TREETIPS

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PROFILER Version 2.1 Released!

PROFILER for NATURAL is a quality assurance and testing tool for NATURAL applications, first discussed in *TREETIPS* Issue #13. PROFILER monitors application execution, and collects statistics that can help you answer questions such as:

- Have the components of this application been thoroughly tested?
- Did any of the programs in this application remain untested?
- Which statements in the tested programs were not executed during testing?
- Which programs in this application consumed the most CPU time?
- Which programs in this application have the greatest ADABAS elapsed time?
- Which of these programs is more efficient?
- Which of these statements or coding options is more efficient?

One PROFILER user said, "I've identified enough inefficient code and saved enough CPU time so that PROFILER has more than paid for itself during the trial period alone!"

Joyce Maguire, the PROFILER Project Leader, says, "Users, affiliates, and Treehouse staff have provided some very good suggestions for improving PROFILER, which we are busy implementing for the next release."

PROFILER V2.1.0 contains several important new features, including:

- Support for the VM/CMS operating system
- CICS, COM-PLETE, TSO, and batch support
- Use of a file other than the FUSER for storing statistics
- Use of a NATURAL exit, rather than NATURAL Dispatcher zaps, for statistics collection
- New and enhanced reports, better error detection, and enhanced direct commands to make navigation easier

William Hastings, TSI Director of International Operations, says, "Some of these enhancements would not have been possible without the cooperation of Software AG. As always, we appreciate their help."

The 6-person PROFILER team has also been making many other "behind the scenes" changes to PROFILER for this release.

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Traveling Road Show

Treehouse Software has started a high-tech "traveling road show" that may be coming to your area soon! We're planning to visit several cities to present and demonstrate our products. The first stop on our tour was Austin, Texas.

TSI Heads for the Hill Country

At the invitation of the officers of the Hill Country User Group, TSI held a meeting in the Town Lake Holiday Inn in Austin, Texas, on July 26, 1993. The meeting was attended by 28 people representing 10 different organizations.

Richard Jacobson, Vice President of TSI, started the meeting with a few words about Treehouse, Pittsburgh, and Sewickley. Rich mentioned that Treehouse Software's focus on providing DP solutions with a relatively small product line gives TSI a clear advantage over competitors with 100+ products that they must try to sell and support.

Live PROFILER Demonstration A Success

Joyce Maguire, the PROFILER Project Leader, made a presentation and live dial-up demonstration at the meeting. One attendee commented that he had never seen a

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Editor's Sproutings

by Michael Salsbury

It's been quite a busy summer for the staff at Treehouse Software.

Visits and Visitors

Since TREETIPS #15, we've had visitors from places like Virginia, New Jersey, Texas, West Virginia, Colorado, Spain, Germany, Australia, and Hong Kong. We've traveled to sites in at least 18 states, presenting our products, teaching people to use them effectively, and helping to solve our clients' problems. We went to Europe to talk about Treehouse Software, its products, and its future at user group meetings sponsored by **Fairware**, our affiliate in **France**, and **Metastore**, our affiliate in **Belgium**. We also visited **SNL**, our affiliate in **Hong Kong**.

New Development Offices

In July, Treehouse opened new development offices in a nearby facility. The new offices were needed to accommodate the growth of our staff and to ensure the future expansion of Treehouse. Our marketing and administrative staff will be moving into new offices in the same facility as soon as those offices are ready.

With these new offices came a new telephone system. It was a little confusing for us at first, but the dust seems to have settled now. We apologize to anyone who might have been inconvenienced as a result of the phone system changes.

New Evaluator Kits Available!

Several of our clients have asked for our help in writing evaluation and justification documents. Toward that end, we have created **Evaluator Kits** for Performance Monitoring, Change Management, ADABAS/NATURAL Security, and Testing/QA Tools.

The kits contain a generic discussion of a suggested evaluation process for software products, along with supporting material, such as justifications written by actual customers, testimonials, etc. There are no "checklists" in our kits, as we feel that only you are qualified to determine the features of the greatest importance to you.

If our kits might help you with your evaluation of a TSI product, don't hesitate to ask for them.

DB2 News

The August 1993 issue of *Database Programming and Design* magazine reported that **DB2 Version 3** offers many improvements over previous releases.

DB2 V3 may offer better response time, transaction processing improvements, reduced data duplication, more consistent data, greater design flexibility, support for large client-server networks, and greater reliability and manageability.

Data compression has been implemented in V3, reducing DASD requirements from 25 to 90%. In addition, DB2 V3 will support up to 10,000 threads, with up to 2,000 concurrently active.

We've also seen announcements that DB2 is available for OS/2, UNIX, and other platforms. The advertising indicates that DB2 functions identically on all platforms.

Some Skills to Develop

The August 1993 issue of *UNIXWORLD* magazine suggested that DP professionals learn technologies such as C++, X Windows Programming with Motif, Perl, Windows NT, Security for UNIX, Internet Communications, Network Programming, TCL, and Multimedia. The article provided an argument in favor of learning each of these technologies.

For example, C++ was listed because "C++ is increasingly being used for mission-critical, workhorse applications...knowledge of object-oriented technology will be a huge asset, and object-oriented applications will be in huge demand. So the enterprising programmer should definitely learn C++." The Treehouse staff is already working on it!

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TREETIPS

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Documentation Sets for all products also available.

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Editor's Sproutings

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Mailing List Concerns

User group representatives fulfill an important and often difficult role in the SAG user community. We have great respect for user groups, and have never intended to "bully" them or ask them to violate any SAG policies.

Customers have told us that Software AG's recent *Connections* newsletter implies that Treehouse Software has written to all SAG user groups to ask for their mailing lists! We asked Software AG for an explanation. After a more careful inspection of our letter to the user groups, Software AG realized that we were not attempting to make such a request. It was too late to stop *Connections*, however.

