

Treerootimes

A Publication of Treehouse Software, Inc.

This Issue

Real World Series Part 10.....	1
Editor's Notes	2
Another Satisfied European Customer ..	2
Roll Your Own Batch of Trouble	3
SAGNA - Before You Forget... ..	4
TSI Event World Tour	5

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Real World Series

(Part 10 of Many) by Hans Peter Will

This is the tenth installment in a continuing series of articles featuring **tRelational** and **Data Propagation System (DPS)**, TSI's ADABAS-to-RDBMS product implementation, in several "real world" environments.

tRelational auto-generates complete RDBMS schemata from existing ADABAS files and allows for easy mapping of ADABAS fields to already existing data warehouse or ERP schema. After **tRelational** does the mapping, **DPS** can then materialize (initially load) and propagate (subsequently keep synchronized) the ADABAS data into the RDBMS without requiring direct access to ADABAS.



The following is a recent discussion between **Livio Varisco** and **Roberto Licandro** at B-Source SA in Lugano, Switzerland and TSI Project Managers.

Would you please provide a description of your organization?

B-Source (formerly Boss Lab) is a Swiss company specializing in providing IT services and Bank Back - Office services to banks and insurance companies by means of an "outsourcing business model". B-Source provides these services to clients in Switzerland and abroad.

Value proposition, our services

- Business Service Provisioning (BSP): B-Source's - and third-party - banking software that is operated by us in our two data centers and B-Source's bank back office administration services that are performed by us "on behalf of the bank".
- Application Service Provisioning (ASP): B-Source's - and third-party - banking software that is operated by us at our two data centers.
- Operations Service Provisioning (OSP): B-Source's data center services.

Our target market

- Banks, in private banking and asset management, in Switzerland and their international affiliates, branches, and/or partners.
- Retail banks in Switzerland.
- Insurance companies.

Certifications and credentials

- All B-Source services are compliant with the Swiss Federal Banking Commission legislation rules and standards and are certified by external auditors each year.
- Two data centers in Lugano and Zurich secure business continuity.
- ISO 9001 certification for the entire company, including the ASP and BSP processes.

(continued on page 6)

Editor's Notes

by Joseph Brady

Tales From the Trails

Treehouse recently presented **"Simplifying the Management and Sharing of Data - ADABAS and More"** at four locations in Europe: Brussels, Belgium; Wiesbaden, Germany; Bonn, Germany; and Berlin, Germany.

The day-long events were met with much interest and enthusiasm by representatives from sites throughout Europe. **See page 4 for information on the upcoming events in South America, U.K., Spain, and South Africa.**

Over the past few months, all Treehouse sales and technical representatives have been very busy on various consulting jobs, site visits, and product demonstrations. They have visited sites in Alaska, Belgium, California, Canada, Colorado, Delaware, Florida, Germany, Hawaii, Illinois, Luxembourg, Maryland, Massachusetts, Michigan, Missouri, The Netherlands, New York, North Carolina, Ohio, Texas, U.K., Utah, Venezuela, Virginia, Washington D.C., and Washington State.

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Another Satisfied European Customer...



"Das Integrationsprodukt tRelational/DPS unterstützt uns beim Einsatz einer Standard-Versicherungsapplikation, die auf einer relationalen Datenbank aufsetzt. Es gelingt uns, unsere in ADABAS gehaltenen Bestandsdaten rasch, ohne aufwändige Programmierung und ohne Eingriffe in die weiter laufenden Applikationen auch für die neue Anwendung nutzbar zu machen.

Beginnend mit den ersten Gesprächen mit VersaTec, über das Durchführen eines gemeinsamen Pilotprojektes mit Treehouse, bis zur selbständigen Daten-Replikation durch unsere Mitarbeiter galt stets: Die versprochenen Merkmale wie leichte Implementierung, einfache Handhabung, hohe Performance und Stabilität haben sich als überaus zutreffend erwiesen, unsere Zusammenarbeit gestaltet sich sehr partnerschaftlich."

English Translation...

"The data transfer product set, tRelational/DPS, supports us in the usage of a standard insurance application that requires a relational database. Our inventory data that is held in ADABAS can be quickly moved into new applications without complex programming or any interference with the currently running applications.

