

Value-added chain at TITEX PLUS

TITEX PLUS Günther & Co. is a company steeped in tradition, which has been manufacturing precision tools in Frankfurt for 112 years. Under the trade mark TITEX PLUS, Günther & Co. has set standards world wide for absolute precision and highest machining quality.

Günther & Co. was a family business until 1990. Today, the company is incorporated into the Swedish SANDVIK-Group with 34,000 employees throughout the world and a turnover of some EURO 4,5 billion in 2001. The TITEX PLUS group contributes EURO 115 million to this figure.

In the last years, however, TITEX sets itself the task of extending high-tech production at the Frankfurt site in the direction of a value-added chain and associating this more closely with the services required on the market. At TITEX key technological, ecological and organisational points have been bundled.



TITEX operates the data-processing department at the Frankfurt headquarters. An IBM-Mainframe is the core of the data center. VM and VSE/ESA 2.3 are the operating systems installed. "Our production corporate data is stored in ADABAS databases," says Mirko Fiddike, system-programmer. "We're running ADABAS for more than 15 years now. Nearly all of our applications have been developed with NATURAL. A few COBOL programs exist as well."

The first contact with B.O.S. was during fall 1999. The contact was initiated through a tcACCESS mail-piece. At this time TITEX was looking for a simple and easy solution to access the ADABAS databases from PC-applications. "Accessing an ADABAS-database using SQL and utilizing the ADABAS specific Descriptors and Super-descriptors sounded exciting and was exactly what we were looking for," remembers Bernd Bleck, system-administrator at TITEX. "We decided to put tcACCESS on trial and we accessed the ADABAS-databases from Office-applications. During the test we used a 3270 emulation as the access bridge. The test went positive and all our expectations were met. We also looked at a competitive product. But we didn't pursue this further, because the vendor couldn't get the product to work in our environment."

Prior to start using tcACCESS the TITEX network was upgraded to TCP/IP. Bernd Bleck: "We wanted to use the advantages that TCP/IP offered and to set base for our mainframe integration with a really outstanding performance."

As of today TITEX is using tcACCESS in two production areas:

1. Microsoft SQL-Server applications
2. Intelligent data-exchange with external partners

Bernd Bleck: "In the past we used NATURAL-programs to extract data from our ADABAS-databases. This data was transferred to a PC in a dBASE-format. The dBASE-file was then imported into an MS-ACCESS application. A really cumbersome and error-prone procedure. We also decided to use MS-SQL-Server as our data-store. tcACCESS was the perfect fit to extract the data from ADABAS and to directly store them into MS SQL-Server tables." The project has been developed and was based on tcACCESS. Mr. Bleck summarizes: "The applications used by the end-user departments have been developed in

MS-ACCESS. They access tables, which reside on the MS SQL-Server. These tables will be refreshed at night with current mainframe data. That task is being performed by tcACCESS. MS SQL-Server provides a technology called DTS-packages. We use this technology in the project. Using these Data Transfer Services, the necessary steps to transfer the ADABAS data can be visualized; checks can be performed and error-situations can be easily handled. Our stock- and article-information are now available to our Web-Shop application. The DTS-Packages are started by a scheduling mechanism. They contain steps where tcACCESS is being used to provide an SQL-based access to the ADABAS-databases. A connection server has been defined to the MS SQL-Server. This connection server uses the OLE-DB provider for ODBC and communicates to the tcACCESS ODBC component." In addition to the nightly automated data-transfers TITEX has implemented a mature procedure to synchronize the MS SQL-Server-tables with the ADABAS-databases. Bernd Bleck: "It was our goal, to keep the mirrored data in-synch with the ADABAS-databases. All changes on the mainframe are logged to a file. Every five minutes, tcACCESS transfers this file to the SQL-Server and the change-data will be automatically applied to the MS SQL-Server-tables. We again use DTS-packages for this task."

The second area of use for tcACCESS is the data-exchange with external partners. "This includes the internal SANDVIK-communication as well as the communication with our customers" Mirko Fiddike describes the project. "The connectivity to the partners is based upon MQSeries, which is installed on a Windows-2000 server. It was our goal to incorporate our existing host-based procedures into the project. Equally as important was a bi-directional data-transfer. tcACCESS is responsible for the entire data-transfer from and to the mainframe. As an example: a batch-program initiates the data-transfer by informing tcACCESS that data is available for transfer. tcACCESS passes this information to the tcACCESS Listener-component, which runs on a Windows-server. The Listener wakes up, downloads the data and passes the data to a VB program which puts the data into a Queue." For the data-transfer to the mainframe, the incoming data becomes part of a VSE-Job, which is then submitted into the POWER-Reader-Queue by tcACCESS.

Bernd Bleck and Mirko Fiddike are in agreement about the team behind tcACCESS: "Not a lot of companies provide such an excellent service like B.O.S. The support is very reliable, really competent and efficient."