We asked user group representatives to help us determine if there was sufficient interest in their regions to hold a Treehouse-sponsored meeting at which we would present our products for half of the day, and other vendors (including SAG) could be invited to fill the remaining half. Our letter stated clearly that "We wish to abide by Software AG policies, and do not suggest that you disregard them." We did not ask for mailing lists, but said, "We can also provide you with mailing pieces and postage to contact the members of your group." By mailing the invitations for us, the user groups could be assured that their membership lists remained secret while helping us to ensure that we did not unintentionally sleight any members of the group.

The Software AG Vice President whose name appeared on the *Connections* article has apologized to TSI for any embarrassment the article may have caused.

Software AG Data Management Symposium

Software AG held their Data Management Symposium in Reston, Virginia, on August 22-26, 1993. Attendance was estimated at 200 for Sunday night and 500 on Monday morning. The key speakers at Monday's General Session presented the business facts and figures. SAG said that the "hot spots" for sales are Brazil, Korea, Mexico, Spain, United Kingdom, and the United States. SAG reported that they are opening an office in Russia.

SAG reported that license sales are flat, perhaps because many sites are considering distributed processing and are postponing mainframe software purchases.

The Software AG staff was reported to number 2170 in 1990, 2278 in 1991, and 2822 in 1992.

SAG reported that their major achievements for 1992 included the following:

- Rated #1 by *Computerworld* readers for the second year in a row
- NIST MVS and SQL Compliance
- Record-setting UNIX benchmark
- People moving back to ADABAS from DB2
- High-quality support, training, and education

Software AG stated that partnerships offer more choices for their customers, and stated that partnerships will be a large part of their strategy in the future.

A presentation on UNIX attracted about 25 customers. Software AG felt that 25% of its mainframe customers would begin using UNIX, though some of these would probably have a mix of mainframes and UNIX machines.

Software AG cautioned that in many cases, management at sites has been short-sighted in the move away from the mainframe. The recommendation was to go slowly and develop a transition plan to open systems. In a panel discussion, customers indicated that they are still trying to determine the role of UNIX at their sites.

New mainframe purchases are decreasing, but MIPS consumption is growing at a rate of 25% per year. IBM will be releasing Attached Processors in late 1993 and Alternative Processors in 1994 to dramatically lower the cost of MIPS.

According to SAG, all new ADABAS development will be done in C for portability. It appears that ADABAS functionality may be different on each platform. An interesting aspect of UNIX and OS/2 ADABAS environments is that problems are not zappable. A problem is communicated to Denver, where it is re-created. Denver explains the problem to Germany, which solves it. At some point, a new tape is sent out. Customers complained that this process is too slow. One user said that their UNIX production environment has been adversely affected by the process.

We found the Symposium to be worthwhile and informative, and we enjoyed seeing many of our customers and friends again. We look forward to seeing all of you in Chicago for the next Symposium!

The preceding discussion of the SAG Data Management Symposium was created from the recounts of individuals both within and outside Treehouse Software. Treehouse Software makes no claims as to the accuracy or validity of the information and opinions in the above discussion.

TREEHOUSE SOFTWARE

TSI's UNIX Future

Why Look At UNIX?

Recently, several clients and affiliates have expressed interest in having our products on platforms other than mainframes, particularly UNIX. One affiliate said, "UNIX is the fastest growing market segment of data processing". Another said, "Treehouse must do UNIX development to be competitive in 1994." The DP magazines are overflowing with UNIX articles. With all this UNIX talk going on, our customers are wondering about our plans for UNIX in the future.

What Do Our Clients Say?

We've asked our clients about their UNIX experiences and plans. Responses varied dramatically from one site to the next, ranging from "it's just a fad" to "we'll be totally UNIX soon". However, the "average feeling" among clients seems to be "UNIX is the way to go, but it isn't ready now".

We've heard a few negative comments about UNIX. Some say it is an "unfriendly techie system". Others say that sites considering a move to UNIX forget to consider the cost of cables, networking equipment, training, etc. Some say the various "flavors" of UNIX are incompatible. At some sites, the decision is being made by management without consulting the technical personnel. The UNIX decision is confusing for clients and vendors alike.

Is Anyone Really Using UNIX?

We uncovered a few sites using UNIX today. One client develops applications with SAG products on the mainframe and moves them to RS6000 UNIX machines for Production. Another plans to develop applications using SAG OS/2 products, and deploy them on UNIX machines.

The City of San Antonio reportedly plans to move selected critical 24-hour/7-day Production applications to UNIX by late 1993. They will keep identical environments on dual UNIX CPUs, and switch between them as needed to maintain around-the-clock support. They will continue to use a mainframe for all other applications. Such "mixed environments" are likely to become the norm.

Our clients using UNIX expressed a need for security, performance monitors, change or configuration management, and prototyping tools. This is right up our alley.

What Do the Treehouse Affiliates Say?

We surveyed our ten international affiliates about UNIX. They report that less than 1% of UNIX sites use SAG products on UNIX. Non-SAG DBMS products (e.g., Oracle and Sybase) are used on over 70% of UNIX machines. Only one affiliate feels that SAG's UNIX market share will improve substantially.

An expert quoted in *Open Systems Today* said, "I doubt that Software AG or Cincom are selling very many copies of their stuff outside their installed base." Our affiliates made similar statements:

- "We think that Software AG did not sell more than 10 licenses to sites that did not have NATURAL before on MVS."
- "I think that SAG will do well getting existing mainframe customers to buy [ADABAS on UNIX], but will find it very hard going competing with Oracle, Ingres, Sybase SQL Server, and Microsoft Access."
- "[Software AG] is losing customers here to Ingres, Oracle, and in some cases DB2."

We have not reached any conclusions at this point, and do not wish to dismiss the Software AG potential in the UNIX market.

What is TSI's Position on UNIX?