Beginning with the first discussions with VersaTec about accomplishing a common pilot project with Treehouse, through the independent data replication by our employees, the promised characteristics like easy implementation, simple handling, high performance, and stability were proven to be extremely true. As a result, our cooperation became very close partnership."

Heribert Kleber

Leader IT
Berufsgenossenschaft
Druck und Papierverarbeitung
Wiesbaden, Germany

About Berufsgenossenschaft Druck und Papierverarbeitung

The Berufsgenossenschaft Druck und Papierverarbeitung is the statutory accident insurance for all branches of the printing and paper processing industry (including bookbinding, production of board and corrugated board, and paper finishing), the plastics industry, and photographic and graphic industry.

Its tasks are:

- Prevention of occupational accidents, occupational diseases, and protection of workers from health hazards at work.
- Medical, work-related, and social rehabilitation of persons injured or diseased.
- Providing financial aid for sustenance for the persons injured or diseased.

The number of persons insured with the Berufsgenossenschaft Druck und Papierverarbeitung totals to 750,000 employees in about 46,000 companies all over Germany.

Roll Your Own Batch of Trouble by Dan Vimont and Wayne Lashley

Over the past few years, we have reported in the Treetimes “Real World Series” stories about various customer successes with our ADABAS-to-RDBMS products, **tRelational/DPS**. A recurring theme among several sites has been how they successfully replaced their home-grown NATURAL extract programs with Treehouse Software’s best-of-breed ADABAS ETL/CDC tools. Once they discovered the ease and efficiency of using **tRelational** and **DPS**, these sites quickly realized that any limits to future expansion of their data extraction processes have been effectively eliminated. Customers opting for **NatQuery/NatCDC**, including those running ADABAS/NATURAL on non-mainframe platforms, stand to benefit in a similar fashion.

Flexibility and Scalability

As a site’s requirements for data synchronization move beyond the need for weekly or daily synchronization, towards several-times-daily and ultimately real-time—available today with Treehouse’s **DPSync**, the “real-time upgrade” to **tRelational/DPS**—Treehouse products will be able to provide for those needs every step of the way. A NATURAL-extract solution (assuming that sites can somehow make such an approach workable for weekly or even daily refreshes) offers no options for ever moving closer to real-time synchronization.

CPU Usage

Even if CPU usage were to be the single factor used in deciding between a TSI product and a home-grown NATURAL extract-based solution, then the TSI product would always win, hands down. It is self-evident that repeated full refreshes required by NATURAL-based “ETL” simply cannot compete with the efficiency of a single point-in-time load (**DPS** Materialization or **NatQuery** extraction) and subsequent propagation of only changes (**DPS** Propagation or **NatCDC**). Many dozens of sites worldwide using TSI ETL/CDC products have confirmed this time and again.

What about ADACDC?

A few years ago, Software AG introduced the ADACDC utility, apparently in response to demands from customers that understand the limitations of the NATURAL-extract approach. Unfortunately, even after several years and countless fixes, ADACDC remains a deeply-flawed facility that is safely usable only under limited circumstances (watch for an article on this topic in an upcoming Treetimes).

Furthermore, ADACDC is only a small piece of the puzzle when undertaking a “roll-your-own” CDC initiative. The output from ADACDC still requires further processing to

make the data useful for application to the data target. The development and maintenance of such facilities is an unnecessary burden on customer IT staff (or an unnecessary project proposed by “helpful” consultants) when **tRelational/DPS** or **NatCDC**—*real products*—can do the job right out of the box.

Customer Experiences

The staff of the State of Arizona’s Department of Economic Security (in Treetimes #6 -- <http://www.treehouse.com/downloads/TREETIMES6.pdf>):

“We have successfully converted all of our NATURAL extract processes to utilize the features of tRelational and DPS. This has freed up valuable processing time on an already crowded production batch processing window, and we are now able to provide updated information to our customers on a daily basis instead of on a weekly basis.”

Bill Cook, Manager of Database Administration, Penn State University (in Treetimes #4 -- <http://www.treehouse.com/downloads/TREETIMES4.pdf>):

“Like other shops, we have also suffered from the processing overload of NATURAL extracts as a means of data extraction and propagation. ... [With DPS] we completed an end-to-end nightly production propagation process that executed in 15 minutes, which included the FTP and the load to ORACLE. This was a significant time-savings compared to the existing methods consisting of a NATURAL extract that was then used to perform a full refresh of the data.

