

# Treetimes

A Publication of Treehouse Software, Inc.

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## Real World Series

(Part Nine of Several) by Daniel Sycalik

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

**tRelational** autogenerates complete RDBMS schemata from existing ADABAS files and allows for easy mapping of ADABAS fields to already existing data warehouse or ERP schemata. 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 **Nancy Kane**, Systems & Programming DBA Manager, **Scott Morrow**, Database Specialist III, and **Gary Vercellino**, Database Specialist III, at Arizona Department of Economic Security, and **Daniel Sycalik**, Treehouse Senior Technical Representative.

### Please describe your organization.

The Department of Economic Security (DES) combines a broad range of Arizona's human service programs within a single agency. Each month, DES' services are sought by more than one million Arizona children, adults, and families. These services range from employment assistance and job training to

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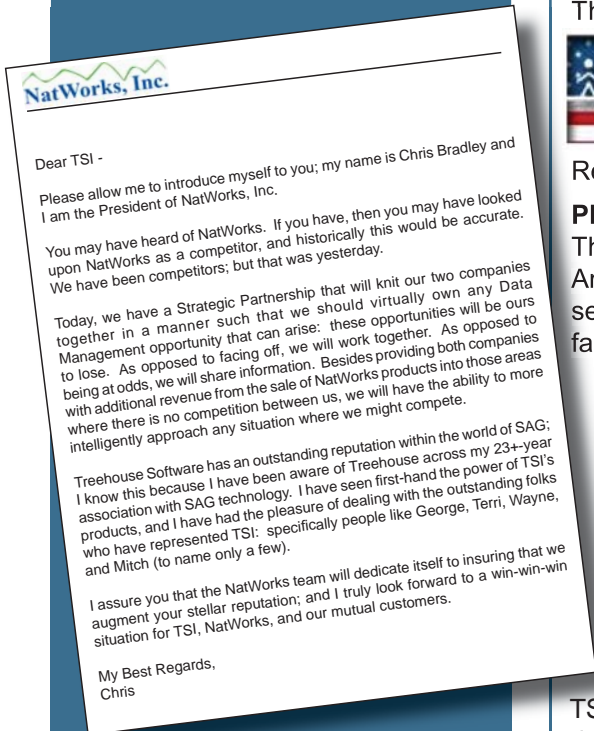
## TSI and NatWorks Partnership

### Offering Customers The Total Package

TSI has taken another step forward in consolidating our position in the ADABAS data extraction and migration market. Most Treetimes readers have heard of NatWorks, Inc. and the **NatQuery** and **NatCDC** ADABAS data extraction products. In recent weeks, TSI has come to agreement with NatWorks to provide principal worldwide sales, marketing, and technical support for those products.

This is a tremendously exciting development for us, as it not only gives us sales and marketing rights for products that have been, to a certain extent, competitors for **tRelational/DPS** (and perhaps **DPS X-Link**), but also expands and completes our capabilities in several key areas.

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## Treehouse Web Site Gets a Face-lift

Those who have been to the TSI Web site recently have undoubtedly notice a new look.