Several people suggested that we consider non-SAG environments for our initial UNIX development. As illustrated in the above comments, Oracle and Sybase have been suggested most often. Oracle and Sybase appear to have strong third-party support, and we plan to contact them to learn more about how we may work together with these companies to develop UNIX solutions of value to their clients.

From what TSI has seen, the majority of sites will not make substantial use of UNIX for some time. Their delay gives us time to determine if and when we should move to UNIX. We will broaden our focus and expertise (for example, we are learning "C"). We must be able to create fully tested, high quality UNIX products before our clients express a strong need for them. We must be certain that UNIX growth will be significant, and that UNIX is not a "fad" (as it was 10 years ago). TSI cannot expend resources to develop products with very limited lifespans or potential.

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Um Mundo sem Fronteiras

by J.C. Freitas, FYT Computer Software

O Sr. Kenichi Ohmae, autor do best-seller "Mundo sem Fronteiras", assim como uma série de outros consagrados autores, vem alertando para a constante globalização mundial. Todos os acontecimentos mantem entre si estrito relacionamento de causa our consequência. Nos dia de hoje não estar integrado a este mundo está totalmente fora de questão. Após anos de isolacionismo em termos de sistemas de pequeno porte, o Brasil abriu seu mercado para essa categoria de produtos.

Considerando o mercado de Software este parece realmente ser um "mundo sem fronteiras". Os mesmos nomes e produtos são ouvidos en qualquer parte: Windows, Unix, DB2, NATURAL, etc. Os mesmos temas também são tratados: rightsizing, downsizing, arquitetura Cliente/Servidor e o novo perfil de aplicaçoes que possibilitam o diferencial mercadológico que se procura.

E aí está a questão básica a ser tratada. Quando e como haverá uma integraçao perfeita entre o negócio e os sistemas de informação? Os gerentes de informação não podem mais fazer colocações do tipo: "diga que informações você precisa, que eu comando a tecnologia para fornecê-las".

O gerente de informação deve conhecer muito bem o negócio para ofertar as informações necessárias. Por outro lado o gerente do negócio deve se "alfabetizar" no uso de informações. Mais do que maravilhar-se pelo simples fato de conseguir as informações, deve saber fazer uso das informações para obter vantagens competitivas.

Esta é a grande decisão que já está sendo seguida com grande determinação por algumas organizações.

A formação cruzada onde gerentes de negócios estudam sistemas de informação e gerentes de informação passam a estudar o negócio, a terceirização das atividades que estão mais distantes do negócio (programação, suporte, etc.), a utilização de soluções prontas sempre que possível, são apenas alguns sinais desta mudança sadia de mentalidade.

Como consequência a este direcionamento está a escolha natural do equipamento de melhor custo/resultado, o direcionamento para arquiteturas mais flexíveis como a cliente-servidor, o novo papel dos mainframes principalmente em corporações com operações e volumes que justifiquem a utilização destas equipamentos.

É desta forma que as áreas de sistemas de Informação responderão às necessidades de cada empresa apoiando e suportando o seu desempenho nestes dias de concorrência acirrada em busca da estabilidade futura.

Em sintonia com esta realidade competitiva, pensando sempre na liberação do pessoal da empresa para atividades voltadas aos negócios, está a associação entre FYT e Treehouse oferecendo soluções acabadas que sempre maximizam a relação custo/retorno:

N_2O:	Gerenciador de Ambientes NATURAL
TRIM:	Monitor de Performance ADABAS
SECURITRE:	A Integração do ambiente ADABAS/NATURAL com o RACF/TOP SECRET
NATEXPRESS:	Gerador de Programas NATURAL
AUTOLOADER:	Utilitários de Carga do ADABAS
GTX:	Gerenciador de Aplicações NATURAL
AUDITRE:	Facilidates de Auditoria no ADABAS
USX:	Exits de customização do Predict
DYNADOC:	Documentação automática de programas NATURAL
PROFILER:	"Estetoscópio" das Aplicações NATURAL

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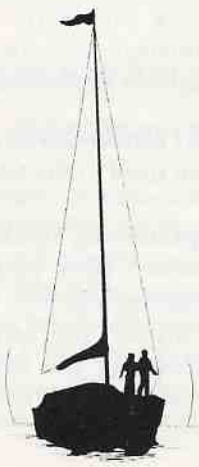

NATURAL Programming Tip: Using Subscript Zero

by Don Ferruggia, Chep USA

Treehouse Software makes no claims as to the accuracy or completeness of the material contained in this article, and the views expressed in this article are not necessarily those of Treehouse Software or its affiliates.

In NATURAL, we typically define arrays with subscripts starting from 1:

```
1 #MY-ARRAY (A10/1:100)
```

However, arrays can start with any number we choose. Subscript zero, in particular, can be very helpful if you are using an EXAMINE statement in your program.

Suppose, for example, that you want to use a table to translate 2-letter state abbreviations (such as "PA") into state names (i.e., "Pennsylvania"). You could code the following structure:

```
1 #STATE-TABLE     (1:51)  /*51 includes DC
  2 #STATE-ABBREV       (A2)
  2 #STATE-NAME         (A15)
```

This would enable you to do the following:

```
EXAMINE #STATE-ABBREV (*) FOR FULL #XYZ GIVING INDEX #I
WRITE 'STATE' #XYZ 'IS' #STATE-NAME (#I)
```

The only problem with this is that index #I will be set to zero if #XYZ does not contain a valid state abbreviation. This means that you must check for this explicitly or risk getting a NAT1316 error, "Index not within array structure."

To avoid this, start your array from zero:

```
1 #STATE-TABLE     (0:51)  /*51 includes DC
```

This prevents you from getting an index error because zero is now valid. You should initialize the zero occurrence of #STATE-NAME to an appropriate error message:

```
MOVE 'NOT VALID' TO #STATE-NAME (0)
```

You can leave #STATE-ABBREV (0) uninitialized or set it to any value not used in the table.