The major point [in our decision to purchase tRelational/DPS], and it’s really fundamental, is it allowed us to accomplish things that we could not do otherwise. For instance, we could not populate daily updates to the Admissions data on the Data Warehouse due to the time it takes to run the NATURAL Extracts.”

Randy Carson, Chief Executive Officer, Cutler-Hammer (in Treetips #30 -- <http://www.treehouse.com/downloads/TREETIPS30.pdf>):

“Our experts tell me the products and consulting services Treehouse provided really bailed us out from a very programmatic Data Warehouse solution. They say the new product solution is much easier to maintain and will enable us to significantly expand on the Warehouse. Additionally, I’m happy to hear that there will be a significant cost savings over time.”

(continued on page 4)

Roll Your Own Batch of Trouble (continued from page 3)

Wayne Richard, Business Solutions Manager, Nova Scotia Provincial Government
(in Treetips #33 -- <http://www.treehouse.com/downloads/TREETIPS33.pdf>):

“The other benefit demonstrated with the materialization/propagation approach was the cost savings in mainframe charges. With the final materialization run completed and DPS propagation now run as a regular nightly process, cost metrics have shown that mainframe charges resulting from a full materialization against the RMV ADABAS data files are orders of magnitude greater than the DPS propagation process running against the transaction log.”

A True Recipe for Disaster



Some sites (and some third-party “CDC” offerings) take the approach of modifying their applications to populate “update timestamp” fields and then query those records to identify changes to propagate. Such an approach is fraught with unacceptable consequences.

What happens if logic to maintain the “update timestamp” fields is omitted or mis-coded in a single program? You get corruption of the target data. Some shops have employed ADABAS triggers (SPaTs) to avoid this nightmare, only to be haunted by a different nightmare—a 20-700% increase in ADABAS overhead caused simply by enabling SPaTs (this information is readily available from SAG-L).

How do you know if an updated record has been “ETed” when you query for changed records using the “update timestamp” fields (another instance of the “dirty read” problem that has been discussed recently on SAG-L)? If you propagate changes from a record whose updates are subsequently backed out, once again you get corruption of the target data. Some shops, recognizing this, are using triggers to copy the record in question to a “shadow” file and have the business transaction’s ET also commit the record to the “shadow” file—or have it be backed out if the business transaction backs out. So let’s see, besides the increase in ADABAS overhead, new ADABAS files must be added to the application and ADABAS must update these new files to record changes in the original application files? ADABAS overhead and actual workload, plus DBA maintenance activities, must be increased dramatically simply to capture changes?

Wait a minute—ADABAS already does this, automatically as a built-in feature, in writing to the PLOG. That’s why **tRelational/DPS** and **NatCDC** take the PLOG approach—no increased overhead, no duplication of effort, no maintenance headache, no nightmares. Just real products.

SAGNA - Before You Forget...

Were you around during the early years of Software AG North America (SAGNA)? Ever wish there was a place to keep and share your memories of those days? Now there is just such a place! So, before you forget dates and details or lose valuable historical information, read on...

John Maguire, founder of Software AG of North America (1972) recently contacted **George Szakach**, TSI President about a new project in the works: the **Computer History Museum’s SAGNA History Project** on their cybermuseum Web site (www.computerhistory.org/cybermuseum/corphist/). Customers, as well as early Software AG employees, are invited to contribute their historical knowledge, important SAGNA timeline dates, anecdotes, etc. to the cybermuseum. If you are interested in participating, please contact **Luanne Johnson** (luannej@sprynet.com), and she will help you

set up your own account. Luanne will supply you with all the information you need to log in to their system. You will be asked to provide your profile information, accept a release authorizing the Computer History Museum to use the information you provide as part of the permanent historical record for SAGNA, and supply some biographical information. The profile information is kept on file as part of the Museum’s standard procedure for validating the source of information added to the archives; it will not be revealed to anyone without your permission. The biographical information—your responsibilities with SAGNA and how long you worked there—is part of the historical source material the cybermuseum is collecting and will become part of the permanent public collection.

We and John look forward to all of the interesting contributions to the SAGNA history project.

Special Events for Worldwide ADABAS Sites!

Simplifying the Management and Sharing of Data

Presented by Treehouse Software, Inc.



