City Supplies Go Hybrid

For more than a year the technical staff in the main heating power plant of the Munich City Supply Authorities (SWM) have been appreciating hybrid administration of their legacy drawings. With softelec's VPraster software these documents, which were already scanned, could be quickly integrated as part of ongoing revisions and update activities. Hybrid technology, combining CAD and scanned data, proved to be the most accurate method - and a highly efficient one, too.

Mrs Gerlinde Klisa takes up her daily hybrid work in the city supply's documentation office

Before applying **VPraster** the drawing administration and documentation was done using Autodesk's AutoCAD R14 and an Autodesk software tool for handling the raster data from scanned drawings. However, of some major drawbacks the worst was connected to the storage of hybrid drawings. As they contained vector and raster information the program generated two files: a TIF file for the raster data and a regular DWG which also incorporated path and file name of the belonging TIF file. The problem emerged in short time. Since the SWM own Plant Administration System (BFS) assigns a file name each time drawing is registered or revised hybrid documents could only be retrieved under immense difficulties. In some cases the raster originals were even lost. Of course, this could not be accepted in a technical documentation department of this size and importance. **VPraster** offered a most welcome solution which now allowed for storing hybrid data in a single AutoCAD DWG file.

Mrs Susanne Dieringer feels happy with VPraster

Tech Consultants introduce VPraster for hybrid technology

Config GmbH, a Munich based tech consultant company, took the project lead fuelled by many years of working experience with the SWM. Knowing the structures and objectives for their documentation/production workflow Config also coached an extensive test period and, in the end, carried out the installation of 30 seats of softelec's **VPraster** and 50 seats of **VPview**, a softelec viewing program to provide visual access to any document in the network.

The new software and has become very popular among users since it received its final approval in February 2000. Mrs Gerlinde Klisa says: "I've been working with CAD systems since 1988 and I know all the difficulties that result from switching to new programs. However, right from the start I felt very much at home with **VPraster**. And nobody really misses its predecessor."

Rudolf Driessen, the head manager in charge for the documentation department, confirms:" Investments for **VPraster** and **VPview** are breaking even very quickly. **VPraster**'s capabilities to store various file formats into one AutoCAD file are contributing considerably to this situation. Now, there is no functional difference between vector, raster, or hybrid documents. This is the main aspect to make use of our BFS in the best possible manner. Having to deal with only one file format which contains all the necessary information allows for a very easy and efficient drawing administration and distribution inside the BFS. In the mean time we've managed to integrate and adapt our entire archive automatically, using some customised software routines. Now, the digital archive is completely available at all AutoCAD and **VPraster** workstations."

Consultant Harald Haimerl (left) introducing VPraster to city supply's senior documentation manager Rudolf Driessen (right)

Working Hybrid – A Working Compromise

At first, the decision for using hybrid technology rendered a compromise. Most importantly, the conversion of all drawings into vector format was no longer needed. Even for drawing revisions or modifications vectorisation became obsolete. However, new information would be added as vectors. As

a result, the concept of a uniformed data structure was left behind in favour of a more efficient and convenient work flow.

In the past many legacy drawings had already been taken from the archive and were scanned. The generated digital raster files, consisting of „pixel" data, could only be converted into vector based CAD drawings with a high amount of work power. Now, by overcoming these steps with hybrid technology the question arises if the advantages of accessing vector drawings can be put aside. Is there a need for vectorised drawings in the case of e.g. construction modifications? „There isn't", subsumes Mrs. Susanne Dieringer, an experienced technical staff member of the plant's documentation department. „It wouldn't make sense to vectorise all those legacy drawings, since a lot of them are no longer in practical use. And for those drawings that are relevant the hybrid technology can be applied to add new CAD information to the scanned documents. So, there is absolutely no need to vectorise."
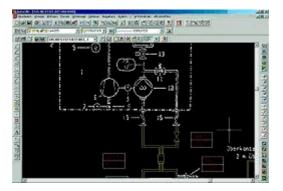
Besides adding vector information **VPraster** also provides direct editing on the scanned raster drawings - a very comfortable way to apply modifications, especially when exact true to scale is a minor issue. In any case will the system offer as much flexibility as needed so that users can make their own decisions on the most suitable method.

Munich's main heating power plant

For the documentation staff the softelec software quite obviously is a great help in their daily work as they comment: "We have attained an optimum situation. The system works perfectly." With currently close to a quarter million drawings in the SWM distribution system a quite remarkable statement.

Despite the obvious advantages of accessing digital documents there is also an archive containing many thousand drawings on paper. The simple reason for this are security issues, a major aspect while running a power plant. Misfunctions in the computer network, or even breakdowns could be disastrous if there was no analogue information backup. Also, taking a paper copy to a construction site will stay as a part of the daily routine work.

In these cases where drawings are required but without the need to edit the **VPview** software provides a quick access to view and print drawings that are available in the system.

A perfect combination: VPraster and VPview

So, once again the myth of a „paperless" administration, as prospected years ago has been overruled by reality. Here, on many occasions paper documents are needed even if a digital information base has already been set up. Sometimes the paper just makes sense. And sometimes new software programs are not instantly accepted as a mere relief by their users as Rudolf Driessen reports:„With every new technology or solution there are internal resistances that we have to deal with. Often, a new workflow organization is looked upon quite skeptical by staff members and there is a fear that things will get more complicated than they were before. In the past years our people had to live through five general system changes in this particular field. It wasn't easy for them. **VPraster**, however, received an immediate approval and everybody actually seems to be almost enthusiastic working with it". A better acknowledgment for both the software providers and the consultants is hard to imagine.