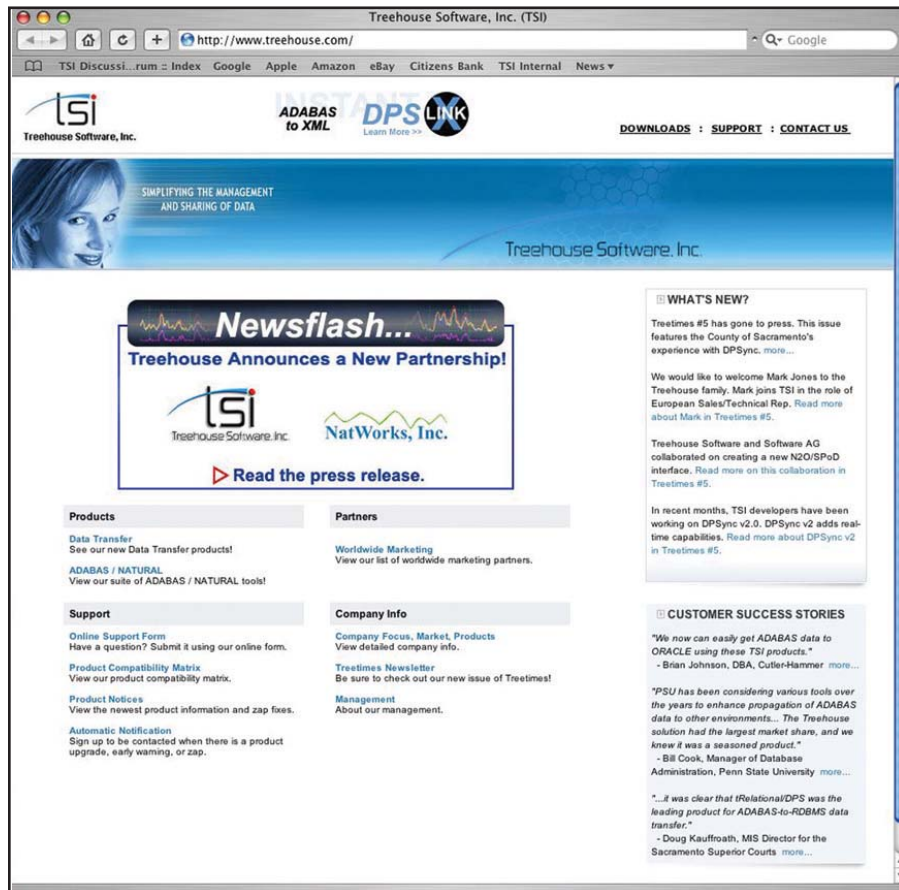
**Mike Szakach** spent much of the 2004 holiday season feverishly tweaking menus, graphics, and text to produce this latest incarnation of the TSI Web site.

When visiting the site, you will immediately notice the clean look, and the prominent "What's New?" and "Customer Success Stories" side bars. We feel that when visiting a software developer's web site, one likes to see a dynamic company with new things happening and words from satisfied customers.

*"We were hoping to create a great example of corporate web site design, making full use of a multi-browser-friendly format. We want a clean, professional Web site design style that is easy to read. I especially like a no-clutter approach."*

### Michael Szakach

Marketing Analyst and  
Webmaster  
Treehouse Software, Inc.



We invite you to visit the newly designed TSI Web site at [www.treehouse.com](http://www.treehouse.com) and explore around. Let us know what you think. Feedback from visitors is always welcome!

## Tree • times

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Back issues available upon  
request. Documentation for all  
products is available in hard copy  
or on CD-ROM.

Hard Copy Circulation: 8,000

## Follow-up to Last Issues's County of Sacramento Success Story

TSI's Director of Technical Operations, **Wayne Lashley**, spoke to **Brian Richards** at the County of Sacramento after his meeting with the technology steering committee that featured a demonstration of one of the new applications now made available through their implementation of **DPSync**, TSI's near-real-time ADABAS-to-RDBMS product. The application is an inmate booking information system and allows visitors to look up the status and location of inmates. This application had not even been publicly announced at the time of the meeting, but already they were getting over 1500 hits per day and the volume of calls to the Sheriff's Department to obtain this kind of information had decreased dramatically. What was supposed to be a 5-minute agenda item went on for over 35 minutes. There is a lot of satisfaction and excitement about what they will be able to do now, and there was much talk about how **DPSync v2** would help them do even more (See Treetimes #5).

This is a terrific success story. Once again, our mature products make the grade. Wayne congratulated everyone at TSI for their efforts in contributing to this success.

# Treehouse and NatWorks Partnership *(continued from page 1)*

**NatQuery** is a GUI-based tool that intelligently generates NATURAL code, delivering effective and efficient ADABAS data extraction that requires no mainframe installation and requires no intensive training to use effectively. It supports both end-user extraction needs and data warehousing requirements.

**NatCDC** is an add-on to **NatQuery** and was designed to embrace the use of NATURAL in conjunction with ADABAS utilities to create immediately usable data out of the ADABAS PLOG.