► You are invited...

to attend a special event that brings together **top ADABAS/NATURAL product vendors** and **world-renowned authorities** in data warehousing, integration, business intelligence and disaster recovery.

You will learn about the latest products and services that can help you **maintain, protect and extend your investment** in legacy ADABAS/NATURAL systems. You will also find out how you can **easily integrate legacy ADABAS data** into Service Oriented Architectures (SOAs), Web Services, and RDBMS-based platforms for use in Internet/Web-based and business intelligence applications.

Brussels, The Netherlands	success!
Bonn, Germany	success!
Wiesbaden, Germany	success!
Berlin, Germany	success!
São Paulo, Brazil	September 12, 2005
Brasília, Brazil	September 14, 2005
Rio de Janeiro, Brazil	September 16, 2005
Madrid, Spain	October 4, 2005
Warwickshire, England	October 6, 2005
Cape Town, South Africa	November 15, 2005
Johannesburg, South Africa	November 17, 2005



Please reserve your place by contacting a representative in your area!

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Real World Series *(continued from page 1)*

- CMMI level 2 certification for software application development in progress.
- Core partner of the Competence Center Sourcing at the University of St. Gallen's Institute for Information Management

Who does the application currently support?

Our Banking Operations Support System - an integrated banking system that supports most of a bank's front- and back-office activities, from loan and securities processing to marketing and internal audit in a multi-language, multi-currency, multi-regulation, and multi-legislation environment.

Can you elaborate on the Database and File environment for the application?

Our core system is integrated in a core database where all operations are executed and the data is stored. We developed interfaces to connect our system to third party solutions or external financial data providers (i.e., SWIFT, SIC, SIS, Reuters).

Please describe the business objective for the application?

- Entirely covers the private and retail banking requirements
- Fully integrated with the Swiss and international banking community and Swiss FBC laws
- Fast and cost effective implementation
- Highly automated back-office functions
- One single and consistent data view (operations and MIS are equivalent)
- Parameter-driven process support

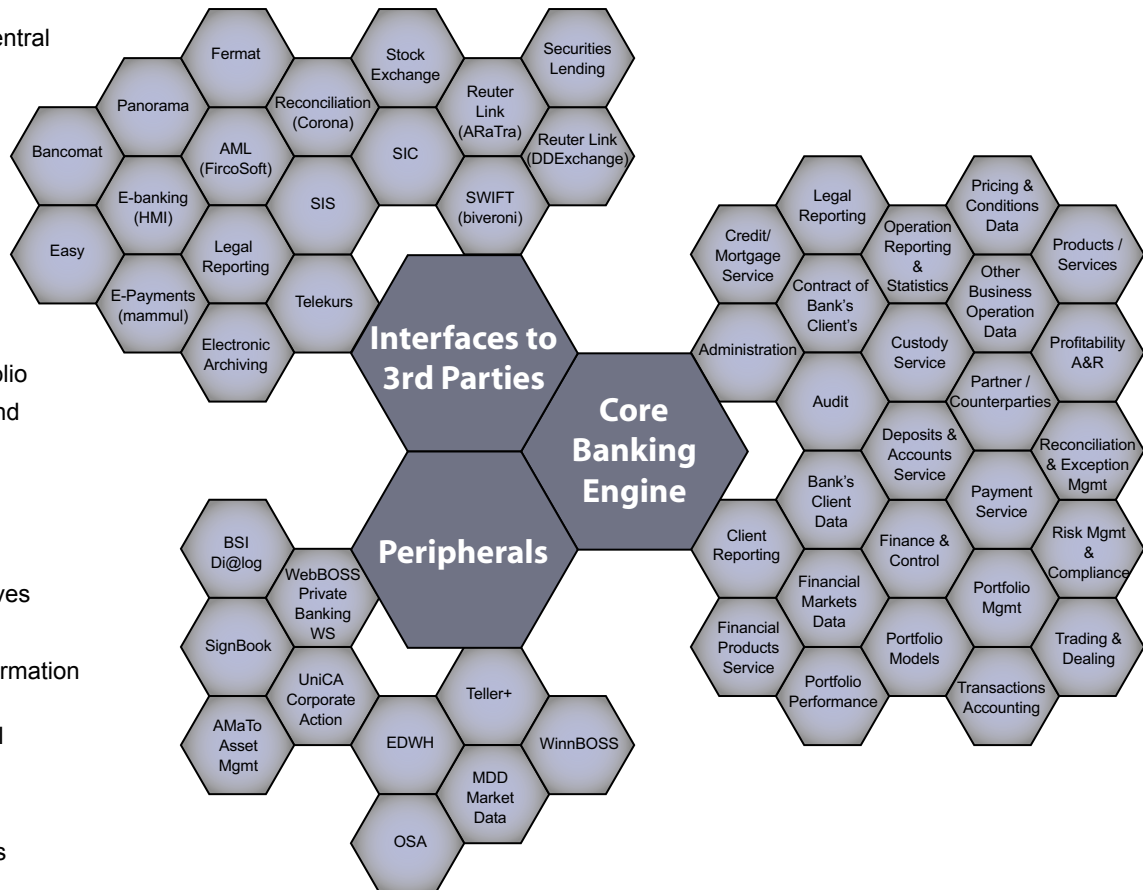
Please describe the target RDBMS (ORACLE, DB2, SQL Server, etc.)?