The NATURAL Programming Tips article in Issue #15 of *TREETIPS* discussed how you can group the occurrences of a PE group together. There is another way you can accomplish the same task without incurring the overhead of the MOVE BY NAME statement. Simply redefine the PE as shown here:

```
0010 **********************************
0020 * Sample program from TREETIPS 15
0030 * revised to remove MOVE BY NAME
0040 **********************************
0050 DEFINE DATA LOCAL
0060 1 #CC-CNT (P3) CONST <3>
0070 *
0080 1 FINANCE VIEW OF FINANCE
0090   2 MAJOR-CREDIT (1:#CC-CNT)
0100     3 CREDIT-CARD
0110     3 CREDIT-LIMIT
0120     3 CREDIT-BALANCE
0130   2 REDEFINE MAJOR-CREDIT
0140     3 #WORK-CREDIT (A26/1:#CC-CNT)
0150 END-DEFINE
0160 *
0170 **********************************
0180 * THE FOLLOWING LOOP WILL WRITE TO
0190 * WORK FILE:
0200 *
0210 * CARD 1, CARD 2, CARD 3, LIMIT 1,
0220 * LIMIT 2, LIMIT 3, BAL 1, BAL 2,
0230 * BAL 3
0240 **********************************
0250 READ FINANCE
0260 WRITE WORK FILE 1 MAJOR-CREDIT (*)
0270 END-READ
0280 *
0290 **********************************
0300 * THE FOLLOWING LOOP WILL WRITE TO
0310 * WORK FILE:
0320 *
0330 * CARD 1, LIMIT 1, BAL 1, CARD 2,
0340 * LIMIT 2, BAL 2, CARD 3, LIMIT 3,
0350 * BAL 3
0360 **********************************
0370 READ FINANCE
0380 WRITE WORK FILE 2 #WORK-CREDIT (*)
0390 END-READ
0400 END
```

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TREEHOUSE SOFTWARE

ISO 9000: A Standard for Quality

You may have heard about **ISO 9000**. In fact, your company might even be implementing it. If not, you have probably wondered what it is. We'll tell you.

The ISO and ISO 9000

The **International Organization for Standardization (ISO)** in Geneva, Switzerland, published definitive global standards for quality. **ISO** membership includes some 90 countries, representing more than 95% of the world's industrial production.

ISO 9000 is a series of quality standards to be applied to companies in various industries. The intent of the standards is to ensure that customers get quality products and service from vendors.

The Quality Manual

ISO 9000 certified vendors must write a "quality manual" which spells out their company's quality standards, rules, and procedures in 20 categories, including the following:

- Responsibility for the Quality Program
- Quality System Principles
- Design Control
- Document Control
- Purchasing
- Supplier Control
- Inspection and Testing
- Records
- Training
- Service

Each of these categories is further broken down in the **ISO** standards to more specific requirements.

ISO 9000 certified companies follow a simple principle, "Document what you do, and then do what you document." The companies develop quality assurance (QA) procedures, write the procedures down, and then follow them. They must keep accurate QA records, and undergo routine external audits. These audits are made by private companies which are accredited by **ISO** to certify compliance with **ISO 9000** standards.

ISO Audits

Auditors regularly visit the vendor's site to monitor compliance with the standards and procedures set forth in the vendor's quality manual. If the auditor notices discrepancies between the documented procedures and the work activities of the employees, the vendor must initiate corrective action in order to retain the **ISO** certification.

ISO 9000 Training

Experts warn that the area where most vendors' **ISO 9000** programs fail is training. Vendors create excellent quality programs, and then fail to train their personnel to follow the procedures.

ISO-certified companies must even train their custodians. For example, a janitor cleaning our data processing facilities could accidentally misplace the new product release tapes. Clearly, we would need to provide training to guard against this.

The Value of ISO 9000

The value of **ISO 9000** certification to a particular vendor depends upon that vendor. **ISO 9000** certification will force some vendors to create, follow, and document quality assurance procedures, improving their products' quality. Others already have good procedures in place, so their product quality will not change substantially.

However, the **ISO 9000** "seal of approval" does not guarantee product quality. **ISO** requires only that a vendor follows a documented quality assurance program which meets **ISO** guidelines. One expert told us, "**ISO 9000** will certify a vendor which makes life jackets out of cement!" Companies with **ISO 9000** certification do not necessarily make better products, companies without certification may make the best products, and two certified companies may not make products of comparable quality.

The November 1, 1993 issue of *Business Week* reported that about a third of all companies with **ISO 9000** certification felt that their products' quality would improve. During certification, one organization found a case of "chronic" waste, and another believes the new procedure it created will cut its development cycle by at least 50%. Another company, however, indicated that **ISO 9000** might be a "barrier to future improvement" in the area of quality assurance because **ISO** might tend to "lock in the status quo".

ISO 9000 at TSI

Treehouse Software is considering the value of **ISO 9000** certification. We believe there is value to be gained from a formal quality assurance program, but we are unsure if the **ISO** "stamp" is needed. The deciding vote will be cast by our customers. If our customers demand **ISO** certification, then we will undertake the process. If they do not, we will continue improving and refining our existing quality control program. ▲

N_2O Needs YOU!

N_2O, Treehouse Software's change management product for NATURAL, SYSERR, and PREDICT, and **N_2O/3GL** for 3GL members, have received many important enhancements. We have discussed these in previous issues of TREETIPS.

The **N_2O** Development Team is currently finalizing the code for the release of **N_2O** Version 3.2. For the next release, the **N_2O** Development Team hopes to include a new **Change Request Tracking System**. To do it right, we need your help.

Where Do Changes Begin?