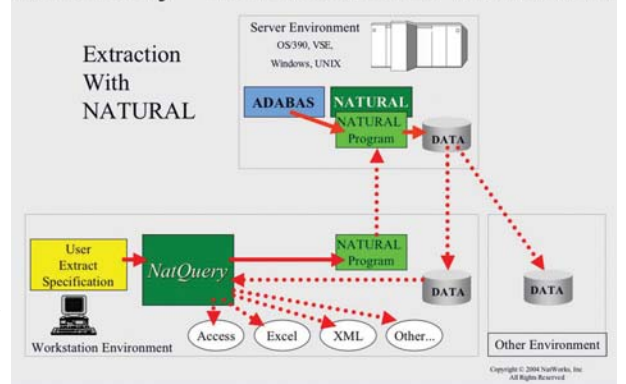
NatWorks is a privately held company based in Vermont. Some readers may be familiar with NatWorks President, **Chris Bradley**, who founded the company in 1998, from user group meetings or conferences. We look forward to working closely with Chris and his NatWorks colleagues and having them visit the TSI office in Sewickley, PA, as we join forces to deliver the "total package". Many of us at TSI have known the NatWorks folks for years and are well aware that they are highly professional and quality people, which is reflected in their products.

## **Whatever the Need, We Have the Products**

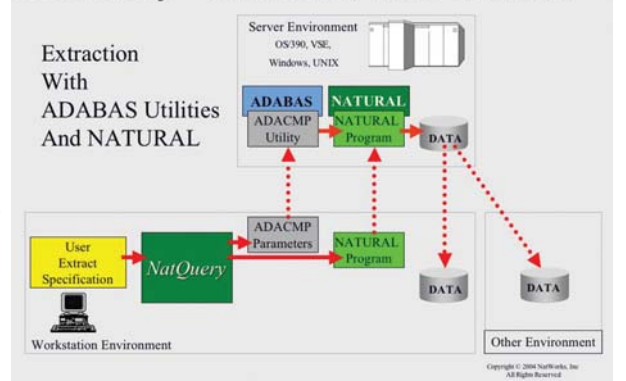
This partnership immediately gives TSI an offering for mainframe customers who need an ADABAS extraction tool that is easy to deploy and use to populate spreadsheets, desktop and server databases, and XML/Web targets. **NatQuery** and **NatCDC** can be an ideal fit for organizations seeking value-priced ADABAS extraction and/or CDC products that are particularly easy to deploy and use. Furthermore, TSI will leverage a key selling point of **NatQuery** and **NatCDC**—the run-time architecture consists of generated NATURAL code and standard ADABAS utilities. This means that the products are suited to any platform where ADABAS/NATURAL runs—z/OS, OS/390, VSE, VM, BS2000, Unix, Linux, and Windows. We are hearing increasingly from customers that have migrated their ADABAS/NATURAL applications from the mainframe to an alternative platform or who run an operation where both mainframe and non-mainframe platforms are used for ADABAS/NATURAL. Now, with **NatQuery** and **NatCDC**, we will have a comprehensive, multi-platform offering for ADABAS ETL/CDC.

The "native NATURAL" orientation of **NatQuery** also means that it can be used to extract from DB2 and VSAM data sources where NATURAL for DB2 or NATURAL for VSAM, respectively, is installed. Finally, we have been approached by customers in the past asking for ADABAS-to-ADABAS ETL/CDC in **tRelational/DPS**, but we have thus far elected against undertaking the development to provide this. However, **NatQuery** and **NatCDC** do have this capability, propagating ADABAS data to both same-structure and differing-structure ADABAS targets. TSI now offers an unequalled comprehensive ADABAS ETL/CDC product set, and when one now considers TSI's total ADABAS extraction/integration portfolio, it is very clear that we have the right product or combination of products to meet any conceivable customer requirement. We already have dozens of customers using **tRelational/DPS** and we expect to see continued and accelerated new sales, especially as we and our partners progress in penetrating the European market and elsewhere, and we continue to establish success on the BS2000 platform. Besides providing

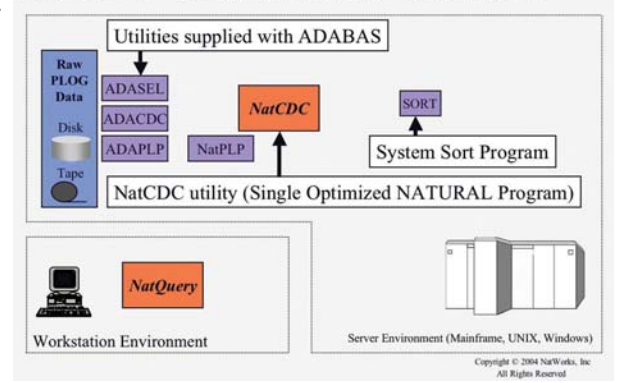
## NatQuery - How NatQuery Works - NATURAL Extraction