TITEX application examples

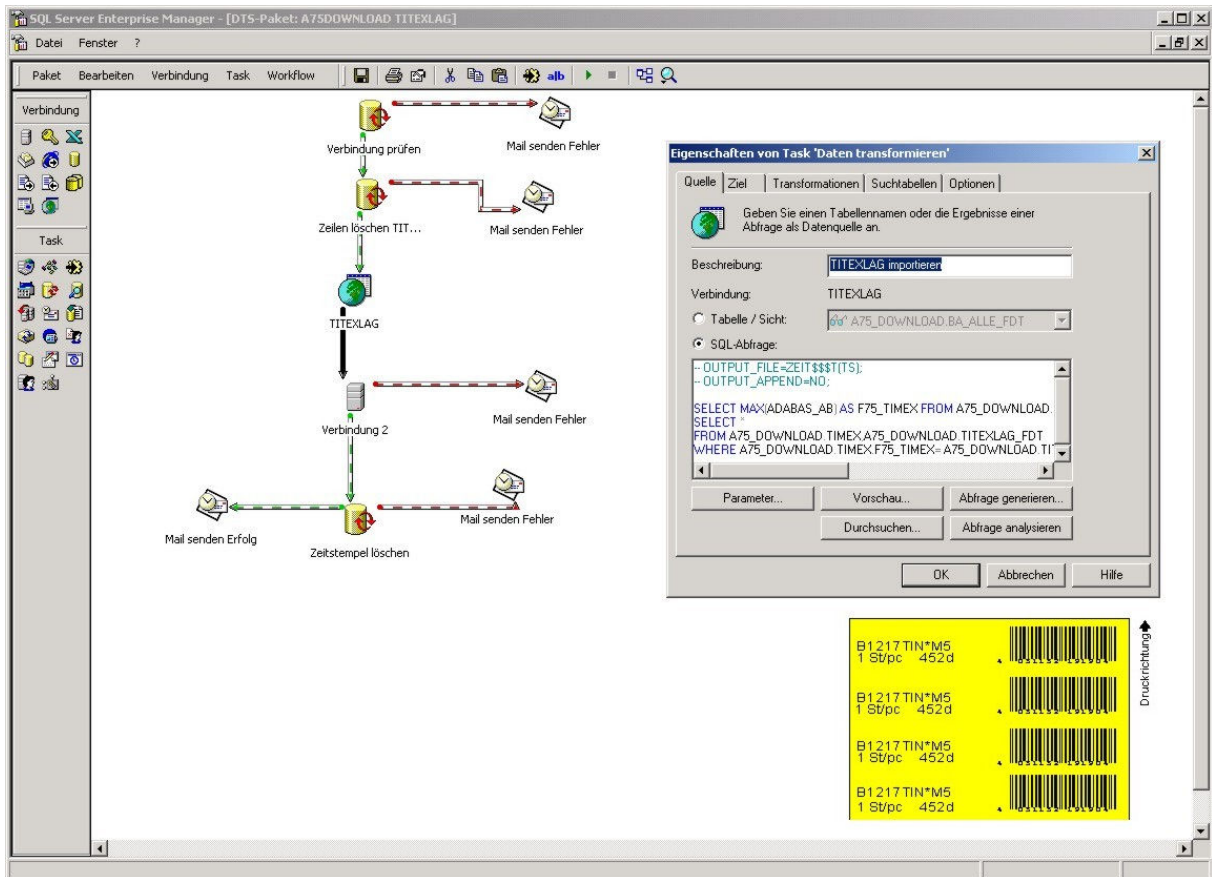
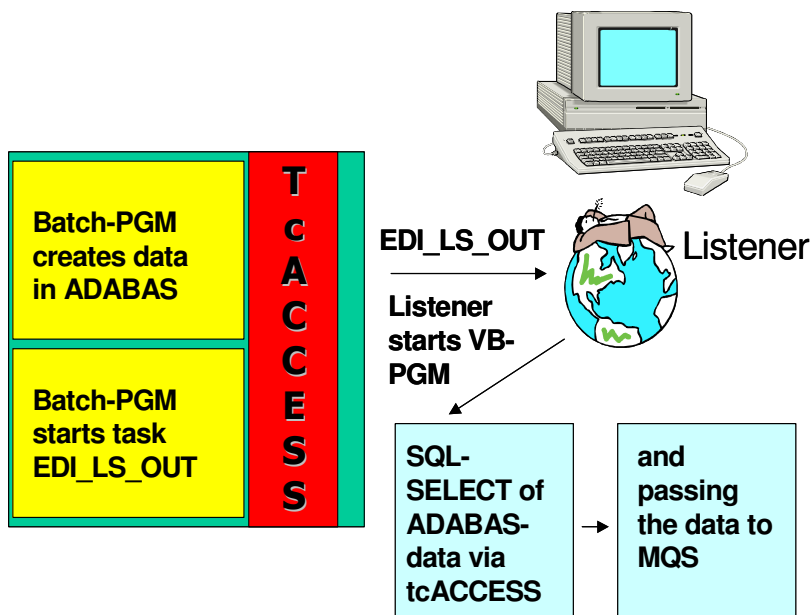


Fig. 1 MS-SQL-Server DTS-Package

The figure demonstrates the processing logic of a DTS-Package. All processing steps are being graphically presented and can be defined or changed using a simple mouse-click. Step TITEXLAG contains tcACCESS SQL-statements to access an ADABAS-database. The result set of the first SELECT will be written into a temporary file. This file will be processed by the second SELECT and the result set will be stored into a MS SQL-Server-table. The data will be the base for other applications, like the creation of shipping documents (i.e. Barcode).



Representation of an EDI-process, which prepares data in a Batch-program. The Batch-program starts a tcACCESS task. tcACCESS forwards the task to a tcACCESS-Listener running on a Windows-server. The Listener wakes up and starts a VB-program. The program uses SQL and the tcACCESS ODBC component to retrieve the host-data and passes the data to MQSeries.

Fig. 2 Process-flow of an EDI-process