End users often suggest changes to a site's applications. Some changes are needed in order to fix bugs in the application, some changes are needed to reflect new business rules or government regulations, and others are needed to make applications easier to use. In most cases, users fill out some kind of paper or electronic request form that includes information such as the following:

- Change Control Number
- Name of Person Requesting the Change
- Name of Application Being Changed
- Date by which the Change Should be Made
- Priority Level of the Change (e.g., Emergency, High, Medium, or Low)
- Description of the Requested Change

Once this information is completed, the requester obtains the approval of the appropriate managers and department heads. The change is then submitted to the development staff.

The development staff tracks and prioritizes each incoming change request. The development staff may add information, such as the following, to the change request form:

- Person(s) Assigned to Implement the Change
- Impact of the Change on the Application (e.g., Severe, Moderate, or Minor)
- Areas of the Application Affected by the Change (e.g., ADABAS, security, communications, DASD requirements, etc.)
- Time Required to Complete Change
- Potential Problems Caused by the Change

The developers would then use **N_2O** to determine which components of the application (such as programs, subprograms, or maps) require changes to implement the user's request. **N_2O** will be used to migrate these components to a Development area where the changes can be made.

Once the change is implemented, the developer may migrate the code to a Testing/Quality Assurance environment. In this environment, Quality Assurance personnel may examine the code for conformance to site standards, test its processing accuracy and performance, etc. This examination might include using Treehouse Software's **PROFILER** for NATURAL to ensure that the programs are adequately tested and that they appear to perform well. End users might then be required to "sign off" on the change to indicate that it performs as desired.

At this point, the changes are migrated to the production environment and become part of the application operated by end users.

How Should N_2O Fit In?

We believe that **N_2O** can be used to eliminate some or all of the paperwork required during the change request, migration, and implementation phases. **N_2O** currently handles the migration and implementation phases, and can tie migration activity together with a Change Control Number.

The proposed change request subsystem within **N_2O** would allow end users to enter their change requests on-line and track those requests through the prioritization, development, testing, and production implementation phases. End users will be able to determine the current status of their change requests without having to interact with the development staff (and thus interrupt them).

The **N_2O** Development Team would like to hear from sites currently using any form of change request tracking system for applications. We would like to discuss the capabilities you need from a change request system, and examine any forms and procedures used at your site. This will help us to implement a change request system within **N_2O** that meets the needs of the majority of user sites.

Please feel free to call **Jim Lumpp**, the **N_2O** Project Leader, or any member of the **N_2O** Development Team, to discuss your needs.

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An adDB2 Update

adDB2 was first announced in TREETIPS #14. For those of you who weren't on our mailing list, or who didn't get to read the article, *adDB2* consists of consulting and software designed to help sites migrate from ADABAS to DB2.

adDB2 includes a "Data Bridge", which emulates the ADABAS nucleus, issuing SQL calls to DB2 to access/update the desired data. Applications "think" they are accessing ADABAS, when they are in fact running against DB2. This means that an *adDB2* site does not have to modify its applications. Programs written in any language, such as COBOL, PL/1, ADAPREP, NATURAL, etc., access DB2 transparently through the Data Bridge.

Over time, perhaps as maintenance is needed, a site can modify its programs and applications to use SQL to access the DB2 data directly. This could improve application performance and eventually lead to removal of the Data Bridge from the customer's environment.

How Does the *adDB2* Project Work?

adDB2 is implemented in three phases:

- Pre-Investigation
- Analysis
- Data Consolidation

Each phase involves a specific set of activities, designed to lead into the next phase of the project.

First Phase: Pre-Investigation

During this phase, the TSI consultants examine ADABAS databases and files, NATURAL DDMs, COBOL copybooks, ADABAS Command Logs, etc., to determine how the site is using ADABAS with its applications. This investigation helps us to determine the feasibility, scope, and time requirements for full conversion.

Second Phase: Analysis

During this phase, TSI consultants prepare detailed reports and plans covering the rest of the project. The reports include a detailed analysis of the site's ADABAS database structure and usage, proposed DB2 database design, DB2 performance estimates, and a detailed plan for migrating a pilot application and data to DB2.

The consultants will report any ADABAS commands, features, or options used by the customer which cannot be supported by DB2. The consultants will suggest ways to work around these items.

The reports produced during this phase can assist a site in tuning the performance of its ADABAS databases and applications.

Third Phase: Data Consolidation

In this phase, TSI consultants take the detailed migration plan prepared in the Analysis Phase and migrate a pilot application and its data to DB2. At this point, the *adDB2* Data Bridge is installed and operational.

With the pilot application migrated, the TSI consultants proceed with the remaining applications, until the consolidation is complete.

While we discuss "migrating an application" in this article, this does not imply that applications are modified or recompiled to work with the *adDB2* Data Bridge and DB2. To promote integrity, all files related to a specific application are migrated at once, along with the application. Very few changes, if any, are required to programs.

At the end of the Data Consolidation Phase, the site is no longer using ADABAS. All applications will be running against the *adDB2* Data Bridge and the DB2 databases.

Other Details

The following issues are not covered in detail in this article, but can be discussed with a Treehouse Software representative:

- Because *adDB2* does not require changes to the site's applications, there is no need to "freeze" application development and maintenance. This reduces the migration risk and ensures that programs can be modified and enhanced at any time before, during, or after the migration.
- To ensure that the *adDB2* Data Bridge is functioning properly, a "dual mode" allows each command to access/update both ADABAS and DB2, and then compare the results.
- Due to differences between ADABAS and DB2, ADABAS Utilities generally will not work under *adDB2*. Many ADABAS Utilities have

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The EXEMPLAR Consortium

What is EXEMPLAR?

EXEMPLAR is a non-profit consortium of colleges and universities which share and collaborate on "best practice applications" built using Software AG tools.

EXEMPLAR members evaluate applications of a specific type and determine which member's application is the "best". These applications are maintained in a repository at Penn State University. Members may request any of the applications in the repository. Enhancements and fixes are reported back to the repository and incorporated in the applications. This exchange allows all members to have access to the best applications with the lowest possible cost.