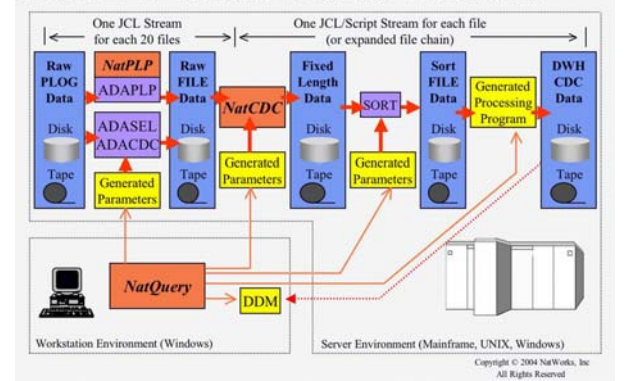
## NatQuery - How NatQuery Works - Utility Extraction



## NatCDC - How NatCDC Works - Base Components



## NatCDC - How NatCDC Works - Base Components



*(continued on page 4)*

# Treehouse and NatWorks Partnership *(continued from page 3)*

exceptional robustness, productivity and efficiency, and unique native RDBMS support, **tRelational/DPS** includes an “upgrade path” to real-time propagation with **DPSync**. Now that **DPS X-Link v3.0** (which includes both read and update capabilities) is available, we can also serve customers seeking bidirectional data propagation. We are currently directing R&D efforts towards making **DPS X-Link** a key component of a larger data integration offering that should be attractive to our customers and to other software vendors needing to OEM an ADABAS “adapter” for their products. In comparison to what TSI can offer customers, competitor “solutions” can only be viewed as one-trick ponies. Others may replicate data out of ADABAS, but only with the requisite custom development and needing add-ons to complete the “solution”.

Furthermore, these other solutions are often severely limited: perhaps being z/OS-specific; having no materialization (full ADABAS-to-target load) capability; lacking a GUI; requiring consultants just to install; or providing no native integration with any target except perhaps ADABAS. These “solutions” cannot in any way be characterized as mature and are dangerously exposed to the same fate that befell many other ADABAS SQL offerings: when they don’t work or don’t sell, they are killed off. Of course, when an organization invests significant resources and mission-critical information services into any product or service, having that product be suddenly terminated is bound to be catastrophic.

You will be hearing much more about this new relationship soon, so keep checking the TSI Web site! ●

PRESS RELEASE FROM TREEHOUSE SOFTWARE, INC.

For Immediate Release

Date: January 3, 2005

Press Contacts: **Joseph Brady** (412.741.1677 x225; jbrady@treehouse.com)

Pittsburgh PA., January 3, 2005 – Treehouse Software, Inc., (TSI) of Sewickley, PA today announced that it has come to agreement with NatWorks, Inc. of Northfield, VT, to provide principal worldwide sales and marketing for NatWorks products.

With the addition of the NatQuery and NatCDC products, native data extraction and change data capture solutions for ADABAS, TSI bolsters its portfolio of ADABAS data extraction and integration tools. These currently include: tRelational/DPS, the leading ADABAS-to-RDBMS Extract-Transformation-Load (ETL) and Change Data Capture (CDC) product; DPSync, the industry’s only real-time ADABAS-to-RDBMS data propagation product; and DPS X-Link, the ADABAS/XML “instant integration” product.

According to **George Szakach**, President of TSI, “For years, we have delivered an increasingly rich and broad array of ADABAS extraction products. With NatQuery and NatCDC, we are able to meet the needs of customers that want a proven GUI-based ADABAS query, extraction, and CDC toolset. These NatWorks products are easy to deploy and use. They integrate readily with a multitude of targets from spreadsheets to replicated ADABAS files. Furthermore, NatQuery and NatCDC offer cross-platform and non-mainframe ADABAS extraction capability that TSI would otherwise have had to develop to meet the demands of customers using ADABAS on Unix, Linux, and Windows platforms. It is now completely clear that Software AG customers, consultants, systems integrators, and others can turn to TSI to fulfill any imaginable ADABAS ETL/CDC or data integration requirement. Offerings from all other vendors pale in comparison to TSI’s in completeness of vision, product maturity, productivity and efficiency, and richness of features.”

