the database
- Reduce project backlogs

The Challenge

Three decades ago, ML&P developed a utility network design process in a legacy Hewlett-Packard system. As the utility grew, it created and acquired multiple software systems to manage network data and then used AutoCAD to produce the physical designs.

Managing multiple systems proved both costly and time consuming. Staff entered the same project data three or four times in different systems. Each duplicated effort increased the risk of data errors and wasted several hours of the team's day.

“As we acquired new systems to improve our work, we actually created a lot of inefficiencies that became part of our design process,” says Ray Pearce, GIS Project Manager at ML&P. “We desperately needed something that would eliminate those inefficiencies, improve the quality of the design product, and fix the problem areas that were prone to data errors.”

At the same time, Pearce struggled with the fact that his workforce was aging. As employees retired, managers taught new employees how to use multiple software applications as well as AutoCAD. Pearce and his team looked for a way to integrate the systems to eliminate redundant data entry and to enforce stricter design standards.

Autodesk®

"We save time and money by making our staff more productive, and dramatically improve the quality of our finished product."

The Solution

Pearce's team, already familiar with the AutoCAD interface, migrated quickly and easily to Autodesk® Utility Design (AUD) software to create a more integrated design process. "Our staff likes AUD because it has the same look and feel as AutoCAD, but with added network design intelligence. Even new designers that used AutoCAD in college are up-to-speed quickly," Pearce notes.

Eliminating Redundancies

With an integrated network design system, ML&P completes tasks quicker without redundant processes. For example, the new system eliminates the need to enter data again to use legacy applications for ordering materials and producing cost estimates. Now, instead of re-entering the same data into two systems, staff can create estimates and order materials in one system with a few simple mouse clicks.

Faster Processes From Start to Finish

When a customer submits a work order, a customer representative forwards the request to an engineering supervisor. The supervisor creates a new project with the software and electronically assigns it to a designer. When the designer opens the project, data from the external work request system automatically updates the AUD database.

ML&P built an interface that integrates existing facility maps into the designer's project drawing so he has a starting point to generate a design. The designer can see existing utility facilities, parcel boundaries, street center lines and other base map data in a single view.

The designer completes the design, while identifying all construction assemblies, estimating project costs and ordering materials for the project. Supervisors now access up-to-the-minute project details to monitor progress. When the engineer finishes the design, he sends it for review electronically. Supervisors use a similar process for

approving the design. Approved projects are saved as lightweight DWF drawings, and are distributed, in real time, to all departments affected by the project. Pearce reports, "This process is much more efficient than before. We have a single project document that captures all the data — the map, design, materials, construction notes and funding sources — and everyone has access to it."

One System, Multiple Benefits

Because AUD is built on AutoCAD® Map 3D, mappers, surveyors and drafters take advantage of the software's open source Feature Data Object (FDO – www.osgeo.org) technology to communicate with other Anchorage city departments who use different software formats and coordinate systems. "We didn't have to go through difficult data translation to use their data," Pearce says. "The software reads and writes data in its native format without difficulty or headaches. That's one more way we protect the integrity of our data."

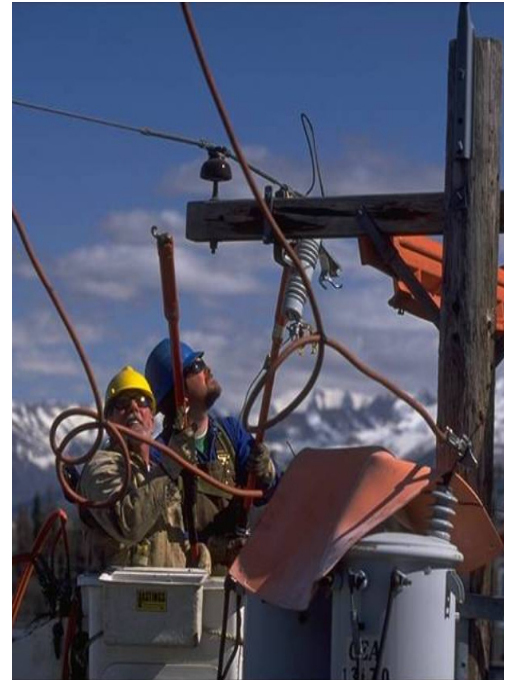
The Result

Pearce estimates that the integrated system enables a skilled designer to complete a typical design project 10 to 15 times faster. "When you factor in populating multiple systems and applications, and printing and distributing designs manually, it used to take days to complete even simple projects. Now, these same projects can be completed in a matter of hours. That saves a tremendous amount of time and money. And our reduced backlog proves it!"

ML&P notices other benefits from its system, too. "Not only are we saving time and money by making our staff more productive, but we are dramatically improving the quality of our finished product as well," Pearce adds.

Fewer Backlogs and Less Paper

Because designers are able to complete tasks more quickly, they have eliminated ML&P's



project backlog. And with more time to devote to important projects, the team creates multiple design alternatives, compares the results and selects with the best, most cost-effective option.

Before implementing its new integrated system, ML&P printed all of its design drawings, made numerous copies, then distributed these paper copies throughout the utility as well as to customers and contractors. Now, it's all electronic, saving thousands sheets of paper annually.

In a harsh climate like Alaska's, power utilities such as ML&P must design and manage reliable systems. And with effective tools, they are doing just that.

To learn more about how Autodesk Utility Design is helping utilities complete projects faster and more cost effectively, visit us at www.autodesk.com/aud.



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