Available Applications

Several institutions have provided EXEMPLAR with applications and functions, including:

- Inventory Management System
- Electronic Authorization
- Electronic Forms
- Reports On-Line
- Miscellaneous Accounts Receivable
- Help Desk
- Plant Operations

Additional applications are added to the repository as they become available.

A Little Help from Treehouse

We know that it will help to contribute to the success of **EXEMPLAR** if all members use the same software tools with their applications. Toward that end, Treehouse Software provides **EXEMPLAR** members with special discounts on our products. This could be an important reason to join **EXEMPLAR**.

For More Information

Educational institutions interested in joining the **EXEMPLAR** Consortium can contact:

EXEMPLAR Administrative Support Office
Penn State University
116 Boucke Building
University Park, PA 16802

Phone: (814) 865-2056
Fax: (814) 865-3504
Email: JAW1@OAS.PSU.EDU

TREEHOUSE SOFTWARE

PROFILER Version 2.1

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PROFILER Reference Card

Many of you received a copy of the **PROFILER** Reference Card. This durable, three-fold card contains information designed to help users get the most out of **PROFILER**. The Reference Card provides:

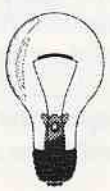
- a list of **PROFILER** uses
- a description of the primary functions of **PROFILER**
- a presentation of the various **PROFILER** Reports and their contents
- a list of the **PROFILER** Direct Commands for navigating through the product
- a step-by-step guide to setting up and using a **PROFILER** session
- batch report submission information

Copies of the Reference Card are available upon request to any individual interested in **PROFILER**.

PROFILER Evaluator Kit

We created a new document to help sites evaluate **PROFILER** for NATURAL and develop their purchase justification documents. If you would like to receive a copy of the Evaluator Kit, call today!

TREEHOUSE SOFTWARE



The Key to Success: Audits for ADABAS/NATURAL Projects

by Martin Lochte-Holtgreven, MaK DATA System

The success of DP projects depends on many factors. The complexity of the development process, coupled with user dissatisfaction with DP's ability to provide timely, efficient solutions, calls for increased quality assurance activity. Audits by neutral specialists are a very useful way to identify and avoid weaknesses in the system development process.

Based on a survey of many ADABAS/NATURAL projects, this article presents the effects of audits and coaching activities by Treehouse Software's German affiliate, **MaK DATA SYSTEM**, on the clients' project success.

System Development Environment and Standards

An organization's guidelines for application development have an immense influence on the efficiency and effectiveness of the whole development process. The use of powerful tools does not guarantee successful project development, thus standards and guidelines have to be set very carefully. In the wake of new technologies such as downsizing and client-server architectures, standards are even more important to ensure a long system life cycle.

For example, a client in the food industry used an audit to evaluate their programming guidelines and standards. The report did not only include more than 30 specific suggestions, but is also used as a basis for future software procurement planning.

Project Coaching

This is the most general form of auditing software projects. Coaching includes a regular survey in all stages of a project, resulting in an overall quality assurance process.

Typical clients include hospitals with their comprehensive communication and information system projects where there is only a limited in-house DP background. Project coaching thus ensures an economic, state-of-the-art project development. Realistic resource planning, fair procurement contracts, and a lean and effective project organization are some other important benefits from project coaching.

System Design Audits

In the common project development process, the specification phase is used to outline the desired system functionality. The general information structure is then derived, giving a general frame for the system's internal architecture. This information structure includes database and file designs as well as a general arrangement of masks and programs. At this point, programming standards and conventions are also set to ensure a uniform, easy-to-maintain system development.

A system audit at this time may have considerable benefits for the overall project success.

MaK DATA SYSTEM provided an audit for an ambitious management information system for a German public transport organization. The analysis proved the system's complexity and confirmed the feasibility, yielding a continued support by the managers.

Database Design Audits

Using Software AG's products, the database design is a crucial performance factor. Audits in database designs have often avoided performance problems by taking a close look at the database design in the early development phases. Activities include a check of the general database design before implementation as well as monitoring the database performance in the test stage. Treehouse Software products such as TRIM are successfully used to identify critical programs and statements.

MaK DATA SYSTEM has given valuable assistance to many clients by database analysis. Design improvements are often checked by follow-up audits.

Programming Audits

During the programming process, audits are used to avoid future performance and maintenance problems. Tests are made using Treehouse Software's TRIM performance monitor and other methods and tools to identify potential programming problems. The evaluation usually includes a look at the implementation of standards and guidelines as well as the documentation.

This kind of audit is very useful for organizations which are just beginning to use ADABAS and NATURAL. **MaK DATA SYSTEM** has also evaluated systems developed by third parties to provide neutral quality assurance and contract fulfillment control.

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Traveling Road Show

(continued from page 1)

successful on-line dial-up demonstration from a hotel meeting room. All of the attendees were impressed with **PROFILER** and several discussed how useful the product would be at their sites.

TSI Product Update

After Joyce finished the **PROFILER** presentation, Rich gave a brief update on the rest of the Treehouse product line. Following Rich's presentation, Treehouse provided a delicious lunch. As Joyce said, "The seafood pasta salad was very good and the peach melba that we had for dessert was great!"

Programart Shares the Spotlight

After lunch, **Programart** presented their **STROBE** performance monitoring tool. Attendees commented that sites needed both **PROFILER** and **STROBE**. **STROBE** provides useful performance statistics about an entire system, while **PROFILER** gives detailed NATURAL execution statistics needed for quality assurance and application tuning.

On to Washington, DC

On October 7, 1993, Treehouse Software held a meeting at the Holiday Inn at National Airport in Crystal City, Virginia. At this meeting, there were live on-line presentations and demonstrations of **N_2O**, **PROFILER**, and **DynaDoc**. Forty-three people attended, representing about 20 organizations. Ten TSI employees were also present, as was **Jon Johnson** of **CCA** (our affiliate in Australia).