**Chris Bradley**, NatWorks President, adds, “We are delighted with this new relationship. TSI’s well-established and highly-respected presence in the Software AG community will give NatQuery and NatCDC access to a much-expanded, worldwide customer market. With sales, marketing, and technical support in the capable hands of TSI, we can focus on continued development and enhancement of our software and services. The TSI and NatWorks product lines complement each other and allow Software AG customers to choose the best possible product or combination of products from a single vendor—a vendor that also happens to be the foremost ISV in the market space.”

## **About NatWorks, Inc.**

Based in Northfield, VT, NatWorks, Inc. is a privately held corporation focused on providing native data extraction and change data capture solutions to ADABAS users since 1998. NatWorks offers products that address end-user extraction, data warehouse extraction, change data capture, transaction auditing, homogeneous replication, and conversion to XML/XSL for publication to the Web.

## **About Treehouse Software, Inc.**

For over 22 years, Treehouse Software, Inc. has been the leading third-party provider of software and services for enterprises using ADABAS and NATURAL from Software AG of Germany. TSI’s traditional offerings include popular products designed to enhance security, control, auditing, and performance. The company’s current focus is on products and services that enable Software AG customers to leverage their investment in legacy systems with data integration, data warehousing, data distribution and conversion, XML, and additional new technologies.

The company is privately held and is based in Sewickley, PA, a suburb of Pittsburgh. Additional information is available at [www.treehouse.com](http://www.treehouse.com).



*"DPS offers the benefit of Propagation, the incremental change data capture, over the full refresh. The products also allow for a faster response to implement changes."*

child and adult protection, child support enforcement, cash assistance, and services for the developmentally disabled. DES works closely with several other state agencies in its delivery of services to the citizens of Arizona. Among the entities DES works with are Arizona Health Care Cost Containment System (AHCCCS), Department of Health Services (DHS), and the Juvenile Justice System.

To support the needs of our clients, our agency is broken into nine divisions. Of these divisions, six provide the services to our clients and the other three provide the operational support for the other divisions and the agency. We are part of the Division of Technology Services (DTS), which provides technical and system services for the development, maintenance, and enhancement of automated business systems to meet the needs of DES. Our division comprises six administrations to support the various needs of the agency. The DBA group is divided between the Technical Support Administration and the Systems & Programming Administration.

We are part of the Systems & Programming DBA Group, which consists of the Application Support Team and the DES Client Data Warehouse Team. The Application Support Team provides centralized ADABAS DBA support to the programming teams within Systems & Programming. They also ensure that the production and sub-production ADABAS databases are running smoothly and efficiently by performing necessary maintenance of the databases. The DES Client Data Warehouse Team facilitates the extraction, transformation, and movement of data from the DES production mainframe systems to the DB2 UDB distributed data warehouse environment. While the two teams perform different tasks, they support each other and provide assistance as the need arises.

### **Please define your ADABAS Application environment**

Our current configuration is 13 production ADABAS databases and 44 sub-production databases supporting the various applications within the Agency. All of the databases are operational 24/7 with minimal downtime for backups and maintenance. Access to the databases is limited based on the application with some being available 24/7 and others being available 6 days a week. Our nightly batch processes for the applications begin at 6:00 p.m.

and complete typically between 2:00 and 4:00 a.m. These applications are written in NATURAL, NATURAL Construct, and COBOL. Additionally, there are DB2 applications running NATURAL for DB2 and COBOL.

### **How many production applications/users do you support?**

We currently support 18 different ADABAS production applications that are accessed at any time by the 10,500 employees within the Agency. We ensure that they have the information that they need at a moment's notice and with very little down time.

### **What prompted the purchase of tRelational and DPS?**

We needed a tool that could extract ADABAS data to populate our Data Warehouse and replace our "homegrown" NATURAL extracts that we performed on a weekly basis. The extracts executed during the weekly batch processes and had to be coordinated within the weekly production schedule.

We looked at other vendors and chose Treehouse Software, Inc. The others claimed they worked with ADABAS, but with deeper investigation ADABAS support seemed more of an afterthought. Their claim was that they supported other source systems, such as SQL Server, but we needed something that really handled ADABAS well and we felt Treehouse has the best solution.

**DPS** offers the benefit of Propagation, the incremental change data capture, over the full refresh. The products also allow for a faster response to implement changes. Previously, we had to make program changes and manually change the offset and lengths for the fixed length records. **DPS** generates column-delimited data for load processing, and now we simply change the model and regenerate the parameters. The change request process has been made much easier for us.