To better support data integration and the analytical platform, we designed and implemented an architecture based on a Operational Staging Area (OSA) and an Operational Data Store (ODS). These solutions are using an ORACLE 9i RDBMS.

Please describe your core application at B-SourceSA?

The following diagram shows how our services portfolio is composed:

- Environment & central information file
- Accounting
- Securities & derivatives
- Portfolio performance
- Commercial transactions
- Bank's own portfolio
- Money transfer and "Teller light"
- Printing output management
- Forex & treasury
- Financial derivatives
- Reconciliation
- Management Information System
- Loans & collateral
- Internal auditing
- Money market
- Fiduciary deposits



(continued on page 7)

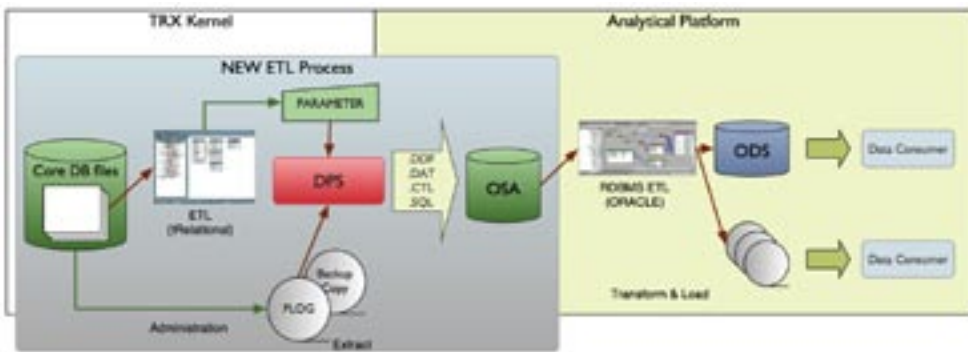
Real World Series (continued from page 6)

How did/does tRelational and DPS factor in the success of the OSA/ODS Project?

tRelational and DPS are the tools that allowed us to reach our goals in a pragmatic and non-invasive way.

The concept and architecture underlying tRelational and DPS are very smart because they do not work directly on the database nucleus,

but use the standard database recovery support instead. This avoids burdening the nucleus, and thus not to affect the performance of the operating database, as shown in the diagram above. For example, a job running every two hours for a few minutes to propagate the updates would never burden the system in a significant way.



How many customers do you support?

Currently we offer our services in the different mentioned models to fifteen customers.

Please describe the project and how you arrived at the selection of the TSI product solution?

The data integration from the core banking engine into other data management systems (e.g., RDBMS, flat files) was done by using scheduled programs that run during the batch. This solution, which eventually grew over time, became difficult to maintain in terms of the required human and infrastructure resources. Moreover, we are convinced that an RDBMS and the SQL language are better solutions to support DB inspections and extractions with common tools. Therefore, we implemented the following architecture as shown in the following diagram:

What were/are the most challenging aspects of the OSA/ODS Project?