The meeting began with an introduction by **Rich Jacobson**. **Jim Lumpp** and **Carrie Love** presented and demonstrated **N_2O**. **Joyce Maguire** and **Karen Hirst** presented and demonstrated **PROFILER** for NATURAL. **Cheryl Stamp** presented **DynaDoc**, and **Adam Hammer** guided a **DynaDoc** demonstration. The meeting ended after a SECURITRE presentation by Rich Jacobson.

Everyone who attended the DC meeting seemed to enjoy it. Interest in all of the products we presented was high. The attendees discussed their needs with product developers, salespeople, and support personnel. Each attendee left with a free canvas attaché filled with information about our products. Our people were excited and happy to meet so many of our customers and potential customers.

We'll Come to Your Neighborhood, Too!

One attendee at the DC meeting asked, "When will you be coming back? I want to bring all my co-workers next time!" We don't know when we'll be back to DC, but we will be back.

We have about 7 more cities in our plans, including New York, Philadelphia, Dallas, Atlanta, Toronto, and Calgary. We have a date already set for **Chicago, December 2**. We will be doing a full day presentation at the **Rosemont Convention Center** near the O'Hare Airport. Invitations have already been sent to all our midwestern contacts. If you haven't received an invitation and you would like to attend, please call us at (412) 741-1677 and ask for **Cheryl Stamp**.

If you would like us to sponsor a special meeting in your area, please let us know when and where it would be convenient to meet. Non-TSI speakers are welcome at the meeting. Treehouse will pay for the meeting room and provide lunch and refreshments for the attendees. We can't promise seafood pasta salad and peach melba at every meeting, but we'll certainly provide something tasty, as well as excellent product presentations and live demos!

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SOFTWARE

Audits for ADABAS/NATURAL Projects

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Conclusion

Third-party audits are highly effective for successful application engineering. As SAG products become more powerful, they are even more susceptible to inefficient use. Therefore, careful quality assurance is highly recommended.

Audits may be used at any project stage, depending on the individual site's needs. **MaK DATA SYSTEM** has specialized in auditing ADABAS/NATURAL projects. For further information, contact:

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MaK

The Future of the Mainframe

We have spoken with many current and potential customers who are considering abandoning the mainframe in favor of other platforms. Based on our discussions, our reading of trade journal articles, etc., we recommend caution.

Does Leaving the Mainframe Save Money?

One of the most common reasons sites express for abandoning the mainframe for an alternative platform, such as UNIX, is that the other platform will cost less to maintain and use.

At first glance, it is difficult to argue that a mainframe costing $1,000,000 can compete with 20 typical UNIX boxes costing $10,000 each and providing the same computing power. This cost differential seems to apply to the software end also, when a UNIX package costs $1,000 compared to $30,000 or more for a mainframe package.

However, a site needs to consider these and other important questions:

- Does the site have UNIX expertise, or will this expertise have to be acquired? Are the current programmers trained for UNIX?
- Will the site have to buy new terminals, cables, database software, applications, network software, utilities, etc.?
- Will the existing applications require re-engineering or re-development to work on the UNIX platform?
- Will the UNIX environment be as secure as the mainframe?
- Will the computing workload increase during the coming years, and can the proposed UNIX environment support this?
- Will a transition from mainframe to UNIX increase the development and maintenance backlog? How long will both environments need to be supported? At what cost?
- Are the products available for UNIX as mature as those on the mainframe, and will all the needed tools be there?
- Will response times be acceptable to users?
- Will mainframe hardware vendors lower prices to remain competitive, eliminating price differential as a reason to migrate?

"When you add up the total cost of computing over five years, client/server applications cost 50% more than a comparable mainframe-based system, according to the Gartner Group. The largest component is support."

It is absolutely imperative that sites considering the move to an alternative platform, whether that platform is UNIX, AS/400, OS/2, etc., examine their situation carefully.

An article in the October 18, 1993 issue of *Computerworld* said, "When you add up the total cost of computing over five years, client/server applications cost 50% more than a comparable mainframe-based system, according to the Gartner Group. The largest cost component is support."

Be Careful - Your Career Could Be At Stake!

For some sites, the move to a UNIX machine will be the right one. A move to distributed computing will give those sites a competitive advantage. For others, it could prove to be a mistake that ends their careers. We have heard of several DP executives and managers who lost their jobs as a result of recommending an alternative platform without considering all of the costs and ramifications.

Treehouse Software's Position

We believe in the past, present, and future of the mainframe.

In the past, the mainframe has provided a powerful platform for application development and use. It has been possible to allow remote access to central data repositories needed throughout an organization.

In the present, the mainframe is competing with other platforms for computing superiority. Users are weighing the costs of the mainframe to its value and performance. Manufacturers of mainframe equipment are keenly aware of the competition, and are making serious efforts to reduce the cost of purchasing and using mainframes.

In the future, we believe that many sites considering alternative platforms today will stay with the mainframe, or will migrate back. The costs and difficulties of managing multiple CPUs, network connections, varied software and hardware configurations, along with "people costs", etc., will prove too much for many organizations. Further, the costs of the mainframe continue to decline, as newer and better processors hit the market. We believe there will always be some shops who (correctly) choose

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The Future of the Mainframe

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UNIX and other platforms over the mainframe, and there will always be shops who (also correctly) choose the mainframe over other platforms.

At a recent Gartner Group Symposium, attendees were told it is OK to "**just say no**" to client/server computing. We aren't saying NO and we may say YES in resounding fashion. Meanwhile, we have no intention of abandoning the mainframe, or discontinuing the development of our mainframe software products. ▲

TSI's UNIX Future

(continued from page 4)

We do intend to have stable, functioning products for any platform in widespread use by our clients. We do not want to move too soon, and take development resources away from our more widely used mainframe tools. We certainly hope Software AG makes a big impact in the UNIX world, because we will be able to help them with quality ancillary products, developed quickly and effectively.