### **Please describe your Data Warehouse**

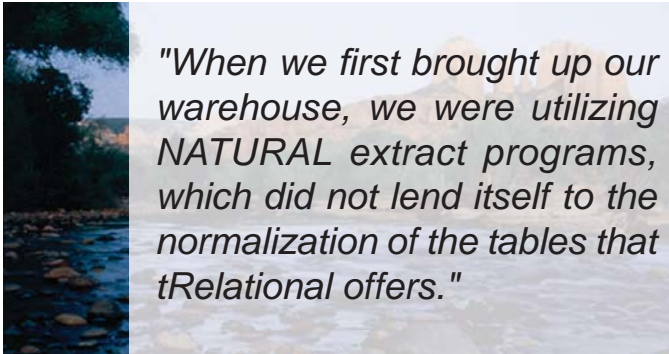
Our Data Warehouse is a central repository for data from many DES Divisions and is a dynamic resource for ad-hoc reporting across the Agency. The data warehouse is in a Windows environment utilizing IBM's DB2 UDB database



*"We looked at other vendors and chose Treehouse Software, Inc. The others claimed they worked with ADABAS, but with deeper investigation ADABAS support seemed more of an afterthought."*

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platform. We currently have 270 tables populated from 285 files (ADABAS, VSAM, DB2, and flat files). Our largest table contains 26 million rows with the total volume of data in the 80 gigabyte range and growing. The Data Warehouse could be considered an Operational Data Store and not a true Data Warehouse, since it does not contain historical (time variant) data. Not all of the production data is transferred to the warehouse, but what is transferred is based on customer requests and criteria. Our focus is on relevant data to satisfy common and specific query



*"When we first brought up our warehouse, we were utilizing NATURAL extract programs, which did not lend itself to the normalization of the tables that tRelational offers."*

requirements. The warehouse is used for DES-wide ad-hoc and production reporting.

We currently have 132 active users of the data warehouse that have specific permission to access their data. Our users provide us a lot of positive feedback on the warehouse in general, our attention to detail and helping them understand how to better use the data contained on the warehouse. We recently asked the user community a question regarding agency wide ad-hoc queries and found that on average that they create or execute 100 ad-hocs per month.

### **Please describe your tRelational/DPS implementation**

We build our models at the application level with the exception of one application and process our propagations and materializations at the database level by concatenating the models. We propagate on a daily basis and materialize as needed, typically when table definitions change. There is a significant amount of data transformation that takes place within the models. Such transformations as date and time fields, concatenating fields, checking for valid numeric values, etc. are performed to facilitate the translation of data from ADABAS to DB2 UDB.

When we first brought up our warehouse, we were utilizing NATURAL extract programs, which did not lend itself to the normalization of the tables that tRelational offers. As we have converted the applications to utilize tRelational/DPS we had to maintain the existing table structure, but as we have brought in new applications to the warehouse, we normalized these models utilizing the features that tRelational offers. We have had discussions with our

customers to normalize the tables, but this was not well received due to the existing report queries that would have to change to accommodate the change. If we had started with tRelational/DPS when we first brought up the warehouse, we would likely have a more normalized schema today.

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.

### **Do you use BI report tools to access the Warehouse?**

No, we do not have a formal reporting tool. Our customers primarily use Microsoft Access in addition to SPSS for Windows and direct SQL queries to access their data and produce their reports. Our division is in the process of reviewing Business Intelligence (BI) tools. We are hoping to implement an enterprise solution to benefit the warehouse customers.

### **Are there currently any technical issues or challenges for the Warehouse?**

One of our main challenges, in terms of customer need, is getting the customer relevant information from the Warehouse. Since this is a new platform for most of our customers, they are not completely proficient in accessing and retrieving their data. We recognize that training may be very beneficial to improving their reporting requirements from this platform.

We address this issue in part by conducting user meetings every other month, and we invite all users to discuss general warehouse topics. This meeting is an open forum, and we conduct training sessions in both Microsoft Access and SQL commands to address specific questions. We also invite our customers to share reports with the other members so that they may benefit one another.

Another challenge is in the area of data modeling and understanding the business processes for each application. Since we bring in data from many different programs within DES, it is difficult to know how all the data relates within each system and the bigger challenge of determining the relationships between systems. Understanding the business processes and logic behind the data is an important part of data modeling.

