

Delphi Corporation's Facilities Services Group Uses Adept to Reclaim Ownership of its Design Information

Delphi Corporation, a major component manufacturer for the automotive industry, maintains plants and offices all over the world. The Delphi Corporation Facilities Services Group ("Delphi FSG") oversees these facilities along with their vast, dynamically changing database of related documents, including a wide variety of electronic and paper documents, such as design drawings, specifications, project estimates, bill of materials, project contract documents, and equipment operation and maintenance manuals. Safely storing and efficiently retrieving this data is mission critical and errors can impact the profitability of any project.

Rich Gunter, senior facilities engineer in Delphi FSG, knows these challenges well. "Our drawings were in three separate storage formats. AutoCAD drawings were managed by Autodesk WorkCenter software. Our physical drawings were stored in drawers and also scanned in as raster files. We had a custom search engine for the raster files, but no way to easily search through the entire database." To centralize its data and provide a standardized database for easy access, Delphi invested in Synergis Adept Document Management.

Managing Documents Across Geographically Dispersed Offices

Headquartered in Troy, Michigan, Delphi Corporation (www.delphi.com) is a world leader in mobile electronics and transportation components and systems technology. The

Delphi FSG, in which Gunter works, serves as an internal Architectural and Engineering firm within the corporation to provide facility engineering, environmental, and real estate services for the corporation's worldwide operations. The group is tasked with all facets of a facility from acquisition to decommissioning.

Delphi FSG's civil, electrical and mechanical engineers interact with each other to varying degrees, depending on project complexity. However, each discipline originally had its own set of standards, specifications, and blocks for creating a new design drawing. Gunter assisted in developing some of the Delphi FSG Warren, Ohio office's CAD standards to enable all members of the group to work in a consistent environment. But many opportunities remained to improve the organization of data. The fundamental challenge was managing the changes in work-in-progress drawings during the project design phase.

"There were many instances where engineers were not communicating design changes on drawings that were referencing each other. An engineer was never sure he or she was working with the most updated external reference file," said Gunter.

According to Gunter, the second major challenge was getting the individual project information out of the engineer's personal files and into a centralized project library that would give others the ability to search and find information when working on revisions to a facility.



Delphi's Facilities Services group uses Adept to manage work-in-progress drawings for the corporation's worldwide plant facilities.

Delphi Selects Adept based on its Open, Unencrypted Design

After evaluating Adept, and two other systems, Delphi purchased 20 licenses of Adept. Gunter explains the key business factors that drove the decision. Non-encryption of files was an important criterion for Gunter. When the company's first document management system, Autodesk WorkCenter became orphaned, all of Delphi's drawings were encrypted and inaccessible. Explained Gunter, "After our experience with WorkCenter, there was no way we wanted to have our data encrypted again." Gunter feels strongly that an organization should have complete control

and ownership of its data. "The level of security should be the responsibility of the customer. It shouldn't be forced on you." Adept's alternative vaulting technology that secures data without renaming, scrambling or moving the file location was the perfect solution for Delphi. Adept's other technical advantages included support for AutoCAD external referencing feature. Added Gunter, "Adept is a simple, yet powerful off-the-shelf product that is externally supported by a strong organization like Synergis Software."

Migrating from Two Electronic Systems to One

Unlike most document management implementations, Delphi was making the transition from two separate systems into a centralized system. Delphi tasked Synergis' data migration team to import Delphi's raster files from a DOS system into Adept; and to migrate its encrypted WorkCenter data into Adept. Because of Synergis' experience with data migrations from WorkCenter and other systems, the migration went smoothly, as did the rest of the implementation. Drawing categories and other data had already been well-designed in the WorkCenter environment, so these were simply incorporated into Adept's environment, and Delphi's workflow process remained unchanged. Because the users were already familiar with document management, the training on Adept went seamlessly.

