

A Project Study in Digitizing Legacy Documents

Four years ago DeTe Immobilien GmbH (DTI), the facilities management division of Deutsche Telekom AG and a wholly-owned subsidiary, was facing a fundamental decision.

How could they transfer their technical paper documents into a more efficient digital archiving system? Following thorough evaluation the best solution was found to be the storage of scanned drawings in a database and processing them with hybrid software inside AutoCAD. Hybrid data would contain both image and CAD information. The hybrid software VPraster was supplied by Munich-based softelec GmbH, a specialist in image technology for CAD/CAM and GIS applications.

Historically the task for DTI's archive department was merely to locate the drawings when required and forward them for duplication. Once prints had been sent to their destination, the originals were re-filed. On behalf of Deutsche Telekom, DTI operates and administers over 12,000 sites with more than 34,000 buildings. These buildings are documented on paper-based legacy drawings (site plans, floor plans, design details, etc.) of differing quality. By current standards the former process to handle the drawings was inefficient in both manpower and space. In each of the twelve branch offices across Germany there were about 70,000 paper drawings. Growing costs for administration, retrieval, copy, revision, updating, and re-design were no longer justifiable.

Project Design and Fulfilment

In 1996 a DTI project task force was established to set up a more efficient system of storage and documentation. The goal was to establish 'best working practice', while meeting the needs of users and administrators. As a first step, an external service contractor scanned the drawings to generate electronic images in TIFF raster file format. The raster files plus index information were delivered to DTI where they were distributed to the network servers in DTI's branch offices. The project involved 600,000 documents, and most drawings became available in the system by the end of 1999.

Hybrid software for processing raster drawings in AutoCAD

Once all relevant drawing documents have been stored in a digital database as scanned images ("raster"), revisions and enhancements should be carried out inside the CAD program AutoCAD. A software tool enabling hybrid processing is best suited for this, since it allows extensive editing of the raster drawing as well as combining it accurately with any elements from AutoCAD. For their 450 PC workstations, DTI decided to use **VPraster**, a program authored by softelec GmbH, Munich. softelec had already furnished evidence for supplying first-rate products and dependability since the US Department of Defense purchased 2,000 licenses of imaging software from them in 1996.

softelec's **VPraster** provides for efficient and easy-to-use handling of TIFF and other raster file formats. Intelligent vector information can be combined with the raster drawing. After the raster drawing has been captured and cleaned up automatically, additional information will usually be added as vector data, using the CAD software. This highlights the major advantage of a hybrid design system: there is no need to convert raster images into generic CAD data for revisions or enhancements. Also, during training sessions users were very pleased with the way in which **VPraster** can easily manage the merging, editing, or alignment of raster drawings and maps.

Summary

At DTI, costly archiving facilities are no longer required and the huge number of documents can now be accessed rapidly from the desktop. Consequently users are better able to focus on their core business. The application of **VPraster** for hybrid processing of scanned technical drawings or maps proves to be a most satisfactory solution. Considering functionality, speed, and cost efficiency it may well serve as a blueprint for any technical paper archive.

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Softelec's VP HybridCAD products cover the full range of plain raster, raster-to-vector, and hybrid applications for digital integration of scanned technical drawings and maps. The article depicts the transfer to digital document handling and editing at Deutsche Telekom while employing softelec software.

