

# ZEH<sup>®</sup> Software for MCAD

## The Issues

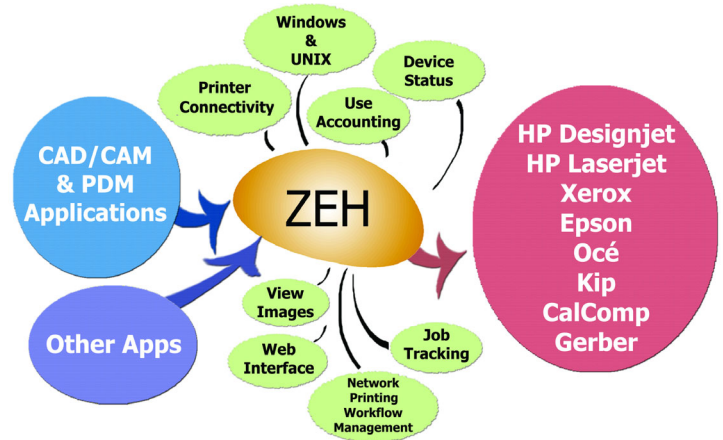
Many large organizations using MCAD technology today have complex IT environments. These environments include many different applications running on a mixture of UNIX and Windows platforms. They use output devices from numerous manufacturers. Sometimes these devices are no longer supported by the application providers. Applications and printers are often spread across different departments or physical locations making access difficult for some users. In this environment, printing from technical applications to specific network devices can be anything but simple.

In addition to the inherent IT challenges in these organizations, many MCAD users and administrators have no view into the printing environment. Users cannot easily check the status of print jobs or devices. This complicates the administrator's job of managing the printing system.

## The Solution

ZEH's print management solution reduces complexity often found in the MCAD printing environment. It handles the complex tasks of routing, processing, and printing MCAD jobs. ZEH's solution allows users to submit print jobs directly from various MCAD and PDM applications, which greatly simplifies the process. The system effectively handles vector and raster output formats from most applications. ZEH's MCAD solution:

- Provides easy to use interfaces to increase user productivity.
- Solves problems caused by printing in a mixed Windows and UNIX environment.
- Eliminates the need to install and maintain printer drivers on client workstations.
- Increases utilization of expensive devices.
- Allows users to submit, schedule, and track the progress of their print jobs using a convenient web interface.
- Provides central control of the printing environment for the administrator.
- Scales to fit all environments.



## Features

- **CATIA V5 Integration** – Users can print to any device and check the status of their job without leaving CATIA V5. Administrators can streamline the process of making printers available. They no longer have to create queues and install drivers on every workstation.
- **Extensive printer connectivity and utilization** – Administrators can fully utilize deployed devices instead of purchasing new printers to keep up with demand. They can also extend the life of legacy devices that are no longer supported by the application providers.
- **Web-based administration** – Administrators can manage PLOT EXPRESS from any workstation with access to the site's Intranet. They can manage queues and printers, schedule jobs to run at specific times (e.g., at midnight), and monitor user activity.
- **Status checking** – Users can easily find their images in the system without having to leave their desks to look for a physical print. User productivity increases when users concentrate on data, not on printing.
- **Accounting** – Administrators can track print sizes, the number of prints per printer, number of prints per user, as well as the color and amount of ink used per printer and other data.

## Company Overview

ZEH Software delivers specialized solutions to solve complex issues associated with printing in environments with multiple technical applications and platforms. For over 20 years, and with over 3,000 installations in 63 countries, ZEH provides printing solutions to MCAD users in companies of all sizes.

## Success at Lockheed Martin

When Lockheed Martin's F-22 project group chose to migrate a comprehensive project management and output system from a mainframe to workstations running CATIA, little did anyone guess the level of printing chaos that would result.

At 75 percent migration completion, 25 Versatec printers, 3M printers and aperture card machines could not be used by the workstations. Users were unable to see print jobs; administrators had no central control of print queues and no printer usage statistics. What was the processing load on any given machine? Where were the print jobs? How could users on both Windows and UNIX workstations send jobs to the 90 available printers, not to mention the 25 printers that the system could not see?

The answer to Lockheed's problem seemed to be twofold:

- Regain management of the printing process from a central system.
- Make the printers network-accessible.

But how? While Lockheed recognized the answer, it was unsure whether any hardware or software product embodied that answer. It's easy to know what your problems are; the difficulty is in finding the solution.

Lockheed came upon one possible answer from ZEH Software. ZEH offered a solution that provided connectivity and centralized control. After a proof of concept, Lockheed was able to make Versatecs, HP Designjets, HP Laserjets, CalComp Drawmasters, Solus 4s and 3M printers available to users no matter which application or platform they used. Lockheed can now monitor the entire printing system, balance the process across servers, and take advantage of job accounting to help locate which printers to reallocate to areas of critical need. Bottlenecks can be reduced as administrators see them developing.

What changed from the users' perspective? Very little, other than users realized they could print and find their prints. Users were not required to learn a new submittal tool; they can submit jobs to the printing system from the application itself rather than launching another application to send the job to the print server. Lockheed standardized on a select set of file-type formats, enabling users to output these formats from their applications and submit the jobs to the printer of their choice. Printers no longer dictated the file formats output from the applications.



United States (Headquarters)  
ZEH Software, Inc.  
16420 Park Ten Place, Suite 520  
Houston, TX 77084 USA  
+1 281 589 7757  
+1 281 497 2141 Fax

United Kingdom  
ZEH Software Ltd.  
Dorking Business Park  
Station Road  
Dorking, Surrey RH4 1HJ  
United Kingdom  
+44 (0) 1306 740105  
+44 (0) 1306 740541 Fax

Perth, WA, Australia  
ZEH Software Ltd.  
+61 449 767 449  
australia@zeh.co.uk

## Tangible and Intangible Savings

The ZEH solution also means tremendous savings – not just the intangible time saved, but also tangible savings in not buying another piece of hardware. Lockheed's 90 printing devices can be "moved" around the system with minimal downtime, concentrating the devices in the area of most immediate need. Some specialized equipment needed to achieve connectivity has been eliminated. Almost half of the overall savings is in the arena of hardware overhead and mainframe connectivity dependency.

Another 25 percent of the savings is in administrative costs. Administrators can concentrate on other aspects of providing CAD/CAM support to their users rather than assisting them with basic printing tasks.

The printing environment has become so stable that Lockheed actually anticipates a reduction in the number of prints produced. Because users are able to get the print they want the first time; the amount of time users spend attempting to get hard copy output is cut in half. Add that to the amount of user time spent actually working rather than trying to print out a file, and the savings start to skyrocket. That's significant when the F-22 group alone generates over 350,000 prints yearly for Lockheed Martin.

## Currently

After the initial implementation, Lockheed added another ZEH server for its C-130 group. This addition is being used to reduce network traffic, as a backup system, and to begin the migration of legacy application users. So far, the migration and interoperability between the two systems has been painless. It has reduced the workload on the primary server and provided better throughput for both groups.

## The Bottom Line

Lockheed estimates they realized a savings of almost **one million dollars** in the first year of ZEH printing solution usage.

Are you thinking that another look at your corporate printing system may be in order?