We would like to hear from any site which is using, or planning to use, UNIX machines for future Development or Production work. Please call, fax, or write to us if UNIX is in your future. ▲

Current Releases

Product	Version
AUDITRE	1.2.0
AUTOLOADER	1.2.0
DynaDoc	3.3.1
N_2O	3.1.2
N_2O/3GL	3.1.2
PROFILER	2.0.0
SECURITRE	2.2.1
TRIM	5.1.1/5.2.1

This list shows the versions of our products that you should be running at your site. If you are not running these versions, please call Treehouse today.

TREEHOUSE SOFTWARE

An adDB2 Update

(continued from page 9)

DB2 counterparts which can be used instead. Many others simply have no value to a DB2 site. However, if a utility is needed for which no DB2 counterpart exists, TSI will probably be able to create it.

- Performance is, and should be, an important issue. The performance of ***adDB2*** depends on a number of factors, including the DB2 "relational" implementation of the ADABAS data and DB2 CPU usage.

- Some Treehouse products, such as TRIM, will not function under ***adDB2***, as these products deal with ADABAS internals. However, we may release versions of these products which operate with ***adDB2***.

- Some Treehouse products, such as N_2O, should work fine with ***adDB2***. N_2O will simply manipulate NATURAL objects migrated to, and residing in, DB2 tables.

There are also many other issues relating to adDB2 that you may wish to discuss with Treehouse.

IBM Assistance

Michael Ruffin, Manager of the Information Management Group at **IBM** Consulting in Chicago, told us, "It's to **IBM**'s advantage to have solutions like ***adDB2*** available to our customers. Having Treehouse Software as our Business Partner will ensure that **IBM** can provide Treehouse with proper assistance with their ***adDB2*** efforts."

IBM will be able to provide Treehouse with technical support, product information, training, potential customer information, and marketing assistance.

Is *adDB2* Right for Your Organization?

The ***adDB2*** approach allows sites to migrate to DB2 in a fast, cost-effective manner. Each site needs to determine its reasons and goals for the migration, and evaluate ***adDB2*** as a way to reach the desired goals.

If you require more information about ***adDB2***, or would like to arrange a site visit or presentation, contact us.

TREEHOUSE SOFTWARE

Affiliate Profile: Quark Software Services

Treehouse Software is pleased to introduce its newest affiliate, Quark Software Services of Spain. Quark Software Services will market and support Treehouse Software products in Spain and Portugal. We asked Quark to provide you with the following brief description of their company.

Quark Software Services is an independent company serving the computer industry in Spain and Portugal, specializing in the distribution and support of software products.

Their personnel are highly qualified and very experienced in database administration and system support. This expertise allows the company to offer a wide range of services designed to add value to the products. These services include performance tuning and quality assurance consulting, project development and a wide range of training courses.

Quark Software Services is dedicated to offering high quality solutions based upon the Treehouse Software product line, with excellent service, provided by highly skilled professionals.

Both the management and the entire team at Quark Software Services are at your disposal to provide more information concerning the company, products, and services.

En Español

Quark Software Services es una compañia independiente que opera en el mercado informatico de España y Portugal y que nace y se configura dentro del sector como compañia especializada en la distribucion y soporte de productos software de alto rendimiento.

La alta cualificacion, conocimiento y experiencia del personal nos permite ofrecer como valor añadido a nuestros productos una amplia gama de servicios como son consultoria, formacion y desarrollo de proyectos.

Quark Software Services esta empeñada en conseguir un compromiso total con las necesidades de nuestros clientes, con el firme deseo de trasladarles los fuertos compromisos adquiridos con nuestros proveedores. Todo esto con el fin de ofrecer soluciones de calidad y un optimo servicio apoyandonos en nuestra responsabilidad profesional.

La direccion y todo el equipo de Quark Software Services se encuentra a su disposicion para ampliar cualquier informacion sobre nuestra compañia, productos, y servicios.

Y en espera de ganar su confianza en el futuro, aprovechamos la ocasion para enviarle un cordial saludo.

QUARK SOFTWARE SERVICES
Mr. Jesus Rodriquez Cabrero
Calle Dracena 10, 2° Dcha.
Madrid 28016
Spain
Phone: 350-18-55
Fax: 350-19-22

Treehouse Software Affiliate List

Area Served	Affiliate	Phone Number
Australia	***Computer Consultants Australia***	(61) 3-416-3377
Benelux	***METASTORE***	(32) 3-238-87-60
Brazil	***FYT***	(55) 11-253-2288
France	***Fairware***	(33) 1-39-65-0688
Germany	***MaK DATA SYSTEM***	(49) 431-3995-135
South Africa	***Information Technology Services***	(27) 11-886-7690
Southeast Asia	***System Networks (Asia) Limited***	(852) 523-6949
Spain/Portugal	***Quark Software Services***	(34) 1-350-18-55
United Kingdom & Eire	***Blenheim Software Ltd.***	(44) 753-571770
Venezuela & Caribbean	***Mega Soft Computacíon C.A.***	(58) 2-483-53-70

Treehouse Software products and services include:

IBM Business Partner

adDB2 - ADABAS to DB2 consolidation product/service
PROFILER for NATURAL - NATURAL program execution analyzer
DynaDoc - NATURAL application documentation tool
N_2O - NATURAL application change management system
N_2O/3GL - 3GL support within N_2O
SECURITRE - Centralized security administration for ADABAS/NATURAL
TRIM® - ADABAS/NATURAL performance monitor
AUDITRE - ADABAS auditing tool
AUTOLOADER - ADABAS file automatic unload/reload/dump utility

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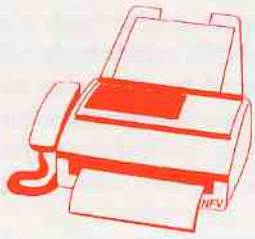

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