### **What are the current business challenges for your organization?**

Our biggest challenge is in the integration of data between systems. A client who needs multiple services is often assigned multiple caseworkers. Ideally, a single case

*(continued on page 7)*



*"I wish all our interactions with software vendors went as smoothly as our interactions with your company."*

worker would be sufficient. The agency is aware of the issue and is working to develop enterprise solutions that would eliminate this issue. This will not be an easy fix, since we have been doing business this way for a number of years.

### **What is the long-range plan for the ADABAS/NATURAL applications and the Data Warehouse?**

DES has been utilizing ADABAS/NATURAL since it was purchased in 1984. The department relies heavily on ADABAS as its main data repository. Although the department's strategic direction for mainframe data lies with DB2, we expect to continue to use and support ADABAS for at least the next 5 to 10 years.

We anticipate challenges in migrating from the ADABAS/NATURAL applications to any other platform. We do see the Treehouse products facilitating the data transfer for any new direction.

### **Would you encourage other State agencies utilizing ADABAS to consider tRelational and DPS?**

I would strongly recommend the use of the **tRelational** and **DPS** products for any other State agencies that are currently utilizing ADABAS, especially if they need to do any migration to another platform for data warehouses. These products are a true time saver in regards to table changes and table updates, along with the lower impact against production databases. The tools are very intuitive and require minimal training prior to use.

### **How would you rate the Treehouse Products, Services and Support?**

I would rate it very good; on a scale of 1 to 10, I would give it a ten. Your responsiveness and follow-up are excellent. At times, it can be challenging for us to provide the information necessary to solve a problem, due in part to confidential information we are processing, but you are always able to provide us solutions to our issues. I wish all our interactions with software vendors went as smoothly as our interactions with your company. ●



Be sure to keep an eye on the Treehouse Web site ([www.treehouse.com](http://www.treehouse.com)) for a link that allows you to download a free trial of **DPS X-Link**, a remote-data-access middleware product that provides PC-based (or mainframe-based) applications with real-time, read/write access to mainframe ADABAS data and metadata in XML format.

When you download **DPS X-Link**, you'll see that there are three downloads:

1. The **DPS X-Link Server**
2. The **DPS X-Link Remote API Components**
3. The **DPS X-Link Documentation Set**

Once you download **DPS X-Link**, simply contact TSI to obtain your 30-day free trial zap. We're sure that once you begin using **DPS X-Link**, you'll be so pleased with how simply and quickly you'll be pumping out XML from ADABAS, you'll wonder how you've been getting along without it!

### **Check Out the New Version 3 Features**

- Complete HOLD/UPDATE/INSERT/DELETE/COMMIT/ROLLBACK functionality.
- True conversational capability (allowing multiple messages between client and server to constitute a single conversational thread associated in ADABAS with a distinct user ID).
- Capability for definition of "composite file" (a set of physical files hierarchically related in the manner of parent-child-grandchild-etc.), allowing a single query to automatically return a parent record with all appropriate descendant record(s) embedded in the resulting XML document's hierarchy.
- Support for mixed-case PREDICT field names and optional high-level (file-name) qualifiers on elements derived from fields.
- New "include schema" option allows for embedding the XML Schema document within "response" XML documents generated by the "getXML" Servlet. This provides for greater ease of use in coordination with Microsoft .NET datasets.

**Note:** This version of the **DPS X-Link Server** is compatible with ADABAS v7.4, PREDICT v4, and z/OS v1.2. This version of the **DPS X-Link Remote API** may be installed on Windows NT v4.0 Service Pack 6 or later operating system. The .NET Framework (runtime edition) v1.1 or greater must be installed in the Windows environment prior to installation of the **DPS X-Link Remote API**.

The **DPS X-Link Server** can be installed on any IBM 390 or compatible mainframe running the z/OS operating system (v1.2 and above). **DPS X-Link** does not require changes to the operating system or any ADABAS load libraries.

## *Treehouse Software Products*

### **ADABAS-to-RDBMS Data Transfer:**

DPS - ADABAS-to-RDBMS data materialization (ETL), replication, and propagation (CDC) software

DPSync - Near-real-time ADABAS-to-RDBMS data propagation (CDC) software product set

DPS X-Link - Instant XML-based read/write access to ADABAS

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

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.

### **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:**

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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