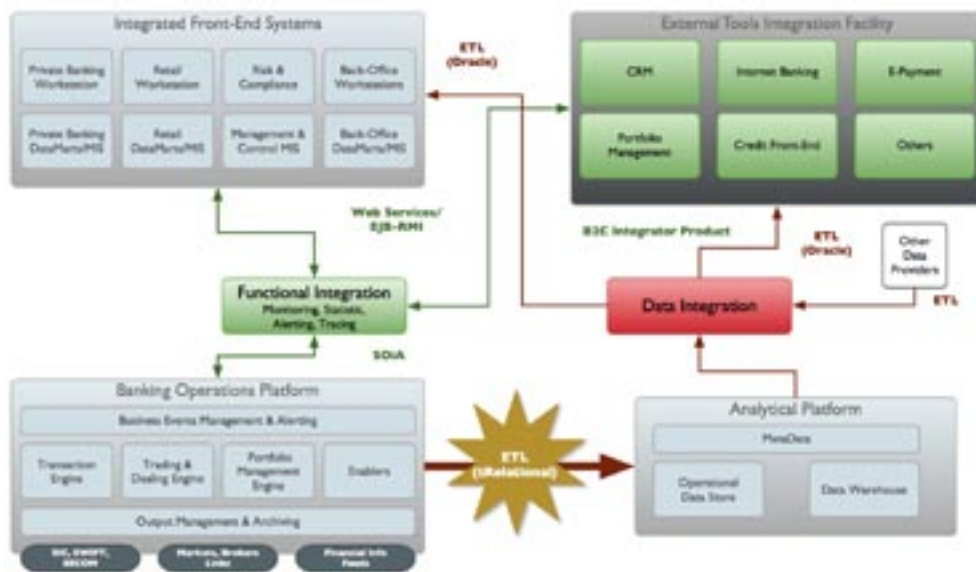
The two main challenges were:

- Selection of an ETL tool capable of directly extracting data from the database engine in an easy, performing, robust and secure way.
- The short time to perform a Proof of Concept with the selected tools and the implementation of a productive solution.

Are you satisfied with the products, support, and services TSI provides?

Yes. Thanks to the professional support of TSI, in particular Mr. **Hans-Peter Will**, we have been able to perform the Proof of Concept and the installation into the production environment in a very short time.

But also afterwards we appreciated TSI's support for the education and for the solution definition. The product was tuned during the set-up phase with quick adjustment interventions. Since we went into production (September 2004) we have not to face problems due to the products, whose stability and performance allow extracting a 2-hour online PLOG, and upload it to ORACLE in a few minutes. •



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Treehouse Software Products

ADABAS-to-RDBMS Data Transfer:

- DPS** - ADABAS-to-RDBMS data materialization (ETL), replication, and propagation (CDC) software
- DPS X-Link** - Instant XML-based read/write access to ADABAS
- DPSync** - Real-time ADABAS-to-RDBMS data propagation (CDC) software product set
- tRelational** - ADABAS modeling, mapping, and data analysis tool; **DPS** parameter generator
- tRelationalPC** - Windows-based graphical interface to make the tasks of modeling and mapping even simpler
- Treehouse Remote Access (TRA)** - Middleware that allows **tRelationalPC** to communicate with **tRelational** on the mainframe.
- NatQuery** - GUI-based tool that intelligently generates NATURAL code to handle all of the complexities of data extraction from ADABAS
- NatCDC** - Add-on to NatQuery designed to create immediately-usable data out of the ADABAS PLOG

UNIX:

- SEEDIT** - XEDIT and ISPF/PDF compatible editor for UNIX and Windows
- S/REXX** - REXX-compatible language for UNIX and Windows
- S/REXX Debugger** - Optional graphical debugger for **S/REXX** programs

Software AG Related:

- ADAMAGIC** - Tool for converting mainframe ADABAS files into ADABAS for UNIX/Linux/Windows, flat file, or comma-delimited formats
- ADAREORG** - File reorganization tool for ADABAS
- ADASTRIP** - Data extraction utility for ADABAS
- AUDITRE** - Generalized ADABAS auditing facility
- AUTOLOADER** - ADABAS file automatic unload/reload/dump utility
- CHART for NATURAL** - NATURAL application analysis and documentation tool
- N2O** - NATURAL application change management system
- N2O/3GL** - 3GL support within **N2O** for PANVALET, LIBRARIAN, ENDEVOR, and PDSs
- PROFILER for NATURAL** - NATURAL quality assurance and testing tool
- SECURITRE** - ADABAS and NATURAL security interface to RACF, ACF2, and TOP SECRET
- TRIM** - ADABAS and NATURAL performance monitor

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