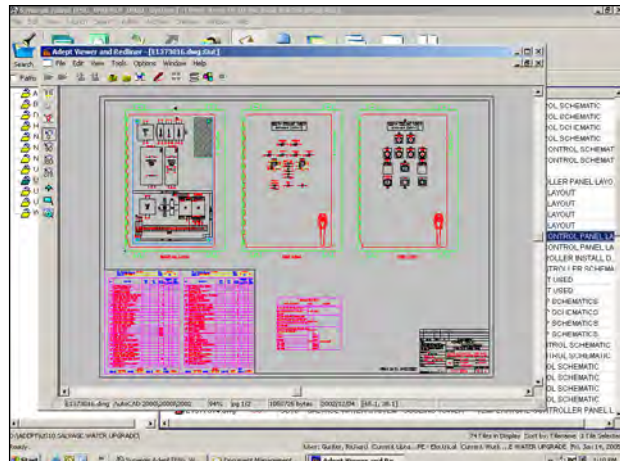
"It was apparent that Synergis Software was experienced in document management. I found them to be very helpful in providing guidance and using examples from their experience to help us decide what we did or didn't need. We had a pretty painless launch," added Gunter.

In addition to combining its raster drawing files and AutoCAD files into a single database, Delphi converted its physical drawings to electronic format for tracking in Adept. "We scanned the drawings into TIF files and used a drawing number generator to assign them names. The scanning company cataloged the drawing name and building number. Once in electronic format, we were able to take advantage of Adept to track their attributes. We update the attributes in Adept as the scanned drawings are needed. The drawing mylars and the file cabinets are gone."

"Now that we have a stable database, we want to improve the database quality by requiring engineers to add valuable information to every drawing to facilitate more efficient searches," said Gunter.

Improving Productivity and Business Processes

Gunter recently completed the Adept Administrator training at Synergis, where he gained hands on experience installing and implementing Adept. As the Adept Administrator for the Facilities Services Group, Gunter will foster streamlined engineering processes to better serve its customers.



All of Delphi CAD and raster drawings are managed in Adept's centralized repository.

"Adept improved our department in both the short and long term," stated Gunter. "In the short term, this investment allowed us to recover from a difficult situation where we couldn't even access our own documentation. In the long term, we were able to collate and see the entire landscape of our departmental documentation. As a result, we have a clearer vision of where we need to be."

From Gunter's perspective, Adept has significantly changed the way his department operates. Migrating to Adept forced the group to examine the way it conducted the business of engineering. It also required that the group address a variety of weaknesses in their process. "Having identified our weaknesses, we have formulated a plan for correction. Ultimately we are improving our value to our customers," remarked Gunter.

One of the first projects in which Gunter used Adept was when the Facilities Services Group hired an external Architecture and Engineering (A&E) firm to design a new plastic injection molding manufacturing facility. In its specifications to the A&E firm, Delphi required the firm to use Delphi's title block and attribute information. As a result, Delphi could import the firm's drawings into Adept and automatically populate the database. The as-built drawings were added to Adept without any problems.

Future Plans for a Paperless Organization

Delphi has already identified how it plans to expand the use of Adept in the future. Gunter's group collaborates on plant layout and office layout with two other AutoCAD-based engineering groups. Gunter intends to give these other groups the opportunity to take advantage of Adept's powerful management of AutoCAD external references. With Adept in charge, when other groups make changes, the Facilities Services Group can then adjust its designs during the design cycle instead of waiting until the time of construction, which will greatly improve productivity and reduce costs.

"Initially we bought Adept to help us manage our AutoCAD drawings," remarked Gunter. "Now it's clear to us that Adept can manage any type of document related to the project. We have specific forms for estimating and bill of materials, which we are trying to standardize. We'd like to get all those documents in Adept and associate them with a drawing, so when we pull up the drawing we get all the associated costs, equipment, and so on for the project."

The department also uses a project engineering request form for its customers. The form contains the project name and internal department charges, which a Supervisor uses to assign projects and determine the project leader. Added Gunter, "I'd like to take advantage of Adept's linking power with Microsoft Word to allow my supervisor to easily search through the database and find out who is working on what project and how far along they are." Concluded Gunter, "One of our goals is to become a paperless office. The payoff of that goal is more than simply saving paper. The real value to going paperless is to get all that electronic information available when and where we need it. Products like Adept allow us to collate information and use it where it is needed, in a variety of ways for various purposes. This inherently instills value into the organization."